

EDITION D

W. L. BLAKE
& CO.
Hy-Tech Products



PORTLAND, MAINE

EDITION "D"

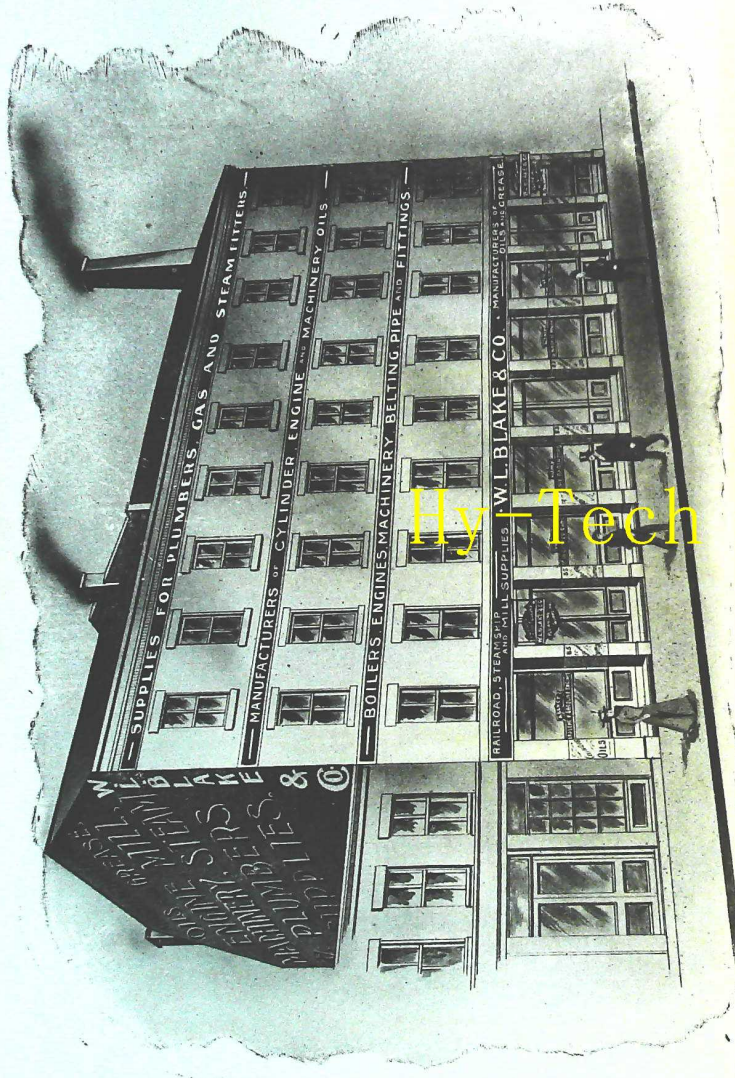
W. L. BLAKE & CO.

SUPPLIES FOR

Plumbers, Water Works,
Steam and Gas Fitters, Engineers and
Contractors, Mills, Railroads
and Steamships

OILS AND GREASES

79 TO 85 COMMERCIAL STREET
PORTLAND, MAINE



SPECIAL NOTICE

NOTATIONS

PRICES

FINANCIAL STATEMENT

TERMS

LIABILITY

RETURN ON EQUITY

CONTRACTS

DELIVERY OF GOODS

INTRODUCTORY



In presenting our EDITION "D" to the trade and Architects of Steam, Water and Plumbing Goods, we desire to extend our thanks for the many favors accorded our Firm during its long existence.

We are headquarters in this territory for everything in the line of Plumbing, Heating and Mill Supplies, Lubricating Oils, Greases, Etc., and have endeavored to show in the Catalog, in condensed form, the most important of our lines covering the great variety of goods which our patrons can rely upon for prompt execution of orders and the best of service.

You will observe the new and convenient arrangement of this Catalog for ordering. The goods have been classified, and all illustrations are designated by Figure Numbers and, in ordering, if customers will kindly refer to these, it will obviate any misunderstanding on the part of our Order Clerks.

W. L. BLAKE & CO.

Hy-Tech Products

Cast Iron Screwed Fittings

STANDARD

THE ILLUSTRATIONS of Standard Cast Iron Fittings, as well as all other goods in this Catalog, are made from photographs, and every one is an exact likeness of the article it represents. The Fittings illustrated on the following pages are marked with the monogram **KB** and include all sizes, both straight and reducing, from ¼ inch to 16 inches. These Fittings are all recessed, which permits of the easy entrance of the pipe; are uniform in design, both in the straight and reducing sizes; and of good weight; and are suitable for working pressures up to 125 pounds.

EXTRA HEAVY

The increasing use of high pressures and superheated steam has created a demand for something better than the ordinary Standard Cast Iron Fitting. To meet this demand, we offer our line of Extra Heavy Fittings illustrated and described on page 21.

We recommend these Fittings for a steam working pressure up to 250 pounds; but we do not recommend the use of Screwed Fittings above 6 inches—for larger sizes, flanged are more suitable.

The same careful workmanship that characterizes all **KB** products is closely followed in the manufacture of Cast Iron Fittings. In no department of the works is more care exercised than in the foundry where the castings are produced. The material used is of a very high grade, and is selected by chemical analysis, and only the irons showing the greatest tensile strength are used.

We have, at various times, tested our iron, and have found it to average between 23,000 and 24,000 pounds per square inch tensile strength.

An important feature in the production of Cast Iron Fittings is the tapping. All threads in our Valves and Fittings, up to and including 16 inches, are tapped to Briggs' Standard Gauge, which has been adopted as the universal standard by all the leading manufacturers of wrought pipe, valves and fittings in the United States.

The inspection of our Cast Iron Fittings, and all other goods we handle, is very rigid and, with the great care we exercise, only perfect Fittings, with full cut threads, accurate as to gauge and absolute alignment, are furnished.

PRESSURE TEST

In order to arrive at the average bursting strength of our Standard and Extra Heavy Screwed Fittings, twelve Fittings each of three different sizes were taken from stock and the bursting pressure of each size Fitting was averaged as a basis for determining the factor of safety. The following shows the result of the test and gives the factor of safety:

STANDARD ELBOWS			EXTRA HEAVY ELBOWS		
	Bursting Pressure	Factor of Safety		Bursting Pressure	Factor of Safety
1 inch	5,608 lbs.	44.8	1 inch	9,825 lbs.	39.3
2½ "	3,816 "	30.5	2½ "	5,583 "	22.3
6 "	2,250 "	18.	6 "	3,158 "	12.6

STANDARD

CAST IRON PIPE FITTINGS

FOR 125 POUNDS WORKING PRESSURE

Hy-Tech Products

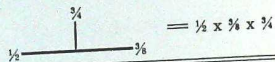
LIST OF SIZES OF
STANDARD CAST IRON FITTINGS

TEES

Straight Sizes....	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
--------------------	---	---	---	---	---	----	----	---	----	---	----	---	----	---	---	---	---	---	----	----

TEES—Reducing Sizes

In describing tees, the run is first named, then the outlet, thus:



¾ x ¾ x ¾	1½x1½x1¼	2 x1 x1	1½x1¼x2¼	3½x2½x2½
¾ x ¾ x ¾	1½x1½x1	2 x1 x ¾	1½x1 x2½	3½x2½x2
¾ x ¾ x ¾	1½x1½x ¾	2 x ¾x2	3 x3 x2½	3½x2 x3½
¾ x ¾ x ¾	1½x1½x ½	2 x ¾x1½	3 x3 x2	3½x1½x3½
¾ x ¾ x ¾	1½x1¼x1½	2 x ½x1½	3 x3 x1½	3½x1¼x3½
¾ x ¾ x ¾	1½x1¼x1¼	2 x ½x2	3 x3 x1¼	3½x1 x3½
¾ x ¾ x ½	1½x1¼x1	2 x ½x2	3 x3 x1	3 x3 x3½
¾ x ¾ x ½	1½x1¼x ¾	1½x1¼x2	3 x3 x ¾	4 x4 x3
¾ x ¾ x ½	1½x1¼x ½	1½x1¼x2	3 x3 x ½	4 x4 x2½
¾ x ¾ x ¼	1½x1 x1½	1½x1 x2	3 x2½x3	4 x4 x2
¾ x ¾ x ¼	1½x1 x1¼	1½x1 x2	3 x2½x2½	4 x4 x1½
¾ x ¾ x ¼	1½x1 x1	1½x1 x2	3 x2½x2	4 x4 x1¼
¾ x ¾ x ¼	1½x1 x ¾	1½x1 x2	3 x2½x1½	4 x4 x1
¾ x ¾ x ¼	1½x1 x ½	1½x1 x2	3 x2½x1¼	4 x4 x ¾
¾ x ¾ x ¼	1½x1 x ¼	1 x1 x2	3 x2½x1	4 x3½x4
¾ x ¾ x ¼	1½x ¾x1½	1 x ¾x2	3 x2½x ¾	4 x3½x3½
1 x1 x ¾	1½x ¾x1¼	1 x ¾x2	3 x2 x3	4 x3½x3
1 x1 x ½	1½x ¾x1	2½x2½x2	3 x2 x2½	4 x3½x2½
1 x1 x ½	1½x ¾x ¾	2½x2½x1½	3 x2 x2	4 x3½x2
1 x1 x ½	1½x ½x1½	2½x2½x1¼	3 x2 x1½	4 x3½x1½
1 x1 x ½	1½x ½x1¼	2½x2½x1	3 x2 x1	4 x3½x1¼
1 x ¾x1	1½x ½x1½	2½x2½x ¾	3 x1½x3	4 x3½x1
1 x ¾x ½	1½x1 x1½	2½x2½x ½	3 x1½x2½	4 x3 x4
1 x ¾x ¼	1½x1 x1¼	2½x2 x2½	3 x1½x2	4 x3 x3½
1 x ¾x ¼	1½x1 x1	2½x2 x2	3 x1½x3	4 x3 x3
1 x ¾x ¼	1½x1 x ¾	2½x2 x1½	3 x1 x3	4 x3 x2½
1 x ¾x ¼	1½x1 x ½	2½x2 x1¼	2½x2½x3	4 x3 x2
1 x ¾x1	1½x1 x ¼	2½x2 x1	2½x2½x3	4 x3 x1½
¾ x ¾x1	¾x ¾x1½	2½x2 x ¾	2½x2 x3	4 x3 x1¼
¾ x ¾x1	¾x ¾x1¼	2½x2 x ½	2½x1½x3	4 x3 x1
¾ x ¾x1	¾x ¾x1	2½x2 x1	2½x1½x2½	4 x3 x ¾
1¼x1¼x1	2 x2 x ¾	2½x1½x2	3½x3½x3	4 x2½x4
1¼x1¼x ¾	2 x2 x ½	2½x1½x1½	3½x3½x2½	4 x2½x3½
1¼x1¼x ½	2 x2 x ¼	2½x1½x1¼	3½x3½x2	4 x2½x3
1¼x1¼x ¼	2 x1½x2	2½x1½x1	3½x3½x1½	4 x2½x2½
1¼x1 x1¼	2 x1½x1½	2½x1½x2½	3½x3½x1	4 x2½x2
1¼x1 x1	2 x1½x1¼	2½x1½x2	3½x3½x ¾	4 x2½x1½
1¼x1 x ¾	2 x1½x1	2½x1¼x1½	3½x3 x3 ¾	4 x2½x1¼
1¼x1 x ½	2 x1½x ¾	2½x1 x2½	3½x3 x3	4 x2½x1
1¼x ¾x1¼	2 x1½x ½	2½x1 x2	3½x3 x2½	4 x2 x4
1¼x ¾x ¾	2 x1½x2	2½x ¾x2½	3½x3 x2	4 x2 x3
1¼x ¾x ½	2 x1¼x1½	2½x ½x2½	3½x3 x1½	4 x2 x2½
1¼x ¾x1¼	2 x1¼x1¼	2½x ½x2	3½x3 x1	4 x2 x2
1¼x ¾x1	2 x1¼x ¾	2 x1¼x2½	3½x3 x1¼	4 x1½x4
1¼x ¾x ¾	2 x1¼x ½	2 x1¼x2	3½x3 x ¾	3½x2½x3½
1 x1 x1¼	2 x1 x2	2 x1 x1½	3½x3 x ½	3½x2½x3
1 x ¾x1¼	2 x1 x1½	2 x1 x1¼	3½x2½x3	3½x2½x3
¾ x ¾x1¼	2 x1 x1¼	1½x1½x2½	3½x2½x3	3½x2½x3

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS

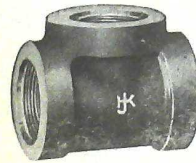


Fig. 26
Straight Tee



Fig. 27
Reducing on Run



Fig. 27A
Reducing on Outlet

TEES, STRAIGHT SIZES

Size	inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Price	each	.08	.08	.09	.12	.15	.23	.29	.41	.73	1.10	1.50	2.00
Size	inches	4½	5	6	7	8	9	10	12	14	15	16	
Price	each	2.55	3.00	4.00	6.80	9.75	13.00	19.50	29.00	75.00	90.00	100.00	

REDUCING TEES

Size	inches	¾	1	1¼	1½	2	2½	3	3½	4		
Price	each	.09	.10	.14	.17	.27	.33	.47	.83	1.25	1.75	2.00
Size	inches	4½	5	6	7	8	9	10	12	14	15	16
Price	each	2.95	3.50	4.40	7.80	11.25	15.00	22.50	33.50	82.00	100.00	110.00

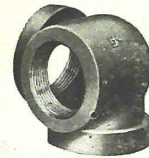


Fig. 27B Side Outlet Elbow



Fig. 27C Side Outlet Tee

SIDE OUTLET ELBOWS

Size	inches	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Price Straight Sizes	each	.18	.24	.30	.48	.60	.84	1.50	2.25	3.15	5.00	5.25	6.00	7.50
Price Reducing Sizes	each	.21	.23	.35	.55	.68	.96	1.70	2.5	3.00	4.00	5.00	6.00	7.50

SIDE OUTLET TEES

Size	inches	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Price Straight Sizes	each	.27	.36	.45	.70	.90	1.25	2.25	3.25	4.50	5.25	7.65	9.00	12.00
Price Reducing Sizes	each	.31	.42	.52	.80	1.00	1.45	2.55	3.73	5.15	6.00	10.25	12.00	15.00

Sizes not listed above made to order at net prices.

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS



Fig. 28 Straight Cross



Fig. 28A Reducing Cross

CROSSES, STRAIGHT SIZES

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5
Price..... each	.15	.15	.16	.22	.27	.42	.53	.75	1.30	2.00	2.70	3.15	4.60	5.50
Side Outlet.....			.36	.48	.60	.94	1.20	1.67	2.97	4.36	6.00	7.00	10.21	12.10
Size..... inches	6	7	8	9	10	12	14	15	16					
Price..... each	7.25	12.25	17.50	23.50	35.00	52.50	110.00	130.00	140.00					
Side Outlet.....	16.05													

REDUCING CROSSES

Size..... inches	½	¾	1	1¼	1½	2	2½	3	3½	4	4½
Price..... each	.18	.25	.30	.46	.60	.83	1.45	2.20	3.00	3.50	5.10
Size..... inches	5	6	7	8	9	10	12	14	15	16	
Price..... each	6.00	8.00	13.50	19.25	26.00	31.50	58.00	120.00	13.00	150.00	



Fig. 29 Y Branch

Y BRANCHES

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	
Price..... each	.20	.20	.20	.28	.34	.54	.66	.94	1.66	2.50	3.50	
Reducing.....	.23	.23	.23	.33	.40	.62	.76	1.08	1.90	2.90	4.00	
Size..... inches	4	4½	5	6	7	8	9	10	12	14	15	16
Price..... each	4.00	5.90	7.00	9.20	15.60	22.50	30.00	45.00	67.00	135.00	160.00	175.00
Reducing.....	4.60	6.80	8.00	10.60	18.00	26.00	35.00	51.75	77.00	150.00	180.00	200.00

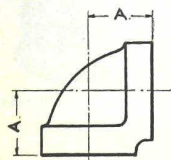
OFFSETS

Size..... inches	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	8
Price, to Offset 4 ins... each	.45	.70	1.00	1.20	1.80	3.00	4.00	5.00	6.00	7.00	8.00	10.00	20.00
to Offset 6 ins... "	.67	1.05	1.50	1.80	2.70	4.50	6.00	7.50	9.00	10.50	12.00	15.00	25.00
to Offset 8 ins... "	.90	1.40	2.00	2.40	3.60	6.00	8.00	10.00	12.00	14.00	16.00	20.00	30.00

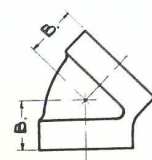
Sizes not listed above made to order at special net prices. Ys are made reducing by filling up ends, thus avoiding the use of screwed bushings. Dimensions remain the same as straight sizes. Double Branch Ys made to order at special prices.

ORDER BY FIGURE NUMBERS

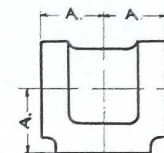
CAST IRON FITTINGS



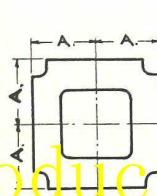
90° Elbow



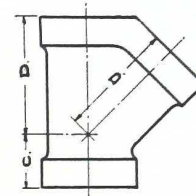
45° Elbow



Tee



Cross



45° Y

Dimensions: 90° Ells, 45° Ells, Tees, Crosses, 45° Ys.

Size	A	B	C	D	Size	A	B	C	D
¼	¾		¾	1¾	3½	3¾	2¾	2½	6¾
⅜	1		1¼	1¾	4	3¾	2¾	2¾	7¼
½	1½	1¼	¾	1¾	4½	4¾	2¾	3	8¾
¾	1¾	1	¾	2¼	5	4¾	2¾	2¾	8¾
1	1½	1¾	1¼	2¾	6	5¾	3¾	3¾	10¾
1¼	1¾	1¾	1	2¾	7	5¾	3¾	4	12
1½	1¾	1¾	1¼	3¾	8	6¾	3¾	4½	14
2	2¼	1¾	1½	4¾	9	7¾	4¾	4¾	14¾
2½	2¾	1¾	1¾	4¾	10	8¾	4¾	5	16¾
3	3¾	2	1¾	5¾	12	10¾	5¾	5¾	19¾

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS



Fig. 36 Reducer



Fig. 36A Eccentric Reducer



Fig. 49 Right and Left Coupling "Kelly's" Patent

REDUCERS

Size.....	inches	¾	1	1¼	1½	2	2½	3	3½	4
Price.....	each	.10	.16	.22	.28	.43	.60	.80	1.00	1.35
Size.....	inches	4½	5	6	7	8	9	10	12	
Price.....	each	1.85	2.00	2.70	5.35	6.75	8.35	10.00	15.00	

ECCENTRIC REDUCERS

Size.....	inches	1	1¼	1½	2	2½	3	3½	4
Price.....	each	.55	.55	.72	1.00	1.50	2.40	3.00	4.00
Size.....	inches	4½	5	6	7	8	9	10	12
Price.....	each	5.00	6.00	3.00	9.00	11.00	12.50	14.00	15.00

CAST IRON RIGHT AND LEFT COUPLINGS

Size.....	inches	¾	¾	½	¾	1	1¼	1½	2	2½	3	3½	4
Price.....	each	.07	.08	.11	.15	.20	.25	.30	.50	.85	1.20	1.50	2.00
	Galv.	.14	.16	.22	.30	.40	.50	.60	1.00	1.70	2.40	3.00	4.00

End tapped left hand is plainly marked to prevent confusion. Can be applied with pipe tongs or wrench of any kind. Couplings with right hand threads furnished at same list as right and left.

ECCENTRIC TEES



Fig. 24



Fig. 25



Fig. 25A

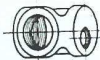


Fig. 25B

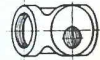


Fig. 25C



Fig. 25D



Fig. 25E



Fig. 25F



Fig. 25G



Fig. 25H

These Eccentric Tees are designed to prevent the accumulation of water from condensation. The above sketches cover nearly every requirement and, in ordering, use the figure number of the Fitting desired. If a Fitting, not covered by above cuts, is desired, submit sketch. Prices on application.

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS

RETURN BENDS



Fig. 30 Close Pattern



Fig. 31 Open Pattern

CLOSE PATTERN

Size.....	inches	¾	½	¾	1	1¼	1½	2	2½	3	4
Price, Right Hand.....	each	.17	.18	.20	.22	.28	.40	.57	1.20	1.70	5.00
.. Right and Left.....	"	.20	.21	.23	.26	.33	.46	.66	1.40	1.95	5.25
.. Left Hand.....	"	.20	.21	.23	.26	.33	.46	.66	1.40	1.95	5.25
.. Right Hand, Pitched.....	"	.23	.26	.33							
.. Right and Left or Left Hand, Pitched.....	"	.23	.26	.33							
Center to Center.....	inches	1¼	1¼	1¼	1¼	2¼	2¼	3¼	3¼	4¾	6

Right and Left and Left Hand Pitched Return Bends are made to order.

OPEN PATTERN

Size.....	inches	¾	¾	1	1¼	1½	2	2½	3	4
Price, Right Hand.....	each	.25	.26	.30	.40	.55	.80	1.35	2.20	6.50
.. Right and Left.....	"	.30	.30	.35	.46	.64	.92	1.55	2.50	7.00
.. Left Hand.....	"	.30	.30	.35	.46	.64	.92	1.55	2.50	7.00
Center to Center.....	inches	1¼	2¼	2½	3	3½	4½	5½	6½	7



Fig. 33 Special Wide Pattern

SPECIAL WIDE PATTERN

Size.....	inches	1	1	1	1	1	1	1¼	*1¼	1¼	1¼	*1¼	*1¼	1¼		
Price.....	Black, each	.30	.45	.50	.60	.75	1.00	1.25	.30	.60	1.00	1.25	1.40	2.25	2.50	2.00
	Galv.	.60	.80	.90	1.10	1.30	1.60	1.85	.55	1.10	1.75	2.00	2.25	3.75	4.00	3.25
Center to Center, inches		2¾	3	4	5	6	8	9	2¼	2¼	4	6	7	7½	8	9
Size.....	inches	1½	1½	*2	2	2	2	2	2	2	2½	3	3½	4	4	4
Price.....	Black, each	1.60	2.00	2.00	.80	1.75	1.90	2.00	3.50	4.50	5.50	6.00	5.50	6.25	6.50	7.50
	Galv.	2.60	3.25	3.25	1.60	3.00	3.15	3.25	5.00	7.00	9.00	10.00	9.00	9.75	10.00	11.00
Center to Center, inches		6	8	3¾	4	4¾	5	6	8	12	8	10	5	6	7	11

* These sizes are extra heavy. Return Bends not listed will be furnished at special net prices.

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS

RETURN BENDS



Fig. 33A Back Outlet

Close Pattern



Fig. 33B Side Outlet

BACK OUTLET

Size..... inches	¾	1	1¼	1½	2	2½	3
Price, Right Hand..... each	.38	.42	.60	.80	1.15	2.00	3.00
Right and Left..... each	.42	.48	.70	.95	1.30	2.30	3.50
Center to Center..... inches	1¼	1¾	2¼	2½	3¼	3¾	4¾

SIDE OUTLET

Size..... inches	¾	1	1¼	1½	2	2½	3
Price, Right Hand..... each	.42	.48	.65	.90	1.40	2.25	3.50
Right and Left..... each	.46	.54	.75	1.05	1.55	2.55	4.00
Center to Center..... inches	1½	1¾	2¼	2½	3¼	3¾	4¾



Fig. 32 Back Outlet

Open Pattern



Fig. 32A Side Outlet

BACK OUTLET

Size..... inches	¾	1	1¼	1½	2	2½	3
Price, Right Hand..... each	.38	.42	.60	.80	1.15	2.00	3.00
Right and Left..... each	.42	.48	.70	.95	1.30	2.30	3.50
Center to Center..... inches	2¼	2½	3	3½	4½	5¾	6¾

SIDE OUTLET

Size..... inches	¾	1	1¼	1½	2	2½	3
Price, Right Hand..... each	.42	.48	.65	.90	1.40	2.25	3.50
Right and Left..... each	.46	.54	.75	1.05	1.55	2.55	4.00
Center to Center..... inches	2¼	2½	3	3½	4½	5¾	6¾

The Back or Side Outlet of Right and Left Return Bends is always tapped Right Hand.

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS



Fig. 41 Plug



Fig. 42 Countersunk Plug

PLUGS

Size..... inches	¼	¾	½	¾	1	1¼	1½	2	2½	3	3½	
Price, Plugs..... each	.02	.02	.02	.02	.03	.04	.05	.07	.10	.18	.25	.38
Solid Plugs, not illustrated..... each	.04	.04	.04	.06	.08	.09	.11	.15	.27	.38	.57	
Size..... inches	4	4½	5	6	7	8	9	10	12	14	15	16
Price, Plugs..... each	.42	.65	.88	1.20	1.85	2.75	3.25	3.75	5.00	12.50	15.00	20.00
Solid Plugs, not illustrated..... each	.63	1.00	1.35	1.80	2.80	4.15	5.00	5.75	7.50	18.75	22.50	30.00

PLUGS—Continued

Size..... inches	¼	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Price, Coarse Thread..... each	.04	.06	.08	.09	.11	.15	.30	.40	.92	1.10	1.55	2.00	3.50
Left Hand..... each	.06	.06	.08	.09	.11	.15							
Tapped for Air Cock..... each	.12	.15	.20	.25	.30								



Fig. 38 Bushing



Fig. 35 Cap
Ribbed, 2½-inch and Larger
Plain, 2-inch and Smaller



Fig. 37 Lock Nut

BUSHINGS, CAPS, LOCK NUTS

Size..... inches	¾	1	1¼	1½	2	2½	3	3½	4		
Price, Bushings..... each	.04	.04	.05	.06	.07	.09	.14	.21	.30	.40	.50
Caps..... each	.03	.03	.05	.08	.14	.20	.26	.40	.54	.75	.87
Lock Nuts..... each						.25	.27	.34	.47	.64	
Size..... inches	4½	5	6	7	8	9	10	12	14	15	16
Price, Bushings..... each	.75	.93	1.25	1.87	2.75	3.25	3.75	5.00	12.50	15.00	22.00
Caps..... each	1.05	1.20	1.55	2.50	2.85	4.75	5.50	7.00	19.00	22.00	25.00
Lock Nuts..... each	.85	.90	1.30	1.70	2.35	2.70	3.00	4.00			

NOTE—Left Hand Bushings, add 15 per cent. to list of Right Hand. Bushings reducing one size only, up to and including 2½", are malleable, and are listed among Malleable Fittings. The list price of Bushings is determined by the male thread size.

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS



Fig. 38B Bushing, Diamond Design

RADIATOR BUSHINGS

Size..... inches	1x3/4	1 1/4x1	1 1/2x1 1/2	1 3/4x1 3/4	1 1/2x1	1 1/2x1 1/4	2x1 1/2	2x1	2x1 1/4	2x1 1/2
Price, Diamond Design... each	.09	.11	.14	.14	.14	.14	.21	.21	.21	.21



Fig. 35B Eccentric Bushing, Diamond Design
ECCENTRIC RADIATOR BUSHINGS

Size..... inches	1 1/4x1 1/2	1 1/2x1 1/2	1 3/4x1 1/2	1 3/4x1 1/4	1 1/2x1	2x1 1/2	2x1 3/4	2x1	2x1 1/4
Price, Diamond Design... each	.22	.22	.25	.25	.25	.27	.27	.27	.27



Fig. 35C Plug, Diamond Design

RADIATOR PLUGS

Size..... inches	3/4	1	1 1/4	1 1/2	2
Price, Diamond Design... each	.06	.08	.10	.14	.20

ECCENTRIC BUSHINGS—Not Illustrated

Size, inches	1 1/4x1 1/2	1 1/2x1 1/2	1 3/4x1 1/2	1 3/4x1 1/4	2x1 1/2	2x1 3/4	2x1	2x1 1/4	2 1/2x1 1/2	2 1/2x1 1/4	2 1/2x1 1/2	3x1 1/2
Price... each	.22	.22	.25	.25	.27	.27	.27	.27	.42	.42	.42	.60
Size, inches	3x1	3x1 1/2	3x2	3 1/2x1 1/2	3 1/2x2	3 1/2x2 1/2	4x1 1/2	4x2	4x3	5x2	5x4	6x4
Price... each	.60	.60	.60	.80	.80	.80	1.00	1.00	1.00	1.85	1.85	2.50

Sizes not listed above made to order at special net prices.

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS



Fig. 154



Fig. 155



Fig. 156



Fig. 156A

BRANCH TEES

Size of Outlet	3/4		1					1 1/4			1 1/2			2					
	3/4-1	1 1/4	1	1 1/4	2	2 1/2	3	1 1/4	2	2 1/2	3	1 1/2	2 1/2	3	2	2 1/2	3	3 1/2	4
Size of Run	3/4-1	1 1/4	1	1 1/4	2	2 1/2	3	1 1/4	2	2 1/2	3	1 1/2	2 1/2	3	2	2 1/2	3	3 1/2	4
Inside Diam.	3/4-1	1-1 1/4	1-1 1/4	1-1 1/4	2	2 1/2	3	1 1/4-1 1/2	1 1/2-2	2 1/2	3	1 1/2-2	2-2 1/2	3	2 1/2	3	3 1/2	4	4 1/2
C. to C. of Outlet	2 1/4	2 1/4	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	3	3	3	3	3 1/2	3 1/2	3 1/2	4 1/2	4 1/2	4 1/2	4 1/2	4 1/2
2 Branch	.90	.90	.90	1.00	1.15	1.35	1.51	1.75	1.90	1.50	1.95	2.10	2.85	3.15	4.10	4.50	4.50	5.00	5.50
3 "	1.05	1.05	1.05	1.15	1.35	1.60	2.05	2.40	2.70	2.40	3.30	3.45	4.15	4.60	5.25	5.75	5.75	6.25	6.75
4 "	1.15	1.15	1.15	1.30	1.60	2.00	2.40	2.85	3.00	3.30	4.30	4.15	4.60	6.40	7.00	7.00	7.75	8.25	
5 "	1.35	1.35	1.35	1.45	1.85	2.75	4.40	2.40	2.90	3.55	4.90	4.00	5.00	5.50	7.65	8.50	8.50	9.25	9.75
6 "	1.60	1.60	1.60	1.75	2.10	3.10	4.85	2.80	3.30	3.95	5.40	4.65	5.75	6.25	8.80	9.75	9.75	10.75	11.25
7 "	1.90	1.90	1.90	2.20	2.45	3.50	5.50	3.20	3.90	4.20	6.25	5.25	6.50	7.25	10.60	11.75	11.75	13.00	13.50
8 "	2.20	2.20	2.20	2.45	2.75	3.75	6.20	3.60	4.50	4.95	7.10	5.85	7.00	7.75	11.50	12.75	12.75	14.00	14.50
9 "	2.65	2.65	2.65	2.90	3.40	4.30	7.85	4.30	5.25	6.15	8.25	6.50	8.25	9.00	12.25	13.50	13.50	15.00	15.50
10 "	3.15	3.15	3.15	3.30	4.00	5.00	8.40	4.80	5.85	6.85	9.20	7.60	9.25	10.00	13.50	15.00	15.00	16.50	17.00
11 "	3.75	3.75	3.75	4.50	4.80	5.50	9.05	5.00	6.25	7.25	10.00	8.00	9.75	10.75	14.25	15.75	15.75		
12 "	4.40	4.40	4.40	4.75	5.10	5.85	9.70	5.25	6.50	7.65	10.85	8.50	10.50	11.50	15.00	16.50	16.50		
13 "	5.00	5.00	5.00	5.50	6.00	6.30	10.35	6.00	7.00	8.25	11.65	9.50	11.50	12.75	16.00	17.50	17.50		
14 "				7.00	7.25		11.00	6.75	7.75	9.00									
15 "				7.50	7.75		11.75	7.50	8.50	9.75									
16 "				8.00	8.25		12.50	8.50	9.50	10.75									

All our Branch Tees are rigidly inspected and thoroughly tested.
Back or Side Outlets charged as additional Front Outlets. In ordering, be particular to STATE SIZE OF RUN required. When not ordered otherwise, all openings will be tapped right hand.
Branch Tees for Circulation are tapped right hand—all openings
Branch Tees for Box Coils are tapped left hand in Branches and right hand in Back Outlets.

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS



Fig. 45 Common



Fig. 46 Curved



Fig. 47 Solid
25% higher than Common Flanges

CAST IRON FLANGES—Not Faced

Pipe Size	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12	14	15	16
Diam.																				
3 in.	.10	.10																		
3 1/2	.15	.15	.15	.16																
4	.22	.22	.22	.22	.16	.16														
4 1/2	.25	.25	.25	.25	.25	.22														
5	.35	.35	.30	.30	.30	.30	.35													
5 1/2	.45	.45	.45	.40	.40	.40	.35	.40												
6	.50	.50	.50	.42	.40	.40	.42	.50												
6 1/2	.65	.60	.60	.60	.55	.50	.50	.65												
7	.75	.75	.75	.70	.70	.62	.62	.75												
7 1/2	.90	.90	.90	.85	.85	.80	.80	.90	.75	.85	.90									
8	1.00	1.00	1.00	.95	.95	.90	.90	.90	.90	.90										
8 1/2	1.25	1.25	1.15	1.15	1.10	1.10	1.10	1.00	1.00											
9		1.35	1.35	1.35	1.30	1.25	1.15	1.15	1.15	1.15	1.40									
9 1/2			1.90	1.90	1.75	1.75	1.60	1.60	1.50	1.25	1.50	1.50								
10			2.25	2.25	2.15	2.00	1.80	1.50	1.50	1.50	1.50	1.50								
11				2.50	2.50	2.25	2.25	2.00	1.75	1.75	1.75	2.20								
12					3.00	3.00	2.75	2.50	2.50	2.20	2.20	2.80								
12 1/2						3.00	3.00	2.75	2.50	2.20	2.20	2.80								
13							3.50	3.50	3.25	3.00	3.00	3.80	3.80							
13 1/2								3.50	3.50	3.25	3.00	3.80	3.80							
14									4.00	4.00	3.75	3.75	3.50	3.25	3.25	3.75	4.00			
15										4.00	4.00	4.00	4.50							
16											5.00	5.00	5.00	6.00						
17												6.50	6.50	7.50	7.50					
18													8.00	8.00	7.00					
19														7.50	7.50					
20															8.50	8.50				
21																9.50				
22 1/2																	14.00			
23 1/2																		18.00		

Curved and Extra Heavy Flanges made to order at special prices. Galvanized Flanges at double the above list.

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS



Fig. 48 Standard Union



Fig. 48A Extra Heavy Union

FLANGE UNIONS

STANDARD FLANGE UNIONS—For 125 Pounds Working Pressure

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2
Diam. of Flanges.....inches	2 1/4	3 1/4	3 3/4	3 3/4	4 1/2	5 1/4	5 3/4	6 3/4	7	8	8 3/4
Number of Bolts.....	3	3	4	4	4	4	4	4	4	5	5
Price.....each	.40	.46	.52	.64	.78	1.00	1.25	1.50	1.80	2.10	2.70
Price.....Galv.	.80	.92	1.04	1.28	1.56	2.00	2.50	3.00	3.60	4.20	5.40

Size.....inches	5	6	7	8	9	10	12	14	15	16
Diam. of Flanges.....inches	9 1/2	11	12	13 3/4	14	15 1/2	18	22	22	23
Number of Bolts.....	5	6	7	7	8	10	12	14	14	16
Price.....each	3.15	3.95	5.50	7.00	10.00	11.50	16.00	28.00	35.00	60.00
Price.....Galv.	6.30	7.90	11.00	14.00	20.00	23.00	32.00	56.00	70.00	120.00

EXTRA HEAVY FLANGE UNIONS—For 250 Pounds Working Pressure

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12
Diam. of Flgs. ins.	3	3 1/4	3 3/4	4 1/4	4 1/2	5 1/4	6	6 1/4	7 1/4	8	8 3/4	9 3/4	10 3/4	12	13 3/4	14 3/4	15 3/4	18
Number of Bolts	3	4	4	4	4	5	5	6	6	6	7	8	8	8	9	10	10	12
Price.....each	.60	.70	.80	1.00	1.15	1.50	1.90	2.25	2.70	3.15	4.00	4.75	6.00	8.25	10.50	15.00	17.25	24.00

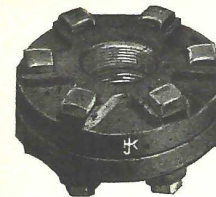


Fig. 54 Extra Heavy Union

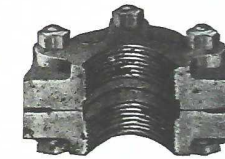


Fig. 54A Sectional Cut

EXTRA HEAVY FLANGE UNIONS—For 400 Pounds Working Pressure

Size.....inches	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	7	8	10	12
Diam. of Flanges.....inches	4 1/2	5	6	6 1/2	7 1/4	8 1/4	8 3/4	9 1/4	10 1/4	11 3/4	13	14 1/4	17 1/4	19 1/4
Number of Bolts.....	4	5	5	5	6	6	6	8	8	8	10	12	15	16
Price.....each	1.80	2.30	3.20	3.50	4.40	6.20	7.60	8.80	9.90	11.60	21.00	28.00	35.00	50.00

Sizes not listed above made to order at special net prices.
NOTE—For Galvanized Extra Heavy Flange Unions for 250 pounds pressure, double the list given.
For Galvanized Extra Heavy Flange Unions for 400 pounds pressure, add 60% to list given.

ORDER BY FIGURE NUMBERS

LIST OF SIZES OF
STANDARD CAST IRON FITTINGS

NOTE—Sizes not mentioned in the following list are to be charged at five per cent. (5%) gross discount higher than those found in the "Standard Sizes".

ELBOWS

Straight Sizes.....	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
---------------------	---	---	---	---	---	----	----	---	----	---	----	---	----	---	---	---	---	---	----	----

ELBOWS—Reducing Sizes

¾x ¼	1 x ¾	2 x 1½	3 x 2½	4 x 3	6x5
½x ⅜	1¼x1	2 x 1¼	3 x 2	4 x 2½	6x4
½x ¼	1¼x ¾	2 x 1	3 x 1½	4 x 2	7x6
¾x ½	1¼x ½	2½x2	3½x3	5 x 4½	8x7
¾x ⅜	1¼x ¼	2½x1½	3½x2½	5 x 4	8x6
¾x ¼	1½x1¼	2½x1	3½x2	5 x 3	10x8
1 x ¾	1½x ½	.....	4 x 3½	5 x 2½	.....
1 x ½	1½x ¼	.....	.....	.....	.....

45° ELBOWS

Straight Sizes...	¾	½	¼	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
-------------------	---	---	---	---	----	----	---	----	---	----	---	----	---	---	---	---	---	----	----

RIGHT AND LEFT ELBOWS

Straight Sizes...	¼	⅜	½	¾	1	1¼	1½	2	2½	3
-------------------	---	---	---	---	---	----	----	---	----	---

PITCHED ELBOWS

¾x½	¾	1x¾	1	1¼x1	1¼	1½x1½	1½	2x1½	2	2½x2	2½	3x2½	3	3½x3	3½	4
-----	---	-----	---	------	----	-------	----	------	---	------	----	------	---	------	----	---

REDUCING COUPLINGS

4½x4	5 x 3½	6x5	6x3	7x6	10x 8
5 x 4½	5 x 3	6x4	6x2½	.....	10x 6
5 x 4	5 x 2½	6x3½	6x2	8x7	.....
.....	5 x 2	.....	.....	8x6	12x10
.....	.....	.....	.....	8x4	.....

ECCENTRIC REDUCERS

1¼x ¾	2 x 1¼	3 x 1¼	4 x 2	5 x 3	6x4
1¼x1	2 x 1½	3 x 2	4 x 2½	5 x 3½	6x5
1½x1	2½x1¼	3 x 2½	4 x 3	5 x 4	7x6
1½x1½	2½x1½	3½x1½	4½x4	.....	.....
.....	2½x2	3½x2	.....	6x2½	8x5
2 x ¾	.....	3½x2½	5 x 2	6x3	8x6
2 x 1	.....	3½x3	5 x 2½	6x3½	8x7

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS

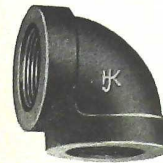


Fig. 21 Straight Elbow



Fig. 21A Reducing Elbow



Fig. 22 Right and Left Elbow



Fig. 23 45° Elbow

ELBOWS, STRAIGHT SIZES

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Price..... each	.05	.05	.06	.08	.10½	.16	.20	.28	.50	.75*	1.05	1.20
Size..... inches	4½	5	6	7	8	9	10	12	14	15	16	.....
Price..... each	1.75	2.00	2.75	4.70	6.75	9.00	13.50	20.00	57.00	70.00	80.00	.....

NOTE—Elbows Tapped Left Hand same list as Right and Left Elbows.

REDUCING ELBOWS

Size..... inches	¾	½	¼	1	1¼	1½	2	2½	3	3½	4
Price..... each	.06	.07	.09	.12	.18	.23	.32	.60	.85	1.20	1.40
Size..... inches	4½	5	6	7	8	9	10	12	14	15	16
Price..... each	2.00	2.30	3.15	5.40	7.75	10.50	15.50	23.00	63.00	77.00	80.00

RIGHT AND LEFT ELBOWS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price..... each	.06	.06	.07	.09	.12	.18	.23	.32	.60	.85

NOTE—The ribs in the band of Right and Left Elbows denote the Left Hand Thread.

45° ELBOWS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Price..... each	.06	.06	.07	.10	.12	.19	.24	.34	.60	.90	1.25	1.45
Size..... inches	4½	5	6	7	8	9	10	12	14	15	16	.....
Price..... each	2.20	2.50	3.45	5.90	8.50	11.25	17.00	25.00	55.00	68.00	75.00	.....

22½°, 30° AND 60° ELBOWS—Not Illustrated

Size..... inches	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
22½°, 30° and 60° Elbows..... each	.25	.30	.35	.45	.50	.60	1.10	1.65	2.25	2.75	4.00	4.50	6.50

PITCHED ELBOWS—Not Illustrated

Tapped to pitch ¼ inch in 1 foot

Size..... inches	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Price..... each	.10	.13	.20	.25	.35	.65	1.00	1.30	1.50	2.25	3.00	4.00
Reducing "P".....	.11	.14½	.22	.28	.39	.75	1.10	1.45	1.70	2.50	3.30	4.40

NOTE—The letter "P" is cast on the side of all our Elbows tapped to pitch. Sizes not listed above made to order at special net prices.

Special Degree Fittings made to order at special prices.

The largest opening of Reducing Cast Iron Fittings determines the list price.

ORDER BY FIGURE NUMBERS

LIST OF SIZES OF
STANDARD CAST IRON FITTINGS

TEES—Reducing Sizes—Continued

3 x3 x4	5 x4 x3½	6 x6 x1½	7 x6 x7	8x 6x 6
2½ x2½ x4	5 x4 x3	6 x6 x1¼	7 x6 x6	8x 5x 8
2 x2 x4	5 x4 x2½	6 x6 x1	7 x6 x5	8x 5x 5
4½ x4½ x4	5 x4 x2	6 x5 x6	7 x6 x4	8x 4x 8
4½ x4½ x3½	5 x4 x1½	6 x5 x5	7 x6 x3	8x 4x 6
4½ x4½ x3	5 x3½ x3½	6 x5 x4	7 x5 x6	9x 6x 6
4½ x4½ x2½	5 x3 x5	6 x5 x3½	7 x5 x5	9x 9x 7
4½ x4½ x2	5 x3 x4½	6 x5 x3	6 x6 x7	9x 9x 6
4½ x4½ x1½	5 x3 x4	6 x5 x2½	5 x5 x7	10x10x 8
4½ x4½ x1¼	5 x3 x3½	6 x5 x1½	8 x8 x7	10x10x 8
4½ x4½ x1	5 x3 x3	6 x4 x6	8 x8 x6	10x10x 6
4½ x4 x3	5 x3 x2½	6 x4 x4	8 x8 x5	10x10x 5
4½ x4 x2	5 x3 x2	6 x4 x3	8 x8 x4	10x10x 4
5 x5 x4½	5 x2½ x5	6 x3 x6	8 x8 x3½	10x10x 3
5 x5 x4	5 x2½ x4	6 x2½ x6	8 x8 x3	10x10x 2
5 x5 x3½	5 x2 x5	6 x2 x6	8 x8 x2½	10x 8x 8
5 x5 x3	5 x1½ x5	5 x3½ x6	8 x8 x2	8x 8x10
5 x5 x2½	4 x4 x5	4 x4 x6	8 x8 x1½	12x12x10
5 x5 x2	6 x6 x5	7 x7 x6	8 x7 x8	12x12x 8
5 x5 x1½	6 x6 x4½	7 x7 x5	8 x7 x6	12x12x 6
5 x5 x1¼	6 x6 x4	7 x7 x4	8 x7 x5	12x12x 4
5 x5 x1	6 x6 x3½	7 x7 x3½	8 x7 x4	12x 8x10
5 x4 x5	6 x6 x3	7 x7 x3	8 x6 x8	12x 8x 8
5 x4 x4½	6 x6 x2½	7 x7 x2½	8 x6 x7	
5 x4 x4	6 x6 x2	7 x7 x2		

RETURN BENDS—Close Pattern

Sizes.....	¾	1	1¼	1½	2	2½	3	4
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RETURN BENDS—Open Pattern

Sizes.....	¾	1	1¼	1½	2	2½	3	4
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OFFSETS—To Offset 4, 6 and 8 inches

Sizes.....	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	8
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CAPS

Sizes...	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12	14	15
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PLUGS

¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12	14	15
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ORDER BY FIGURE NUMBERS

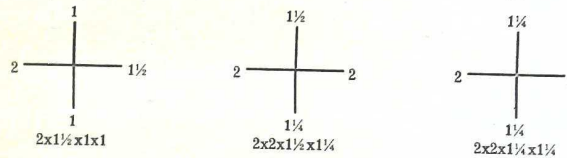
LIST OF SIZES OF
STANDARD CAST IRON FITTINGS

CROSSES

Straight Sizes..	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
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CROSSES—Reducing Sizes

Reducing Crosses are read thus:



¾x ¾x ¾x ¾	2½x 2½x 1½x 1	3 x 2½x 1½x 1½	4 x 3½x 2 x 1½
¾x ¾x ¾x ¾	2½x 2½x 1½x ¾	3 x 2½x 1½x 1¼	4 x 3½x 2 x 1¼
1 x 1 x ¾x ¾	2½x 2½x 1 x 1	3 x 2½x 1½x 1	4 x 3½x 1½x 1½
1 x 1 x ¾x ¾	2½x 2½x 1 x ¾	3 x 2½x 1½x 1	4 x 3½x 1½x 1¼
1 ½x ¾x ¾x ¾	2½x 2½x ¾x ¾	3 x 2½x 1½x 1	4 x 3½x 1½x 1
1 ½x 1½x 1 x 1	2½x 2 x 2 x 1½	3 x 2½x 1 x 1	4 x 3½x 1½x 1
1 ½x 1½x ¾x ¾	2½x 2 x 2 x 1	3 x 2 x 2 x 2	5 x 5 x 4 x 4
1 ½x 1 x 1 x 1	2½x 2 x 2 x ¾	3½x 3½x 3 x 3	5 x 5 x 3 x 3
1 ½x 1 x ¾x ¾	2½x 2 x 1½x 1½	3½x 3½x 2½x 2½	5 x 5 x 2½x 2½
1 ½x ¾x ¾x ¾	2½x 2 x 1½x 1¼	3½x 3½x 2 x 2	5 x 5 x 2 x 2
1 ½x ¾x ¾x ¾	2½x 2 x 1½x 1	3½x 3½x 2 x 1½	5 x 5 x 1½x 1½
1 ½x 1½x 1 x 1	2½x 2 x 1½x ¾	3½x 3½x 1½x 1½	5 x 5 x 1½x 1¼
1 ½x 1½x ¾x ¾	2½x 2 x 1½x 1	3½x 3½x 1 x 1	5 x 5 x 1 x 1
1 ½x 1½x ¾x ¾	2½x 2 x 1 x 1	3½x 3½x 1¼x 1¼	5 x 4 x 2 x 2
1 ½x 1¼x 1¼x 1¼	2½x 2 x 1 x ¾	3½x 3½x 1¼x 1	5 x 4 x 2 x 1½
1 ½x 1¼x 1 x 1	2½x 2 x ¾x ¾	3½x 3½x 1 x 1	5 x 4 x 1½x 1½
1 ½x 1 x 1 x ¾	2½x 1½x 2 x 1½	3½x 3 x 2½x 2	5 x 4 x 1¼x 1¼
1 ½x 1 x ¾x ¾	2½x 1½x 1½x 1	3½x 3 x 2 x 2	5 x 4 x 1¼x 1
2 x 2 x 1½x 1½	2½x 1½x 1¼x 1¼	3½x 3 x 2 x 1½	5 x 4 x 1 x 1
2 x 2 x 1¼x 1¼	2½x 2 x 1½x 1	3½x 3 x 2 x 1¼	6 x 6 x 5 x 5
2 x 2 x 1 x 1	3 x 3 x 2 x 2	3½x 3 x 1½x 1½	6 x 6 x 4 x 4
2 x 2 x 1 x ¾	3 x 3 x 2 x 1½	3½x 3 x 1½x 1¼	6 x 6 x 3 x 3
2 x 2 x 1 x 1	3 x 3 x 2 x 1	3½x 3 x 1½x 1	6 x 6 x 2 x 2
2 x 2 x 1 x ¾	3 x 3 x 1½x 1½	3½x 3 x 1½x ¾	6 x 6 x 2½x 2½
2 x 2 x 1 x 1	3 x 3 x 1½x 1¼	3½x 3 x 1½x 1	6 x 6 x 2 x 1½
2 x 2 x 1 x ¾	3 x 3 x 1½x 1	3½x 3 x 1¼x 1¼	6 x 6 x 1½x 1½
2 x 2 x 1 x 1	3 x 3 x 1½x ¾	3½x 3 x 1¼x 1	6 x 5 x 2 x 2
2 x 1½x 1½x 1½	3 x 3 x 1½x ¾	4 x 4 x 3½x 3½	6 x 5 x 2 x 1½
2 x 1½x 1¼x 1¼	3 x 3 x 1½x 1	4 x 4 x 3 x 3	6 x 5 x 1½x 1½
2 x 1½x 1 x 1	3 x 3 x 1¼x 1	4 x 4 x 2½x 2½	7 x 7 x 6 x 6
2 x 1½x 1 x ¾	3 x 3 x 1¼x ¾	4 x 4 x 2 x 2	7 x 7 x 5 x 5
2 x 1½x 1 x 1	3 x 3 x 1 x 1	4 x 4 x 2 x 1½	8 x 8 x 7 x 7
2 x 1½x 1 x ¾	3 x 2½x 2½x 2	4 x 4 x 1½x 1½	8 x 8 x 6 x 6
2 x 1 x 1½x 1	3 x 2½x 2½x 1½	4 x 4 x 1½x 1¼	8 x 8 x 5 x 4
2½x 2½x 2 x 2	3 x 2½x 2 x 2	4 x 4 x 1¼x 1¼	10 x10 x 8 x 8
2½x 2½x 1½x 1½	3 x 2½x 2 x 1½	4 x 4 x 1 x 1	10 x10 x 7 x 7
2½x 2½x 1½x 1¼	3 x 2½x 2 x 1	4 x 3½x 2½x 2	12 x12 x10 x10
2½x 2½x 1¼x 1¼	3 x 2½x 2 x ¾	4 x 3½x 2 x 2	12 x12 x 8 x 8

ORDER BY FIGURE NUMBERS

LIST OF SIZES OF
STANDARD CAST IRON FITTINGS

BUSHINGS

Bushings reducing one size only up to and including 1 1/2 inches can be furnished either in Cast or Malleable Iron, except 1/2x1/2, 3/4x3/4, 1x1 and 1 1/2x1 1/2, which are made in Malleable only. All other sizes are made in Cast Iron.

1/4x 3/8	1 1/4x 3/4	2 x 3/4	3 x 1 1/4	4 x 2	5 x 4	7 x 3 1/2	9x 7
3/8x 1/2	1 1/2x 1 1/2	2 x 1	3 x 1 1/2	4 x 2 1/2	5 x 4 1/2	7 x 4	9x 8
1/2x 3/4	1 3/4x 1 1/4	2 x 1 1/4	3 x 2	4 x 3	6 x 1 1/2	7 x 4 1/2	10x 4
3/4x 1	1 1/2x 1	2 x 1 1/2	3 x 2 1/2	4 x 3 1/2	6 x 2	7 x 5	10x 5
1x 1/4	1 1/2x 1 1/4	2 1/2x 1 1/4	3 1/2x 1	4 1/2x 2	6 x 2 1/2	7 x 6	10x 6
1 1/4x 1/4	1 1/2x 3/4	2 1/2x 3/4	3 1/2x 1 1/4	4 1/2x 2 1/2	6 x 3	8 x 2	10x 7
1 1/2x 1/4	1 1/2x 1 1/4	2 1/2x 1 1/4	3 1/2x 1 1/2	4 1/2x 3	6 x 3 1/2	8 x 2 1/2	10x 8
1 3/4x 1/4	1 1/2x 3/4	2 1/2x 3/4	3 1/2x 1 1/2	4 1/2x 3 1/2	6 x 4	8 x 3	10x 9
1 1/2x 3/8	1 1/2x 1 1/4	2 1/2x 1 1/4	3 1/2x 2	4 1/2x 4	6 x 4 1/2	8 x 4	12x 6
1 1/2x 1/2	1 1/2x 1 1/2	2 1/2x 1 1/2	3 1/2x 2 1/2	4 1/2x 4 1/2	6 x 5	8 x 5	12x 8
1 x 1/2	1 1/2x 1 1/2	2 1/2x 2	3 1/2x 3	5 x 2	6 x 5	8 x 5	12x 10
1 x 3/4	2 x 3/4	3 x 3/4	4 x 1	5 x 2 1/2	7 x 2	8 x 6	
1 x 1/2	2 x 1	3 x 1	4 x 1 1/4	5 x 3	7 x 2 1/2	8 x 7	
1 x 3/4	2 x 3/4	3 x 1	4 x 1 1/2	5 x 3 1/2	7 x 3	9 x 6	

LOCKNUTS

2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12
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Y BRANCHES—Reducing Sizes to Order

1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	7	8	9	10	12
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FLANGE UNIONS

1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12
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LIST OF REDUCING SIZES
STANDARD CAST IRON LONG SWEEP FITTINGS

Nos. 1, 2, 3 and 4 Reducing Fittings (pages 61 and 62) Will Be Made to Order by Bushing in the Sand

No. 5 WATER TEES AND No. 6 CROSSES

2 1/2x2 1/2x1 1/2	3 1/2x3x4	4x3 1/2x5	*4x4x6
3 x3 x1 1/2	*5 x5x3	*6x6 x4	*8x8x6
*4 x4 x2 1/2	*4 x4x5	4x5 x6	

NOTE—No. 6 Reducing Crosses, carried in stock, are listed in sizes indicated by an *. Other sizes made to order by bushing in the sand.

Reducing Flanged, or Screwed and Flanged, Fittings, Can Be Furnished with Flanged Ends on One or More Openings

They can be furnished Reducing on the screwed end, by bushing in the sand, at same price. They can be furnished Reducing on the flanged ends, only from such Reducing Patterns as we have, at same price.

For Price List, See Page 63

ORDER BY FIGURE NUMBERS

LIST OF REDUCING SIZES
STANDARD CAST IRON LONG SWEEP FITTINGS

ELLS, TEES AND CROSSES—Reducing Sizes

2 1/2x2 1/2x1 1/2	*3 1/2x3x4	*4x3 1/2x5	6x6x4
3 x3 x1 1/2	5 x5x3	4x4 x6	8x8x6
4 x4 x2 1/2	4 x4x5	*4x5 x6	

When ordering, submit sketch showing size of openings and position of flanges.

Sizes indicated by an * are not made in Crosses.

LIST OF REDUCING SIZES

EXTRA HEAVY CAST IRON FITTINGS

For Steam Working Pressure Up to 250 Pounds

The following Reducing Tees are carried in stock. Other sizes will be made to order, by bushing in the sand, at a special price, according to quantity wanted.

TEES—Reducing

3/4x 3/4x 1/2	1 1/2x1 1/4x1 1/2	2 1/2x2 1/2x1	3 x1 1/2x2	6x 6x 5
3/4x 3/4x 3/4	1 1/2x1 1/4x1 1/4	2 1/2x2 1/2x 3/4	3 x1 x3	6x 6x 4
1 x 1 x 3/4	1 1/2x 1 x 1 1/2	2 1/2x2 1/2x 1/2	2 1/2x2 1/2x3	6x 6x 3
1 x 1 x 1 1/2	1 1/2x 3/4x 1 1/2	2 1/2x2 x2 1/2	2 x2 x3	6x 6x 2 1/2
1 x 3/4x 3/4	1 1/2x 1/2x 1 1/2	2 1/2x2 x2	3 1/2x3 1/2x2	6x 6x 2
1 x 3/4x 1/2	2 x2 x1 1/2	2 1/2x2 x1 1/2	3 1/2x2 1/2x2 1/2	6x 4x 6
1 x 1/2x1	2 x2 x1	2 1/2x1 1/2x2 1/2	4 x4 x3	6x 4x 4
3/4x 3/4x1	2 x2 x 3/4	2 1/2x1 1/2x1 1/2	4 x4 x2	7x 7x 5
1 1/4x1 1/4x1	2 x2 x 1/2	2 1/2x 3/4x2 1/2	4 x4 x1 1/2	8x 8x 6
1 1/4x1 1/4x 3/4	2 x2 x 1/4	2 x2 x2 1/2	4 x4 x1 1/4	8x 8x 4
1 1/4x1 1/4x 1/2	2 x1 1/2x2	1 1/2x1 1/2x2 1/2	4 x4 x1	8x 8x 3
1 1/4x1 1/4x 3/8	2 x1 1/2x1 1/2	3 x3 x2 1/2	4 x3 x4	8x 6x 6
1 1/4x1 x1 1/4	2 x1 1/2x1	3 x3 x2	4 x3 x3	8x 6x 4
1 1/4x 3/4x1 1/4	2 x1 x2	3 x3 x1 1/2	4 x2 1/2x4	10x10x 8
1 1/4x 1/2x1 1/4	2 x1 x1 1/2	3 x3 x1	4 x2 1/2x2 1/2	10x10x 6
1 1/4x 1/4x1 1/4	2 x 3/4x2	3 x2 1/2x3	4 x2 x4	10x10x 4
1 x 1 x1 1/4	2 x 1/2x2	3 x2 1/2x2 1/2	3 x3 x4	12x12x10
1 1/2x1 1/2x1 1/4	1 1/2x1 1/2x2	3 x2 1/2x2	5 x5 x4	12x12x 8
1 1/2x1 1/2x1	1 1/2x1 1/2x2	3 x2 1/2x1 1/2	5 x5 x3	12x12x 6
1 1/2x1 1/2x 3/4	2 1/2x2 1/2x2	3 x2 x3	5 x5 x2 1/2	
1 1/2x1 1/2x 1/2	2 1/2x2 1/2x1 1/2	3 x2 x2	5 x5 x2	
1 1/2x1 1/2x 3/8	2 1/2x2 1/2x1 1/4	3 x2 x1 1/2	5 x3 x5	
			5 x2 x5	

ELBOWS—Reducing

3/4x 3/4	1 1/2x1 1/4	2 x1 1/4	2 1/2x1 1/4	4x3
1 x 3/4	1 1/2x1	2 x1	3 x2 1/2	5x4
1 1/4x1	2 x1 1/2	2 1/2x2	3 x2	

45° Elbows, Crosses and Ys are not carried in stock in reducing sizes; but will be made to order, by bushing in the sand, from the Straight Patterns, at a special price, according to quantity wanted.

ORDER BY FIGURE NUMBERS

CAST IRON CAR HEATER FITTINGS

EXTRA HEAVY



Fig. 56 Elbow



Fig. 57 Tee



Fig. 59 Cast Iron Coupling



Fig. 58 Return Bend Elbows



Fig. 60 Wrought Iron Coupling

Size.....inches	1/2	3/4	1	1 1/4	1 1/2 x 1 1/4	1 1/2	2
Price, Right Hand.....each	.22	.25	.27	.30	.45	.45	.55
Right and Left.....	.22	.25	.27	.30	.45	.45	.55

TEES

Size.....inches	1/2	3/4	1	1 1/4	1 1/4 x 1 1/4	1 1/4 x 1 1/4	1 1/2 x 1 1/4	1 1/2	2
Price.....each	.30	.35	.40	.45	.45	.45	.45	.65	.85

CAST IRON COUPLINGS

Size.....inches	1	1 1/4	1 1/2	2
Price, Right Hand.....each	.25	.30	.45	.55
Right and Left.....	.35	.40	.55	.65

RETURN BENDS

Size.....inches	1	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/2	2	2	2	2	2
Distance Between Centers, in.	2 3/4	2 1/2	3	4	5	6	7 1/2	8	2 1/2	3 1/4	3 3/4	4 1/4	5 1/4
Price, Right Hand.....each	.45	.45	.50	.60	.70	.85	1.10	1.10	.80	1.10	1.00	1.00	1.75
Right and Left.....	.52	.52						.90	1.25	1.15			2.00

RETURN BENDS WITH BACK OUTLET PRICES ON APPLICATION

Size Inches	2	4	1 1/2
C. to C.			3 1/2
Back Outlet	1 1/2		1 1/2

WROUGHT IRON COUPLINGS

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2
Actual Outside Diameter.....inches	1.13	1.44	1.63	2.13	2.31	2.81
Length of Coupling.....inches	1.88	2.13	2.38	2.13	2.87	3.13
Price, Right Hand.....Black, each	.14	.20	.26	.34	.42	.56
Right and Left.....	.20	.30	.40	.45	.55	.70
Right Hand.....Galv.	.20	.25	.32	.42	.55	.75
Right and Left.....	.25	.35	.45	.55	.70	.90

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS



Fig. 157 Hook Plate



Fig. 159 Expansion Plate



Fig. 161 Ring Plate



Fig. 163 Offset Hook Plate

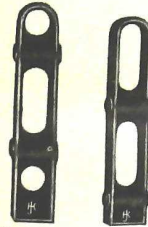


Fig. 165 Coil Stands



Fig. 158 Single Hook Plate



Fig. 162 Single Ring Plate



Fig. 160 Single Expansion Plate



Fig. 164 Pipe Saddle



Fig. 149 Rosette Plate

	Number of Branches	1 2 3 4 5 6 7 8 9 10 11 12																																																		
		Hook Plates Figs. 157, 158	For 1/4 in. Pipe, 2 1/4 in. C. to C.	.08	.16	.21	.24	.28	.34	.40	.45	.50	.56	.68	.72	For 1/2 in. Pipe, 3 in. C. to C.	.10	.18	.23	.26	.32	.38	.48	.59	.65	.70	.85	1.00	For 3/4 in. Pipe, 4 in. C. to C.	.15	.28	.43	.58	.72	.88	1.10	1.25	1.40	1.55	1.65	1.90	For 1 in. Pipe, 5 in. C. to C.	.22	.43	.65	.90	1.15	1.35	1.75	2.00	2.25	2.50
Ring Plates Figs. 161, 162	For 1/4 in. Pipe, 2 1/4 in. C. to C.	.14	.25	.37	.45	.57	.67	.90	.95	1.10	1.20	1.35	1.50	For 1/2 in. Pipe, 3 in. C. to C.	.16	.28	.41	.50	.62	.72	.96	1.00	1.20	1.30	1.50	2.00	For 3/4 in. Pipe, 4 in. C. to C.	.21	.35	.50	.62	.75	1.10	1.25	1.40	1.60	1.80	2.25	2.75	For 1 in. Pipe, 5 in. C. to C.	.28	.45	.65	.85	1.10	1.35	1.65	2.00	2.35	2.75	3.25	4.00
Expansion Plates Figs. 159, 160	For 1/4 in. Pipe, 2 1/4 in. C. to C.	.12	.23	.34	.45	.55	.65	.77	.90	1.05	1.25	1.45	1.65	For 1/2 in. Pipe, 3 in. C. to C.	.15	.25	.35	.50	.60	.70	.80	.95	1.10	1.35	1.55	1.70	For 3/4 in. Pipe, 4 in. C. to C.	.17	.27	.40	.60	.70	.80	.90	1.15	1.30	1.50	1.70	2.00	For 1 in. Pipe, 5 in. C. to C.	.25	.40	.60	.75	.90	1.00	1.25	1.50	1.75	2.00	2.25	2.50
Offset Hook Plates Fig. 163	For 1/4 in. Pipe to offset 1 1/2 ins	.84	1.10	1.40	1.80	2.25	2.50	2.80	3.20	3.70	4.10	4.50	For 1/2 in. Pipe to offset 2 ins	1.10	1.70	1.95	2.25	2.50	2.80	3.35	3.70	4.10	4.50	5.00	For 3/4 in. Pipe to offset 2 1/2 ins	1.70	1.95	2.25	2.50	2.80	3.35	4.00	4.65	5.30	6.00	6.75																
Coil Stands Fig. 165	For 1/4 in. Pipe, per pair.....	.55	.70	.85	1.25	1.50	For 1/2 in. Pipe, per pair.....	.60	.75	1.30	1.60	2.05																																								
Pipe Saddles Fig. 164	For 1 in. Pipe, 2 1/2 in. C. to C.	.60	.65	.70	.90	1.00	1.40	1.60	1.75	For 1 1/4 in. Pipe, 3 in. C. to C.	.65	.75	.85	1.10	1.40	1.65	1.80	2.00	For 1 1/2 in. Pipe, 4 in. C. to C.	.80	.90	1.00	1.30	1.65	2.00	2.25	2.50																									
Ornamental Rosette Plates Fig. 149	For 1 in. Pipe, 2 1/2 in. C. to C.	.40	.80	.90	1.20	1.40	1.80	For 1 1/4 in. Pipe, 3 in. C. to C.	.70	1.30	1.50	1.80	2.20	2.75																																						

These are only made for even numbers of Pipe.

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS



FLOOR PLATES

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6
Price, Cast Iron, Nos. 1, 2, 3, 4..... each	.06	.06	.08	.11	.14	.16	.24	.30	.35	.42	.50	.60	.75
" Nickel Plated.....	.15	.15	.20	.25	.30	.40	.50	.60	.75	.90	1.00	1.10	1.25
" Brass, No. 1.....	.64	.72	1.00	1.40	1.80	.....	.....	.....	.....	.....	.....	.....	.....



CEILING PLATES

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7
Price, No. 1 or No. 2..... each	.11	.13	.16	.18	.23	.27	.36	.50	.55	.68	.85	.95	1.25	2.00

FLOOR FLANGES—Cast Iron

Size of Pipe in.	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Diameter .2 1/2 in.	.14	.14	.15	.18	.....	.....	.....	.....	.....	.....	.....	.....
Diameter .3 "	*.14	.14	.15	.18	.20	.....	.....	.....	.....	.....	.....	.....
Diameter .3 1/2 "17	*.17	.18	.20	.23	.....	.....	.....	.....	.....	.....
Diameter .4 "20	.20	.21	*.22	*.25	.28	.30	.....	.....	.....	.....
Diameter .4 1/2 "26	.28	.28	.30	*.31	.35	.....	.....	.....	.....
Diameter .5 "31	.33	.33	.35	.36	*.45	.....	.....	.....	.....
Diameter .5 1/2 "42	.42	.42	.42	.45	.....	.....	.....	.....
Diameter .6 "52	.52	.52	.55	*.65	.....	.....	.....	.....
Diameter .6 1/2 "62	.62	.65	.75	.90	.....	.....	.....
Diameter .7 "75	.90	*1.00	.....	.....	.....
Diameter .8 "	1.25	1.40	*1.50

NOTE—Galvanized Floor Flanges furnished at double the above list.
 Sizes marked with an * are standard diameters.
 MALLEABLE FLOOR FLANGES FURNISHED AT SAME LIST AS ABOVE, SPECIAL DISCOUNT APPLYING.

FLOOR FLANGES—Brass

Size of Pipe..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Diameter..... 2 1/2 inches	.30	.32	.35	.38	.....	.....	.....	.....	.....
Diameter..... 3 "	*.38	*.40	.43	.47	.52	.....	.....	.....	.....
Diameter..... 3 1/2 "	.....	.55	*.58	*.62	.67	.72	.....	.....	.....
Diameter..... 4 "	.....	.70	.73	.76	*.80	*.87	.95	1.30	.....
Diameter..... 4 1/2 "	.....	.....	.95	1.00	1.05	1.12	*1.20	1.50	.....
Diameter..... 5 "	.....	.....	.....	1.20	1.25	1.30	1.40	*1.65	.....
Diameter..... 5 1/2 "	.....	.....	.....	.....	1.65	1.65	1.75	1.95	2.05
Diameter..... 6 "	.....	.....	.....	.....	2.05	2.05	2.15	2.30	2.45
Diameter..... 6 1/2 "	.....	.....	.....	.....	.....	2.60	2.75	2.95	3.25

Finished Brass Floor Flanges furnished at double the above list.
 Sizes marked with an * are standard diameters.

ORDER BY FIGURE NUMBERS

CAST IRON PIPE SADDLES

WITH WROUGHT IRON BANDS OR STRAPS
 For Steam, Water and Natural Gas Connections

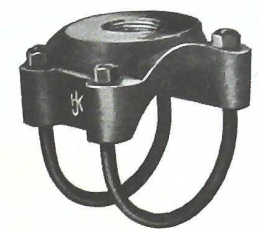


Fig. 184

PIPE SADDLES—Cast Iron

Size of Pipe..... inches	2	2 1/2	3	4	4 1/2	5	6	7	8	10	12	16
Size of Pipe Saddles tapped for, ins.	1 1/2 to 2 1/2	2 1/2 to 2 3/4	2 3/4 to 3 1/2	3 1/2 to 3 3/4	3 3/4 to 4 1/2	4 1/2 to 5 1/2	5 1/2 to 6 1/2	6 1/2 to 7 1/2	7 1/2 to 8 1/2	8 1/2 to 10 3/4	10 3/4 to 12 1/2	12 1/2 to 16
Price..... each	1.50	1.75	2.00	2.50	2.75	3.00	3.50	4.00	4.50	7.00	10.00	25.00

Products



Fig. 170 Hanger Roll



Fig. 171 Sprinkler Clip

HANGER ROLLS

Size for Pipe... inches	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	10	12	14
Price, Rolls only..... each	.06	.07	.08	.13	.15	.18	.21	.21	.24	.24	.27	.36	.44	.72	1.05	1.32
Length Rolls end to end, ins.	2 1/4	3	2 3/4	3	3 3/4	4 1/2	4 7/8	5 1/2	5 7/8	6 1/2	7 1/4	8 1/4	9 1/4	10 3/4	13 1/4	15 1/4
Size of Bore..... inches	5/8	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4

Larger sizes than above on application.
 Prices for PIPE SUPPORTS on application.

CAST IRON CLIPS—For Sprinkler Pipes

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Price, Short..... each	.14	.15	.16	.18	.20	.25	.30	.40	.50	.65	.85	1.10
" Long.....	.16	.17	.18	.20	.22	.27	.35	.45	.60	.75	.95	1.20
" Extra Long.....	.18	.20	.22	.24	.26	.31	.41	.55	.70	.85	1.10	1.35

ORDER BY FIGURE NUMBERS

MALLABLEE IRON PIPE SADDLES AND CLAMPS

WITH WROUGHT IRON BANDS OR STRAPS



Fig. 184A Pipe Saddle



Fig. 184B Water Pipe Clamp
3½-inch and Larger as Illustrated
3-inch and Smaller have Single Wrought
Iron Band

PIPE SADDLES—Malleable Iron

Size of Pipe inches	1½	2	2½	3	3½	4	4½	5	5	6
Size of Pipe Saddle tapped for, ins.	½, ¾	¾ to 1½	¾ to 1½	¾ to 2	¾ to 2	¾ to 2	¾ to 2	¾ to 2	2¼, 3	¾ to 2
Price each	.90	1.00	1.25	1.25	1.40	1.50	2.50	2.75	2.75	2.75
Size of Pipe inches	6	7	8	9	10	10	12	12	15	16
Size of Pipe Saddle tapped for, ins.	2½ to 4	1 to 4	1 to 4	1½ to 4	1½ to 4	1½ to 6	1 to 4	4½ to 6	3 to 6	3 to 6
Price each	5.75	6.50	6.50	8.50	10.00	10.00	14.00	14.00	22.00	25.00

WATER PIPE CLAMPS

Number	CLAMPS WILL FIT				Price, Each	Number	CLAMPS WILL FIT				Price, Each
	Outside Diam. of Circle, Inches	Size Wrought Pipe, Inches	Size Outside Diam. Casing, Inches	Size Cast Iron Pipe, Inches			Outside Diam. of Circle, Inches	Size Wrought Pipe, Inches	Size Outside Diam. Casing, Inches	Size Cast Iron Pipe, Inches	
0	1½	2	2	...	1.00	19	6%	6	6%	...	2.25
1	2½	2	2½	...	1.00	20	6%	6	6%	...	2.50
2	2½	2½	2½ and 3	...	1.25	21	6%	6	6%	...	5.00
3	3½	3	3	...	1.25	22	7	...	7	...	2.50
4	3½	3	3½	...	1.50	23	7	...	7	...	2.70
5	4	3½	4	...	1.50	24	7	...	6	...	5.00
6	4	3½	4	...	1.75	25	7%	7	7%	...	5.00
7	4½	4	4½	...	1.75	26	7%	7	7%	...	5.00
8	4½	4	4½	...	2.00	27	7%	7	7%	...	4.50
9	4½	4	4½	...	4.00	28	8	...	8	...	5.00
10	5	4½	5	...	1.80	29	8	...	8	...	5.50
11	5	4½	5	...	2.15	30	8	...	8	...	5.50
12	5	4½	5	...	4.00	30½	8%	8	8%	...	5.50
13	5½	5	5½	...	1.80	31	8%	8	8%	...	6.00
14	5½	5	5½	...	2.15	32	8%	8	8%	...	8.00
15	5½	5	5½	...	4.00	33	9%	9	...	...	9.00
16	6	...	6	...	2.00	34	10	10	9	...	9.00
17	6	...	6	...	2.40	35	10½	10	...	...	9.00
18	6	...	6	...	4.50	36	12½	12	...	...	10.00

Always order Water Pipe Clamps by number.
3-inch and smaller have Wrought Iron Bands.
3½-inch and larger have Malleable Iron Bands.

ORDER BY FIGURE NUMBERS

PIPE HANGERS

JONES' PATENT

PATENTED MARCH 11, 1890

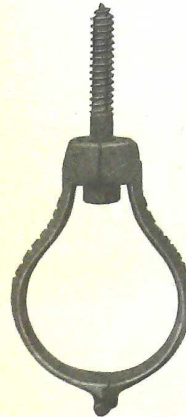


Fig. 166



Fig. 167 Sectional View

As lengthening pieces, iron pipe is needed as follows:
¾-inch pipe for Hangers ¾ to 1-inch inclusive.
¾-inch pipe for Hangers 1¼ to 2½-inch inclusive.
¾-inch pipe for Hangers 3 to 6-inch inclusive.
¾-inch pipe for Hangers 7 to 8-inch inclusive.

PIPE HANGERS—Jones' Patent

Size inches	¾	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8
Price each	.20	.20	.22	.25	.30	.38	.44	.55	.65	.90	1.15	1.35	1.50	2.25	3.00



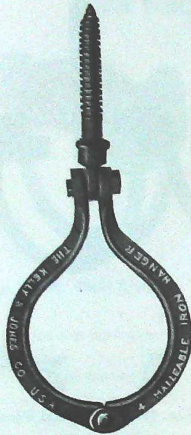
Fig. 168 Beam Clamp

CAST IRON CLAMPS FOR STEEL BEAMS

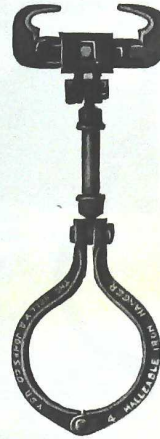
Width of Beam Flange . . . inches	3	3½	4	4½	5	6	8
Price, Clamp only each	.40	.40	.60	.60	.60	.60	.80

ORDER BY FIGURE NUMBERS

MALLEABLE IRON PIPE HANGERS



No. 4 Fig. 168E



No. 3 Fig. 168D

MALLEABLE IRON PIPE HANGERS

Size..... inches	¾	½	¾	1	1¼	1½	2	2½	3	3½
Price, No. 4, complete..... each	.15	.15	.18	.18	.20	.22	.25	.30	.35	.50
No. 3, .....	.55	.55	.58	.58	.60	.62	.65	.70	.75	.90
Size..... inches	4	4½	5	6	7	8	9	10	12	14
Price, No. 4, complete..... each	.60	.65	.70	.90	1.20	1.40	1.60	1.80	2.20	2.50
No. 3,	1.00	1.05	1.10	1.30	1.60	1.80	2.00	2.20	2.60	2.90

MALLEABLE IRON PIPE HANGER PARTS

Size of Pipe..... inches	½	¾	1	1¼	1½	2	2½	3
Size of Socket and Lag..... inches	¾	¾	¾	¾	¾	¾	¾	¾
Price of Ring..... each	.05	.08	.08	.10	.12	.14	.20	.25
" Socket..... "	.05	.05	.05	.05	.05	.05	.05	.05
" Bolt..... "	.03	.03	.03	.03	.03	.03	.03	.03
Size of Pipe..... inches	3½	4	4½	5	6	7	8	10
Size of Socket and Lag..... inches	¾	¾	¾	¾	¾	¾	¾	¾
Price of Ring..... each	.30	.40	.45	.50	.65	.90	1.10	1.50
" Socket..... "	.08	.08	.08	.08	.10	.10	.10	.10
" Bolt..... "	.05	.05	.05	.05	.05	.05	.05	.05

When ordering No. 3 complete, be particular to specify size of beam for which clamp is intended.

ORDER BY FIGURE NUMBERS

CAST IRON EXPANSION PIPE HANGERS OR RING HOOKS



Fig. 168F Expansion Pipe Hanger

EXPANSION PIPE HANGERS

Size..... inches	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8
Price, Complete..... Black, each	.17	.17	.18	.19	.25	.29	.36	.44	.55	.63	.90	1.12	1.35	1.80	2.25
Size of Pipe Ring and Buttons, Gal. Are Tapped for..... inches	¾	¾	¾	¾	¾	¾	½	½	½	½	½	¾	¾	¾	¾

PARTS OF EXPANSION PIPE HANGERS

Size..... inches	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8
Price, Plate..... each	.08	.08	.08	.08	.09	.09	.10	.10	.10	.10	.10	.10	.10	.10	.10
" Buttons..... "	.06	.06	.06	.06	.07	.07	.08	.08	.08	.08	.08	.08	.08	.08	.08
" Rings..... "	.08	.08	.12	.15	.20	.25	.30	.40	.50	.60	.80	1.00	1.25	1.70	2.15

NOTE—Above prices do not include such parts as Pipe, Rod, or Turnbuckles. If desired, will furnish at extra prices.



Fig. 168G

CAST IRON SOLID RING PIPE HANGERS

PRICE PER 100

Size..... inches	¾	½	¾	1	1¼	1½	2
Price.....	5.00	5.00	5.80	7.75	10.00	14.00	22.00
" Galvanized.....	6.50	6.50	7.00	9.00	12.00	16.00	25.00

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

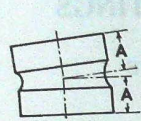


Fig. 529 5 1/2° Elbow

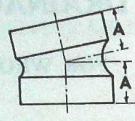


Fig. 528 11 1/4° Elbow

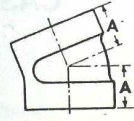


Fig. 527 22 1/2° Elbow

5 1/2°, 11 1/4° AND 22 1/2° ELBOWS

Size..... inches	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	7	8	10	12
5 1/2° Elbow, Dimen. A, ins.	1	1 1/8	1 3/8	1 7/8	1 7/8	2	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8
11 1/4° " " A " "	1	1 1/8	1 3/8	1 7/8	1 7/8	2	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8
22 1/2° " " A " "	1	1 1/8	1 3/8	1 7/8	1 7/8	2	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8
Price, 5 1/2°, 11 1/4° or 22 1/2° Elbows..... Black, each	.25	.28	.30	.38	.57	1.20	1.45	2.30	4.25	6.25	11.50	15.00	31.00	47.50
..... Galv. " "	.44	.49	.52	.67	1.00	2.10	2.55	4.00	7.40	11.00	20.00	26.25	54.00	83.00

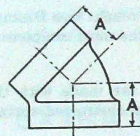


Fig. 525 45° Short Turn Elbow

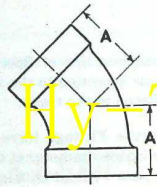


Fig. 526 45° Long Turn Elbow

45° ELBOWS—Long and Short Turn

Size..... inches	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
45° Short Turn Elbow, Dimension A..... inches	1 1/8	1 3/8	1 7/8	1 7/8	2 1/8	2 1/8	2 1/8	2 1/8
45° Long Turn Elbow, " " A..... " "	1 1/8	1 3/8	1 7/8	1 7/8	2 1/8	2 1/8	2 1/8	2 1/8
45° Short Turn Elbow..... Price, Black, each	.25	.28	.30	.38	.57	1.20	1.45	2.30
..... Galv. " "	.44	.49	.52	.67	1.00	2.10	2.55	4.00
45° Long Turn Elbow..... " Black " "	.25	.28	.30	.38	.57	1.20	1.45	2.30
..... Galv. " "	.44	.49	.52	.67	1.00	2.10	2.55	4.00

Size..... inches	5	6	7	8	10	12	14	16
45° Short Turn Elbow, Dimension A..... inches	3	3 3/8	3 3/8	3 3/8	4 1/2	5 1/2	5 1/2	5 1/2
45° Long Turn Elbow " " A..... " "	4 1/2	5 1/2	6 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2
45° Short Turn Elbow..... Price, Black, each	4.25	6.25	11.50	15.00	31.00	47.50	65.00	100.00
..... Galv. " "	7.40	11.00	20.00	26.25	54.00	83.00	114.00	175.00
45° Long Turn Elbow..... " Black " "	5.25	7.50	13.50	19.00	38.00	57.50	75.00	100.00
..... Galv. " "	9.20	13.15	23.50	33.25	66.50	100.00	130.00	175.00

Malleable and Brass Drainage Fittings furnished at special prices.
In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

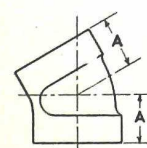


Fig. 529A 30° Elbow



Fig. 524 60° Elbow

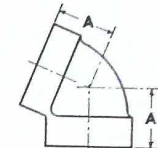


Fig. 529B 67 1/2° Elbow

30°, 60° AND 67 1/2° ELBOWS

Size..... inches	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	7	8	10
30° Elbow, Dimension A..... inches	1 1/8	1 3/8	1 7/8	1 7/8	2 1/8	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8
60° Elbow, " " A..... " "	1 1/8	1 3/8	1 7/8	1 7/8	2 1/8	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8
67 1/2° Elbow, " " A..... " "	1 1/8	1 3/8	1 7/8	1 7/8	2 1/8	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8
30°, 60°, 67 1/2° Elbows, Price..... Black, each	.25	.28	.30	.38	.57	1.20	1.45	2.30	4.25	6.25	11.50	15.00	31.00
..... Galv. " "	.44	.49	.52	.67	1.00	2.10	2.55	4.00	7.40	11.00	20.00	26.25	54.00

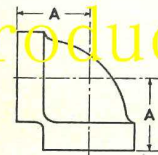


Fig. 522 90° Short Turn Elbow

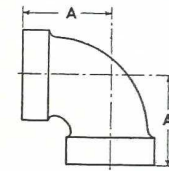


Fig. 523 90° Long Turn Elbow

90° ELBOWS—Long and Short Turn

Size..... inches	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	7	8	10	12	14
90° Elbow, Short Turn, Dimension A..... inches	1 1/8	1 3/8	1 7/8	1 7/8	2 1/8	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8
90° Elbow, Long Turn, Dimension A..... inches	1 1/8	1 3/8	1 7/8	1 7/8	2 1/8	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8	2 3/8
90° Elbow, Short Turn, Price..... Black, each	.25	.28	.30	.38	.57	1.20	1.45	2.30	4.25	6.25	11.50	15.00	31.00	47.50	65.00
..... Galv. " "	.44	.49	.52	.67	1.00	2.10	2.55	4.00	7.40	11.00	20.00	26.25	54.00	83.00	114.00
90° Elbow, Long Turn, Price..... Black, each	.30	.32	.35	.42	.65	1.40	1.75	2.75	5.25	7.50	13.50	19.00	38.00	57.50	75.00
..... Galv. " "	.52	.56	.60	.72	1.15	2.45	3.10	4.80	9.20	13.25	25.00	33.25	66.50	100.00	130.00

NOTE—The outlet on 90° Elbows is tapped graded 1/4" to the foot, unless otherwise ordered.
Malleable and Brass Drainage Fittings furnished at special prices.
In ordering, be particular to state whether Drainage Fittings are desired black or galvanized

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

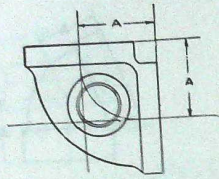


Fig. 529C
90° Elbow with Side Outlet

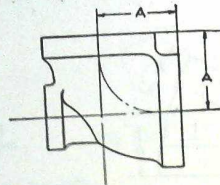


Fig. 529D
90° Elbow with Heel Outlet

ELBOWS—Side Outlet and Heel Outlet

	Size	Dimension A	Size of Outlet	Price Black, Ea.	Price Galv., Ea.
90° Elbow, with Side Outlet.....	3	4 1/4	2	3.00	5.25
90° Elbow, with Heel Outlet.....	3	4 1/4	2	3.00	5.25
90° Elbow, with Side Outlet.....	4	4 1/4	2	3.85	6.75
90° Elbow, with Heel Outlet.....	4	4 1/4	2	3.85	6.75

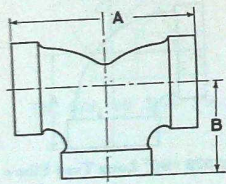


Fig. 531
3-Way Elbow

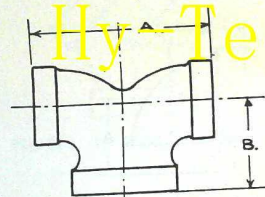


Fig. 531A
3-Way Elbow Reducing

3-WAY ELBOWS

Size..... inches	1 1/4	1 1/2	2	2 1/2	3	4	4x3	5	5x4	6	6x4	6x5
Dimension A..... inches	4 1/4	6 1/4	7 3/4	9 1/4	10 1/4	12 1/4	9 1/4	14 1/4	11 1/4	16 1/4	12 1/4	13 1/4
" B..... "	2 1/4	3 1/4	3 3/4	4 1/4	5 1/4	6 1/4	4 3/4	7 1/4	5 3/4	8 1/4	5 3/4	6 1/4
Price, Black..... each	.75	.85	1.10	2.25	3.00	5.00	5.50	7.50	8.25	13.50	15.00	15.00
" Galv..... "	1.25	1.50	1.95	3.90	5.25	8.75	9.65	13.15	14.50	23.50	26.25	26.25

The Outlet on 90° Elbows and the Inlet of 3-Way Elbows are tapped graded 1/4" to the foot unless otherwise ordered.

The Inlets on Reducing Fittings are always the smallest openings.

Malleable and Brass Drainage Fittings furnished at special prices.

In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

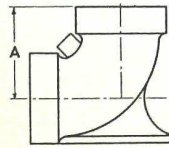


Fig. 545A
90° Base Elbow with Plugged Cleanout

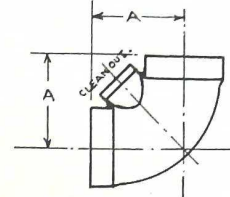


Fig. 545B
90° Long Turn Elbow with Cleanout

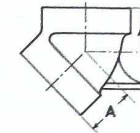


Fig. 545D
45° Elbow with Shoe

ELBOWS

Size..... inches	2	3	4	5	6
90° Base Elbow with Plugged Cleanout; Dimension A..... inches	4	5 1/4	6 1/4	7 1/4	8 1/4
90° Long Turn Elbow with Cleanout; Dimension A..... "	4	5 1/4	6 1/4	7 1/4	8 1/4
45° Elbow with Shoe; Dimension A..... "	1 1/2	2 1/4	2 3/4	3	3 1/2
90° Base Elbow with Plugged Cleanout..... Price, Black, each	3.00	4.50	7.00	12.00	18.00
Galv. "	5.25	8.00	12.25	21.00	31.50
90° Long Turn Elbow with Cleanout..... " Black "	1.20	3.00	5.00	7.50	10.00
Galv. "	2.10	5.25	8.75	13.00	17.50
45° Elbow with Shoe..... " Black "	1.00	1.75	2.75	4.50	6.75
Galv. "	1.75	3.10	4.80	7.75	11.75

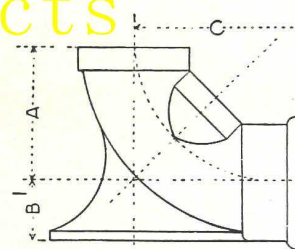


Fig. 545C
90° Base Elbow with Cleanout to Connect Cast Iron Pipe with Wrought Iron Pipe

Size..... inches	3x2	3	4x3	4	5x4	5	6x4	6x5	6	8x6	8
Dimension A..... inches	3 3/4	5 1/4	5 3/4	6 1/4	6 3/4	7 1/4	6 3/4	7 1/4	8 1/4	8 1/4	11 1/4
" B..... "	6 3/4	6 3/4	6 3/4	7 3/4	8	9 1/4	8 1/4	8 1/4	9 1/4	14	18
" C..... "	2 1/4	2 1/4	2 1/4	2 1/4	3 3/4	3 3/4	4	4	4	10 1/4	11 1/4
Price, Black..... each	5.50	5.00	8.75	8.00	16.50	15.00	27.50	27.50	25.00	44.00	40.00
Galv..... "	9.50	8.75	15.25	14.00	28.75	26.25	48.00	48.00	43.75	77.00	70.00

90° Elbows are tapped graded 1/4" to the foot, unless otherwise ordered.

Malleable and Brass Drainage Fittings furnished at special prices.

In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

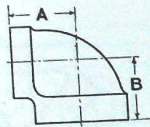


Fig. 540 Closet Elbow, Reducing

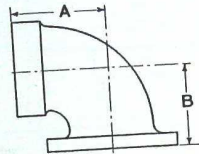


Fig. 539 Closet Elbow with Flange

CLOSET ELBOWS

	Size	Dimens'n A	Dimens'n B	Price Black	Price Galv.
Closet Elbow, Reducing	5 x 4	4 1/4"	3 1/4"	4.25	7.40
Closet Elbow with Flange	4	6 1/8"	6 1/8"	4.25	7.40

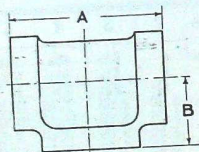


Fig. 530 Tee

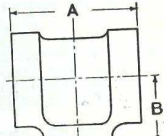


Fig. 530A Tee, Reducing

TEES

Size	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	7"	8"	10"	12"
Dimension A	3 3/4"	4 1/4"	5 1/4"	6 1/4"	8 1/4"	9 1/4"	10 3/4"	11 1/4"	13 1/4"	16 1/4"	18 1/4"	21 1/4"
Dimension B	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	7"	8"	10"	12"
Price, Black, each	.45	.55	.80	1.50	2.00	3.25	6.00	8.75	16.00	21.00	43.00	60.00
Price, Galv., each	.80	1.00	1.40	2.50	3.50	5.70	10.50	15.25	28.00	37.00	75.00	100.00

TEES—Reducing

Size	2x1 1/2"	2 1/2x1 1/2"	2 1/2x2"	3x1 1/2"	3x2"	4x2"	4x3"	5x2"	5x3"	5x4"	6x2"
Dimension A	4 1/4"	4 1/4"	5 1/4"	4 1/4"	5 1/2"	5 3/4"	7 1/4"	5 1/4"	7 1/4"	8 1/4"	6"
Dimension B	2 1/4"	2 1/4"	2 1/4"	2 1/4"	3 1/4"	3 3/4"	4 1/4"	4 1/4"	4 1/4"	4 1/4"	5"
Price, Black, each	.90	1.65	1.65	2.20	2.20	3.60	3.60	6.60	6.60	6.60	9.60
Price, Galv., each	1.60	2.75	2.75	3.85	3.85	6.30	6.30	11.55	11.55	11.55	16.75

Size	6x3"	6x4"	6x5"	7x4"	7x5"	7x6"	8x4"	8x5"	8x6"	8x7"	10x4"
Dimension A	7 1/4"	8 1/4"	9 1/4"	8 1/4"	9 1/4"	11"	8 1/4"	10"	11 1/4"	12 1/4"	9 1/4"
Dimension B	5 1/4"	5 1/4"	5 1/4"	6"	6 1/4"	6 1/4"	6 1/4"	6 1/4"	6 1/4"	6 1/4"	7 1/2"
Price, Black, each	9.60	9.60	9.60	17.60	17.60	17.60	23.00	23.00	23.00	23.00	47.30
Price, Galv., each	16.75	16.75	16.75	30.80	30.80	30.80	40.70	40.70	40.70	40.70	82.50

Size	10x5"	10x6"	10x7"	10x8"	12x8"	12x10"	14x8"	14x10"	14x12"
Dimension A	10 1/4"	11 1/4"	12 1/4"	13 1/4"					
Dimension B	7 1/2"	7 1/2"	7 1/2"	8"					
Price, Black, each	47.30	47.30	47.30	47.30	65.00	65.00	85.00	85.00	85.00
Price, Galv., each	82.50	82.50	82.50	82.50	110.00	110.00	145.00	145.00	145.00

NOTE—The Outlets on Tees and the 90° Inlets on Closet Elbows are tapped graded 1/4" to the foot, unless otherwise ordered.
Malleable and Brass Drainage Fittings furnished at special prices.
The Inlets on Reducing Fittings are always the smallest openings.
In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

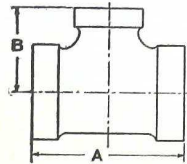


Fig. 546A Basin Tee

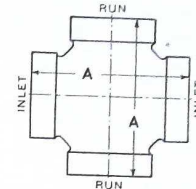


Fig. 546B Basin Cross

BASIN TEES

Size	1 1/4"	1 1/2"	2"	2x1 1/2"	2 1/2"	3"
Dimension A	5"	6 1/4"	7 3/4"	6 3/4"	8 1/4"	9 1/4"
Dimension B	2 1/4"	3 1/4"	3 3/4"	3 1/4"	4 1/4"	4 1/4"
Price, Black, each	.60	.70	1.10	1.20	1.75	2.50
Price, Galvanized	1.00	1.22	1.95	2.10	3.00	4.25

BASIN CROSSES

Size	1 1/2"	2"	2x1 1/2"
Dimension A	6 1/2"	7 3/4"	8 1/4"
Dimension B	3 1/4"	3 3/4"	4 1/4"
Price, Black, each	1.50	1.75	1.95
Price, Galvanized	2.50	3.10	3.40

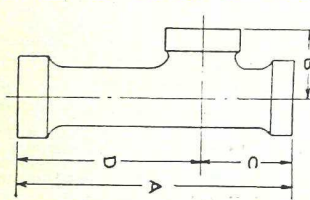


Fig. 546-I Special Long T Y

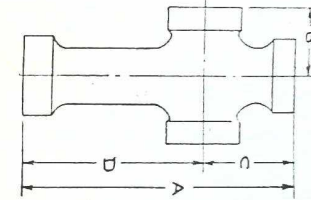


Fig. 546J Special Long Double T Y

SPECIAL LONG T Y'S

2-inch Spigot End for Soil Pipe connection; 1 1/2-inch Head and Branch tapped for Wrought Iron Pipe.

	Size	Price, Blk. Ea.	Price, Galv. Ea.	Dim. A	Dim. B	Dim. C	Dim. D
Special Long T Y's	2 x 1 1/2"	2.30	4.00	24	2 1/2	4	20
Special Long T Y's	2 x 1 1/2"	3.35	5.85	34	2 1/2	4	30
Special Long Double T Y's	2 x 1 1/2"	2.65	4.65	24	2 1/2	4	20
Special Long Double T Y's	2 x 1 1/2"	3.65	6.40	34	2 1/2	4	30

Malleable and Brass Drainage Fittings furnished at special prices.
In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

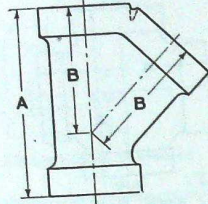


Fig. 534 45° Y Branch

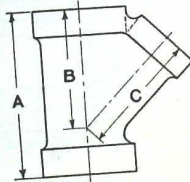


Fig. 535 45° Reducing Y Branch

45° Y BRANCHES

Size.....inches	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	7	8	10
Dimension A.....inches	4	4 1/2	5	6	7	8	9	10	11	12	14	16
Dimension B.....inches	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10
Price.....Black, each	.45	.52	.65	.85	1.10	1.40	1.75	2.15	2.60	3.10	3.70	4.40
.....Galv.	.80	.90	1.15	1.65	2.10	2.65	3.25	3.90	4.70	5.50	6.40	7.50

REDUCING 45° Y BRANCHES

Size.....inches	1 1/4 x 1	1 1/2 x 1 1/4	2 x 1 1/4	2 1/2 x 1 1/4	3 x 1 1/4	3 1/2 x 1 1/4	4 x 1 1/4	4 1/2 x 1 1/4	5 x 1 1/4	6 x 1 1/4	7 x 1 1/4	8 x 1 1/4	10 x 1 1/4
Dimension A.....inches	4 1/2	5 1/4	6 1/4	7 1/4	8 1/4	9 1/4	10 1/4	11 1/4	12 1/4	13 1/4	14 1/4	16 1/4	18 1/4
Dimension B.....inches	2 1/2	3 1/4	4 1/4	5 1/4	6 1/4	7 1/4	8 1/4	9 1/4	10 1/4	11 1/4	12 1/4	14 1/4	16 1/4
Dimension C.....inches	2 1/8	3 1/8	4 1/8	5 1/8	6 1/8	7 1/8	8 1/8	9 1/8	10 1/8	11 1/8	12 1/8	14 1/8	16 1/8
Price.....Black, each	1.00	1.25	1.85	2.30	2.80	3.30	3.80	4.30	4.80	5.30	5.80	6.30	6.80
.....Galv.	1.70	2.00	2.80	3.50	4.20	4.90	5.60	6.30	7.00	7.70	8.40	9.10	9.80

The Inlets of Reducing Fittings are always the smallest openings. Malleable and Brass Drainage Fittings furnished at special prices. In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

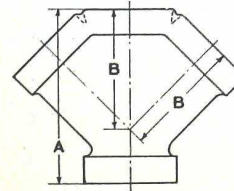


Fig. 535A 45° Double Y Branch

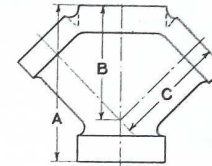


Fig. 536 45° Double Y Branch, Reducing

45° DOUBLE Y BRANCHES

Size.....inches	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	7	8	10
Dimension A.....inches	4	4 1/2	5	6	7	8	9	10	11	12	14	16
Dimension B.....inches	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10
Price.....Black, each	.80	.90	1.00	1.45	1.90	2.40	2.90	3.40	4.00	4.60	5.20	6.00
.....Galv.	1.40	1.60	1.75	2.55	3.30	4.10	4.90	5.70	6.50	7.30	8.20	9.20

REDUCING 45° DOUBLE Y BRANCHES

Size.....inches	1 1/4 x 1	1 1/2 x 1 1/4	2 x 1 1/4	2 1/2 x 1 1/4	3 x 1 1/4	3 1/2 x 1 1/4	4 x 1 1/4	4 1/2 x 1 1/4	5 x 1 1/4	6 x 1 1/4	7 x 1 1/4	8 x 1 1/4	10 x 1 1/4
Dimension A.....inches	4 1/2	5 1/4	6 1/4	7 1/4	8 1/4	9 1/4	10 1/4	11 1/4	12 1/4	13 1/4	14 1/4	16 1/4	18 1/4
Dimension B.....inches	2 1/2	3 1/4	4 1/4	5 1/4	6 1/4	7 1/4	8 1/4	9 1/4	10 1/4	11 1/4	12 1/4	14 1/4	16 1/4
Dimension C.....inches	2 1/8	3 1/8	4 1/8	5 1/8	6 1/8	7 1/8	8 1/8	9 1/8	10 1/8	11 1/8	12 1/8	14 1/8	16 1/8
Price.....Black, each	1.00	1.10	1.60	2.10	2.60	3.10	3.60	4.10	4.60	5.10	5.60	6.10	6.60
.....Galv.	1.70	1.90	2.80	3.60	4.40	5.20	6.00	6.80	7.60	8.40	9.20	10.00	10.80

The Inlets of Reducing Fittings are always the smallest openings. Malleable and Brass Drainage Fittings furnished at special prices. In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

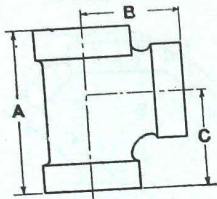


Fig. 532
90° Y Branch, Tee Pattern, Short Turn

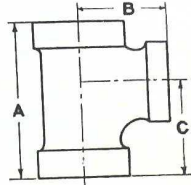


Fig. 532A
90° Y Branch, Tee Pattern, Short Turn, Reducing

90° Y BRANCHES, TEE PATTERN—Short Turn

Size..... inches	¾	1	1¼	1½	2	2½	3	4	5	6	7	8	10
Dimension A..... inches	3¼	3¼	3¾	4¼	5¼	6¼	7¼	9¼	11¼	12¾	13¾	15¼	19¼
Dimension B..... inches	1¾	1¾	2¼	2½	3¼	3¼	5¼	6¼	7¼	8¼	8¼	9¼	12¼
Dimension C..... inches	1¾	1¾	2¼	2½	3¼	3¼	5¼	6¼	7¼	8¼	8¼	9¼	12¼
Price..... Black, each	.38	.40	.45	.57	.85	1.80	2.20	3.50	6.50	9.50	17.50	23.00	47.00
Price..... Galv.	.67	.70	.80	1.00	1.50	3.15	3.85	6.15	11.35	16.50	30.50	40.00	82.00

REDUCING 90° Y BRANCHES, TEE PATTERN—Short Turn

Size..... inches	1x¾	1½x1	1½x1½	1½x1¾	2x1	2x1½	2x1¾	2x1½x2	2x1½x2½	2x1½x3	2x1½x4	2x1½x5
Dimension A..... inches	3¾	3¾	3¾	3¾	4¾	4¾	4¾	4¾	5¾	5¾	5¾	5¾
Dimension B..... inches	1¾	2¼	2¼	2¼	2¼	2¼	2¼	2¼	3¼	3¼	3¼	3¼
Dimension C..... inches	1¾	2¼	2¼	2¼	2¼	2¼	2¼	2¼	3¼	3¼	3¼	3¼
Price..... Black, each	.55	.58	.63	.63	.95	.95	.95	.95	2.00	2.00	3.50	3.50
Price..... Galv.	.95	1.00	1.10	1.10	1.65	1.65	1.65	1.65	1.65	3.50	3.50	3.50

Size..... inches	2½x2	3x1½	3x1½	3x2	4x1½	4x1½	4x2	4x2½	4x3	5x1½	5x2
Dimension A..... inches	7¾	6¼	6¼	7½	7¾	7¾	7¾	7¾	8¾	8¾	8¾
Dimension B..... inches	4¾	4¾	4¾	4¾	5	5	5	5	5¾	5¾	5¾
Dimension C..... inches	4¾	4¾	4¾	4¾	5	5	5	5	5¾	5¾	5¾
Price..... Black, each	2.00	2.40	2.40	2.40	3.85	3.85	3.85	3.85	3.85	7.15	7.15
Price..... Galv.	3.50	4.20	4.20	4.20	6.75	6.75	6.75	6.75	6.75	12.50	12.50

Size..... inches	5x2½	5x3	5x4	6x1½	6x2	6x3	6x4	6x5	7x3	7x4	7x5
Dimension A..... inches	9¼	9¼	10¾	8¾	9¼	9¼	10¾	12¾	10¾	10¾	10¾
Dimension B..... inches	5¾	6¾	6¾	6¾	6¾	6¾	6¾	8	8	8	8
Dimension C..... inches	6¾	6¾	6¾	6¾	6¾	6¾	6¾	10.50	10.50	19.00	19.00
Price..... Black, each	7.15	7.15	7.15	10.50	10.50	10.50	10.50	18.50	33.25	33.25	33.25
Price..... Galv.	12.50	12.50	12.50	18.50	18.50	18.50	18.50	18.50	33.25	33.25	33.25

Size..... inches	7x6	8x2	8x3	8x4	8x5	8x6	8x7	10x4	10x6	10x8
Dimension A..... inches	11¾	11¾	11¾	11¾	12¾	12¾	12¾	10¾	13¾	15¾
Dimension B..... inches	7¼	7¼	7¼	7¼	7¼	7¼	7¼	8¾	8¾	9¾
Dimension C..... inches	6¾	6¾	6¾	6¾	6¾	6¾	6¾	8¾	8¾	9¾
Price..... Black, each	19.00	25.50	25.50	25.50	25.50	25.50	25.50	52.00	52.00	52.00
Price..... Galv.	33.25	44.50	44.50	44.50	44.50	44.50	44.50	88.00	88.00	88.00

The Inlets on Reducing Fittings are always the smallest openings. The Inlet on 90° Y Branches is tapped graded ¼" to the foot, unless otherwise ordered.
Malleable and Brass Drainage Fittings furnished at special prices.
In ordering, be particular to state whether Drainage Fittings are desired black or galvanized

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

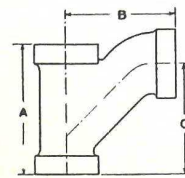


Fig. 532B
90° Y Branch, Tee Pattern, Long Turn

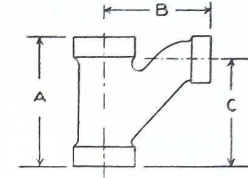


Fig. 532C
90° Y Branch, Tee Pattern, Long Turn, Reducing

90° Y BRANCHES, TEE PATTERN—Long Turn

Size..... inches	1¼	1½	2	2½	3	4	5	6	7	8	10
Dimension A..... inches	4¾	5¼	6¾	8¾	7¾	10¾	11¼	13¾	14¾	17	.....
Dimension B..... inches	2¾	3¾	5¼	6¾	6¼	8¼	9¼	10¾	10¾	14	.....
Dimension C..... inches	3¾	3¾	5¼	6¾	6¼	7¾	8¾	10¾	10¾	13¾	.....
Price..... Black, each	.57	.70	1.10	2.40	3.35	6.00	9.50	20.00	30.00	40.00	55.00
Price..... Galv.	1.00	1.22	1.95	4.20	5.85	10.50	16.50	35.00	52.50	70.00	90.00

REDUCING 90° Y BRANCHES, TEE PATTERN—Long Turn

Size..... inches	1½x1	1½x1	1½x1½	2x1½	2x1½	2x1½	2x1½x2	2x1½x2	2x1½x2	3x1½
Dimension A..... inches	.....	.....	5¼	.....	5¾	.....	.....	5¾	7¾	5¾
Dimension B..... inches	.....	.....	3¾	.....	4¾	.....	.....	4¾	5¾	5¾
Dimension C..... inches	.....	.....	3¾	.....	4¾	.....	.....	4¾	5¾	5¾
Price..... Black, each	.63	.80	.80	1.20	1.20	2.65	2.65	2.65	2.65	3.75
Price..... Galv.	1.10	1.40	1.40	2.10	2.10	4.65	4.65	4.65	4.65	6.55

Size..... inches	3x2	3x2½	4x1½	4x2	4x2½	4x3	5x1½	5x2	5x2½	5x3
Dimension A..... inches	7¼	.....	6¾	7¾	8¾	9¼	6¾	7¾	.....	8¾
Dimension B..... inches	5¾	.....	5¾	6¾	7¾	7¾	6	6¾	.....	7¾
Dimension C..... inches	5¾	.....	4¾	5¾	6¾	6¾	4¾	5¾	.....	6¾
Price..... Black, each	3.75	3.75	6.60	6.60	6.60	6.60	10.50	10.50	10.50	10.50
Price..... Galv.	6.55	6.55	11.55	11.55	11.55	11.55	18.50	18.50	18.50	18.50

Size..... inches	5x4	6x2	6x3	6x4	6x5	7x3	7x4	7x5	7x6	8x3
Dimension A..... inches	9¼	7¼	9¼	10¾	12¾	10¾	13¾	13¾	.....	10¾
Dimension B..... inches	8¾	7¼	7¾	9¾	10	9¼	11¾	11¾	.....	10¾
Dimension C..... inches	7¾	6¾	7¼	8¾	9¾	7¾	10¾	10¾	.....	8¾
Price..... Black, each	10.50	22.00	22.00	22.00	22.00	33.00	33.00	33.00	33.00	44.00
Price..... Galv.	18.50	38.50	38.50	38.50	38.50	58.00	58.00	58.00	58.00	77.00

Size..... inches	8x4	8x5	8x6	8x7	10x4	10x6	10x8	12x5
Dimension A..... inches	13¾	.....	14¾	.....	14	15¾	.....	17
Dimension B..... inches	12	.....	12¾	.....	13	13¾	.....	15¾
Dimension C..... inches	10¾	.....	11¾	.....	11	12¾	.....	13
Price..... Black, each	44.00	44.00	44.00	44.00	60.00	60.00	60.00	85.00
Price..... Galv.	77.00	77.00	77.00	77.00	102.00	102.00	102.00	150.00

LONG TURN T Y—For 3" Soil Stack and 4" Water Closet Connection

Center to Face, 8¼ inches—Price, Black	10.50	Center to Face, 8¾ inches—Price, Galv.	18.50
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The Inlet of 90° Long Turn Y Branches is tapped graded ¼" to the foot, unless otherwise ordered. The Inlets on Reducing Fittings are always the smallest openings.
Malleable and Brass Drainage Fittings furnished at special prices.
In ordering, be particular to state whether Drainage Fittings are desired black or galvanized

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

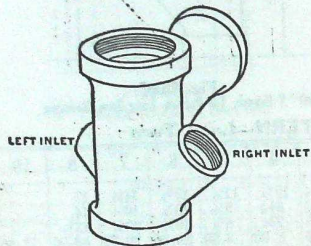


Fig. 541
Closet Tee with Inlets on Both Sides

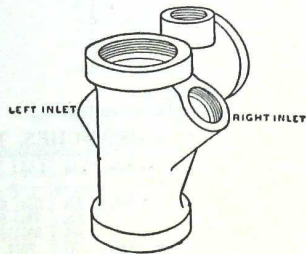


Fig. 542
Closet Tee with Inlets on Both Sides and Top

LONG TURN 90° Y BRANCHES WITH AUXILIARY INLETS

(Closet Tees)

Size..... inches	3	4	5x4	6x4
Price, with 2-inch Inlet on Right Side only.....	Black, each 5.25	9.00	12.00	23.00
	Galv. " 9.20	15.75	21.00	40.00
Price, with 2-inch Inlet on Left Side only.....	Black, " 5.25	9.00	12.00	23.00
	Galv. " 9.20	15.75	21.00	40.00
Price, with 2-inch Inlet on Both Sides.....	Black, " 5.75	10.00	13.00	25.00
	Galv. " 10.00	17.50	22.75	44.00
Price, with 2-inch Inlet on Right Side and 2-inch Top Inlet.....	Black, " 5.75	10.00	13.00	25.00
	Galv. " 10.00	17.50	22.75	44.00
Price, with 2-inch Inlet on Left Side and 2-inch Top Inlet.....	Black, " 5.75	10.00	13.00	25.00
	Galv. " 10.00	17.50	22.75	44.00
Price, with 2-inch Inlet on Both Sides and 2-inch Top Inlet.....	Black, " 6.50	11.00	14.50	28.00
	Galv. " 11.35	19.25	25.50	49.00

For dimensions of above Fittings, see dimensions of 90° Long Turn Y Branches, Tee Pattern.
 The Inlets on Reducing Fittings are always the smallest openings.
 We can furnish, to order, Fittings with Auxiliary Side Inlets only, from Short Pattern, if desired. Prices on application.
 The 90° Inlets on Closet Tees are tapped graded 1/4" to the foot, unless otherwise ordered.
 Malleable and Brass Drainage Fittings furnished at special prices.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

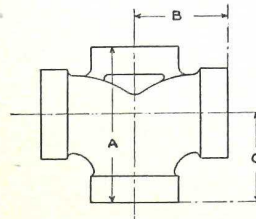


Fig. 533 Short Turn Cross
(90° Double Y Branch, Tee Pattern, Short Turn)

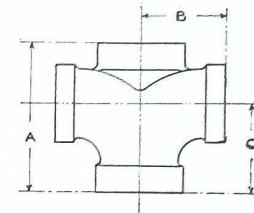


Fig. 533A Reducing Short Turn Cross
(90° Double Y Branch, Reducing, Tee Pattern, Short Turn)

SHORT TURN CROSSES

Size..... inches	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	7	8	10
Dimension A..... inches	3 1/4	3 3/4	4 1/4	5 1/4	7	7 1/4	9 1/4	11 1/4	12 1/4	13 1/4	15 1/4	19 1/4
" B..... "	1 1/8	2 1/4	2 1/2	3 1/8	4 1/8	5 1/4	6 1/8	7 1/4	8 1/4	8 1/4	9 1/4	12 1/4
" C..... "	1 1/8	2 1/4	2 1/2	3 1/8	4 1/8	5 1/4	6 1/8	7 1/4	8 1/4	8 1/4	9 1/4	12 1/4
Price..... Black, each	.60	.70	.85	1.30	2.85	3.40	5.25	9.50	14.00	25.00	36.00	60.00
" Galv. "	1.05	1.22	1.50	2.30	5.00	5.95	9.20	16.50	24.50	42.50	62.00	102.00

REDUCING SHORT TURN CROSSES

Size..... inches	1 1/2 x 1	1 1/2 x 1	1 1/2 x 1 1/2	2 x 1 1/2	2 x 1 1/2	2 1/2 x 1 1/2	2 1/2 x 1 1/2	2 1/2 x 2	3 x 1 1/2
Dimension A..... inches	3 1/2	3 3/4	3 3/4	4 1/2	4 3/4	5 1/4	5 1/4	6 1/4	6 1/2
" B..... "	2 1/8	2 1/8	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	3 1/8	4 1/8
" C..... "	2 1/8	2 1/4	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	3 1/8	4 1/8
Price..... Black, each	.77	.95	.95	1.50	1.50	3.15	3.15	3.15	3.75
" Galv. "	1.35	1.45	1.65	2.10	2.60	5.50	5.50	5.50	6.55

Size..... inches	3x2	4x2	4x3	5x2	5x3	5x4	6x2	6x4
Dimension A..... inches	7 1/2	7 1/2	8 1/2	7 1/2	9 1/2	10 1/2	8 1/2	9 1/2
" B..... "	4 1/2	5 1/4	5 1/4	5 1/4	5 3/4	6 1/2	6 1/2	6 1/2
" C..... "	5	5 1/2	5 1/2	5 1/2	5 1/2	6	5 1/2	6 1/2
Price..... Black, each	3.75	5.75	5.75	10.50	10.50	10.50	15.50	15.50
" Galv. "	6.55	10.00	10.00	18.50	18.50	18.50	27.00	27.00

Size..... inches	6x5	7x4	8x3	8x4	8x5	8x6	10x4	10x6	10x8
Dimension A..... inches	12 1/2	10 1/2	9 1/2	11 1/2	12 1/2	15 1/2	10 1/2	13 1/2	15 1/2
" B..... "	7 1/2	7 1/2	7 1/4	7 1/2	8 1/4	8 1/2	8 1/2	9 1/4	10
" C..... "	8	6 1/4	6 1/4	6 1/2	7 1/2	7 3/4	10	8 1/4	9 1/4
Price..... Black, each	15.50	27.50	40.00	40.00	40.00	40.00	66.00	66.00	68.00
" Galv. "	27.00	46.75	68.00	68.00	68.00	68.00	112.00	112.00	112.00

The Inlets of Short Turn Crosses are tapped graded 1/4" to the foot, unless otherwise ordered.
 The Inlets on Reducing Fittings are always the smallest openings.
 Malleable and Brass Drainage Fittings furnished at special prices.
 In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

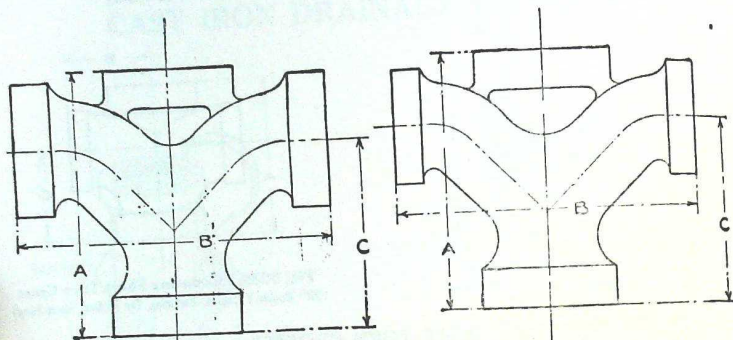


Fig. 533 B Long Turn Cross
(90° Double Y Branch, Tee Pattern, Long Turn)

Fig. 533 C Reducing Long Turn Cross
(90° Double Y Branch, Reducing, Tee Pattern, Long Turn)

LONG TURN CROSSES

Size..... inches	1 1/4	1 1/2	2	2 1/2	3	4	5	6	7	8	10
Dimension A..... inches	4 3/4	5 1/4	6 1/4	8 1/4	7 3/4	10 3/4	11 1/4	13 1/4	14 1/4	17	28
B..... "	5 3/4	7 1/4	10 1/4	12 1/4	13 3/4	17 3/4	19 1/4	20 3/4	20 3/4	28	70.00
C..... "	3 3/4	3 3/4	5 1 1/2	6 3/4	8 1/4	9.00	14.00	30.00	45.00	60.00	70.00
Price..... Black, each	1.00	1.10	1.75	3.60	5.60	9.00	14.00	30.00	45.00	60.00	70.00
Galv..... "	1.75	1.95	3.10	6.30	8.75	15.75	24.50	52.50	79.00	105.00	119.00

REDUCING LONG TURN CROSSES

Size..... inches	1 1/4 x 1	1 1/2 x 1	1 1/2 x 1 1/4	2 x 1 1/2	2 x 1 1/4	2 1/2 x 1 1/4	2 1/2 x 1 1/2	2 1/2 x 2	3 x 1 1/2
Dimension A..... inches	5 1/4	5 1/4	7 1/4	9	9	11 1/4	11 1/4	13 1/4	15 1/4
B..... "	7 1/4	7 1/4	9 1/4	11 1/4	11 1/4	13 1/4	13 1/4	15 1/4	17 1/4
C..... "	3 1/4	3 1/4	4 1/4	5 1/4	5 1/4	6 1/4	6 1/4	7 1/4	8 1/4
Price..... Black, each	1.10	1.25	1.25	3.35	3.35	7.00	7.00	7.00	9.15
Galv..... "	1.90	2.25	2.25	3.35	3.35	7.00	7.00	7.00	9.15

Size..... inches	3x2	4x2	4x2 1/2	4x3	5x2	5x3	5x4	6x2	6x3
Dimension A..... inches	7 1/4	7 3/4	8 1/4	9 1/4	7 1/4	8 1/4	9 1/4	7 1/4	8 1/4
B..... "	10 1/4	13 1/4	14 1/4	14 1/4	13 1/4	14 1/4	17 1/4	14 1/4	15 1/4
C..... "	5 1/4	5 1/4	6 1/4	6 1/4	5 1/4	6 1/4	7 1/4	6 1/4	7 1/4
Price..... Black, each	5.50	10.00	10.00	10.00	15.50	15.50	15.50	33.00	33.00
Galv..... "	9.65	17.50	17.50	17.50	27.00	27.00	27.00	58.00	58.00

Size..... inches	6x4	6x5	7x4	8x3	8x5	8x6	10x4	10x6	10x8
Dimension A..... inches	10 3/8	10 3/8	11 3/8	12 3/8	12 3/8	14 3/8	15 3/8	15 3/8	17 3/8
B..... "	19	19	21 1/4	21 1/4	21 1/4	24 1/4	26 1/4	26 1/4	29 1/4
C..... "	8 3/8	8 3/8	9 3/8	9 3/8	9 3/8	11 3/8	12 3/8	12 3/8	14 3/8
Price..... Black, each	33.00	33.00	50.00	66.00	66.00	77.00	77.00	77.00	77.00
Galv..... "	58.00	58.00	85.00	112.00	112.00	130.00	130.00	130.00	130.00

The Inlets on Long Turn Crosses are tapped graded 1/4" to the foot, unless otherwise ordered.
The Inlets on Reducing Fittings are always the smallest openings.
Malleable and Brass Drainage Fittings furnished at special prices.
In ordering, be particular to state whether Drainage Fittings are desired black or galvanized

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

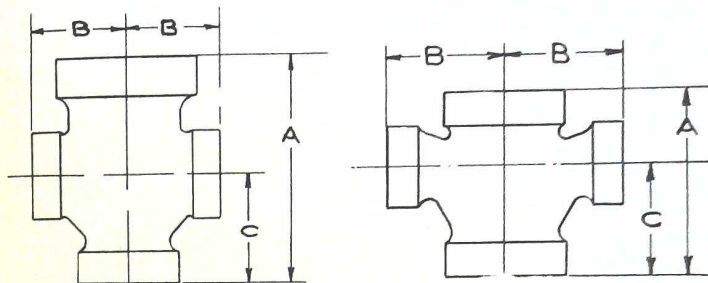


Fig. 546E
Special Double T Y with Hub for
Soil Pipe Connection

Fig. 546F
Special Double T Y; Short Branch, Long Body
for Narrow Wall or Close Connection

SPECIAL DOUBLE T Y WITH HUB FOR SOIL PIPE CONNECTIONS

	Size	Dimens'n A	Dimens'n B	Dimens'n C	Price Black, Ea.	Price Galv., Ea.
Special Double T Y, Fig. 546E.....	2x1 1/2	7 1/4	3	3 1/2	5.35	9.35

SPECIAL DOUBLE T Y; SHORT BRANCH, LONG BODY

Size..... inches	1 1/4	1 1/2	2	2 1/2	2 1/2 x 1 1/2	2 1/2 x 2	2 1/2	3	3 x 1 1/2	3 x 2	4 x 2
Dimension A..... inches	4 1/4	4 1/4	5 1/4	6 1/4	5 3/4	6 3/4	7 3/4	9	6	7 1/4	7
B..... "	2 1/4	2 1/4	2 1/4	3 1/4	3 1/4	3 1/4	4	4 1/4	4 1/4	5 1/4	4 1/4
C..... "	2 1/4	2 1/4	3 1/4	3 1/4	3 1/4	4	4 1/4	5 1/4	5 1/4	6 1/4	5 1/4
Price..... Black, each	.75	.85	1.25	2.00	3.60	3.80	4.00	5.50	6.00	6.00	7.00
Galv..... "	1.25	1.50	2.25	3.50	6.30	6.50	7.00	9.75	10.50	10.50	12.25

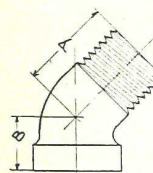


Fig. 546M
45° Drainage Street Ell

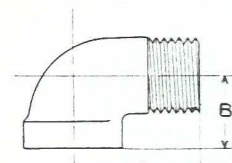


Fig. 546N
90° Drainage Street Ell

DRAINAGE STREET ELLS

	Size	Dimens'n A	Dimens'n B	Price Black, Ea.	Price Galv., Ea.
45° Drainage Street Ell.....	1 1/2	2 1/4	1 1/4	.40	.70
90° Drainage Street Ell.....	1 1/2	3	1 1/4	.40	.70

Malleable and Brass Drainage Fittings furnished at special prices.
In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

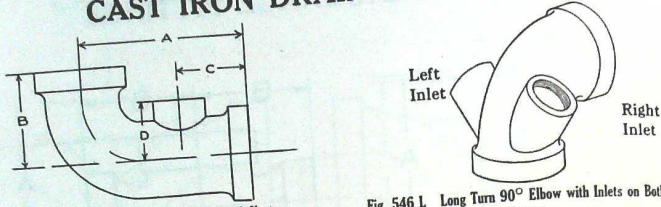


Fig. 546P Long Turn 90° Elbow with Vent

Fig. 546L Long Turn 90° Elbow with Inlets on Both Sides

LONG TURN 90° ELBOW WITH VENT

	Size	Size of Vent	Dim. A	Dim. B	Dim. C	Dim. D	Price Blk. Ea.	Price Galv. Ea.
Long Turn 90° Elbow with Vent	4	2	10 1/4	5 3/4	4 1/4	3 1/2	8.00	14.00

LONG TURN 90° ELBOWS WITH INLETS ON BOTH SIDES

Size	inches	3	4	5	6
Dimension A	inches	5 1/4	6 1/4	7 1/4	8 1/4
Size of Outlet	inches	2	2	2	2
Price	Black, each	3.50	5.50	10.50	15.00
	Galv.	6.10	9.60	18.25	26.25

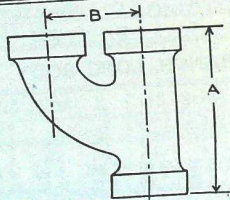


Fig. 546D Special Upright Y

SPECIAL UPRIGHT Y'S

Size	inches	2	2x1 1/2	2x1 1/2	2 1/2	2 1/2 x 1 1/2	3	3x1 1/2	3x2	4	4x2	6	6x4
Dimension A	inches	6 1/4	6 1/4	6 1/4	8	8	8 1/4	8 1/4	8 1/4	10 1/4	10 1/4	13 1/4	13 1/4
Dimension B	inches	4	4	4	5	5	6	6	6	7	7	10	10
Price	Black, each	2.65	2.90	2.90	4.00	4.50	5.50	6.00	6.00	8.00	8.75	15.00	16.50
	Galv.	4.65	5.10	5.10	7.00	7.75	9.75	10.50	14.00	15.25	26.25	29.00	31.00

60° Y BRANCHES

Size	inches	1 1/4	1 1/2	1 1/2 x 1 1/4	2	2x1 1/2	3	3x2	4	4x2	4x3
Dimension A	inches	4 1/4	5 1/4	5 1/4	6	6 1/4	8 1/4	8 1/4	10 1/4	10 1/4	12 1/4
Dimension B	inches	2 1/4	3 1/4	3 1/4	3 3/4	3 3/4	5 1/4	5 1/4	6 1/4	6 1/4	7 1/4
Price	Black, each	.52	.65	.72	.95	1.05	2.65	2.90	3.85	4.25	4.25
	Galv.	.90	1.15	1.25	1.65	1.85	4.65	5.10	6.75	7.40	7.40

NOTE—The Outlet of 90° Elbows is tapped graded 1/4" to the foot, unless otherwise ordered.
The Inlets on Reducing Fittings are always the smallest openings.
Malleable and Brass Drainage Fittings furnished at special prices.
In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

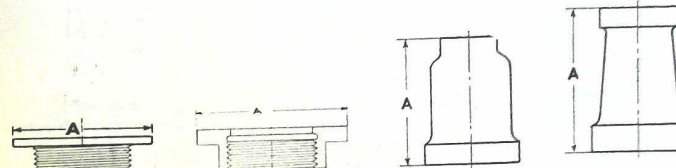


Fig. 544 Brass Closet Flange

Fig. 543 Iron Closet Flange

Fig. 538A Tucker Connection

Fig. 538 Increaser

BRASS CLOSET FLANGES

	Size	Diam. A	Price
Brass Closet Flange, Male or Female	4"	7"	7.00

IRON CLOSET FLANGES

	Size	Diam. A	Price, Blk., Ea.	Price, Galv., Ea.
Iron Closet Flange	4"	7"	1.35	2.35
Iron Closet Flange	5"	10"	1.70	2.95

TUCKER CONNECTIONS

Size	inches	2	2 1/2	3	4	5	6	8	10
Dimension A	inches	4 1/4	4 1/4	4 1/4	6 1/4	6 1/4	7	7	7 1/4
Price	Black, each	.80	1.50	2.00	3.25	6.00	8.75	21.00	43.00
	Galv.	1.40	2.45	3.50	5.70	10.50	15.25	37.00	75.00

INCREASERS

Size	inches	3 1/2 x 1	3 1/2 x 1 1/2	1 x 1 1/2	1 x 1 1/2	1 x 2	1 1/2 x 2	1 1/2 x 1 1/2	2 x 1 1/2	2 1/2 x 2
Dimension A	inches	3 1/8	3 1/8	3 1/8	5 1/8	5 1/8	5 1/8	9	9	9
Price	Black, each	1.00	1.00	1.10	1.10	1.10	1.25	1.50	1.75	2.00
	Galv.	1.75	1.75	1.85	1.85	1.85	2.25	2.40	3.00	3.50

Size	inches	3x2	3x2 1/2	4x2	4x3	5x2	5x3	5x4	6x4	6x5
Dimension A	inches	9	9	9	9	9	9	9	9	9
Price	Black, each	2.50	2.50	3.75	3.75	5.50	5.50	5.50	6.50	6.50
	Galv.	4.40	4.40	6.55	6.55	9.65	9.65	9.65	11.35	11.35

Size	inches	7x6	8x6	8x7	10x8	12x10	14x6	14x8
Dimension A	inches	9	9	9	9	12x10	14x6	14x8
Price	Black, each	12.00	15.00	15.00	20.00	40.00	55.00	55.00
	Galv.	20.00	26.25	26.25	35.00	70.00	95.00	95.00

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

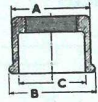


Fig. 545
Roof Connection

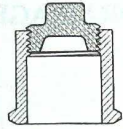


Fig. 542A
Iron Body Ferrule
with Brass Trap Screw



Fig. 547
Brass Soldering Nipple

ROOF CONNECTIONS

Size..... inches	2	3	4	5	6
Dimension A..... inches	3 3/4	4 1/4	5 1/4	7 1/4	8 1/4
" B..... inches	3 3/4	4 1/4	5 1/4	7 1/4	8 1/4
" C..... inches	3	4 1/4	5 1/4	6 1/4	7 1/4
Price..... Black, each	1.15	1.20	1.50	2.00	4.25
" Galv. "	2.00	2.10	2.60	3.50	7.40

BRASS SOLDERING NIPPLES AND IRON BODY FERRULES

Size..... inches	1	1 1/4	1 1/2	2	3	4	5	6
Price, Brass Soldering Nipples..... each	.80	.90	1.05	1.50	2.75	4.00	9.00	7.00
" Iron Body Ferrules..... Black, "				1.00	2.00	3.00	5.00	7.00
" Iron Body Ferrules..... Galv. "				1.75	3.50	5.25	8.75	12.25

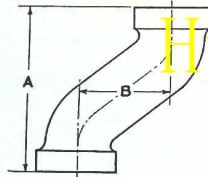


Fig. 546G Offset

Size..... inches	3/4	1	1 1/4	1 1/2	2	3	4	5	6	8	10	12
B-Offset..... inches	4	6	8	10	12	14	16	18	20	24	30	36
A-Length..... inches	4 1/2	5	5 1/2	6 1/4	7 1/4	8 1/4	9 1/4	10 1/4	11 1/4	13 1/4	16 1/4	19 1/4
Price..... Black, each	1.10	1.15	1.20	1.25	1.30	1.40	1.50	1.65	1.80	1.90	2.00	2.00
" Galv. "	1.92	2.00	2.10	2.20	2.28	2.45	2.65	2.90	3.15	3.35	3.50	3.50

Size..... inches	2	3	4	5	6	8	10	12
B-Offset..... inches	4	6	8	10	12	14	16	18
A-Length..... inches	7 1/4	9 1/4	11 1/4	13 1/4	15 1/4	17 1/4	19 1/4	21 1/4
Price..... Black, each	2.15	2.40	2.60	2.85	3.35	4.00	4.75	5.50
" Galv. "	3.75	4.20	4.55	5.00	5.85	7.00	8.30	9.65

Size..... inches	4	5	6	8	10	12	14	16	18	20
B-Offset..... inches	10	12	14	16	18	20	22	24	26	28
A-Length..... inches	15 1/4	17 1/4	19 1/4	21 1/4	23 1/4	25 1/4	27 1/4	29 1/4	31 1/4	33 1/4
Price..... Black, each	7.50	8.50	9.75	11.00	12.50	14.00	15.50	17.00	18.50	20.00
" Galv. "	13.15	15.00	16.85	18.75	21.00	23.00	25.50	28.00	30.50	33.00

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS



Fig. 546H
Coupling

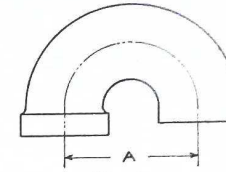


Fig. 546
Capping For Capping Air Inlet Pipes

COUPLINGS

Size..... inches	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	7	8	10
Dimension A, inch's	2 3/4	3	3 1/4	3 3/4	4	4 1/4	4 1/2	4 3/4	5	5 1/4	5 3/4	6 1/4
Price..... Black, each	.65	.70	.80	.90	1.20	1.50	2.50	4.00	6.00	8.00	10.00	14.00
" Galv. "	1.15	1.25	1.40	1.60	2.10	2.60	3.40	7.00	10.50	14.00	17.50	24.50

CAPPINGS For Capping Air Inlet Pipes

Size..... inches	2	3	4	5
Dimension A..... inches	5 1/2	6	9 1/4	9 1/4
Price..... Black, each	2.50	3.50	8.00	10.00
" Galv. "	4.25	6.00	14.00	17.50

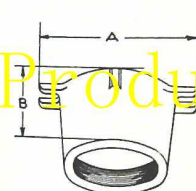


Fig. 546K
Sink Coupling

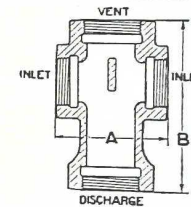


Fig. 546-O
Partition Cross, Reducing

SINK COUPLINGS

Size..... inches	1 1/4	1 1/2	2
Dimension A..... inches	4 3/4	4 3/4	4 3/4
Price..... Black, each	.70	.80	.90
" Galv. "	1.25	1.40	1.60

PARTITION CROSSES

Size..... inches	1 1/4 x 1 1/2
Dimension A..... inches	3 1/2
Price..... Black, each	1.25
" Galv. "	2.20

Malleable and Brass Drainage Fittings furnished at special prices.
In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

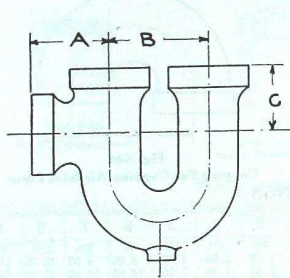


Fig. 549 Half S Trap

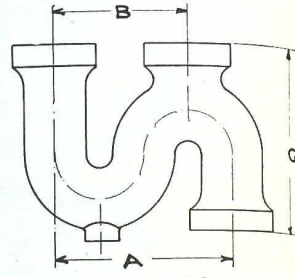


Fig. 548 S Trap

HALF S TRAPS

Size..... inches	1½	2	3	4	5	6	7	8	10
Dimension A..... inches	2½	3½	4½	5½	6½	7½	8½	9½	11½
" B..... "	2¾	3¾	4¾	5¾	6¾	7¾	8¾	9¾	11¾
" C..... "	2	2½	3	3½	4	4½	5	5½	6
Size of Vent.....	1½	2	3	4	5	6	7	8	10
Price.....Black, each	1.50	1.70	2.20	3.00	4.00	5.00	6.00	7.00	8.00
".....Galv. "	2.65	3.00	3.85	5.00	6.50	8.00	9.50	11.00	13.00

S TRAPS

Size..... inches	1½	2	3	4	5	6	7	8
Dimension A..... inches	6½	8	11	13½	15½	17½		
" B..... "	5½	6½	8½	10½	11½	13½		
" C..... "	7½	8½	11½	13½	15½	18		
Size of Vent.....	2	2	3	4	4	4		
Price.....Black, each	3.25	4.00	9.25	14.00	21.00	36.00	45.00	60.00
".....Galv. "	5.75	7.00	16.00	24.00	37.00	63.00	78.00	105.00

The Outlets on Half S Traps are tapped graded ¼" to the foot, unless otherwise ordered. Malleable and Brass Drainage Fittings furnished at special prices. In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

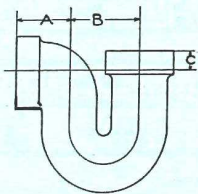


Fig. 551

CALIFORNIA PATTERN BATH TRAP
"p" Pattern

Size Inches	Dimension A Inches	Dimension B Inches	Dimension C Inches	Price Black Each	Price Galv. Each
1½	1½	2½	¾	1.60	2.80

ORDER BY FIGURE NUMBERS

CAST IRON DRAINAGE FITTINGS

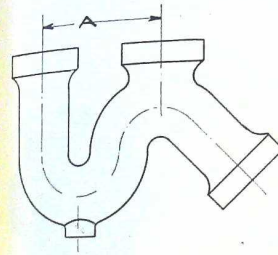


Fig. 549A Three-quarter S Trap

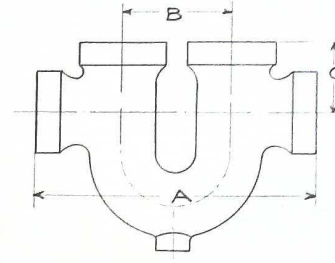


Fig. 550 Running Trap

THREE-QUARTER S TRAPS

Size..... inches	2	3	4	5	6
Dimensions A..... inches	6½	8½	10½	11½	13½
Size of Vent..... "	2	3	4	4	4
Price.....Black, each	4.00	9.25	14.00	21.00	36.00
".....Galv. "	7.00	16.00	24.00	37.00	63.00

RUNNING TRAPS

Size..... inches	1½	2	3	4	5	6	7	8	10
Dimension A..... inches	7½	7½	10½	13½	17½	20½	23½	26½	30½
" B..... "	2¾	3	4	5½	7	8½	10½	11½	12½
" C..... "	2	2½	2½	3½	4½	4½	5½	6½	8½
Size of Vent.....	1½	1½	2	3	4	4	4	5	6
Price.....Black, each	2.40	2.70	3.30	5.50	9.75	24.50	33.50	50.00	65.00
".....Galv. "	4.20	4.70	5.75	9.50	17.00	43.00	58.50	87.50	115.00

The Inlet and Outlet on Running Traps are tapped graded ¼" to the foot. Malleable and Brass Drainage Fittings furnished at special prices. In ordering, be particular to state whether Drainage Fittings are desired black or galvanized.

CALIFORNIA PATTERN BATH TRAP
Running Pattern

Size Inches	Dimension A Inches	Dimension B Inches	Dimension C Inches	Price Black Each	Price Galv. Each
1½	5½	2½	1½	2.00	3.50

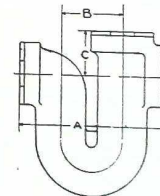


Fig. 552

ORDER BY FIGURE NUMBERS

DRUM TRAPS AND COVERS



Fig. 553 Drum Trap
Size 4x5 Inches



Fig. 555
Drum Trap Cover



Fig. 554 Drum Trap
Size 4x8 Inches

DRUM TRAPS

Size of Trap	Number of Openings	Size of Inlet	Price Without Cover Each	Price with Cover Each
4 x 5	1	1½	1.00	2.10
4 x 5	2	1½	1.15	2.25
4 x 8	1	1½	1.25	2.35
4 x 8	2	1½	1.50	2.60
4 x 8	3	1½	1.75	2.85
4 x 8	3	2	2.00	3.10
4 x 8	4	1½	2.00	3.10
4 x 8	5	1½	2.25	3.35

DRUM TRAP COVERS

Price, Nickel Plated Brass Cover with Projecting Flange, 3-inch Pipe Size..... each \$1.10

Price for sizes and styles other than above furnished upon application.

ORDER BY FIGURE NUMBERS

AMERICAN STANDARD SPRINKLER FITTINGS

The various styles of elbows, tees and crosses illustrated on page 54, are designed in accordance with the rules and requirements of the National Fire Protection Association, and are known as "AMERICAN STANDARD SPRINKLER FITTINGS."

These fittings are made of the best quality of cast iron and of such character as to make them strong, tough and of even grain and soft enough to satisfactorily admit of drilling and machining.

The sizes range from 2½" to 6".

Screwed, flanged and combination screwed and flanged fittings all have the same center to end dimensions for each respective size.

When one end is flanged the large opening will be flanged unless otherwise specified.

These fittings are recommended for the water working pressure of 150 pounds per square inch.

The screwed fittings have the "AMERICAN BRIGGS STANDARD THREAD," eight threads per inch.

Tappings will be provided only for drain or test purpose in which case fittings will be provided with bosses for tapping when required if the location and size of tapping are specified. Slip bosses having blind holes will be provided when required to act as sockets for supports. Fittings 2½ to 6 inch, inclusive, may be tapped ½ inch on the side without boss and fittings larger than 6 inch may be tapped ¾ inch without boss.

In describing Tees and Crosses the run is the first named and then the outlet or outlets.

All flanges and Drilling Templates are the "AMERICAN STANDARD."

Our regular Standard Cast Iron Screwed Fittings, sizes 2 inch and smaller and our Standard Flanged Fittings, sizes 7 inch and larger, are acceptable to the National Fire Protection Association, and with the fittings shown on page 54 form a complete line of fittings for sprinkler service.

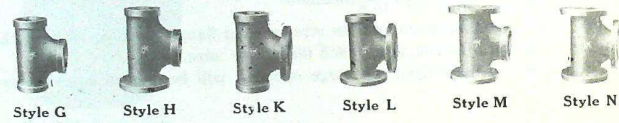
ORDER BY FIGURE NUMBERS

AMERICAN STANDARD SPRINKLER FITTINGS

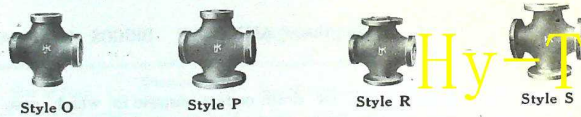
ELBOWS



TEES



CROSSES



Size.....	Inches	2½	3	3½	4	5	6
Style A, Elbows.....	Each	1.20	2.25	3.25	3.50	6.50	8.75
Style B, Elbows.....	"	5.50	6.00	6.50	7.50	10.00	14.00
Style C, Elbows.....	"	6.75	7.50	8.50	10.00	12.50	17.50
Style D, Elbows.....	"		8.00		11.00	15.00	18.00
Style G, Tees.....	"	2.40	4.50	6.50	7.00	13.00	17.50
Style G, Tees, Reducing.....	"	3.60	6.75	9.75	10.50	19.00	26.25
Style H, Tees.....	"	9.00	10.00	11.00	12.00	15.00	22.00
Style K, Tees.....	"	9.00	10.00	11.00	12.00	15.00	22.00
Style L, Tees.....	"	9.00	10.00	11.00	12.00	15.00	22.00
Style M, Tees.....	"	9.00	10.00	11.00	12.00	15.00	22.00
Style N, Tees.....	"	10.00	11.50	13.00	15.00	18.00	26.00
Style O, Crosses.....	"	3.20	6.00	8.75	9.50	17.50	24.00
Style P, Crosses.....	"	12.50	13.50	15.00	17.00	22.00	30.00
Style R, Crosses.....	"	12.50	13.50	15.00	17.00	22.00	30.00
Style S, Crosses.....	"	13.50	15.00	17.00	20.00	25.00	35.00

ORDER BY FIGURE NUMBERS

AMERICAN STANDARD SPRINKLER FITTINGS

LIST OF SIZES

ELBOWS



Style A
2½
3½
4
5
6



Style B
2½
3
3½
4
5
6



Style C
2½
3
3½
4
5
6

TEES



Style G
2½
2½ x 2½ x 2
2½ x 2 x 2½
2 x 2 x 2½

3
3 x 3 x 2½
3 x 2½ x 3
3 x 2½ x 2½
3 x 2 x 3
3 x 2 x 2½
2½ x 2½ x 3
2½ x 2 x 3
3½
3½ x 3½ x 3
3½ x 3½ x 2½
3½ x 3 x 3½
3½ x 3 x 3
3½ x 3 x 2½
3½ x 2½ x 3½
3½ x 2½ x 2½
3½ x 2 x 3½
3 x 3 x 3½
3 x 2½ x 3½
3 x 2 x 3½
2½ x 2½ x 3½

4
4 x 4 x 3½
4 x 4 x 3
4 x 3½ x 3½
4 x 3½ x 4
4 x 3½ x 3½
4 x 3½ x 3
4 x 3 x 3½
4 x 3 x 3
4 x 3 x 2½
4 x 3 x 3
4 x 3 x 3½
4 x 3 x 3
4 x 3 x 3½
4 x 3 x 3

4 x 3 x 2½
4 x 2½ x 4
4 x 2½ x 3½
3½ x 3½ x 4
3½ x 3 x 4
3½ x 2½ x 4
3 x 3 x 4
3 x 2½ x 4

5
5 x 5 x 4
5 x 5 x 3½
5 x 5 x 3
5 x 5 x 2½
5 x 4 x 5
5 x 4 x 4
5 x 4 x 3½
5 x 4 x 3
5 x 4 x 2½

5 x 3½ x 5
5 x 3½ x 4
5 x 3½ x 3½
5 x 3 x 5
5 x 3 x 4
5 x 3 x 3½
5 x 2½ x 5
5 x 2½ x 4
4 x 4 x 5
4 x 3½ x 5
4 x 3 x 5
3½ x 3½ x 5
3½ x 3 x 5

6
6 x 6 x 5
6 x 6 x 4
6 x 6 x 3½
6 x 6 x 3
6 x 5 x 6
6 x 5 x 5
6 x 5 x 4
6 x 5 x 3½
6 x 5 x 3
6 x 4 x 6
6 x 4 x 5
6 x 4 x 4
6 x 3½ x 6
6 x 3½ x 5
6 x 3 x 6
6 x 5 x 6
5 x 4 x 6
5 x 3½ x 6
5 x 3 x 6
4 x 4 x 6
4 x 3½ x 6



Style H

2½
2½ x 2 x 2½
3
3 x 3 x 2½
3 x 2½ x 3
3 x 2½ x 2½

3½
3½ x 3½ x 3
3½ x 3½ x 2½
3½ x 3 x 3½
3½ x 3 x 3
3½ x 3 x 2½
3½ x 2½ x 3½
3½ x 2½ x 3
3½ x 2½ x 2½

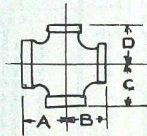
4
4 x 4 x 3½
4 x 4 x 3
4 x 4 x 2½
4 x 3½ x 4
4 x 3½ x 3½
4 x 3½ x 3
4 x 3½ x 2½
4 x 3 x 4
4 x 3 x 3½
4 x 2½ x 4
4 x 2½ x 3½

5
5 x 5 x 4
5 x 5 x 3½
5 x 5 x 3
5 x 5 x 2½
5 x 4 x 5
5 x 4 x 4
5 x 4 x 3½
5 x 4 x 3
5 x 3½ x 5
5 x 3½ x 4
5 x 3 x 5
5 x 3 x 4
5 x 2½ x 5

ORDER BY FIGURE NUMBERS

AMERICAN STANDARD SPRINKLER FITTINGS

For Water Working Pressure up to 150 Pounds



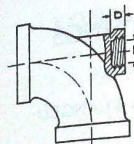
CROSSES—Sizes and Dimensions, Screwed or Flanged

Sizes	A	B	C	D	Sizes	A	B	C	D
2 1/2	4 1/2	4 1/2	4 1/2	4 1/2	*4 x 2 1/2 x 2 1/2 x 2 1/2	Bush	4x4x3x 3 1/2	7 1/2	7 1/2
*2 1/2 x 2 1/2 x 2 1/2 x 2	5	Bush	2 1/2	5	5	5	7 1/2	7 1/2	7 1/2
3	5	5	3	5	*5 x 5 x 5 x 4	Bush	5x5x4x 3 1/2	5	5
*3 x 3 x 3 x 2 1/2	4 1/2	4 1/2	4 1/2	4 1/2	5	5	5	5	5
3 x 3 x 2 1/2 x 2 1/2	5 1/2	5 1/2	5 1/2	5 1/2	*5 x 5 x 4 x 3 1/2	Bush	5x5x4x 3 1/2	5 1/2	5 1/2
3 1/2	5 1/2	5 1/2	3 1/2	5 1/2	5	5	5	5	5
*3 1/2 x 3 1/2 x 3 1/2 x 3	4 1/2	4 1/2	4 1/2	4 1/2	*5 x 5 x 4 x 2 1/2	Bush	5x5x4x 2 1/2	4 1/2	4 1/2
3 1/2 x 3 1/2 x 3 1/2 x 2 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5	5	5	5	5
3 1/2 x 3 1/2 x 3 x 3	5	5	5	5	*5 x 5 x 3 1/2 x 3 1/2	Bush	5x5x3 1/2x3 1/2	5 1/2	5 1/2
3 1/2 x 3 1/2 x 3 x 2 1/2	5	5	5	5	5	5	5	5	5
3 1/2 x 3 1/2 x 2 1/2 x 2 1/2	4 1/2	4 1/2	4 1/2	4 1/2	*5 x 5 x 4 x 3	Bush	5x5x4x 3	4 1/2	4 1/2
*3 1/2 x 2 1/2 x 2 1/2 x 2 1/2	Bush	3 1/2 x 3 1/2	2 1/2 x 2 1/2	6 1/2	5	5	5	5	5
4	6 1/2	6 1/2	4	6 1/2	*5 x 4 x 3 x 3	Bush	5x4x3x 3	6 1/2	6 1/2
*4 x 4 x 4 x 3 1/2	Bush	4	4	6	6	6	6	6	6
4 x 4 x 4 x 3	5 1/2	5 1/2	5 1/2	5 1/2	*6 x 6 x 5 x 5	Bush	6x6x5x 5	5 1/2	5 1/2
4 x 4 x 3 1/2 x 3 1/2	5 1/2	5 1/2	5 1/2	5 1/2	6	6	6	6	6
4 x 4 x 3 1/2 x 3	5 1/2	5 1/2	5 1/2	5 1/2	*6 x 6 x 5 x 3 1/2	Bush	6x6x5x 3 1/2	5 1/2	5 1/2
4 x 4 x 3 1/2 x 2 1/2	5 1/2	5 1/2	5 1/2	5 1/2	6	6	6	6	6
4 x 4 x 3 x 3	5 1/2	5 1/2	5 1/2	5 1/2	*6 x 6 x 5 x 3	Bush	6x6x5x 3	5 1/2	5 1/2
4 x 4 x 3 x 2 1/2	5 1/2	5 1/2	5 1/2	5 1/2	6	6	6	6	6
*4 x 3 x 2 1/2 x 2 1/2	Bush	4x4x3x 2 1/2	2 1/2	5 1/2	*6 x 6 x 4 x 4	Bush	6x6x4x 4	5 1/2	5 1/2
					6	6	6	6	6

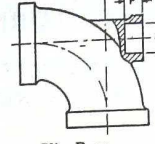
*These sizes may be bushed.

ORDER BY FIGURE NUMBERS

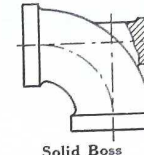
AMERICAN STANDARD SPRINKLER FITTINGS



Screwed Boss



Slip Boss



Solid Boss

LONG TURN BOSS'ED ELBOWS FOR WATER

The three cuts above show the different styles of Bosses furnished.

DIMENSIONS OF CAST IRON LONG TURN BOSS'ED ELBOWS

Size of Elbow inches	2 1/2	3	3 1/2	4	5	6
Dimension A inches	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4
Dimension B "	2 1/2	3 1/4	3 1/2	4 1/4	4 1/2	5 1/4
Dimension C "	2 1/2	3 1/4	3 1/2	3 3/4	4	4 1/2
Dimension D "	3/4	1 1/4	1 1/2	1 3/4	2	2 1/2
Dimension E, Size Pipe Tap, ins.	1 1/2	2	2	2	2 1/2	2 1/2
Dimension F inches	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Dimension G inches	9	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2

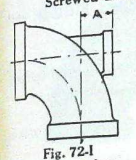


Fig. 72-I

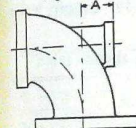


Fig. 72-J

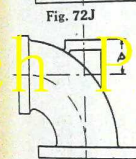


Fig. 72-K

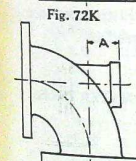


Fig. 72-L

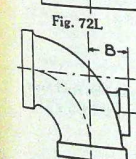


Fig. 72-M

NOTES

- Solid Bosses can be tapped size noted, "E", and smaller.
- Cutting allowance on Bosses same as corresponding size Fittings.
- Slip Bosses have a blind hole to act as a socket for support.

SPECIAL NOTE

In ordering Bossed Fittings, specify particularly Fig. No. and Style of Boss desired, whether screwed, slip or solid.

PRICE LIST

Prices for above Fittings with screwed or slip boss, add \$1.00, net, to list of corresponding Fittings without boss, shown on preceding pages.

For Fittings with solid boss, add 75 cents, net, to list of corresponding Fittings without boss.

ORDER BY FIGURE NUMBERS

LONG TURN FITTINGS FOR WATER

For Water Working Pressure up to 150 Pounds

No. 5



Fig. 72A Water Tee, Double Sweep

No. 6

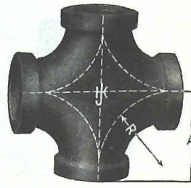


Fig. 72B Sweep Cross

Size Inches	WATER TEES, DOUBLE SWEEP					Center to Face A Inches	Radius R Inches	SWEEP CROSSES					
	Price Scr'd Each	Price Flang'd Faced Each	Price Flang'd Faced and Drilled	Price Flang'd Reducing Faced	Price Flang'd Reducing Faced and Drilled			Price Scr'd Each	Price Flang'd Faced Each	Price Flang'd Faced and Drilled	Price Flang'd Reducing Faced	Price Flang'd Reducing Faced and Drilled	
1	.64					2 3/4	1 3/4	.85					
1 1/4	.80					2 3/4	2	1.10					
1 1/2	1.10					3	2 1/4	1.50					
2	1.60	8.00	9.50	9.25	10.75	3 3/4	2 1/2	2.15	11.00	13.00	12.75	14.75	
2 1/2	2.40	8.25	10.00	9.50	11.25	4 1/4	3.50	3.20	12.50	15.00	14.50	17.00	
3	4.50	9.50	11.25	11.00	12.75	5	3.87	6.00	15.00	17.50	17.00	19.50	
3 1/2	6.50	11.00	12.75	12.50	14.25	5 3/4	4.53	8.75	17.50	20.00	19.75	22.50	
4	7.00	12.00	15.00	13.75	16.75	6 1/4	5.19	9.50	20.00	24.00	23.00	27.00	
4 1/2	11.00	15.00	18.00	17.25	20.25	7	5.65	15.00	24.00	28.00	27.00	31.00	
5	13.00	16.25	19.25	18.75	21.75	7 1/2	6.06	17.50	27.00	31.00	30.00	34.00	
6	17.50	20.00	23.00	23.00	26.00	9	7.44	24.00	35.00	39.00	38.00	42.00	
7	26.00	26.50	32.00	30.00	35.50	10 1/4	8 3/4	35.00	45.00	52.00	50.00	57.00	
8	34.00	33.50	39.00	38.50	44.00	11 1/4	10	45.00	56.00	64.00	63.00	71.00	
9	51.00	43.50	50.00	50.00	56.50	12 3/4	11	68.00	70.00	78.00	78.00	86.00	
10	60.00	53.50	60.00	61.50	68.00	14	13	80.00	84.00	92.00	94.00	102.00	
12	80.00	74.00	83.00	85.00	94.00	15 1/4	13 1/2	107.00	115.00	127.00	129.00	141.00	
14	120.00	98.00	107.00	110.00	121.00	17 1/2	15 1/2	150.00	150.00	164.00	167.00	181.00	
15	170.00	120.00	132.00	138.00	150.00	19	16 1/2	210.00	190.00	205.00	212.00	227.00	

Dimensions of Reducing Tees and Crosses given on pages 57 and 58.
For list price of Reducing Screwed Tees and Crosses, add 50% to above list.
For Galvanized Fittings, double the above list.

ORDER BY FIGURE NUMBERS

LONG TURN FITTINGS FOR WATER

For Water Working Pressure up to 150 Pounds

No. 3

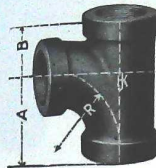


Fig. 71 Water Tee, Single Sweep

No. 4

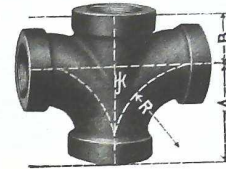


Fig. 72 Water Cross

Size Inches	WATER TEES, SINGLE SWEEP					Center to Face A Inches	Center to Face B Inches	Radius R Inches	WATER CROSSES					
	Price Scr'd Each	Price Flang'd Faced Each	Price Flang'd Faced and Drilled	Price Flang'd Reducing Faced	Price Flang'd Reducing Faced and Drilled				Price Screw'd Each	Price Flang'd Faced Each	Price Flang'd Faced and Drilled	Price Flang'd Reducing Faced	Price Flang'd Reducing Faced and Drilled	
1	.48					2 3/4	1 1/4	1 1/4	.85					
1 1/4	.60					2 3/4	2	2	1.10					
1 1/2	.82					3	2 1/4	2 1/4	1.50					
2	1.20	8.00	9.50	9.25	10.75	3 3/4	2 3/4	2 1/2	2.15	11.00	13.00	12.75	14.75	
2 1/2	1.80	8.25	10.00	9.50	11.25	4 1/4	3	3 1/4	3.20	12.50	15.00	14.50	17.00	
3	3.40	9.50	11.25	11.00	12.75	5	3 3/4	4 1/4	6.00	15.00	17.50	17.00	19.50	
3 1/2	4.90	11.00	12.75	12.50	14.25	5 3/4	3 3/4	4 3/4	8.75	17.50	20.00	19.75	22.50	
4	5.25	12.00	15.00	13.75	16.75	6 1/4	4 1/4	5 3/4	9.50	20.00	24.00	23.00	27.00	
4 1/2	8.25	15.00	18.00	17.25	20.25	7	4 3/4	5 1/2	15.00	24.00	28.00	27.00	31.00	
5	9.75	16.25	19.25	18.75	21.75	7 1/2	4 1/2	6 1/2	17.50	27.00	31.00	30.00	34.00	
6	13.25	20.00	23.00	23.00	26.00	9	5 1/4	7 3/4	24.00	35.00	39.00	38.00	42.00	
7	19.50	26.50	32.00	30.00	35.50	10 1/4	6 1/4	8 3/4	35.00	45.00	52.00	50.00	57.00	
8	25.50	33.50	39.00	38.50	44.00	11 1/4	6 1/4	10	45.00	56.00	64.00	63.00	71.00	
9	38.00	43.50	50.00	50.00	56.50	12 3/4	7 1/2	11	68.00	70.00	78.00	78.00	86.00	
10	45.00	53.50	60.00	61.50	68.00	14	7 1/2	13	80.00	84.00	92.00	94.00	102.00	
12	60.00	74.00	83.00	85.00	94.00	15 1/4	9 1/2	13 1/2	107.00	115.00	127.00	129.00	141.00	
14	90.00	98.00	107.00	110.00	121.00	17 1/2	10 1/4	15 1/2	150.00	150.00	164.00	167.00	181.00	
15	127.00	120.00	132.00	138.00	150.00	19	11 1/2	16 1/2	210.00	190.00	205.00	212.00	227.00	

For price of Reducing Screwed Fittings add 50 per cent. to above list. For Galvanized Fittings, double the above list.

ORDER BY FIGURE NUMBERS

LONG TURN FITTINGS FOR WATER

For Water Working Pressure up to 150 Pounds

No. 11

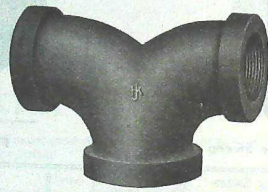


Fig. 72G Reducing Double Branch Elbow

REDUCING DOUBLE BRANCH ELBOWS

Size.....inches	3x1	1x1 1/2	1 1/4x1 1/2	1 1/2x2	2x2 1/2	2 1/2x3	3x4	3 1/2x5	4x6	5x6
Face to Face.....inches	5 1/4	5 1/4	5 3/4	6 3/4	8 1/4	9 1/4	11 1/4	12	14 1/4	14 3/4
Center to Face....."	2 1/4	2 3/4	2 3/4	3 1/4	4	4 3/4	5 1/4	5 3/4	6 1/4	6 3/4
Price.....each	.65	.75	1.05	1.50	2.25	4.25	6.50	10.00	12.00	16.50

We make Base Fittings in all sizes, both screwed and flanged. They will be found very convenient where it is necessary to support a long vertical line of pipe on a pier of masonry or other foundation.

For price of Reducing Screwed Fittings add 50 per cent. to above list. For Galvanized Fittings double the above list.

ORDER BY FIGURE NUMBERS

CAST IRON DRAIN OR DRIP TEES

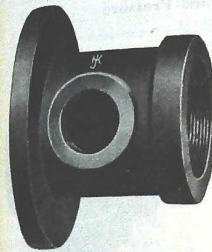


Fig. 76C Flanged One End

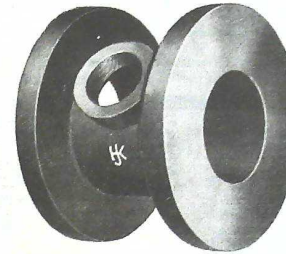


Fig. 76D Flanged Two Ends

CAST IRON DRAIN TEES

Size.....inches	2	2 1/2	3	3 1/2	4	5	6	7	8	10	12
Price, Faced, Flanged 1 End.....each	1.67	2.23	2.85	3.55	4.15	6.30	7.80	12.15	16.25	30.25	44.00
" Faced & I. Flanged 1 End....."	1.97	2.83	3.50	4.25	5.00	7.15	8.60	13.55	17.75	31.75	46.00
" Faced, Flanges 2 Ends....."	2.47	3.63	4.45	5.35	6.30	9.10	11.00	16.50	21.25	38.00	54.50
" Faced & Dril'd, Flanges 2 Ends....."	3.47	4.83	5.75	6.75	8.00	10.80	12.60	19.30	24.25	41.00	58.50

In these Reducing Drain or Drip Tees the list price is determined by the largest opening.

DIMENSIONS

Of Sizes Regularly Carried in Stock

Size.....inches	2 1/2x1 1/4	3x1 1/4	3 1/2x1 1/4	4x1 1/4	4x2	5x1 1/4	5x1 1/2	5x2	6x1 1/2	6x2	6x2 1/2
Center to Face of Flange.....inches	1 1/2	2	2 3/4	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8
Center to End, Screwed....."	1 1/2	2	2 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8	3 3/8
Cr. to End of Screwed Outlet....."	2 3/8	2 7/8	3 3/8	3 3/8	3 3/8	4 3/8	4 3/8	4 3/8	4 3/8	4 3/8	4 3/8
Diameter of Flange....."	7	7 1/2	8 1/2	9	9	10	10	10	11	11	11
Thickness of Flanges....."	1 1/8	3/4	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1	1	1

Dimensions of sizes other than above furnished on application.
These Cast Iron Drain or Drip Tees are designed and made especially for use in Sprinkler Systems.

ORDER BY FIGURE NUMBERS

CAST IRON FITTINGS

FOR HIGH PRESSURE GAS AND OIL LINES LIPPED FOR LEAD

Extra Heavy for 500 Pounds Pressure
Extra Heavy Hydraulic for 900 Pounds Pressure



Fig. 1100 90° Elbow
Extra Heavy
Fig. 1100A Extra Heavy Hydraulic



Fig. 1101 Tee
Extra Heavy
Fig. 1101A Extra Heavy Hydraulic

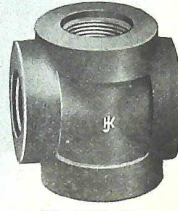


Fig. 1102 Cross
Extra Heavy
Fig. 1102A Extra Heavy Hydraulic



Fig. 1104 Reducer
Extra Heavy



Fig. 1103 Y Branch
Extra Heavy
Fig. 1103A Extra Heavy Hydraulic

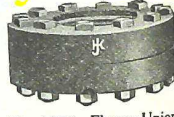


Fig. 1105 Flange Union
Extra Heavy Hydraulic

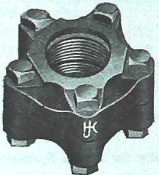


Fig. 1106 Lead End Flange Union
Extra Heavy



Fig. 1107 Plain End Flange Union
Extra Heavy



Fig. 1108 Bushing
Extra Heavy



Fig. 1109 Plug
Extra Heavy

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST IRON FITTINGS

FOR HIGH PRESSURE GAS AND OIL LINES
LIPPED FOR LEAD

For 500 Pounds Working Pressure Tested to 1500 Pounds Pressure
PIPE ELBOWS

Size..... inches	2	2½	3	3½	4	5	6	8	10	12	14 O.D.	16 O.D.
Weight..... pounds	16	30	28	59	56	76	124	192	342	520		

REDUCING PIPE ELBOWS

Size..... inches	2x1	3x2	4x2	4x3	5x4	6x3	6x4	6x5	8x3	8x4	8x5	8x6	12x10
Weight..... pounds	16½	30	59	60	82	139	125	111	228	232	229	228	565

45° PIPE ELBOWS

Size..... inches	2	2½	3	4	6	8	10	12	14 O.D.	16 O.D.
Weight..... pounds	12½	25	22½	43	91	145	196	317		

CASING ELBOWS

Size..... inches	3	4¼	5	5¼	5½	6¼	6½	7½	8¼	9½	11½
Weight..... pounds	29	54	79	78	110	123	218	206	207	302	556

REDUCING CASING ELBOWS

Size..... inches	5x4	5½x4	5½x3	6¼x4	6¼x5	6¼x4	6½x4	8¼x6
Weight..... pounds	121	121	112					228

45° CASING ELBOWS

Size..... inches	4¼	5	5½	6¼	6½	7½	8¼	9½
Weight..... pounds	48	69	91	95	90		145	196½

PIPE TEES

Size..... inches	2	2½	3	4	5	6	8	10	12	14 O.D.	16 O.D.
Weight..... pounds	19	41	38	68	101	168	247	436	655		

REDUCING PIPE TEES

Size Inches	Weight Pounds	Size Inches	Weight Pounds	Size Inches	Weight Pounds	Size Inches	Weight Pounds
2 x2 x1	24½	4x3x4	75	6x6x 2	95	10x 8x 8	454
2 x2 x1½	21	4x4x1½	57	6x6x 3	92	10x 8x10	430
2 x2 x3	21	4x4x2	55	6x6x 4	106	10x 8x12	770
2 x2 x6	198	4x4x2½	57½	6x6x 5	176	10x10x 2	297
2½x2½x1½	11½	4x4x3	56	6x6x 8	292	10x10x 3	300
3 x1½x3	39	4x4x3½	75	6x6x12	830	10x10x 4	290
3 x2 x2	42½	4x4x6	183	7x7x 6	210	10x10x 6	271
3 x2 x3	35	5x4x5	109	8x3x 3	190	10x10x 8	458
3 x3 x1	40½	5x5x2	112	8x3x 4	210	10x10x12	747
3 x3 x2	36	5x5x3	110	8x4x 4	168	12x 6x12	750
3 x3 x4	33	5x5x4	106	8x4x 8	290	12x 8x 8	488
3 x3 x6	75	6x2x2	115	8x6x 6	205	12x10x 8	475
4 x2 x2	199	6x2x3	105	8x6x 8	276	12x10x10	723
4 x2 x3	57	6x2x4	106	8x8x 2	158	12x10x12	715
4 x2 x4	67	6x3x3	106	8x8x 3	150	12x12x 3	320
4 x3 x1½	76	6x3x6	190	8x8x 4	189	12x12x 4	315
4 x3 x2	61	6x4x3	102	8x8x 5	193	12x12x 6	440
4 x3 x3	61	6x4x4	114	8x8x 6	198	12x12x 8	410
4 x3 x6	60	6x4x6	176	8x8x10	505	12x12x10	710
		6x5x6	177	10x6x10	453	18 O. D. x 18 O. D x 12 I. D.	1165

Fittings for which list is not given sold by weight. Prices upon application.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST IRON FITTINGS FOR HIGH PRESSURE GAS AND OIL LINES LIPPED FOR LEAD

For 500 Pounds Working Pressure Tested to 1500 Pounds Pressure

CASING TEES

Table with 2 rows: Size (inches) and Weight (pounds) for casing tees from 3 to 11 1/2 inches.

REDUCING CASING TEES

Table with 2 rows: Size (inches) and Weight (lbs.) for reducing casing tees in various sizes.

PIPE CROSSES

Table with 2 rows: Size (inches) and Weight (pounds) for pipe crosses from 2 to 12 inches.

REDUCING PIPE CROSSES

Table with 2 rows: Size (inches) and Weight (pounds) for reducing pipe crosses in various sizes.

CASING CROSSES

Table with 2 rows: Size (inches) and Weight (pounds) for casing crosses from 4 1/4 to 9 inches.

REDUCING CASING CROSSES

Table with 2 rows: Size (inches) and Weight (pounds) for reducing casing crosses from 4 1/4 to 9 inches.

PIPE BUSHINGS

Table with 2 rows: Size (inches) and Price (Plain/Lead End) for pipe bushings from 2 to 12 inches.

CASING BUSHINGS

Table with 2 rows: Size (inches) and Price (Plain/Lead End) for casing bushings from 4 1/4 to 8 1/2 inches.

Fittings for which list is not given sold by weight. Prices upon application.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST IRON FITTINGS FOR HIGH PRESSURE GAS AND OIL LINES LIPPED FOR LEAD

For 500 Pounds Working Pressure Tested to 1500 Pounds Pressure

PIPE PLUGS

Table with 2 rows: Size (inches) and Weight (pounds) for pipe plugs from 2 to 12 inches.

CASING PLUGS

Table with 2 rows: Size (inches) and Weight (pounds) for casing plugs from 4 1/4 to 11 1/2 inches.

PIPE REDUCERS

Table with 2 rows: Size (inches) and Weight (pounds) for pipe reducers from 3x2 to 12x6.

CASING REDUCERS

Table with 2 rows: Size (inches) and Weight (pounds) for casing reducers from 4 1/4 to 9 inches.

PIPE Y BRANCHES

Table with 2 rows: Size (inches) and Weight (pounds) for pipe y branches from 2 to 12 inches.

REDUCING PIPE Y BRANCHES

Table with 2 rows: Size (inches) and Weight (lbs.) for reducing pipe y branches in various sizes.

CASING Y BRANCHES

Table with 2 rows: Size (inches) and Weight (pounds) for casing y branches from 4 1/4 to 11 1/2 inches.

REDUCING CASING Y BRANCHES

Table with 2 rows: Size (inches) and Weight (pounds) for reducing casing y branches from 4 1/4 to 11 1/2 inches.

Fittings for which list is not given sold by weight. Prices upon application.

FLANGE UNIONS—PIPE SIZES

Table with 2 rows: Size (Inches) and Number of Bolts for flange unions in pipe sizes from 2 to 16 inches.

FLANGE UNIONS—CASING SIZES

Table with 2 rows: Size (inches) and Weight (pounds) for flange unions in casing sizes from 4 1/4 to 8 1/2 inches.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY HYDRAULIC CAST IRON FITTINGS

FOR HIGH PRESSURE GAS AND OIL LINES LIPPED FOR LEAD

**For 900 Pounds Working Pressure
Tested to 2500 Pounds Working Pressure**

ELBOWS

Size.....inches	2	3	3½	4	4½	5	6	8	10	12
Weight.....pounds	20	49	71	93	122	151	240	372	661	1082

45° ELBOWS

Size.....inches	3	3½	4	4½	5	6	8	10	12
Weight.....pounds	39	57	74	99	122	193	284	488	769

TEES

Size.....inches	2	3	3½	4	4½	5	6	8	10	12
Weight.....pounds	25	58	86	112	156	203	312	492	824	1281

REDUCING TEES

Size.....inches	4x4x2	6x6x3	6x6x4	8x8x4	8x8x6	10x10x2	10x10x4
Weight.....pounds	91	245	323	432	423	307	575

CROSSES

Size.....inches	3	3½	4	4½	5	6	8	10	12
Weight.....pounds	72	106	130	189	250	385	590	996	1513

Y BRANCHES

Size.....inches	3	3½	4	4½	5	6	8	10	12
Weight.....pounds	96	139	182	245	308	482	748	1340	2035

Fittings for which list is not given sold by weight. Prices upon application.

FLANGE UNIONS

Size.....inches	3	4	6	8	10	12
Number of Bolts.....	5	6	6	12	.....	.....
Size of Bolts.....inches	½x5	¾x6	1x7	1¼x7½	.....	.....
Weight.....pounds	42	86	182	364	.....	.....
Each.....	7.50	10.00	15.00	30.00	.....	.....

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS

In presenting to the trade the line of Malleable Iron Fittings, as illustrated in the following pages, it is our desire that the merits of this line be recognized over that of any other manufacture. We have endeavored in their manufacture to make a Fitting entirely free from defects, and to overcome the "leaky-joint" difficulty. These Fittings are all threaded to a uniform gauge, and we feel that the variety of sizes tabulated is sufficient to meet the requirements of the trade.

To avoid the making of special Fittings, we would, in a great many cases, recommend the use of bushings; but, where it is absolutely necessary to have a special Fitting made, we will gladly quote prices on receipt of specifications.

When an order has been received for a special Fitting, or for one not regularly carried in stock, the order cannot be cancelled after the work is begun on the Fitting. Specify particularly, in ordering, whether a plain or flat band pattern Fitting is desired, as it is generally understood when no pattern is specified that a flat band Fitting is desired.

Our foundries and finishing rooms are equipped with the latest machinery obtainable. We employ none but skilled workmen; and most careful attention is given in the purchase of all raw materials used.

Our Malleable Fittings are all recessed, which permits of the easy entrance of the pipe, and are as uniform and perfectly annealed as it is possible for highly skilled labor, working with specially constructed appliances, to produce; and our enormous foundry capacity yields a sufficient stock to enable us to fill all orders promptly.

STANDARD FITTINGS

Our Standard Malleable Iron Fittings are made in both flat band and plain patterns, and are recommended for 150 pounds working pressure. Many of them are in use at 200 pounds pressure and, in the smaller sizes, it is almost impossible to burst them at any pressure.

EXTRA HEAVY FITTINGS

Our Extra Heavy Malleable Iron Fittings are designed for pressures greater than 150 pounds, and we recommend them for 250 pounds working pressure. They are tested to 2000 pounds hydraulic pressure per square inch.

EXTRA HEAVY AMMONIA FITTINGS

Tested to 300 pounds air pressure, and furnished with recessed ends for soldering.

FLAT BAND FIRE LINE FITTINGS

For 250 pounds working pressure. Used in high pressure and salt water service.

DRAINAGE FITTINGS

We can furnish Drainage Fittings made of Malleable Iron from any of the regular drainage patterns, and we would advise using these where an extra strong Drainage Fitting is desired.

GALVANIZED FITTINGS

We carry all sizes of Galvanized Malleable Iron Fittings in stock in both flat band and plain patterns.

ORDER BY FIGURE NUMBERS

REVISED PRICE LIST AND CLASSIFICATION OF MALLEABLE IRON FITTINGS

Adopted June 1, 1917

Superseding All Previous Classifications

Table with columns: Class, A, B, C. Lists various fittings like Caps, Crosses, Couplings, etc. with their respective classifications and sizes.

Such Fittings in Class C as have one or more openings smaller than 3/4 to be Class B. For Reducing Malleable Fittings, the smallest opening determines the classification. The run of Tees gives the sizes for the purpose of classification; the outlet being larger does not change it.

ORDER BY FIGURE NUMBERS

ELBOWS

Table listing various elbow types (Plain, Flat Band and Plain) with columns for Size, Class, and Price per lb. (Blk. Galv.).

45° ELBOWS

Table listing 45 degree elbow types with columns for Size, Class, and Price per lb. (Blk. Galv.).

45° ELBOWS—Continued

Continuation of 45 degree elbow types with columns for Size, Class, and Price per lb. (Blk. Galv.).

60° ELBOWS

Table listing 60 degree elbow types with columns for Size, Class, and Price per lb. (Blk. Galv.).

STREET ELBOWS

Table listing street elbow types with columns for Size, Class, and Price per lb. (Blk. Galv.).

ORDER BY FIGURE NUMBERS

45° STREET ELBOWS

Table with columns: Flat Band, Size, Class, Price per lb. (Blk., Galv.).

ELBOWS Side Outlet

Table with columns: Plain, Size, Class, Price per lb. (Blk., Galv.).

DROP ELBOWS Female

Table with columns: Plain, Size, Class, Price per lb. (Blk., Galv.).

DROP ELBOWS Male and Female

Table with columns: Plain, Size, Class, Price per lb. (Blk., Galv.).

LONG DROP ELBOWS

Male and Female With Drop 2 1/2 Inches Long

Table with columns: Plain, Size, Class, Price per lb. (Blk., Galv.).

ROUND FLANGE DROP ELBOWS

Female

Table with columns: Plain, Size, Class, Price per lb. (Blk., Galv.).

Hy-Tec

TEES

In describing Tees, the run is first named, then the outlet, thus: 1/2 T 3/4 = 1/2x3/4x3/4.

Table with columns: Plain, Size, Class, Price per lb. (Blk., Galv.).

ORDER BY FIGURE NUMBERS

TEES—Continued

Table with columns: Flat Band and Plain, Size, Class, Price per lb. (Blk., Galv.).

TEES—Continued

Table with columns: Flat Band and Plain, Size, Class, Price per lb. (Blk., Galv.).

ORDER BY FIGURE NUMBERS

TEES—Continued

Table listing various tee sizes (e.g., 3 x3 x2 1/2, 4 x4 x2) and their prices per lb. in different classes (C, B).

DROP TEES

Female

Table listing drop tee sizes (e.g., 1 x1 x 3/8, 2 x2 x 1/2) and their prices per lb. in different classes (C, B).

ORDER BY FIGURE NUMBERS

ROUND FLANGE DROP TEES

Female

Table listing round flange drop tee sizes (e.g., 1, 1 1/4, 1 1/2) and their prices per lb. in different classes (B).

DROP TEES

Male and Female

Table listing drop tee sizes (e.g., 1 x1 x 3/8, 1 1/4 x 1 1/4) and their prices per lb. in different classes (B).

SERVICE TEES

Table listing service tee sizes (e.g., 1 x1 x 3/8, 1 1/4 x 1 1/4) and their prices per lb. in different classes (B).

FOUR-WAY TEES

Table listing four-way tee sizes (e.g., 1/2, 3/4, 1, 1 1/4) and their prices per lb. in different classes (B).

LONG DROP TEES

Male and Female

Table listing long drop tee sizes (e.g., 1/2 x 1/2 x 3/8, 1/4 x 1/4 x 3/8) and their prices per lb. in different classes (B).

CROSSES

The outlets of a Cross are always the same size and both denoted by the last figure.

Table listing cross sizes (e.g., 1/2 x 1/2 x 1/2, 3/4 x 3/4 x 3/4) and their prices per lb. in different classes (B).

ORDER BY FIGURE NUMBERS

CROSSES—Continued

Table listing cross sizes (e.g., 2 x2 x 3/4, 2 x2 x 1) and their prices per lb. in different classes (C, B).

CAPS

Table listing cap sizes (e.g., 1/4, 3/8, 1/2, 3/4, 1) and their prices per lb. in different classes (B, C).

REDUCERS

Table listing reducer sizes (e.g., 1/2 x 3/8, 3/8 x 1/4) and their prices per lb. in different classes (A, B, C).

REDUCERS—Continued

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists various reducer types like Flat Band and Plain with sizes from 1 1/4 x 1 to 6 x 5.

COUPLINGS—Right Hand

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists coupling types like Plain and Flat Band with sizes from 3/4 to 4.

COUPLINGS—Right and Left

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists coupling types like Plain and Flat Band with sizes from 3/4 to 4.

COUPLINGS—Hexagon

Right and Left

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists hexagonal coupling types like Plain with sizes from 3/4 to 2.

LOCK NUTS

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists hexagonal lock nut types with sizes from 3/8 to 4.

WASTE NUTS

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists waste nut types with sizes from 1/2 to 2.

WALL PLATES

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists wall plate types with sizes from 3/4 to 1/2.

EXTENSION PIECES

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists extension piece types with sizes from 3/4 x 3/4 to 2 x 2.

ORDER BY FIGURE NUMBERS

CHANDELIER HOOKS

Male

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists chandelier hook types like Chandelier Hooks with sizes from 3/4 to 1 1/2.

Female

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists chandelier hook types like Chandelier Hooks with sizes from 3/4 to 1 1/2.

CHANDELIER LOOPS

Male

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists chandelier loop types like Chandelier Loops with sizes from 3/4 to 4.

Female

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists chandelier loop types like Chandelier Loops with sizes from 3/4 to 2.

Y BRANCHES

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists Y branch types like Flat Band and Plain with sizes from 3/4 to 6.

DOUBLE Y BRANCHES

Table with columns: Description, Size, Class, Price per lb. Blk., Galv. Lists double Y branch types like Plain with sizes from 3/4 to 2.

RETURN BENDS

Close Pattern

Table with columns: Description, Distance Between Centers, R. H. Class, R. & L. Class, R. H. Class, Galv. Lists return bend types like Plain with various sizes and classes.

Medium Pattern

Table with columns: Description, Distance Between Centers, R. H. Class, R. & L. Class, R. H. Class, Galv. Lists return bend types like Flat Band with various sizes and classes.

Open Pattern

Table with columns: Description, Distance Between Centers, R. H. Class, R. & L. Class, R. H. Class, Galv. Lists return bend types like Flat Band with various sizes and classes.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS



Fig. 110 Plain Elbow



Fig. 99 Flat Band Elbow

ELBOWS—Straight and Reducing

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price, Right Hand..... each	.06	.07	.08	.10	.15	.22	.25	.35	.50
Right and Left.....	.09	.11	.13	.17	.25	.30	.40	.65	
Right Hand, Galvanized.....	.08	.09	.11	.14	.20	.32	.40	.60	.90

Size..... inches	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8
Price, Right Hand..... each	.90	1.50	2.25	3.00	3.50	4.00	6.50	15.00	20.00
Right and Left.....									
Right Hand, Galvanized.....	1.50	2.60	3.75	5.00	6.00	6.50	10.00	19.00	30.00



Fig. 99A Plain 45° Elbow



Fig. 100 Flat Band 45° Elbow

45° ELBOWS

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price..... each	.08	.10	.12	.18	.26	.36	.54	.82
Galvanized.....	.12	.15	.20	.25	.40	.50	.85	1.35

Size..... inches	2 1/2	3	3 1/2	4	4 1/2	5	6	8
Price..... each	1.25	2.50	3.25	4.50	5.25	6.00	7.50	20.00
Galvanized.....	1.90	3.75	4.75	6.75	8.00	9.00	11.00	30.00

For classification of Malleable Iron Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS



Fig. 100A 60° Plain Elbow



Fig. 100B 60° Flat Band Elbow

60° ELBOWS

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
Price..... each	.13	.17	.25	.30	.45	.65
Galvanized.....				.45	.70	1.05



Fig. 103 90° Street Elbow



Fig. 103A 45° Street Elbow

STREET ELBOWS

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Price, Street Elbow..... each	.10	.15	.20	.35	.40	.55	.90	1.50	2.25
Street Elbow, Galvanized.....	.12	.15	.25	.35	.55	.80	1.30	2.25	3.50
45° Street Elbow.....	.10	.12	.20	.25	.40	.55	.90	1.50	2.25
45° Street Elbow, Galvanized.....	.12	.15	.28	.35	.55	.80	1.30	2.25	3.50

90° Street Elbows are made Plain in the following sizes: 1/2", 3/4" and 1".



Fig. 115 Side Outlet Elbow

SIDE OUTLET ELBOWS

Size..... inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price, Side Outlet Elbow..... each	.08	.10	.18	.30	.45	.60	1.00
Side Outlet Elbow, Galvanized.....	.10	.15	.25	.45	.65	.90	1.50

For classification of Malleable Iron Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS



Fig. 115A Female Drop Elbow



Fig. 115B Drop Elbow Flange Right Side



Fig. 115C Drop Elbow Flange Left Side

DROP ELBOWS

Size.....inches	¼	½	¾	1	1½	2	2½	3	3½	4	4½	5	6	7	8
Price, Female Drop Elbow.....each	.06	.08	.12	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70
" Female Drop Elbow, Galvanized....."	.08	.10	.14	.18	.24	.30	.36	.42	.48	.54	.60	.66	.72	.78	.84
" Right or Left Drop Elbow....."	.08	.10	.14	.18	.24	.30	.36	.42	.48	.54	.60	.66	.72	.78	.84
" Right or Left Drop Elbow, Galv....."	.12	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80



Fig. 115E Male and Female Drop Elbow



Fig. 115D Male and Female Drop Elbow Long, with Drop 2½ Inches Long

MALE AND FEMALE DROP ELBOWS

Size.....inches	¼ x ¾	½	¾	1	1½	2	2½	3	3½	4	4½	5	6	7	8
Price, Male and Female Drop Elbow.....each	.08	.10	.14	.18	.24	.30	.36	.42	.48	.54	.60	.66	.72	.78	.84
" Male and Female Drop Elbow, Galvanized....."	.12	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80
" Male and Female Drop Elbow, Long....."	.10	.12	.16	.20	.26	.32	.38	.44	.50	.56	.62	.68	.74	.80	.86
" Male and Female Drop Elbow, Long, Galvanized....."	.18	.22	.28	.34	.40	.46	.52	.58	.64	.70	.76	.82	.88	.94	.100

For classification of Malleable Iron Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS



Fig. 111 Plain Tee



Fig. 101 Flat Band Tee

TEES—Straight and Reducing

Size, in.	¼	½	¾	1	1½	2	2½	3	3½	4	4½	5	6	7	8
Price ea.	.07	.08	.11	.15	.25	.30	.45	.60	1.05	1.70	2.50	3.40	4.25	5.00	7.75
" Galv. "	.09	.10	.13	.16	.20	.38	.50	.70	1.00	1.90	3.00	4.25	5.75	6.75	8.00



Fig. 124A Service Tee



Fig. 124B Male Outlet Tee



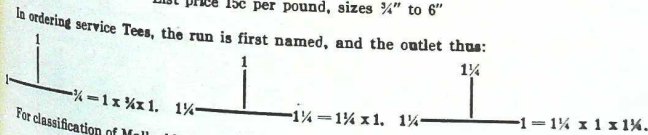
Fig. 124F Pipe Ring

SERVICE AND MALE OUTLET TEES

Size.....inches	¾	1	1½	2	2½	3	3x2½	3x3x4
Price, Service Tee.....each	.12	.15	.25	.35	.50	.75	1.15	2.00
" Service Tee, Galv....."	.15	.20	.35	.50	.70	1.10	1.65	2.75
" Male Outlet Tee....."	.14	.22	.30	.50	.75	1.10	1.65	2.75
" Male Outlet Tee, Galv."	.25	.40	.55	.70	.70	1.10	1.65	2.75

MALLEABLE PIPE RINGS

List price 15c per pound, sizes ¾" to 6"



For classification of Malleable Iron Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS



Fig. 114 Four-way Tee



Fig. 114A Female Drop Tee

		TEES							
Size	inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price, Four-way Tee	each	.08	.12	.14	.20	.35	.50	.80	1.25
" Four-way Tee, Galv.	"	.12	.17	.20	.28	.50	.70	1.10	1.75
" Female Drop Tee	"	.10	.14	.22	.30				
" Female Drop Tee, Galv.	"	.15	.25	.40	.55				



Fig. 114B Male and Female Drop Tee

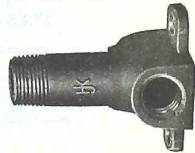


Fig. 114C Male and Female Drop Tee, Long With Drop 2 1/2 Inches Long

		DROP TEES									
Size	inches	1/4 x 1/4	3/8 x 3/8	1/2 x 1/2	3/4 x 3/4	1 x 1	1 1/4 x 1 1/4	1 1/2 x 1 1/2	2 x 2	1 x 1	1
Price, M. & F. Drop Tees	each	.10	.10	.10	.14	.14	.22	.22	.30	.30	.30
" M. & F. Drop Tees, Galv.	"	.15	.15	.15	.25	.25	.40	.40	.55	.55	.55
" M. & F. Drop Tees, Long	"	.12		.12							
" M. & F. Drop Tees, Galv.	"	.17		.17							



Fig. 114D Round Flange Drop Elbow

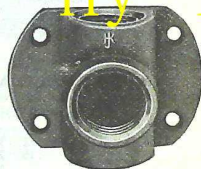


Fig. 114E Round Flange Drop Tee

		ROUND FLANGE DROP ELBOWS						
Size	inches	1/4	1/4 x 3/8	3/8 x 1/2	1/2	3/4 x 1/2	3/4	1
Price	each	.08	.12	.12	.12	.15	.15	.30
" Galvanized	"	.12	.15	.15	.15	.20	.20	.40

		ROUND FLANGE DROP TEES						
Size	inches	1/4	3/8	1/2 x 3/8	1/2	3/4 x 1/2	3/4	1
Price	each	.12	.15	.25	.25	.50	.50	.60
" Galvanized	"	.16	.20	.32	.32	.65	.65	.75

For classification of Malleable Iron Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS



Fig. 112 Plain Cross



Fig. 102 Flat Band Cross

CROSSES—Straight and Reducing

Size	inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Price	each	.09	.10	.16	.20	.30	.40	.60	1.00	1.75	3.00	3.25	5.25	7.50	13.00
" Galvanized	"	.12	.14	.25	.29	.45	.60	.90	1.50	2.75	4.50	5.00	8.00	12.00	18.00



Fig. 102A Plain Y Branch



Fig. 104 Flat Band Y Branch

Y BRANCHES—Straight and Reducing

Size	inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Price	each	.40	.50	.60	.80	1.00	1.70	2.00	4.00	5.50
" Galvanized	"	.60	.75	.90	1.25	1.50	2.50	3.00	6.00	8.25



Fig. 104A Double Y Branch



Fig. 104B 60° Y Branch

Y BRANCHES

Size	inches	1/2	3/4	1	1 1/4	1 1/2	2	2 x 1 1/2	2 1/2 x 2
Price, Double Y	each	1.50	1.75	2.00	2.50	2.75	3.50	3.50	5.00
" Double Y, Galvanized	"	1.88	2.20	2.50	3.15	3.50	4.75	4.75	7.50
" 80° Y	"					1.70	1.70		
" 80° Y Galvanized	"					2.50	2.50		

For classification of Malleable Iron Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS



Fig. 117 Plain Coupling, Right Hand



Fig. 117A Flat Band Coupling, Right Hand

RIGHT HAND COUPLINGS

Size.....inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price.....each	.03	.03	.05	.07	.10	.14	.20	.25	.35	.50	.75	1.25	1.75
Galvanized.....	.05	.05	.07	.10	.17	.23	.30	.40	.55	.85	1.35	2.15	2.15



Fig. 106 Right and Left Coupling, Ribbed



Fig. 109E Right and Left Coupling, Hexagon

RIGHT AND LEFT COUPLINGS

Size.....inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, Ribbed.....each	.04	.06	.08	.12	.16	.25	.36	.52	.70	1.00
Galvanized.....	.06	.09	.10	.17	.25	.36	.55	.75	1.05	1.50
Hexagon.....each	.04	.06	.08	.12	.16	.25	.36	.52	.70	1.00
Galvanized.....	.06	.09	.10	.17	.25	.36	.55	.75	1.05	1.50



Fig. 113 Plain Reducing Coupling



Fig. 113A Flat Band Reducing Coupling



Fig. 107 Plain Cap



Fig. 107A Flat Band Cap

REDUCING COUPLINGS

Size.....inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2
Price.....each	.05	.06	.07	.10	.16	.20	.28	.45	.70	1.00	1.50	1.85	3.50
Galvanized.....	.08	.10	.10	.15	.25	.35	.45	.75	1.05	1.65	2.40	3.05	3.50

CAPS—Plain or Flat Band

Size.....inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Price.....each	.03	.03	.04	.05	.08	.12	.16	.24	.32	.45	.85	1.00	1.20	2.50	3.50
Galvanized.....	.04	.04	.05	.08	.12	.17	.24	.38	.52	.76	1.30	1.60	2.00	3.50	3.50

For classification of Malleable Iron Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS

RETURN BENDS



Fig. 108A Close Pattern



Fig. 108 Medium Pattern

RETURN BENDS—Close or Medium Pattern

Size.....inches	1/8	1/4	3/8	1	1 1/4	1 1/2	2
Center to Center, Close.....inches	1 1/8	1 1/4	1 1/2	1 3/4	2 1/4	2 3/4	3 1/2
Center to Center, Medium.....inches	1 1/4	1 1/2	1 3/4	2	2 1/4	2 3/4	3 1/2
Price, R. H.....each	.16	.18	.25	.35	.50	.75	1.00
R. H.....Galv.....	.23	.25	.35	.55	.75	1.15	1.65
Right and Left.....	.23	.30	.45	.60	.90	1.25	1.65
Left Hand.....	.23	.30	.45	.60	.90	1.25	1.65

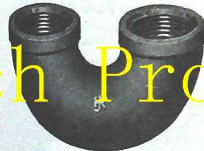


Fig. 109 Open Pattern



Fig. 109-O Special Wide Pattern

RETURN BENDS—Open Pattern

Size.....inches	1/8	1/4	3/8	1	1 1/4	1 1/2	2	2 1/2	3
Center to Center.....inches	1 1/8	1 1/4	1 1/2	1 3/4	2 1/4	2 3/4	3 1/2	4 1/2	5
Price, R. H.....each	.18	.20	.30	.50	.65	.85	1.25	2.00	3.00
R. H.....Galv.....	.25	.28	.45	.70	.90	1.25	2.00	3.50	5.00
Right and Left.....	.25	.38	.60	.80	1.05	1.55	2.50	3.75	5.00
Left Hand.....	.25	.38	.60	.80	1.05	1.55	2.50	3.75	5.00

RETURN BENDS—Special Wide Pattern—Right Hand

Size.....inches	1/8	1/4	3/8	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Center to Center.....inches	1 1/4	1 1/2	1 3/4	2	2 1/4	2 3/4	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	10
Price.....each	1.00	1.25	1.25	1.25	1.25	2.00	3.00	4.00	5.00	5.00	8.00	16.00	20.00
Galv.....	.30	1.35	1.65	1.70	1.70	2.73	4.00	5.00	6.50	6.50	10.00	20.00	20.00

For classification of Malleable Iron Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

CIRCULATING BOILER FITTINGS
Galvanized Malleable Iron

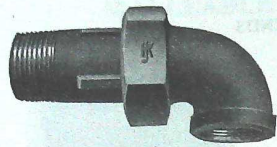


Fig. 110G Boiler Union Elbow



Fig. 110H Straight Boiler Coupling

NEW STYLE BOILER UNION ELBOWS AND COUPLINGS

Size..... inches	1x 1/2 x 1/2	1x 3/4 x 1/2	1x 1/2 x 3/4
Price, Boiler Union Elbows..... Galv., each	.60	.75	.75
Price, Straight Boiler Couplings..... Galv., each	.60	.75	.75

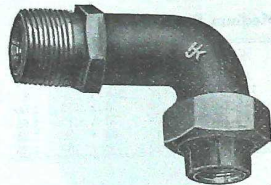


Fig. 110A Log Boiler Elbow with Union, Extra Long Shank
Price, Fig. 110A Galv. 1-inch Male with 1/2-inch Union, 50c;
Price, Fig. 110B Galv. 1-inch or 3/4-inch Inlet, 1/2-inch Sediment, 3/4-inch Union, 80 cents.

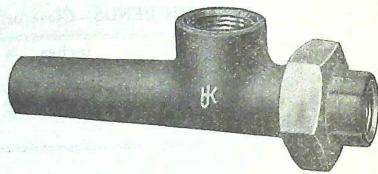


Fig. 110B Water Back Tee
Price, Fig. 110B Galv. 1-inch or 3/4-inch Inlet, 1/2-inch Sediment, 3/4-inch Union, 80 cents.



Fig. 109B Boiler Elbow with Union



Fig. 109D Boiler Coupling with Union

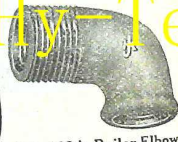


Fig. 109A Boiler Elbow



Fig. 109C Boiler Coupling

A SET OF BOILER COUPLINGS COMPRISES:

- One Elbow (1" male-tapped 1/2") with 3/4" Outlet.
- Two Elbows (1" male x 3/4" blank) with 3/4" Outlet.
- One Coupling (1" male x 3/4" blank) with 3/4" Outlet.

Specify if wanted with or without Union

OLD STYLE BOILER ELBOWS AND COUPLINGS

Size..... inches	Fem. Male 3/4 x 3/4 x 1	Fem. Male 3/4 x 1/2 x 1	Fem. Male 1/2 x 1/2 x 1	Fem. Male 3/4 x 1/2 x 3/4
Price, Elbows or Couplings, Galv., each	.40	.40	.40	.40
with Union..... Galv., each	.75	.75	.60	.75

ORDER BY FIGURE NUMBERS

CIRCULATING BOILER FITTINGS
MALLEABLE IRON CIRCULATING BOILER TEES



Fig. 110C Without Union

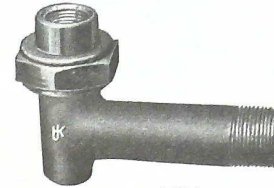


Fig. 110D With Union

CIRCULATING BOILER TEES

Size..... inches	3/4 x 1/2 x 1
Price, Without Union..... Galv., each	.50
Price, With Union..... Galv., each	.80

PARTITION TEES AND CROSSES

6 1/2 Inches End to End of Run



Fig. 110E Tee



Fig. 110F Cross

PARTITION TEES AND CROSSES

Size..... inches	3/4	3/4 x 1/2	3/4 x 3/4 x 3/4 x 1/2
Price, Tees..... each	.20	.25	.30
Price, Tees..... Galv., each	.28	.35	.40
Price, Crosses..... Galv., each	.25	.30	.30
Price, Crosses..... Galv., each	.35	.40	.40

Male openings in Partition Tees and Crosses are 3/8 inch.

For classification of Malleable Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS



Fig. 109F Cross Over



Fig. 109H Cross Over with Back Outlet

CROSS OVERS

Size.....	inches	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/2	3	3 1/2	4	4 1/2	5	6	8
To Cross Pipe.....	inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/2	4
Price, Cross Overs, Galvanized.....	each	.22	.35	.45	.60	.82	1.00	1.20	1.50	1.80	2.20	2.60	3.00	3.50	4.00	4.80
Price, Cross Overs with Back Outlet, Galvanized.....	each	.26	.40	.55	.75	1.00	1.25	1.50	1.80	2.20	2.60	3.00	3.50	4.00	4.80	5.80



Fig. 109R Armstrong Connection



Fig. 109-I Offset

ARMSTRONG CONNECTIONS

Size.....	inches	1 1/2	2
Price.....	Black each	.80	1.00
	Galv.	1.20	1.50

OFFSETS

Size.....	inches	3/4	1	1 1/4
To Offset.....	inches	1 1/2	1 1/4	2
Length.....	inches	3 1/4	4	5 1/4
Price.....	each	.25	.40	.75



Fig. 124C Malleable Iron Flange Union

MALLEABLE IRON FLANGE UNIONS

Size.....	inches	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	8
Diam. of Flange.....	inches	2 1/4	3 1/4	3 3/4	4 1/4	5 1/4	6 1/4	7 1/4	8 1/4	9 1/4	10 1/4	11 1/4	13 1/4	15 1/4
Number of Bolts.....		3	4	4	4	4	4	4	4	5	5	6	6	7
Price.....	each	1.40	1.60	2.00	2.50	3.00	3.50	4.40	5.25	6.00	7.00	8.00	9.00	18.00
	Galv.	2.80	3.20	4.00	5.00	6.00	7.00	8.30	10.50	12.00	14.00	16.00	18.00	38.00

For classification of Malleable Iron Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS

HYDRANT CLAMPS



Fig. 103B For Square Rod



Fig. 103C For Pipe

Size of Cock.....	inches	1/2	3/4	1
Price, Fig. 103B, for 3/4 or 1/2-inch Square Rod.....	per pound	.15	.15	.15
Price, Fig. 103C, Tapped for 3/4-inch Pipe.....	"	.18	.18	.18
Price, Fig. 103C, Tapped for 1/2-inch Pipe.....	"	.20	.20	.20

STREET WASHER KEYS AND HYDRANT HANDLES

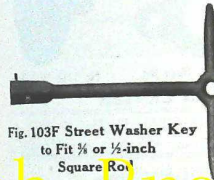


Fig. 103F Street Washer Key to Fit 3/4 or 1/2-inch Square Rod

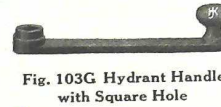


Fig. 103G Hydrant Handle with Square Hole



Fig. 103H Hydrant Handle with 3/4-inch Pipe Thread

Price, Fig. 103F, Street Washer Key.....	per pound	.15
Price, Fig. 103G, Hydrant Handle.....	"	.15
Price, Fig. 103H, Hydrant Handle.....	"	.20

LONG SCREW COUPLINGS AND FOLLOWERS



Fig. 103D Coupling

Faced

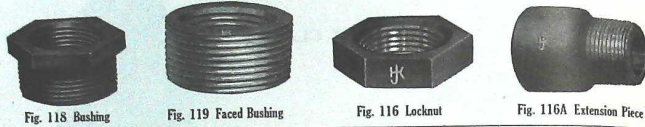


Fig. 103E Follower

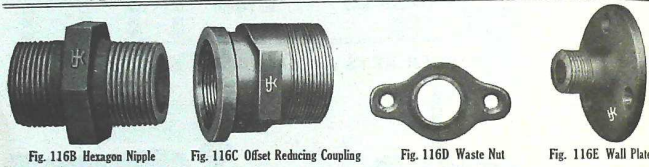
Size.....	inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, Coupling.....	each	.09	.10	.12	.16	.22	.30	.40	.50	.70	.90
Price, Coupling.....	Galv.	.14	.15	.18	.24	.33	.45	.60	.75	1.00	1.35
Price, Follower.....	"	.08	.09	.10	.12	.15	.20	.25	.30	.35	.45
Price, Follower.....	Galv.	.11	.13	.15	.18	.22	.30	.35	.45	.50	.65

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS



Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8
Bushings..... each	.04	.04	.05	.06	.07	.09	.14	.21	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galv.....	.08	.08	.10	.12	.14	.18	.28	.42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Faced Bushings.....	.02	.03	.04	.05	.07	.09	.11	.18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Locknuts..... Galv.....	.03	.04	.05	.07	.10	.14	.20	.30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Extension Pieces..... Galv.....	.06	.09	.12	.14	.18	.28	.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....



R. AND L. NIPPLES WITH HEXAGON CENTER

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Price..... each	.20	.20	.20	.25	.30	.40	.50	.70	1.10	1.60	2.40	.....

OFFSET REDUCING COUPLINGS

Size... inches	1x½	1½x1	1½x1½	2x1½	2½x2	3x2½	3x3	4x3	4x3½	4½x4	5x4	5x4½
Price..... each	.60	.70	.90	1.10	1.80	2.50	3.00	4.00	4.00	5.00	6.00	6.00

This fitting is the same as a Male and Female Reducer, except that the inlet and outlet are on the same level. By its use, water pockets are prevented.

WASTE NUTS

Size..... inches	¼	⅜	½	¾	1	1¼	1½
Price..... each	.04	.05	.06	.08	.10	.15	.25
Galvanized.....	.08	.10	.12	.16	.20	.30	.50

WALL PLATES

Size..... inches	¾	1	1¼	1½
Price..... each	.12	.16	.30	.....



CHANDELIER LOOPS AND HOOKS

Size..... inches	¾	1
Price..... each	.10	.12

For classification of Malleable Iron Fittings, see pages 72-79.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS



Fig. 121 Male Union Elbow



Fig. 122 Female Union Elbow

UNION ELBOWS

Size..... inches	¾	1	1¼	1½	2	2½
Price, Male Union..... each	.45	.48	.62	.72	1.05	1.20
Male Union Galvanized.....	.70	.72	.93	1.08	1.60	1.80
Female Union.....	.40	.42	.54	.63	.90	1.05
Female Union Galvanized.....	.60	.63	.81	.95	1.35	1.58



Fig. 123 Male Union Tee



Fig. 124 Female Union Tee

UNION TEES

Size..... inches	¾	1	1¼	1½	2	2½
Price, Male Union..... each	.50	.52	.65	.80	1.10	1.30
Male Union, Galvanized.....	.75	.78	1.00	1.20	1.65	1.95
Female Union.....	.43	.45	.57	.70	.95	1.15
Female Union, Galvanized.....	.65	.68	.86	1.05	1.45	1.75

Where it is necessary to have a Union near an Ell or Tee these combination Fittings, as above, render unnecessary the use of a separate Union or Nipple. The reduction in number of Joints lessens the liability to leakage and makes easy work in close quarters.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON FITTINGS

PENN UNION ELBOWS

Brass to Iron Seat

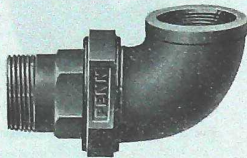


Fig. 120A Male Union Elbow

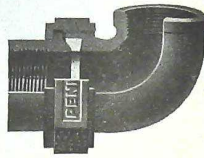


Fig. 120B Female Union Elbow

UNION ELBOWS—Brass to Iron Seat

Size..... inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Price, Male Union..... each	.60	.75	.90	1.20	1.80	2.40	3.00	4.80
.. Male Union, Galvanized.....	.80	1.00	1.20	1.60	2.40	3.20	4.00	6.40
.. Female Union.....	.60	.75	.90	1.20	1.80	2.40	3.00	4.80
.. Female Union, Galvanized.....	.80	1.00	1.20	1.60	2.40	3.20	4.00	6.40

PENN UNION TEES

Brass to Iron Seat



Fig. 120C Male Union Tee

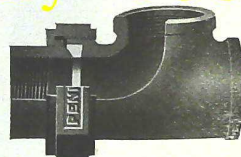


Fig. 120D Female Union Tee

UNION TEES—Brass to Iron Seat

Size..... inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Price, Male Union..... each	.66	.82	.99	1.32	1.98	2.64	3.30	5.30
.. Male Union, Galvanized.....	.88	1.10	1.32	1.75	2.65	3.50	4.40	7.10
.. Female Union.....	.66	.82	.99	1.32	1.98	2.64	3.30	5.30
.. Female Union, Galvanized.....	.88	1.10	1.32	1.75	2.65	3.50	4.40	7.10

These Unions are well made of the best grade Malleable Iron and Brass and the ground ball joint permits of a perfect connection regardless of pipe alignment. The inserted brass rings conform readily into the Malleable iron and cannot be dislodged.

ORDER BY FIGURE NUMBERS

WASH TRAY TEES AND ELLS

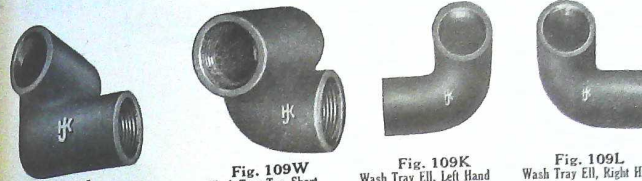


Fig. 109J Wash Tray Tee

Fig. 109K Wash Tray Ell, Short

Fig. 109K Wash Tray Ell, Left Hand

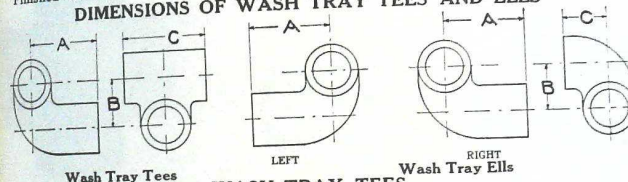
Fig. 109L Wash Tray Ell, Right Hand

WASH TRAY TEES AND ELLS

Size..... inches	1/2	3/4	1 x 1/2
Price, Wash Tray Tees, Short..... Galv., each	.20	.25	.30
.. Wash Tray Tees, Standard..... Galv., ..	.25	.35	.35
.. Wash Tray Tees, Extra Long..... Galv., ..	.18	.25	.....
.. Wash Tray Ells..... Galv., ..	.20	.30	.....

Finished Brass and Nickel Plated Wash Tray Fittings on application.

DIMENSIONS OF WASH TRAY TEES AND ELLS



WASH TRAY TEES

Size.....	1/2 Std.	3/4 Long	1 x 3/4 Std.	1 1/4 Long	1 1/2 Short	2 Std.	2 1/2 Long	3" 2" Centers	3 1/2" 2 1/2" Centers
Center of Run to End of Branch A	1 1/4	2 1/8	1 1/8	2 1/2	1 1/4	1 1/8	2 1/4	1 1/4	1 1/8
Center of Run to Center of Branch B	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	1 1/4	2	2 1/2
End to End of Run C	1 1/4	1 1/4	1 1/4	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2

WASH TRAY ELLS

Size..... inches	1/2	3/4	2 1/2" Centers	3" 4" Centers
Center of Inlet to End of Outlet A.....	1 1/4	1 1/8	1 1/4	1 1/4
.. of Inlet to Center of Outlet B.....	1	1 1/4	2 1/4	4
.. of Outlet to End of Inlet C.....	1 1/8	1 1/2	1 1/8	1 1/8

NOZZLES AND CAPS

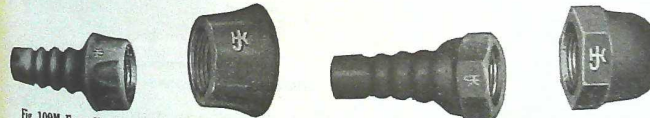


Fig. 109M Fancy Nozzle

Fig. 109N Fancy Cap

Fig. 109P Hexagon Nozzle

Fig. 109Q Hexagon Cap

Fig. 109M and 109N made 3/8 inch only.
 Fig. 109P made 3/8, 1/2 and 3/4 inch.
 Fig. 109Q made 1/4 inch, 3/8 inch, 1/2 inch and 3/4 inch.
 Net price per pound quoted upon application.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY MALLEABLE IRON FITTINGS

For 250 Pounds Working Pressure



Fig. 125G Elbow



Fig. 125H 45° Elbow



Fig. 125-I Long Turn Elbow



Fig. 125J Tee



Fig. 125Z Coupling

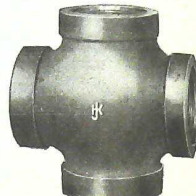


Fig. 125K Cross

EXTRA HEAVY MALLEABLE IRON FITTINGS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2
Price, Elbows..... each	.20	.25	.30	.35	.40	.55	.70	.90
“ 45° Elbows..... “	.25	.30	.35	.42	.50	.65	.85	1.10
“ Long Turn Elbows.. “	.....	.....	.....	.....	.64	.80	1.10	1.60
“ Tees..... “	.30	.40	.45	.50	.60	.80	1.05	1.35
“ Couplings..... “	.20	.25	.30	.35	.40	.55	.70	.90
“ Crosses..... “	.60	.80	.90	1.00	1.20	1.60	2.10	2.70
“ Reducers (not ill).. “	.20	.25	.28	.30	.40	.45	.55	.70

Size..... inches	2½	3	3½	4	4½	5	6	8	10	12
Price, Elbows..... each	1.50	2.40	3.25	4.25	5.50	6.50	9.50	21.00	37.00	60.00
“ 45° Elbows..... “	1.85	2.85	4.00	5.00	.....	7.50	10.50	.....	.....	.....
“ Long Turn Elbows.. “	2.40	4.50	6.50	7.00	.....	13.00	17.50	.....	.....	.....
“ Tees..... “	2.25	3.60	5.00	6.50	8.25	9.75	14.25	32.00	55.00	90.00
“ Couplings..... “	1.50	2.40	3.25	4.25	.....	6.50	9.50	.....	.....	.....
“ Crosses..... “	4.50	7.20	10.00	13.00	.....	19.50	28.50	.....	.....	.....
“ Reducers (not ill).. “	1.30	2.25	.....	.....	.....	.....	.....	.....	.....	.....

Long Turn Elbows, 45° Elbows and Crosses reducing sizes, are made to order by bushing in the sand from straight patterns, at a special price.
 Reducing Fittings carried in stock furnished at same price as straight sizes. For list of Reducing sizes carried in stock, see page 104.
 For Galvanizing add 50% to above lists.
 Extra Heavy Malleable Iron Return Bends, page 102.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON UNIONS

For 150 Pounds Working Pressure



Fig. 125 Malleable Union, Female



Fig. 125C Two-third Malleable Union



Fig. 125½ Union, Male and Female

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	
Price, Female Union..... each	.18	.18	.20	.22	.27	.33	.46	.58	.75	1.55	2.10	3.65	4.35
“ Galvanized..... “	.27	.27	.30	.33	.40	.50	.70	.90	1.15	2.35	3.15	5.50	6.30
“ Male and Female Union .. “	.....	.23	.25	.28	.33	.40	.57	.72	.95	1.95	.....	.....	.....
“ Galvanized..... “	.....	.32	.35	.39	.46	.57	.81	1.04	1.35	2.75	.....	.....	.....

TWO-THIRD MALLEABLE UNIONS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4		
Price..... each	.12	.14	.16	.19	.22	.30	.40	.47	.50	1.17	1.00	1.40	2.40	3.00
“ Galvanized..... “	.18	.20	.22	.25	.35	.50	.60	.73	.75	1.67	1.60	2.10	3.70	4.35

EXTRA HEAVY MALLEABLE IRON UNIONS—“OCTA” PATTERN

For 250 Pounds Working Pressure



Fig. 125E "Octa Union"

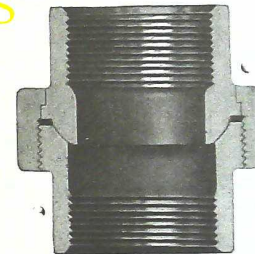


Fig. 125F Sectional

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Female..... each	.20	.24	.28	.35	.40	.56	.80	.95	2.00	2.75
“ Galvanized..... “	.30	.36	.42	.53	.60	.84	1.20	1.43	3.00	4.13
“ Male and Female, Black..... “	.25	.29	.34	.41	.47	.67	.94	1.15	2.40	.....
“ Galvanized..... “	.35	.41	.48	.59	.67	.95	1.34	1.63	3.40	.....

The "Octa" Union is made of the best grade Malleable Iron, is heavy and suitable for high pressure service.
 The seats are ground to a ball joint, and do away with the necessity of packing.
 On account of their octagonal shape can be made up on pipe quickly with a wrench—avoiding the use of tongs.

ORDER BY FIGURE NUMBERS

THE "NORUSTOCTA" UNION

MALLEABLE IRON

For 250 Pounds Working Pressure

The "Norustocta" is a new Union made of the highest grade Malleable Iron and entirely copper covered.

Serves all purposes of a Brass Union at much less cost, and is far stronger.

Heavy and well made, and the octagonal shape permits of making up on pipe quickly with a wrench, avoiding the use of tongs.

Absolutely rustless, as all parts of this Union are heavily covered inside and outside with pure copper.

The spherical or cone joint of the Union is machined and ground perfectly before the Electrolytic copper is applied, with the result that the copper-covered surfaces have a perfect bearing and make the best possible copper to copper non-corrosive Joint for high pressure steam and air work.

Require no packing.

These "Norustocta" Unions we highly recommend and guarantee to give absolute satisfaction for all steam, air and water work up to 250 pounds working pressure.

Each Union is tested with 100 pounds air pressure under water and is thoroughly inspected before it is packed for shipment, thereby insuring a perfect product.

(Kelly Patent—Nov. 8, 1910.)

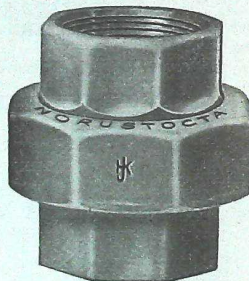
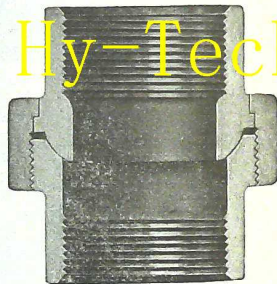


Fig. 125T "Norustocta" Union



Sectional View

"NORUSTOCTA" MALLEABLE IRON UNIONS

Size.....inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4
Price.....each	.22	.23	.26	.34	.49	.60	.82
Size.....inches	1 1/2	2	2 1/2	3	3 1/2	4	
Price.....each	1.10	1.40	2.75	3.50	6.30	7.50	

ORDER BY FIGURE NUMBERS

MALLEABLE IRON UNIONS
THE "PENN" UNION

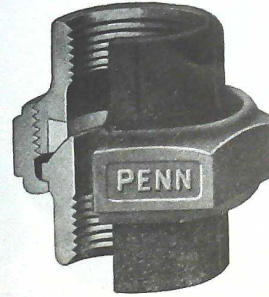


Fig. 125V

BRASS TO IRON
SEAT

For 150 Pounds
Working Pressure

This Union is well made of the best grade Malleable Iron and Brass, and the ground ball joint permits of a perfect connection regardless of pipe alignment. The inserted brass ring is firmly forced into the Malleable Iron and can not be dislodged.

BRASS TO IRON SEAT MALLEABLE HEXAGON NUT

Size.....inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price "Penn" Union Female B.K., ea.	.30	.30	.40	.50	.60	.80	1.20	1.60	2.00	3.20	4.90	8.00	10.00
" " " Galv. "	.45	.45	.60	.75	.90	1.20	1.80	2.40	3.00	4.80	6.20	12.00	15.00
" " " M. & F. B.K. "	..	..	.38	.50	.62	.75	1.00	1.50	2.00	2.50	4.00	6.00	..
" " " Galv. "	..	..	.53	.70	.87	1.05	1.40	2.10	2.80	3.50	5.60	8.40	..

THE "NIP" UNION

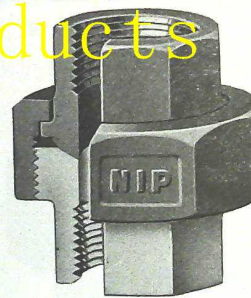


Fig. 126B

BRASS TO IRON
SEAT

For 200 Pounds
Working Pressure

The Nip Union is one of the simplest unions made, there being only three parts. The ring and bottom are made of heavy Malleable Iron and the thread end of brass. The brass to iron seat eliminates the use of gaskets and the two metals make a much better joint than one made of the same metal. The threads are all brass to iron and will not corrode. The brass to iron seat makes it possible to re-connect it many times without injury.

BRASS TO IRON SEAT NO INSERTED PARTS

Size.....inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price "Nip" Union, Female, B.K. ea.	.18	.19	.22	.27	.40	.48	.66	.80	1.14	2.10	2.65	4.30	5.50
" " " Galv. "	.22	.23	.26	.34	.49	.60	.82	1.10	1.40	2.75	3.50	6.30	7.50
" " " M. & F. B.K. "	.18	.19	.22	.27	.40	.48	.66	.80	1.14	2.10	2.65	4.30	5.50
" " " Galv. "	.22	.23	.26	.34	.49	.60	.82	1.10	1.40	2.75	3.50	6.30	7.50

ORDER BY FIGURE NUMBERS

MALLEABLE IRON UNIONS

THE "OCTA PENN" UNION

For 250 Pounds Working Pressure

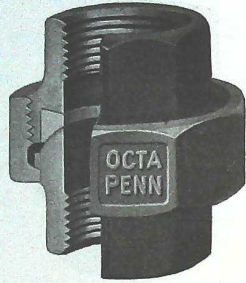


Fig. 125X

This Union is heavy and well made and the Octagon nut permits of making up on pipe quickly with any ordinary wrench. The inserted brass ring is firmly forced into Malleable Iron and can not be dislodged.

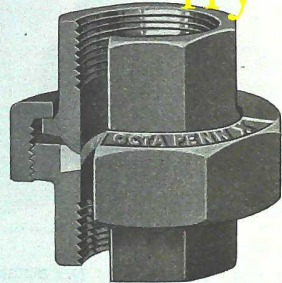
BRASS TO IRON SEAT

MALLEABLE OCTAGON NUT

Size..... inches	1/4	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	
"Octa Penn" Union, Fem., Blk., ea.	.30	.40	.50	.60	.80	1.20	1.60	2.00	3.20	4.80	8.00	10.00
Galv. "	.45	.60	.75	.90	1.20	1.80	2.40	3.00	4.80	6.20	12.00	15.00
" M. & F. Blk. "	.38	.50	.62	.75	1.00	1.50	2.00	2.50	4.00	6.00	.....	.....
Galv. "	.53	.70	.87	1.05	1.40	2.10	2.80	3.50	5.60	8.40	.....	.....

"OCTA PENN X" UNION

For 300 Pound Working Pressure



126C

This Union is intended for severe service, as all parts are of heavy construction. The inserted brass ring is firmly forced into the Malleable Iron and can not be dislodged. The seat is ground in so that a tight joint is insured. It can be re-connected many times without injury.

BRASS TO IRON SEAT

MALLEABLE OCTAGON NUT

Size..... inches	1/4	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	
"Octa Penn X" Union, Femals, Blk, ea.	.30	.40	.50	.60	.80	1.20	1.60	2.00	3.20	4.80	8.00	10.00
Galv. "	.45	.60	.75	.90	1.20	1.80	2.40	3.00	4.80	6.20	12.00	15.00
" M. & F. Blk. "	.38	.50	.62	.75	1.00	1.50	2.00	2.50	4.00	6.00	.....	.....
Galv. "	.53	.70	.87	1.05	1.40	2.10	2.80	3.50	5.60	8.40	.....	.....

ORDER BY FIGURE NUMBERS

MALLEABLE IRON AIR BRAKE FITTINGS

SPECIAL TESTED



Elbow



Street Elbow



Tee

AIR BRAKE ELBOWS

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2 x 1	1 1/2
Price, Elbow, Right Hand..... each	.07	.08	.10	.15	.22	.25	.25	.35
" Elbow, Right and Left..... "	.09	.11	.13	.17	.25	.30	.30	.40
" Street Elbow, Right Hand..... "	.10	.10	.12	.20	.25	.40	.40	.55

AIR BRAKE TEES

Size..... inches	1/4	1/2	3/4 x 1/2	1 x 1/2	1 1/4 x 1/2	1 1/2	1 x 1 1/4	1	1 1/4	1 1/2
Price, Tees.....	.08	.11	.15	.15	.15	.15	.25	.25	.30	.45

SPECIAL LARGE MALLEABLE FITTINGS

STANDARD PATTERN—FLAT BAND

Size..... inches	7	8	8x3	8x4	8x6
Price, Elbows..... each	15.00	20.00	.....	.....	.....
" 45° Elbows..... "	20.00	25.00	.....	.....	.....
" Tees, Reducing..... "	21.00	25.00	25.00	25.00	25.00
" Couplings..... "	20.00	20.00	.....	.....	.....

10 and 12-inch Malleable Fittings can be made to order from our Flat Band Standard Cast Iron Patterns. Prices on application.

For Galvanizing, add 50% to above lists.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON
EXTRA HEAVY AMMONIA FITTINGS

Recessed Ends for Soldering
Tested to 300 Pounds Air Pressure



Fig. 125L Elbow



Fig. 125M 45° Elbow



Fig. 125N Tee



Fig. 125P Return Bend



Fig. 125-O Cross

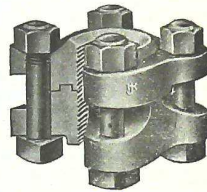


Fig. 125S Flange Union
Recessed Ends for Soldering
Tested to 300 Pounds Air Pressure

Size..... inches	¼	⅜	½	¾	1	1¼	1½
Price, Elbows..... each	.20	.25	.30	.35	.40	.55	.70
.. 45° Elbows..... "	.25	.30	.35	.42	.50	.65	.85
.. Tees..... "	.30	.40	.45	.50	.60	.80	1.05
.. Crosses..... "	.60	.80	.90	1.00	1.20	1.60	2.10
.. Flange Unions..... "	1.35	1.35	1.50	1.50	1.50	1.75	2.25

Size..... inches	2	2½	3	3½	4	5	6
Price, Elbows..... each	.90	1.50	2.40	3.25	4.25	6.50	9.50
.. 45° Elbows..... "	1.10	1.85	2.85	4.00	5.00	7.50	11.00
.. Tees..... "	1.35	2.25	3.60	5.00	6.50	9.75	14.25
.. Crosses..... "	2.70	4.50	7.20	10.00	13.00	19.50	28.50
.. Flange Unions..... "	3.00	6.00	9.00	11.50	14.00	17.50	25.00

EXTRA HEAVY MALLEABLE IRON RETURN BENDS

Size..... inches	1	1	1	1	1¼	1¼	1¼
Center to Center..... inches	1¼	2¼	3	4	2¼	2¼	3
Price..... each	.60	.75	.85	1.05	.90	.95	1.00

Size..... inches	1¼	1¼	1¼	1½	2	2	2
Center to Center..... inches	3¼	4	6	3	3	3¼	4
Price..... each	1.15	1.20	1.55	1.15	1.25	1.30	1.90
with ½-in. Back Outlet (not illus.)			1.90				2.25

Reducing Fittings furnished from straight patterns by bushing in the sand, at special price. For Galvanizing, add 50% to above lists.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY
HYDRAULIC MALLEABLE IRON FITTINGS



Fig. 129A Elbow



Fig. 129B 45° Elbow



Fig. 129C Long Turn Elbow



Fig. 129D Tee



Fig. 129F Coupling



Fig. 129E Cross

EXTRA HEAVY HYDRAULIC MALLEABLE IRON FITTINGS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2
Price, Elbows..... each	.20	.25	.30	.35	.40	.55	.70	.90
.. 45° Elbows..... "	.25	.30	.35	.42	.50	.65	.85	1.10
.. Long Turn Elbows..... "	.30	.40	.45	.50	.60	.80	1.10	1.60
.. Tees..... "	.30	.40	.45	.50	.60	.80	1.05	1.35
.. Couplings..... "	.20	.25	.30	.35	.40	.55	.70	.90
.. Crosses..... "	.60	.80	.90	1.00	1.20	1.60	2.10	2.70
.. Reducers..... "				.30	.40	.45	.55	.70

Size..... inches	2½	3	3½	4	5	6	8	10	12
Price, Elbows..... each	1.50	2.40	3.25	4.25	6.50	9.50	21.00	37.00	60.00
.. 45° Elbows..... "	1.85	2.85	4.00	5.00	7.50	10.50	24.00	42.00	70.00
.. Long Turn Elbows..... "	2.40	4.50	6.50	7.00	13.00	17.50	38.00	68.00	110.00
.. Tees..... "	2.25	3.60	5.00	6.50	9.75	14.25	32.00	55.00	90.00
.. Couplings..... "	1.50	2.40	3.25	4.25	6.50	9.50	21.00	37.00	60.00
.. Crosses..... "	4.50	7.20	10.00	13.00	19.50	28.50	66.00	115.00	180.00
.. Reducers (not ill.)..... "	1.30	2.25							

Extra Heavy Hydraulic Malleable Fittings are Recommended for the Following

Working Pressures:
 1-inch and smaller..... 2000 lbs. | 2½ to 4-inch..... 1000 lbs. | 8-inch..... 600 lbs.
 1¼ to 2-inch..... 1500 lbs. | 5 and 6-inch..... 800 lbs. | 10 and 12-inch..... 500 lbs.
 Long Turn Elbows, 45° Elbows and Crosses, reducing sizes, are made to order by bushing in the sand from straight patterns, at a special price.
 Reducing Fittings carried in stock furnished at same price as straight sizes. For list of Reducing sizes carried in stock, see following page.
 For Galvanizing, add 50% to above lists.

ORDER BY FIGURE NUMBERS

LIST OF REDUCING SIZES

EXTRA HEAVY AND HYDRAULIC MALLEABLE FITTINGS

CARRIED IN STOCK

EXTRA HEAVY AND HYDRAULIC MALLEABLE ELBOWS

¾ x ¾	1¼ x ½	2 x 1¼	2½ x 2
1 x ¾	1½ x 1½	2 x 1	2½ x 1½
1¼ x 1	1¾ x 1	2 x ¾	3 x 2½
1½ x ¾	2 x 1½	2 x ½	3 x 2

EXTRA HEAVY AND HYDRAULIC MALLEABLE TEES

½ x ¾ x ½	1¼ x 1	2 x 2 x ¾	3 x 2½
¾ x ¾ x ½	1½ x 1½ x 1½	2 x 2 x ½	4 x 4 x 3
1 x 1 x ¾	1¾ x 1½ x 1	2 x 1½ x 2	4 x 4 x 2½
1 x 1 x ½	1½ x 1½ x ¾	2 x 1 x 2	4 x 4 x 2
1 x ¾ x 1	1¾ x 1½ x ½	2½ x 2½ x 2	4 x 3 x 4
1¼ x 1¼ x 1	1½ x 1½ x 1½	2½ x 2½ x 1½	5 x 5 x 4
1¼ x 1¼ x ¾	2 x 2 x 1½	2½ x 2 x 2½	6 x 6 x 4
1½ x 1¼ x ½	2 x 2 x 1¼	3 x 3 x 2	6 x 6 x 3
1¾ x 1 x ½	2 x 2 x 1	3 x 3 x 1½	

EXTRA HEAVY AND HYDRAULIC MALLEABLE REDUCERS

¾ x ½	1¼ x ½	1½ x ½	2 x 1
1 x ¾	1¾ x 1	2 x 1¼	2 x ½
1¼ x 1			

Long Turn Elbows, 45° Elbows and Crosses—reducing sizes, are not carried in stock, but can be made to order, by bushing in the sand, from straight patterns.

Other reducing sizes of Elbows, Tees and Reducers, than given above, made to order, by bushing in the sand, at special prices.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON
EXTRA HEAVY HYDRAULIC FLANGE UNIONS



Fig. 126A
Sizes ¼" to 1½" for 1500 lbs. Pressure
Sizes 2" to 4" for 1000 lbs. Pressure

SPECIAL EXTRA HEAVY HYDRAULIC FLANGE UNION

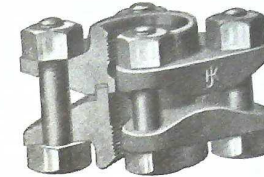


Fig. 126
Sizes ¼" to 1½" for 2500 lbs. Pressure
Sizes 2" to 4" for 1500 lbs. Pressure.

FIG. 126A—EXTRA HEAVY HYDRAULIC FLANGE UNIONS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Largest Outside Diam., inches	3	3½	3½	4¼	3½	4¼	5	5¾	6¾	7¾	8¾	9¼
Number of Bolts.....	2	2	2	4	4	4	4	4	4	4	4	4
Price..... each	1.35	1.35	1.50	1.50	1.50	1.75	2.25	3.00	6.00	9.00	11.50	14.00

These Flange Unions are made with Tongue and Groove, and are furnished with Rubber Gaskets.

FIG. 126—SPECIAL EXTRA HEAVY HYDRAULIC FLANGE UNIONS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Largest Outside Diam., inches	3½	3½	4	4¾	4¾	5	6	6½	7½	8½	9	10
Number of Bolts.....	2	2	2	2	4	4	4	4	4	8	8	8
Price..... each	1.50	1.50	1.75	2.00	2.50	3.00	3.50	4.00	6.00	9.00	11.50	14.00

These Flange Unions are tested to the hydraulic pressure recommended. Tongue and Groove construction with Rubber Gasket.

When Hydraulic Flange Unions are desired for higher working pressures than given above, or if larger sizes are required, state the working pressure. Prices for larger sizes or higher pressure upon application.

MALLEABLE IRON ROUND FLANGES
LIGHT PATTERN



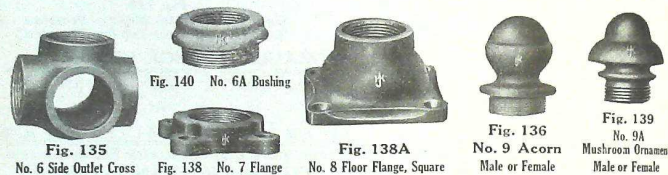
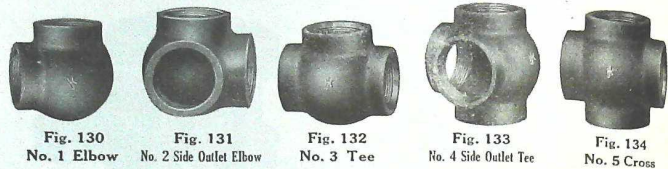
Fig. 125U Flange

Size..... inches	1½x3½	1½x3½	1½x3½	1½x3½	1½x4	1x4	1x4½	1½x4½	1½x5	1½x5	1½x5½
Price, Black... each	.15	.15	.18	.19	.20	.20	.32	.25	.35	.37	.40
Galv..... "	.30	.30	.36	.38	.40	.40	.64	.50	.70	.74	.80
Size..... inches	2x5½	2x6	2x6½	2½x6½	2½x7	3x6	3x7½	3½x8	4x8½	5x9½	6x10
Price, Black... each	.38	.55	.63	.63	.82	.57	.94	1.10	1.30	1.80	1.90
Galv..... "	.76	1.10	1.26	1.26	1.64	1.14	1.88	2.20	2.60	3.60	3.75

ORDER BY FIGURE NUMBERS

MALLEABLE IRON RAILING FITTINGS

FOR FENCES, ENCLOSING ENGINES AND MACHINERY, EXHIBITION SPACES, ETC.



MALLEABLE RAILING FITTINGS

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
No. 1, Elbow.....each	.15	.18	.30	.35	.45	.72	.90	1.50
" 2, Side Outlet Elbow....."	.20	.23	.25	.40	.40	.80	1.15	.70
" 3, Tee....."	.20	.23	.25	.40	.40	.75	1.20	.60
" 4, Side Outlet Tee....."	.30	.33	.35	.45	.55	.90	1.40	2.15
" 5, Cross....."	.30	.33	.35	.45	.58	1.00	1.50	2.25
" 6, Side Outlet Cross....."	.35	.38	.40	.50	.65	1.35	1.75	2.50
" 6A, Bushing....."	.08	.07	.10	.12	.18	.28	.40	.40
" 7, Flange....."	.14	.15	.15	.20	.28	.50	.50	.75
" 8, Floor Flange, Square....."	.16	.18	.20	.40	.50	.90		
" 9, Acorn, Male or Female....."	.16	.18	.20	.25	.35	.90	1.00	1.50
" 9A, Mushroom Ornament, M. or F....."	.16	.18	.20	.25	.35	.90	1.00	1.50

NOTE—We carry a full line of Railing Fittings, reducing sizes. Listed on a following page.

FINISHED BRASS RAILING FITTINGS

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2
No. 1, Elbow.....each	.40	.60	.80	1.20	1.60	2.50
" 2, Side Outlet Elbow....."	.75	1.00	1.10	1.70	2.00	3.00
" 3, Tee....."	.60	.85	1.10	1.70	2.00	3.00
" 4, Side Outlet Tee....."	1.05	1.25	1.50	2.00	2.40	3.50
" 5, Cross....."	1.05	1.25	1.50	2.00	2.40	3.50
" 6, Side Outlet Cross....."	1.20	1.45	1.70	2.25	3.00	4.00
" 7, Flange....."	1.20	1.45	1.70	2.25	3.00	4.00
" 8, Floor Flange, Square....."	.60	.90	1.00	1.35	1.75	2.50
" 9, Acorn, Male or Female....."	.60	.90	1.00	1.35	1.75	2.50

In ordering these Fittings, describe kind wanted by number and size. Railing Fittings will always be furnished with all openings tapped Right Hand, unless otherwise specified. Railing Fittings tapped Right and Left or Left Hand will be charged for at 15% additional, net. Malleable Railing Fittings, Galvanized, add 50% to above list.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON RAILING FITTINGS

FOR FENCES, ENCLOSING ENGINES AND MACHINERY, EXHIBITION SPACES, ETC.

REDUCING SIZES

MALLEABLE IRON RAILING FITTINGS—Reducing

Size.....inches	1	1 1/4	1 1/2	2	2 1/2	3
No. 1, Elbow.....each	.25	.44	.56	.90	1.80	2.70
" 2, Side Outlet Elbow....."	.31	.50	.62	1.00	1.90	2.80
" 3, Tee....."	.31	.50	.62	1.00	2.00	2.90
" 4, Side Outlet Tee....."	.44	.56	.70	1.12	2.20	2.75
" 5, Cross....."	.44	.56	.75	1.25	2.20	2.75

MALLEABLE IRON RAILING FITTINGS

LIST OF REDUCING SIZES CARRIED IN STOCK

No. 1 Elbow	No. 2 Side Outlet Elbow	No. 3 Tee	No. 4 Side Outlet Tee	No. 5 Cross
1 1/4 x 1	1 1/4 x 1	1 x 1 x 3/4	1 x 1 x 1/2 x 1/2	1 x 3/4
1 1/2 x 1 1/4	1 1/2 x 1 1/4 x 1 1/4	1 x 1 x 1 1/4	1 1/4 x 1 1/4 x 1 x 3/4	1 1/4 x 1
2 x 1 1/4	2 1/4 x 2 x 1 1/4	1 1/4 x 1 x 1	1 1/4 x 1 1/4 x 1 x 1	1 1/2 x 1 1/4
2 1/2 x 1 1/2	3 x 2 1/2 x 2 1/2	1 1/4 x 1 1/4 x 1	1 1/2 x 1 1/2 x 2 1/2 x 1 1/2	2 x 1 1/4
2 3/4 x 2	3 x 3 x 2 1/2	1 1/4 x 1 1/4 x 2	2 x 2 x 1 1/4 x 1 1/4	2 x 1 1/2
3 x 2		1 1/2 x 1 1/4 x 1 1/4	2 x 2 x 2 x 2 1/2	2 1/2 x 1
3 x 2 1/2		1 1/2 x 1 1/4 x 2 1/2	2 1/2 x 2 1/2 x 1 1/4 x 1 1/4	2 1/2 x 1 1/2
		2 x 2 x 1 1/4		2 1/2 x 2
		2 x 2 x 2 1/2		3 x 2
		2 x 2 x 3		3 x 2 1/2
		2 1/4 x 2 1/2 x 1 1/4		
		2 1/4 x 2 1/2 x 2		
		2 1/4 x 2 1/2 x 3		
		3 x 3 x 1		
		3 x 3 x 2		
		3 x 3 x 2 1/2		

Other size Reducing Railing Fittings made to order. When ordering Reducing Railing Fittings, send sketch showing which openings are wanted reduced. In ordering these Fittings, describe kind wanted by number and size. Railing Fittings will always be furnished with all openings tapped Right Hand, unless otherwise specified. Railing Fittings tapped Right and Left or Left Hand, will be charged for at 15% additional, net. Malleable Railing Fittings, Galvanized, add 50% to above list.

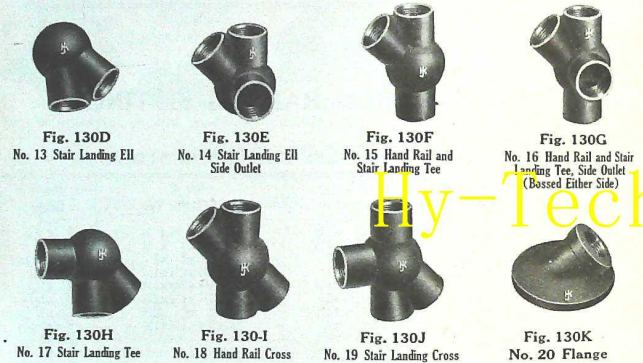
ORDER BY FIGURE NUMBERS

45° MALLEABLE RAILING FITTINGS



45° MALLEABLE RAILING FITTINGS						
Size..... inches	1	1 1/4	1 1/2	2	2 1/2	3
No. 10, Elbow..... each	.30	.45	.55	.90	2.15	2.90
" 11A, Tee..... "	.40	.50	.60	.95	2.50	3.00
" 12B, Cross..... "	.45	.55	.70	1.15	2.20	2.75

45° HAND RAIL AND STAIR LANDING FITTINGS



45° HAND RAIL AND STAIR LANDING FITTINGS						
Size..... inches	1	1 1/4	1 1/2	2	2 1/2	
No. 13, Stair Landing Ells..... each	.40	.70	.90	1.44	2.00	
" 14, Stair Landing Ells, Side Outlet..... "	.50	.80	1.00	1.60	2.30	
" 15, Hand Rail and Stair Landing Tees..... "	.50	.80	1.00	1.60	2.40	
" 16, Hand Rail and Stair Landing Tees, Side Outlet..... "	.70	.90	1.10	1.80	2.80	
" 17, Stair Landing Tees..... "	.50	.80	1.00	1.60	2.40	
" 18, Hand Rail Cross..... "	.70	.90	1.10	1.80	2.80	
" 19, Stair Landing Cross..... "	.70	.90	1.10	1.80	2.80	
" 20, Flange..... "	.30	.40	.56	.60	1.00	

In ordering above Fittings, describe kind wanted by number and size. All openings tapped Right Hand; 15% additional, net, for tapping Right and Left or Left Hand For Galvanizing, add 50% to above lists.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON RAILING FITTINGS

GAS FITTING PATTERN

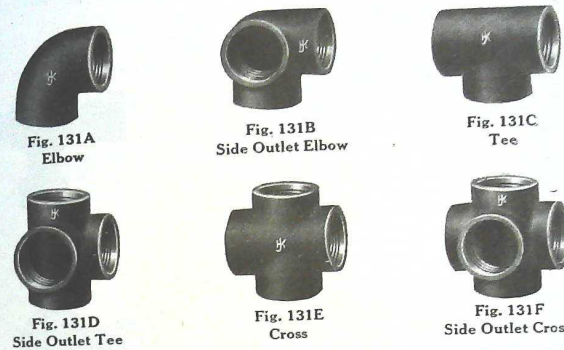
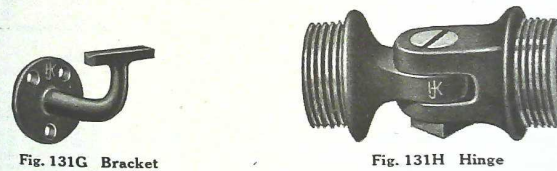


Fig. 131F can be made with outlet on both sides, if desired. Gas Fitting Pattern Railing Fittings are made in all sizes from 3/4-inch to 3-inch, and are sold by the pound rates. Elbows and Tees, all sizes, take the "C" Classification—Black, 13 cents per pound, Galvanized, 20 cents per pound. Crosses and Side Outlet Fittings, all sizes, take the "B" Classification—Black, 20 cents per pound, Galvanized, 28 cents per pound. These Railing Fittings will always be furnished with all openings tapped Right Hand, unless otherwise specified. Railing Fittings tapped Right and Left or Left Hand will be charged for at 15% additional, net. Reducing sizes furnished at special prices; also furnished reamed for Slip Joints at special prices.

RAILING BRACKETS AND HINGES

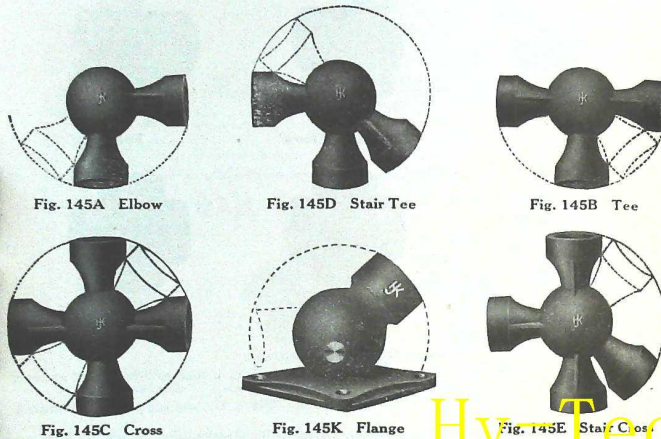


MALLEABLE RAILING BRACKETS AND HINGES						
Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
Price, Fig. 131G—Bracket..... each	.35	.35	.35	.35	.35	.35
Fig. 131H—Hinge..... "	.35	.40	.45	.55	.80	1.00

ORDER BY FIGURE NUMBERS

MALLEABLE IRON RAILING FITTINGS

ADJUSTABLE



MALLEABLE IRON RAILING FITTINGS—Adjustable

Size..... inches	1	1 1/4	1 1/2	2
Price, Elbows..... each	1.10	1.25	1.70	2.25
" Tees..... "	1.30	1.50	2.00	2.50
" Crosses..... "	1.50	1.75	2.35	2.75
" Stair Tees..... "	1.30	1.60	2.15	2.50
" Stair Crosses..... "	1.50	1.85	2.50	2.75
" Flanges..... "	1.65	1.75	1.90	2.50

FINISHED BRASS RAILING FITTINGS—Adjustable

Size..... inches	1	1 1/4	1 1/2	2
Price, Elbows..... each	2.75	3.15	4.25	5.65
" Tees..... "	3.25	3.75	5.00	6.25
" Crosses..... "	3.75	4.40	5.90	6.90
" Stair Tees..... "	3.25	4.00	5.40	6.25
" Stair Crosses..... "	3.75	4.65	6.25	6.90

The above Fittings can be furnished, if desired, with side outlets. Prices on application.
 By means of these Fittings, almost any angle may be obtained in railings for stairs and other places requiring deviation from horizontal or perpendicular lines, which would otherwise require special patterns to attain the same results.
 Right and Left and Left Hand Fittings, 25% extra.
 For Galvanizing, add 50% to above lists.

ORDER BY FIGURE NUMBERS

MALLEABLE IRON RAILING FITTINGS

COMBINATION ANGLE SCREW AND SLIP JOINT
 Vertical Openings Threaded Angle Openings Reamed and Drilled for Rivets

These Fittings are for use on Railings between 27 1/2° and 47 1/2° angles.

- 30° Fittings for Railings between 27 1/2° and 32 1/2° angles.
- 35° Fittings for Railings between 32 1/2° and 37 1/2° angles.
- 40° Fittings for Railings between 37 1/2° and 42 1/2° angles.
- 45° Fittings for Railings between 42 1/2° and 47 1/2° angles.

For setting up, the posts are first screwed together and the rails are then fitted and riveted.

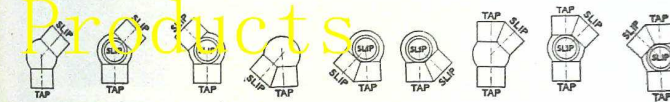
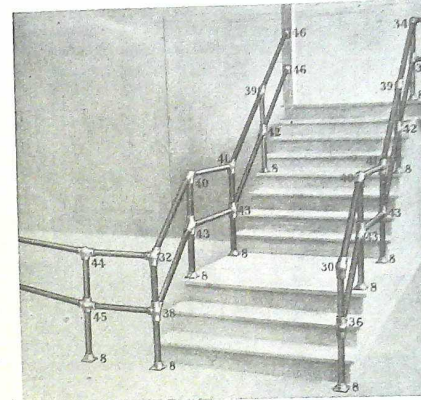


Fig. 137 Fig. 137A Fig. 137B Fig. 137C Fig. 137D Fig. 137E Fig. 137F Fig. 137G Fig. 137H
 Nos. 30 & 30T Nos. 31 & 31T Nos. 32 & 32T Nos. 33 & 33T Nos. 34 & 34T Nos. 35 & 35T Nos. 36 & 36T Nos. 37 & 37T Nos. 38 & 38T

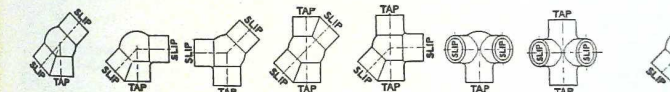


Fig. 137-I Fig. 137J Fig. 137K Fig. 137L Fig. 137M Fig. 137N Fig. 137-O Fig. 137P
 Nos. 39 & 39T Nos. 40 & 40T Nos. 41 & 41T Nos. 42 & 42T Nos. 43 & 43T Nos. 44 & 44T Nos. 45 & 45T Nos. 46 & 46T

NOTE—The letter "T" used after the number of a Fitting signifies that all openings are to be threaded. Prices for Fittings, all openings threaded, on application.

Size..... inches	1	1 1/4	1 1/2	2	Size..... inches	1	1 1/4	1 1/2	2
No. 30, Elbow..... each	1.10	1.25	1.70	2.25	No. 40, Tee..... each	1.30	1.50	2.00	2.50
No. 31 or 32, Side Outlet Elbows..... "	1.65	1.95	2.70	3.35	No. 41, Tee..... "	1.30	1.50	2.00	2.50
No. 33, Elbow..... "	1.10	1.25	1.70	2.25	No. 42, Cross..... "	1.50	1.75	2.35	2.75
No. 34 or 35, Side Outlet Elbows..... "	1.65	1.95	2.70	3.35	No. 43, Cross..... "	1.50	1.75	2.35	2.75
No. 36, Tee..... "	1.30	1.50	2.00	2.50	No. 44, Tee..... "	1.65	1.95	2.70	3.35
No. 37 or 38, Side Outlet Tees..... "	1.85	2.20	3.00	3.60	No. 45, Cross..... "	1.50	1.75	2.35	2.75
No. 39, Tee..... "	1.30	1.50	2.00	2.50	No. 46, Flange..... each	1.50	1.75	1.90	2.25

ORDER BY FIGURE NUMBERS

FLAT BAND FIRE LINE FITTINGS

MALLEABLE IRON HIGH PRESSURE

For 250 Pounds Working Pressure



Fig. 145F
90° Reducing Elbow



Fig. 145-I
Straight Tee



Fig. 145H Reducing Tee



Fig. 145G 90° Elbow

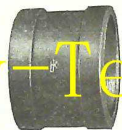


Fig. 145J Coupling

FLAT BAND FIRE LINE FITTINGS—List of Sizes Carried in Stock

90° Elbows	45° Elbows	Tees		Couplings
2½	2½	2½	4	4-inch Plain
3	3	2½x1½	1½x4	6-inch Band
3x2	4	3	4 x1½	
4	5	3x1½	4 x2	
4x1½	6	3x2	4 x2½	
4x2		3x2½	4 x3	
4x3		3x2x2	5 x2½	
5		3x2x3	5 x4	
6		3x2½x2½	5	
		3x2½x3	6	
			6x2½	
			6x4	

The above cuts show a line of Malleable Iron Fittings which are designed for use in high pressure and salt water service.

We make to order any sizes not listed above that the requirements of the trade may demand.
 POUND LISTS—All of the above Fittings sold at "C" Classification. Black, 13c., Galv., 20c.

ORDER BY FIGURE NUMBERS

CAST IRON CASING FITTINGS

REVISED LIST

Size, Inside Diameter.....	2, 2½, 2¾, 3	3¼	3½	3¾	4	4¼	4½	4¾
Price, Ells..... each	1.40	1.55	1.80	1.80	2.50	2.50	3.00	3.00
" Ells, Reducing..... "	1.40	1.75	2.25	2.25	3.00	3.00	3.75	3.75
" Ells, 45°..... "	1.60	2.00	2.70	2.70	3.75	3.75	4.00	4.00
" Tees..... "	1.50	2.00	2.50	2.50	3.50	3.50	4.00	4.25
" Tees, Reducing..... "	1.85	2.50	3.00	3.00	4.35	4.35	5.00	5.25
" Crosses..... "	2.20	2.70	3.50	3.50	5.00	5.00	5.70	6.00
" Crosses, Reducing..... "	2.75	3.30	4.35	4.35	6.25	6.25	7.00	7.50
" Plugs..... "	.50	.75	.85	.85	1.35	1.35	1.75	1.75
" Bushings..... "	.40	.85	1.00	1.00	1.50	1.50	1.85	1.85
" Flange Unions..... "	2.25	2.75	3.45	3.45	4.50	4.50	5.00	5.00
" Locknuts..... "	.50	.70	.95	.95	1.25	1.25	1.35	1.35
" Return Bends, Close..... "	3.00	4.00	5.00	5.00	6.00	6.00	6.50	6.50
" Return Bends, Open..... "	3.75	4.50	5.75	5.75	8.00	8.00	9.00	9.00
" Reducers..... "	1.20	1.50	2.00	2.00	2.75	2.75	3.00	3.00
" Caps..... "	.80	1.10	1.30	1.30	1.60	1.60	2.00	2.00
" Ys..... "	3.25	4.50	6.00	6.00	8.00	8.00	9.00	9.00

Size, Inside Diameter.....	5	5½, 5¾	6¼, 6½	7%	8¼, 8½	9%	10%	11%
Price, Ells..... each	3.50	4.00	7.00	10.00	13.00	20.00	28.00	35.00
" Ells, Reducing..... "	4.35	5.00	8.75	12.50	16.00	25.00	35.00	45.00
" Ells, 45°..... "	4.50	5.50	9.00	13.00	16.00	25.00	35.00	45.00
" Tees..... "	5.00	5.50	10.00	15.00	20.00	25.00	32.00	40.00
" Tees, Reducing..... "	6.25	6.75	12.50	18.75	25.00	30.00	35.00	50.00
" Crosses..... "	7.00	7.80	14.00	20.00	26.00	40.00	55.00	70.00
" Crosses, Reducing..... "	8.75	9.70	17.50	25.00	32.00	50.00	70.00	90.00
" Plugs..... "	2.00	2.40	3.75	5.50	6.50	7.50	9.00	11.00
" Bushings..... "	2.00	2.50	3.75	5.50	6.50	7.50	9.00	14.00
" Flange Unions..... "	5.50	6.50	8.00	10.00	12.00	15.00	28.00	35.00
" Locknuts..... "	1.50	1.90	2.50	3.50	4.00	4.50	6.25	12.50
" Return Bends, Close..... "								
" Return Bends, Open..... "								
" Reducers..... "	3.50	4.00	8.00	10.00	12.00	15.00	22.00	30.00
" Caps..... "	2.15	2.35	4.00	4.35	6.00	7.25	8.50	16.00
" Ys..... "	10.00	12.00	17.00	25.00	35.00	45.00	50.00	65.00

For Fittings, one or more openings pipe threads, add 25%.

WROUGHT CASING NIPPLES

REVISED LIST

Size..... inches	3	3¼	3½	3¾	4	4¼	4½	4¾	5	5½
Price, Close or Short..... each	1.90	1.95	2.30	2.35	2.35	2.40	2.40	2.45	2.55	3.00
" Shoulder or Long..... "	2.00	2.10	2.45	2.50	2.50	2.60	2.60	2.70	2.85	3.30
" 6 inches Long..... "	2.05	2.15	2.50	2.60	2.60	2.70	2.70	2.80	2.95	3.50
" 8..... "	2.10	2.15	2.50	2.60	2.60	2.70	2.70	2.80	2.95	3.50
" 9..... "	2.15	2.20	2.60	2.65	2.75	2.80	2.80	2.95	3.10	3.65
" 10..... "	2.25	2.30	2.65	2.75	2.80	2.90	2.90	3.05	3.25	3.80
" 11..... "	2.30	2.35	2.70	2.85	2.90	3.00	3.00	3.15	3.40	4.00
" 12..... "	2.35	2.40	2.80	2.90	3.00	3.05	3.10	3.25	3.55	4.15
"..... "	2.40	2.50	2.85	3.00	3.10	3.15	3.20	3.35	3.65	4.30

Size..... inches	5¾	6¼	6¾	7%	8¼	8½	9%	10%	11%
Price, Close or Short..... each	3.25	3.45			4.50	5.25	6.45	7.10	
" Shoulder or Long..... "	3.50								
" 6 inches Long..... "	3.65	3.80			4.75	4.80	5.45		
" 7..... "	3.65	4.00			5.00	5.05	5.70	6.70	7.80
" 8..... "	3.80	4.20			5.25	5.35	5.95	7.00	8.60
" 9..... "	3.95	4.35			5.45	5.55	6.20	7.30	8.15
" 10..... "	4.10	4.55			5.70	5.80	6.45	7.60	8.50
" 11..... "	4.25	4.75			5.95	6.05	6.70	7.90	8.85
" 12..... "	4.40	4.95			6.20	6.30	6.95	8.20	9.20

In ordering Casing Fittings and Nipples, always specify number of threads to inch, and state whether dimensions given are for inside or outside diameter.

ORDER BY FIGURE NUMBERS

CAST IRON FLANGED FITTINGS

STANDARD LOW PRESSURE EXTRA HEAVY
EXTRA HEAVY HYDRAULIC

American Standard, in Effect January 1, 1915

EXPLANATORY NOTES

- (1)—Standard and Extra Heavy Reducing Elbows carry same dimensions center to face as regular Elbows of largest straight size.
- (2)—Standard and Extra Heavy Tees, Crosses and Laterals, reducing on run only, carry same dimensions face to face as largest straight size.
- (3)—If Flanged Fittings for lower working pressure than 125 pounds are made, they shall conform in all dimensions, except thickness of shell, to this standard, and shall have the guaranteed working pressure cast on each Fitting.
- (4)—Where Long Radius Fittings are specified, it has reference only to Elbows which are made in two center to face dimensions, and to be known as Elbows and Long Radius Elbows, the latter being used only when so specified.
- (5)—All Standard Weight Fittings must be guaranteed for 125 pounds working pressure, and Extra Heavy Fittings for 250 pounds working pressure; and each Fitting must have some mark cast on it indicating the maker and guaranteed working steam pressure.
- (6)—All Extra Heavy Fittings and Flanges to have a raised surface of 1/8 inch high inside of bolt holes for gaskets.
Standard Weight Fittings and Flanges to be plain faced.
Bolt Holes to be 1/8 inch larger in diameter than bolts.
Bolt Holes to straddle center line.
- (7)—Size of all Fittings scheduled indicates inside diameter of ports.
- (8)—The face to face dimensions of Reducers, either straight or eccentric, for all pressures, shall be the same face to face as given in table of dimensions.
- (9)—Square Head Bolts with hexagonal nuts are recommended.
For Bolts 1 1/2 inches diameter and larger, studs with a nut on each end are satisfactory.
Hexagonal Nuts for pipe sizes 1 to 4 1/2-inch on 125-pound standard, and 1 to 6-inch on 250-pound standard, can be conveniently pulled up with open wrenches of minimum design of heads. Hexagonal Nuts for pipe sizes 4 1/2 to 100-inch on 125-pound standard, and 6 to 48-inch on 250-pound standard, can be conveniently pulled up with box wrenches.
- (10)—Twin Elbows, whether straight or reducing, carry same dimensions center to face and face to face as regular straight size Ells and Tees.
Side Outlet Elbows and Side Outlet Tees, whether straight or reducing sizes, carry same dimensions center to face and face to face as regular Tees having same reductions.
- (11)—Bull Head Tees or Tees increasing on outlet will have same center to face and face to face dimensions as a straight Fitting of the size of the outlet.
- (12)—Tees Crosses and Laterals, 16-inch and down, reducing on the outlet, use the same dimensions as straight sizes of the larger port.
Size 18-inch and up, reducing on the outlet, are made in two lengths, depending on the size of the outlet as given in the table of dimensions.
Short Body Tees and Crosses, 16-inch and smaller, Standard and Extra Heavy, can be furnished special to order, if desired.
Laterals, 16-inch and down, reducing on the branch, use the same dimensions as straight sizes of the larger port.
- (13)—Laterals, sizes 18-inch and up, reducing on the branch, are made in two lengths, depending on the size of the branch as given in the table of dimensions.
The dimensions of Reducing Flanged Fittings are always regulated by the reductions of the outlet or branch. Fittings, reducing on the run only, the long body pattern will always be used.
Ys are special and are made to suit conditions.
Double Sweep Tees are not made reducing on the run.
- (14)—STEEL FLANGES, FITTINGS AND VALVES ARE RECOMMENDED FOR SUPER-HEATED STEAM.

The Fittings herein described are well adapted to the pressures named; and we are prepared to manufacture, on short notice, Flanged Fittings of all kinds up to and including 48-inch.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure



Fig. 61 90° Elbow



Fig. 62 45° Elbow

Size Inches	FLANGED 90° ELBOWS			Diameter of Flanges Inches	FLANGED 45° ELBOWS		
	Price Faced Each	Price Faced and Drilled Each	Center to Face Inches		Price Faced Each	Price Faced and Drilled Each	Center to Face Inches
1 1/4	3.00	3.60	3 3/4	4 1/2	3.30	3.90	2
1 1/2	3.00	3.60	4	5	3.30	3.90	2 1/4
2	3.00	3.60	4 1/2	6	3.30	3.90	2 1/2
2 1/2	3.15	3.75	5	7	3.50	4.10	3
3	3.45	4.15	5 1/2	7 1/2	3.80	4.50	3
3 1/2	4.00	4.90	6	8 1/2	4.50	5.35	3 1/2
4	4.50	5.50	6 1/2	9	5.00	6.00	4
4 1/2	5.50	6.50	7	9 1/2	6.00	7.00	4
5	6.25	7.25	7 1/2	10	6.90	7.90	4 1/2
6	7.60	8.90	8	11	8.35	9.65	5
7	10.50	12.00	8 1/2	12 1/2	11.00	12.50	5 1/2
8	12.00	13.60	9	13 1/2	12.60	14.20	5 1/2
9	17.00	19.25	10	15	17.75	20.00	6
10	19.00	21.70	11	16	20.00	22.70	6 1/2
12	28.00	31.00	12	19	29.50	32.50	7 1/2
14	41.50	45.25	14	21	41.50	45.25	7 1/2
15	47.00	51.50	14 1/2	22 1/4	47.00	51.50	8
16	54.50	59.50	15	23 1/2	54.50	59.50	8
18	71.00	77.00	16 1/2	25	71.00	77.00	8 1/2
20	90.00	97.00	18	27 1/2	90.00	97.00	9 1/2
22	113.00	122.00	20	29 1/2	113.00	122.00	10
24	140.00	150.00	22	32	140.00	150.00	11

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.
See template for drilling, page 136.
Extra list price for galvanizing, page 133.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure

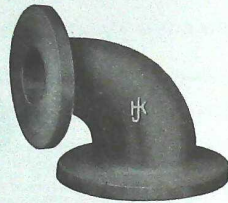


Fig. 62A Reducing Elbow

REDUCING FLANGED 90° ELBOWS

Size Inches	Price Faced	Price Faced and Drilled	Center to Face Inches	Diameter of Flanges Inches	Size Inches	Price Faced	Price Faced and Drilled	Center to Face Inches	Diameter of Flanges Inches
1½ x 1¼	6.00	6.60	4	5 x 4½	7 x 6	21.00	22.50	8½	12½ x 11
2 x 1½	6.00	6.60	4½	6 x 5	8 x 3½	24.00	25.60	9	13½ x 8½
2½ x 2	6.30	6.90	5	7 x 6	8 x 4	24.00	25.60	9	13½ x 9
3 x 1½	6.90	7.60	5½	7½ x 5	8 x 5	24.00	25.60	9	13½ x 10
3 x 2	6.90	7.60	5½	7½ x 6	8 x 6	24.00	25.60	9	13½ x 11
3 x 2½	6.90	7.60	5½	7½ x 7	8 x 7	24.00	25.60	9	13½ x 12½
3½ x 2	8.10	8.95	6	8½ x 6	9 x 6	34.00	36.25	10	15 x 11
3½ x 2½	8.10	8.95	6	8½ x 7	9 x 8	34.00	36.25	10	15 x 13
3½ x 3	8.10	8.95	6	8½ x 7½	10 x 4½	38.00	40.70	11	16 x 9
4 x 2	9.00	10.00	6½	9 x 6	10 x 5	38.00	40.70	11	16 x 10
4 x 2½	9.00	10.00	6½	9 x 7	10 x 6	38.00	40.70	11	16 x 11
4 x 3	9.00	10.00	6½	9 x 7½	10 x 7	38.00	40.70	11	16 x 12½
4 x 3½	9.00	10.00	6½	9 x 8½	10 x 8	38.00	40.70	11	16 x 13½
4½ x 2½	11.00	12.00	7	9½ x 7	12 x 6	56.00	59.00	12	19 x 11
4½ x 3½	11.00	12.00	7	9½ x 8½	12 x 7	56.00	59.00	12	19 x 12½
4½ x 4	11.00	12.00	7	9½ x 9	12 x 8	56.00	59.00	12	19 x 13½
5 x 2½	12.50	13.50	7½	10 x 7	14 x 10	70.00	73.75	14	21 x 16
5 x 3	12.50	13.50	7½	10 x 7½	14 x 12	80.00	84.50	14½	22½ x 16
5 x 4	12.50	13.50	7½	10 x 9	15 x 12	80.00	84.50	14½	22½ x 19
6 x 2½	15.25	16.55	8	11 x 7	16 x 12	90.00	95.00	15	23½ x 21
6 x 3	15.25	16.55	8	11 x 7½	16 x 14	90.00	95.00	15	23½ x 22½
6 x 3½	15.25	16.55	8	11 x 8½	16 x 15	90.00	95.00	15	23½ x 23½
6 x 4	15.25	16.55	8	11 x 9	18 x 15	105.00	111.00	16½	25 x 22½
6 x 5	15.25	16.55	8	11 x 10	18 x 16	105.00	111.00	16½	25 x 23½
7 x 5	21.00	22.50	8½	12½ x 10	20 x 14	120.00	127.00	18	27½ x 23½
					20 x 16	120.00	127.00	18	27½ x 25
					20 x 18	120.00	127.00	18	

Flanged Fittings will always be furnished faced only, unless otherwise ordered.
 Flanged Taper Reducing Elbows not listed above will be made to order at special prices.
 See template for drilling, page 136.
 Extra list price for galvanizing, page 133.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure



Fig. 62B Long Radius Elbow

FLANGED LONG RADIUS ELBOWS

Size Inches	Price Faced Each	Price Faced and Drilled Each	Center to Face Inches	Radius Inches	Diameter Flanges Inches
1½	5.00	5.90	6	5	5
2	5.00	5.90	6½	5½	6
2½	5.25	6.15	7	5½	7
3	5.75	6.85	7½	6¼	7½
3½	6.75	8.00	8¼	6½	8½
4	7.50	9.00	9	7¾	9
4½	9.25	10.75	9½	7¾	9½
5	10.50	12.00	10¼	8½	10
6	12.65	14.60	11½	9½	11
7	17.50	19.75	12¾	10¾	12½
8	20.00	22.40	14	12	13½
9	28.50	31.85	15½	13	15
10	31.50	35.50	16½	14½	16
12	46.50	51.00	19	16½	19
14	69.00	74.50	21½	18½	21
15	78.00	84.75	22¾	20	22½
16	91.00	98.50	24	21½	23½
18	118.00	127.00	26½	23½	25
20	150.00	160.00	29	26	27½
22	190.00	203.00	31½	28½	29½
24	235.00	250.00	34	30¾	32

Sizes not listed above made to order at special net prices.
 NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.
 See template for drilling, page 136.
 Extra list price for galvanizing, page 133.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure

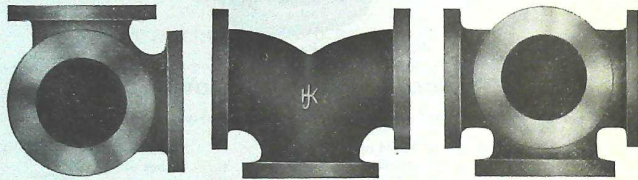


Fig. 62C Side Outlet Elbow, Fig. 62D Double Branch Elbow, Fig. 62E Four-way Tee

Size Inches	No. 62C		No. 62D		No. 62E	
	Faced Each	Faced and Drilled Each	Faced Each	Faced and Drilled Each	Faced Each	Faced and Drilled Each
4	26.50	28.00	28.50	30.00	31.00	33.00
5	28.50	30.00	36.00	37.50	35.00	37.00
6	33.00	35.00	38.00	40.00	42.25	45.00
7	40.25	42.50	42.75	45.00	49.50	52.50
8	47.50	50.00	47.50	50.00	56.75	60.00
10	76.00	80.00	66.00	70.00	84.50	90.00
12	100.50	105.00	90.50	95.00	114.00	120.00
14	129.50	135.00	119.50	125.00	142.50	150.00
16	152.50	160.00	142.50	150.00	170.00	180.00

Larger sizes made to order Prices on application.
 Furnished faced only, unless otherwise ordered.
 Reducing Side Outlet Elbows are made reducing on the side outlet only.
 Double Branch Elbows are made reducing on the run only.
 Dimensions, page 132. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS

125 Pounds Working Pressure

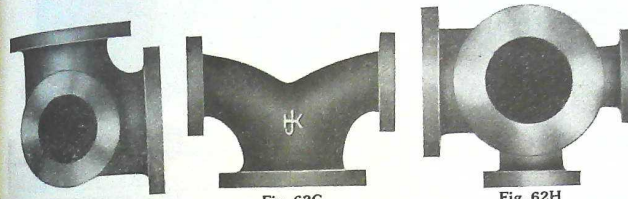


Fig. 62F Side Outlet Elbow Reducing, Fig. 62G Double Branch Elbow Reducing, Fig. 62H Four-way Tee Reducing

Size Inches	No. 62F		No. 62G		No. 62H	
	Faced Each	Faced on Drilled Each	Faced Each	Faced and Drilled Each	Faced Each	Faced and Drilled Each
4	29.50	31.00	31.50	33.00	34.00	36.00
5	31.50	33.00	39.50	41.00	39.00	41.00
6	36.00	38.00	42.00	44.00	47.25	50.00
7	44.75	47.00	47.75	50.00	55.00	58.00
8	52.00	55.00	52.50	55.00	62.75	66.00
10	84.00	88.00	79.50	77.50	94.50	100.00
12	110.50	115.00	100.50	105.00	126.00	132.00
14	144.50	150.00	132.50	138.00	157.50	165.00
16	167.50	175.00	157.50	165.00	190.00	200.00

Larger sizes made to order. Prices on application.
 Furnished faced only, unless otherwise ordered.
 Reducing Side Outlet Elbows are made reducing on the side outlet only.
 Double Branch Elbows are made reducing on the run only.
 Dimensions, page 132. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure



Fig. 63 Tee



Fig. 66 Tee, Reducing on Side



Fig. 65 Tee, Reducing on End

Size Inches	FLANGED TEES		Face to Face Inches	Center to Face Inches	Diameter Flanges Inches	REDUCING FLANGED TEES	
	Price Faced Each	Price Faced and Drilled Each				Price Faced Each	Price Faced and Drilled Each
1 1/4	4.35	5.25	7 1/2	3 3/4	4 1/2	.....	.....
1 1/2	4.35	5.25	8	4	5	5.00	5.90
2	4.35	5.25	9	4 1/2	6	5.00	5.90
2 1/2	4.55	5.45	10	5	7	5.25	6.15
3	5.00	6.10	11	5 1/2	7 1/2	5.75	6.85
3 1/2	5.85	7.10	12	6	8 1/2	6.75	8.00
4	6.50	8.00	13	6 1/2	9	7.50	9.00
4 1/2	8.00	9.50	14	7	9 1/2	8.25	10.75
5	9.10	10.60	15	7 1/2	10	10.50	12.00
6	11.00	12.95	16	8	11	12.65	14.60
7	15.25	17.50	17	8 1/2	12 1/2	17.50	19.75
8	17.40	19.80	18	9	13 1/2	20.00	22.40
9	24.65	28.00	20	10	15	28.50	31.85
10	27.50	31.50	22	11	16	31.50	35.50
12	40.50	45.00	24	12	19	46.50	51.00
14	60.00	65.50	28	14	21	69.00	74.50
15	68.00	74.75	29	14 1/2	22 1/2	78.00	84.75
16	79.00	86.50	30	15	23 1/2	91.00	98.50
18	103.00	112.00	33	16 1/2	25	118.00	127.00
20	130.00	140.00	36	18	27 1/2	150.00	160.00
22	164.00	177.00	40	20	29 1/2	189.00	202.00
24	203.00	218.00	44	22	32	233.00	248.00

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.
 Reducing Tees, 16-inch and smaller, have same dimensions as straight sizes, center to face.
 For Reducing Tees, sizes 18-inch and larger, the short body pattern is used. See page 134 for dimensions.
 For list of Reducing Flanged Tees carried in stock, see page 126.
 See page 126 for advanced prices beyond regular list and discount on Reducing Flanged Tees not carried in stock. Template for drilling, page 136. Extra list price for galvanizing, page 138.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure

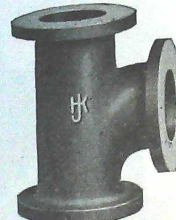


Fig. 63A Tee Single Sweep



Fig. 63B Reducing Tee Single Sweep Reducing in Run or Branch

SINGLE SWEEP FLANGED TEES

Size Inches	SINGLE SWEEP FLANGED TEES		Face to Face Inches	Center to Face Inches	Diameter Flanges Inches	REDUCING SINGLE SWEEP FLANGED TEES	
	Price Faced Each	Price Faced and Drilled Each				Price Faced Each	Price Faced and Drilled Each
2	3.00	3.90	9	4 1/2	6	.....	.....
2 1/2	3.25	4.15	10	5	7	6.00	6.90
3	3.75	4.65	11	5 1/2	7 1/2	6.60	7.70
3 1/2	4.25	5.15	12	6	8 1/2	7.75	9.00
4	4.75	5.65	13	6 1/2	9	8.65	10.15
4 1/2	5.25	6.15	14	7	9 1/2	10.60	12.10
5	5.75	6.65	15	7 1/2	10	12.00	13.50
6	6.75	7.65	16	8	11	14.50	16.45
7	7.75	8.65	17	8 1/2	12 1/2	20.00	22.25
8	8.75	9.65	18	9	13 1/2	23.00	25.40
9	9.75	10.65	20	10	15	32.75	36.10
10	10.75	11.65	22	11	16	36.00	40.00
12	12.75	13.65	24	12	19	53.50	58.00
14	14.75	15.65	28	14	21	79.00	84.50
15	16.75	17.65	29	14 1/2	22 1/2	90.00	96.75
16	18.75	19.65	30	15	23 1/2	105.00	112.50

Reducing Single Sweep Flanged Tees are carried in stock in the following sizes: 6x6x5, 6x6x4, 6x6x3, 6x6x2 1/2, 8x8x6, 8x8x5, 8x8x3, 8x8x2, 8x8x1, 10x10x6, 10x8x8, 10x6x6.

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.
 Reducing Tees, 18-inch and smaller, have same dimensions as straight sizes, center to face.
 For Reducing Tees, 18-inch and larger, the short body pattern is used. See page 134.
 Single Sweep Tees are not made with side openings larger than the run.
 Larger sizes than above made to order. Prices on application.
 Dimensions, page 132. Template for drilling, page 136.
 Extra list price for galvanizing, page 138.
 See page 128 for advanced prices beyond regular list and discount on Reducing Flanged Tees not carried in stock.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure

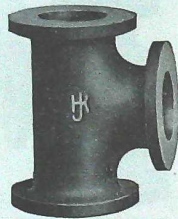


Fig. 63C Tee Double Sweep

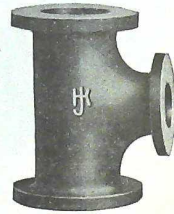


Fig. 63D Reducing Tee Double Sweep

DOUBLE SWEEP FLANGED TEES

Size Inches	DOUBLE SWEEP FLANGED TEES		Face to Face Inches	Center to Face Inches	Diameter Flanges Inches	REDUCING DOUBLE SWEEP FLANGED TEES	
	Price Faced Each	Price Faced and Drilled Each				Price Faced Each	Price Faced and Drilled Each
2	5.00	5.90	9	4 1/2	6	6.00	6.90
2 1/2	5.25	6.15	10	5	7	6.30	7.20
3	5.75	6.85	11	5 1/2	8	6.60	7.70
3 1/2	6.75	8.00	12	6	9	7.75	9.00
4	7.50	9.00	13	6 1/2	10	8.65	10.15
4 1/2	9.25	10.75	14	7	11	10.60	12.10
5	10.50	12.00	15	7 1/2	12	12.00	13.50
6	12.65	14.60	16	8	14	14.50	16.45
7	17.50	19.75	17	8 1/2	16	20.00	22.25
8	20.00	22.40	18	9	18	23.00	25.40
9	28.50	31.85	20	10	20	32.75	36.10
10	31.50	35.50	22	11	22	36.00	40.00
12	46.50	51.00	24	12	24	53.50	58.00
14	69.00	74.50	28	14	28	79.00	84.50
15	78.00	84.75	29	14 1/2	29	90.00	96.75
16	91.00	98.50	30	15	30	105.00	112.50

Reducing Double Sweep Flanged Tees are carried in stock in the following sizes: 4x4x2, 6x6x5, 6x6x3, 8x8x6, 10x10x6, 10x10x5, 10x10x4.

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered. Double Sweep Tees are not made reducing on the run. Should these be wanted, patterns will be altered and the fittings charged at a special price. Dimensions, page 132. Template for drilling, page 138. Reducing Tees, 16-inch and smaller, have same dimensions as straight sizes, center to face. For Reducing Tees, 18-inch and larger, the short body pattern is used. Extra list price for galvanizing, page 138. See page 126 for advanced prices beyond regular list and discount on Reducing Flanged Tees not carried in stock.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS
For 125 Pounds Working Pressure



Fig. 64 Cross



Fig. 64A Reducing Cross

Size Inches	FLANGED CROSSES		Face to Face Inches	Center to Face Inches	Diameter Flanges Inches	REDUCING FLANGED CROSSES	
	Price Faced Each	Price Faced and Drilled Each				Price Faced Each	Price Faced and Drilled Each
1 1/2	6.75	7.95	7 1/2	3 3/4	4 1/2	7.75	8.95
2	6.75	7.95	8	4	5	7.75	8.95
2 1/2	6.75	7.95	9	4 1/2	6	7.75	8.95
3	6.75	7.95	10	5	7	8.00	9.20
3 1/2	7.25	8.45	11	5 1/2	8 1/2	8.75	10.15
4	9.00	10.00	12	6	9	10.35	12.05
4 1/2	10.00	12.00	13	6 1/2	10	11.50	13.50
5	12.00	14.00	14	7	11	13.75	15.75
6	13.75	15.75	15	7 1/2	12 1/2	15.75	17.75
7	16.75	19.25	16	8	13 1/2	19.25	21.75
8	23.00	26.00	17	8 1/2	14	26.50	29.50
9	26.50	29.75	18	9	15	30.50	33.75
10	37.50	42.00	20	10	16	43.00	47.50
12	42.00	47.50	22	11	17	48.00	53.50
14	61.50	67.50	24	12	18	71.00	77.00
16	91.00	98.50	28	14	21	105.00	112.50
18	103.00	112.00	29	14 1/2	22 1/2	118.00	127.00
20	120.00	130.00	30	15	23 1/2	138.00	148.00
22	157.00	169.00	33	16 1/2	25	180.00	192.00
24	198.00	212.00	36	18	27 1/2	228.00	242.00
26	248.00	266.00	40	20	29 1/2	285.00	303.00
28	310.00	330.00	44	22	32	355.00	375.00

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered. Reducing Crosses, 16-inch and smaller, have same dimensions as straight sizes center to face. For Reducing Crosses, sizes 18-inch and larger, the short body pattern is used. See page 134 for dimensions. For list of Reducing Flanged Crosses carried in stock, see page 126. Template for drilling, page 138. See page 126 for advanced prices beyond regular list and discount on Reducing Flanged Crosses not carried in stock. Extra list price for galvanizing, page 138.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure



Fig. 94 Base Elbow, Round or Square Base

FLANGED BASE ELBOWS

Size Inches	Price Faced Each	Price Faced and Drilled Each	Price for Facing and Drilling Base Flange	Center to Face Inches	Center to Face of Base Inches	Diameter of Flanges Inches	Size of Base Inches
4	9.00	10.00	3.00	6½	6½	9	6
4½	11.00	12.00	3.00	7	6¾	9½	6
5	12.50	13.50	3.50	7½	7	10	7
6	15.25	16.35	3.50	8	7½	11	7
7	21.00	22.50	3.50	8½	8¼	12½	7
8	24.00	25.60	5.00	9	8¾	13½	9
9	34.00	36.25	5.00	10	9½	15	9
10	38.00	40.70	5.00	11	10	16	9
12	56.00	59.00	7.50	12	10½	19	11
14	70.00	73.75	7.50	14	13½	21	11
15	80.00	84.50	7.50	14½	14	22½	11
16	90.00	95.00	7.50	15	14¾	23½	11
18	105.00	111.00	12.00	16½	15½	25	13½
20	120.00	127.00	12.00	18	16¾	27½	13½
22	150.00	159.00	12.00	20	17¾	29½	13½
24	190.00	200.00	12.00	22	18¾	32	13½

In ordering Base Elbows, state particularly whether Round or Square Base is desired. Edge to edge of Square Base is same measurement as diameter of Round Base. Flanged Base Tees made to order on application. Flanged Fittings will always be furnished faced only, unless otherwise ordered. See template for drilling, page 136. Extra list price for galvanizing, page 138.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure

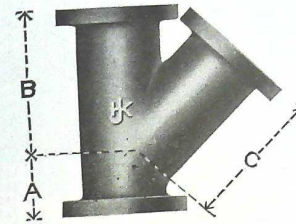


Fig. 67 Lateral

Size Ins.	FLANGED LATERALS		Center to Face A Inches	Center to Face B or C Inches	Face to Face A and B Inches	Diameter of Flanges Inches	REDUCING FLANGED LATERALS	
	Price Faced Each	Price Faced and Drilled Each					Price Faced Each	Price Faced and Drilled Each
2	6.75	7.95	2½	8	10½	6	7.75	8.95
2½	6.95	8.15	2½	9½	12	7	8.00	9.20
3	7.65	9.05	3	10	13	7½	8.75	10.15
3½	9.00	10.70	3	11½	14½	8½	10.35	12.05
4	10.00	12.00	3	12	15	9	11.50	13.50
4½	12.00	14.00	3	12½	15½	9½	13.75	15.75
5	13.75	15.75	3½	13½	17	10	15.75	17.75
6	16.75	19.25	3½	14½	18	11	19.25	21.75
7	23.00	26.00	4	16½	20½	12½	26.50	29.50
8	26.50	29.75	4½	17½	22	13½	30.50	33.75
9	37.50	42.00	4½	19½	24	15	43.00	47.50
10	42.00	47.50	5	20½	25½	16	48.00	53.50
12	61.50	67.50	5½	24½	30	19	71.00	77.00
14	91.00	98.50	6	27	33	21	105.00	112.50
15	103.00	112.00	6	28½	34½	22½	118.00	127.00
16	120.00	130.00	6½	30	36½	23½	138.00	148.00
18	157.00	169.00	7	32	39	25	180.00	192.00
20	198.00	212.00	8	35	43	27½	228.00	242.00
22	248.00	268.00	8½	37½	46	29½	285.00	303.00
24	310.00	330.00	9	40½	49½	32	355.00	375.00

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered. See template for drilling, page 136. For dimensions of Reducing Laterals, see page 135. Extra list price for galvanizing, page 138. For list of reducing sizes carried in stock, see page 126. See page 126 for advanced prices beyond regular list and discount on Reducing Flanged Laterals not carried in stock.

ORDER BY FIGURE NUMBERS

STANDARD
CAST IRON REDUCING FLANGED FITTINGS

List of Sizes Carried in Stock

REDUCING FLANGED TEES

2 1/2 x 2 1/2 x 2	4 1/2 x 4 1/2 x 4	6 x 2	x 6	8 x 8	x 2 1/2	10 x 10 x 7	12 x 12 x 3
2 1/2 x 2 1/2 x 1 1/2	4 1/2 x 4 1/2 x 3	6 x 5	x 5	8 x 8	x 2	10 x 10 x 6	12 x 12 x 2
2 1/2 x 2	4 1/2 x 4 1/2 x 2 1/2	6 x 5	x 4	8 x 7	x 8	10 x 10 x 5	12 x 10 x 12
3 x 3	x 2 1/2	5 x 5	x 4	6 x 5	x 3	10 x 10 x 4 1/2	12 x 8 x 12
3 x 3	x 2	5 x 5	x 3 1/2	6 x 5	x 2 1/2	8 x 5	x 8
3 x 3	x 1 1/2	5 x 5	x 3	6 x 4	x 5	8 x 4	x 8
3 x 3	x 1 1/4	5 x 5	x 2 1/2	6 x 4	x 4	8 x 3 1/2 x 8	10 x 10 x 3
3 x 2 1/2 x 3	5 x 5	x 2	6 x 4	x 3	8 x 3	x 8	10 x 10 x 2 1/2
3 x 2 1/2 x 2 1/2	5 x 5	x 1 1/2	6 x 4	x 2 1/2	8 x 7	x 7	10 x 10 x 2
3 x 2 1/2 x 2	5 x 5	x 1 1/4	5 x 5	x 6	8 x 7	x 6	10 x 8 x 10
3 x 2	x 2 1/2	5 x 4	x 5	5 x 4	x 6	8 x 7	x 5
3 x 2	x 3	5 x 3	x 5	4 x 4	x 6	8 x 7	x 4
2 1/2 x 2 1/2 x 3	5 x 2 1/2	x 5	7 x 7	x 6	8 x 6	x 6	10 x 5 x 10
3 1/2 x 3 1/2 x 3	5 x 2	x 5	7 x 7	x 5	8 x 6	x 5	10 x 4 x 10
3 1/2 x 3 1/2 x 2 1/2	5 x 4	x 4	7 x 7	x 4	8 x 6	x 4	10 x 3 x 10
3 1/2 x 3 1/2 x 2	5 x 4	x 3	7 x 7	x 3 1/2	8 x 6	x 3	10 x 8 x 8
3 1/2 x 2 1/2 x 2 1/2	5 x 4	x 2 1/2	7 x 7	x 3	8 x 5	x 7	10 x 8 x 7
4 x 4	x 3 1/2	5 x 4	x 2	7 x 7	x 2 1/2	8 x 5	x 6
4 x 4	x 3	5 x 3 1/2	x 4	7 x 7	x 2	8 x 5	x 5
4 x 4	x 2 1/2	5 x 3	x 3 1/2	7 x 6	x 7	8 x 4	x 6
4 x 4	x 2	5 x 3	x 3	7 x 5	x 7	8 x 4	x 4
4 x 4	x 1 1/2	4 x 4	x 5	7 x 4	x 7	7 x 7	x 8
4 x 4	x 1 1/4	4 x 4	x 5	7 x 3	x 7	6 x 6	x 8
4 x 3 1/2 x 4	6 x 6	x 4 1/2	7 x 6	x 6	8 x 5	x 8	10 x 10 x 10
4 x 3	x 4	6 x 6	x 4	7 x 6	x 5	9 x 9	x 8
4 x 2 1/2 x 4	6 x 6	x 3 1/2	6 x 7	x 7	9 x 9	x 7	10 x 10 x 14
4 x 2	x 4	6 x 6	x 3	5 x 5	x 7	9 x 9	x 6
4 x 3	x 3	6 x 6	x 2 1/2	8 x 8	x 7	9 x 9	x 5
4 x 3	x 2 1/2	6 x 6	x 2	8 x 8	x 6	9 x 9	x 4
4 x 3	x 2	6 x 6	x 1 1/2	8 x 8	x 5	9 x 9	x 3
4 x 2 1/2 x 3	6 x 5	x 6	8 x 8	x 4 1/2	9 x 9	x 2 1/2	12 x 12 x 6
4 x 2 1/2 x 2 1/2	6 x 4	x 6	8 x 8	x 4	9 x 6	x 6	16 x 12 x 5
4 x 2	x 2	6 x 3	x 6	8 x 8	x 3 1/2	10 x 10	x 9
3 x 3	x 4	6 x 2 1/2	x 6	8 x 8	x 3	10 x 10	x 8

REDUCING FLANGED CROSSES

4x4x3x3	5x5x2 1/2 x 2 1/2	6x6x3x3	8x8x4x4	8x 6x8x6	10x10x6x6
5x5x4x4	6x6x5x5	8x8x6x6	8x8x3x3	10x10x8x8	10x10x5x5
5x5x3x3	6x6x4x4	8x8x5x5	8x8x6x6		

REDUCING FLANGED LATERALS

4x4x2 1/2	6x6x3	8x8x6	8x8x3	10x10x6
6x6x4	6x6x2 1/2	8x8x6	10x10x8	10x8x8

The sizes of Reducing Flanged Fittings listed, with our Reducing Companion Flanges, enable us to furnish, from stock, about every variety of Reducing Fitting required.

We carry a full line of Reducing Ribbed Flanges in stock, and these are furnished the same thickness as regular Companion Flanges of corresponding outside diameter and drilled to the same template.

If reductions are desired in this manner, specify "Reduce by Flange if necessary".

The list of Reducing Crosses and Ys given are made to order only.

Price list for Reducing Flanged Fittings given on preceding pages.

PRICES OF SIZES NOT CARRIED IN STOCK

Sizes not carried in stock are considered special, and are made to order at the following advance in prices, according to quantity of a size ordered at one time.

Add to Regular List Prices of Reducing Flanged Tees, Crosses and Laterals on Preceding Pages the Percentage Advances Given Below

Size	1 Piece	2 Pieces	3 Pieces	4 Pieces	5 Pieces	6 or More
3/2-in. and Smaller	100%	80%	60%	40%	20%	No Advance
4 to 8-inch	50%	40%	30%	20%	10%	No Advance
9 and 10-inch	25%	20%	15%	10%	5%	No Advance
12-inch and Larger	No Adv.	No Adv.	No Adv.	No Adv.	No Adv.	No Advance

ORDER BY FIGURE NUMBERS
Hy-Tech Products

CAST IRON STANDARD FLANGED FITTINGS
For 125 Pounds Working Pressure

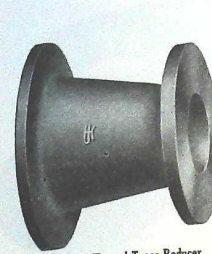


Fig. 67A Flanged Taper Reducer

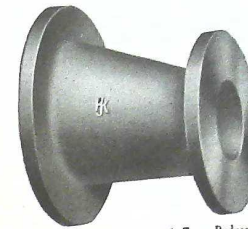


Fig. 67B Flanged Eccentric Taper Reducer

FLANGED TAPER REDUCERS

Size Inches	Diameter of Flanges Inches	Face to Face Inches	Faced Each	Faced and Drilled Each	Size Inches	Diameter of Flanges Inches	Face to Face Inches	Faced Each	Faced and Drilled Each
3 x 2	7 1/2 x 6	6	6.90	7.60	12 x 5	19 x 10	14	56.00	59.00
3 x 2 1/2	7 1/2 x 7	6	6.90	7.60	12 x 6	19 x 11	14	56.00	59.00
3 1/2 x 2 1/2	8 1/2 x 7	6 1/2	8.10	8.95	12 x 8	19 x 13 1/2	14	56.00	59.00
4 x 2	9 x 6	7	9.00	10.00	12 x 10	19 x 16	14	56.00	59.00
4 x 2 1/2	9 x 7	7	9.00	10.00	14 x 6	21 x 11	16	70.00	73.75
4 x 3	9 x 7 1/2	7 1/2	11.00	12.00	14 x 8	21 x 13 1/2	16	70.00	73.75
4 1/2 x 2	9 1/2 x 6	7	11.00	12.00	14 x 10	21 x 16	16	70.00	73.75
4 1/2 x 3	9 1/2 x 7 1/2	7 1/2	11.00	12.00	14 x 12	21 x 19	16	70.00	73.75
5 x 2	10 x 6	8	12.50	13.50	15 x 8	22 1/2 x 13 1/2	17	80.00	84.50
5 x 2 1/2	10 x 7	8	12.50	13.50	15 x 10	22 1/2 x 16	17	80.00	84.50
5 x 3	10 x 7 1/2	8	12.50	13.50	15 x 12	22 1/2 x 19	17	80.00	84.50
5 x 4	10 x 9	8	12.50	13.50	15 x 14	22 1/2 x 21	17	80.00	84.50
6 x 3	11 x 7 1/2	9	15.25	16.55	16 x 8	23 1/2 x 13 1/2	18	90.00	95.00
6 x 3 1/2	11 x 8 1/2	9	15.25	16.55	16 x 10	23 1/2 x 16	18	90.00	95.00
6 x 4	11 x 9	9	15.25	16.55	16 x 12	23 1/2 x 19	18	90.00	95.00
6 x 5	11 x 10	9	15.25	16.55	16 x 14	23 1/2 x 21	18	90.00	95.00
7 x 3	12 1/2 x 7 1/2	10	21.00	22.50	18 x 10	25 x 16	19	105.00	111.00
7 x 4	12 1/2 x 9	10	21.00	22.50	18 x 12	25 x 19	19	105.00	111.00
7 x 5	12 1/2 x 10	10	21.00	22.50	18 x 14	25 x 21	19	105.00	111.00
7 x 6	12 1/2 x 11	10	21.00	22.50	18 x 16	25 x 23 1/2	19	105.00	111.00
8 x 3	13 1/2 x 7 1/2	11	24.00	25.60	20 x 12	27 1/2 x 19	20	120.00	127.00
8 x 4	13 1/2 x 9	11	24.00	25.60	20 x 14	27 1/2 x 21	20	120.00	127.00
8 x 5	13 1/2 x 10	11	24.00	25.60	20 x 16	27 1/2 x 23 1/2	20	120.00	127.00
8 x 6	13 1/2 x 11	11	24.00	25.60	20 x 18	27 1/2 x 25	20	120.00	127.00
9 x 4	15 x 9	11 1/2	34.00	36.25	22 x 12	29 1/2 x 21	22	150.00	159.00
9 x 5	15 x 10	11 1/2	34.00	36.25	22 x 14	29 1/2 x 23 1/2	22	150.00	159.00
9 x 6	15 x 11	11 1/2	34.00	36.25	22 x 16	29 1/2 x 25	22	150.00	159.00
9 x 8	15 x 13 1/2	11 1/2	34.00	36.25	22 x 20	29 1/2 x 27 1/2	22	150.00	159.00
10 x 4	16 x 9	12	38.00	40.70	24 x 12	32 x 23 1/2	24	190.00	200.00
10 x 5	16 x 10	12	38.00	40.70	24 x 14	32 x 25	24	190.00	200.00
10 x 6	16 x 11	12	38.00	40.70	24 x 16	32 x 27 1/2	24	190.00	200.00
10 x 8	16 x 13 1/2	12	38.00	40.70	24 x 20	32 x 29 1/2	24	190.00	200.00

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.

See template for drilling, page 136.

Extra list price for galvanizing, page, 138.

ORDER BY FIGURE NUMBERS

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure

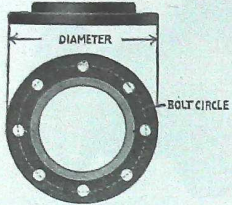


Fig. 68 Companion Flange



Fig. 68A Sectional Cut



Fig. 68B Solid Flange

COMPANION FLANGE				SOLID FLANGE				
Size Inches	Price Faced Each	Price Faced and Drilled Each	Price Faced and Bolted on Each	Thickness A Inches Thread Length	Size Inches	Price Faced Each	Price Faced and Drilled Each	Price Faced Drilled and Bolted on Each
1 x 4	.55	.80	1.15	1 1/8	1 x 4	.85	1.10	1.45
1 1/4 x 4 1/2	.60	.85	1.20	3/4	1 1/4 x 4 1/2	.90	1.15	1.50
1 1/2 x 5	.65	.90	1.30	7/8	1 1/2 x 5	1.00	1.25	1.65
2 x 6	.75	1.00	1.50	1	2 x 6	1.15	1.40	1.80
2 1/2 x 7	.85	1.10	1.60	1 1/8	2 1/2 x 7	1.30	1.55	2.05
3 x 7 1/2	.95	1.25	1.75	1 1/4	3 x 7 1/2	1.40	1.70	2.20
3 1/2 x 8 1/2	1.20	1.55	2.05	1 1/2	3 1/2 x 8 1/2	1.80	2.15	2.65
4 x 9	1.35	1.80	2.70	1 3/8	4 x 9	2.00	2.45	3.35
4 1/2 x 9 1/4	1.45	1.90	3.00	1 1/2	4 1/2 x 9 1/4	2.20	2.65	3.75
5 x 10	1.60	2.05	3.15	1 3/8	5 x 10	2.40	2.85	3.95
6 x 11	2.00	2.50	3.60	1 1/2	6 x 11	3.00	3.50	4.60
7 x 12 1/2	2.65	3.25	4.35	1 3/4	7 x 12 1/2	4.00	4.60	5.70
8 x 13 1/2	3.10	3.80	5.00	1 3/8	8 x 13 1/2	4.60	5.30	6.50
9 x 15	3.85	4.65	6.30	1 3/4	9 x 15	5.75	6.55	8.20
10 x 16	4.50	5.50	7.50	1 3/8	10 x 16	6.75	7.75	9.75
12 x 19	6.50	7.85	9.90	2 1/8	12 x 19	9.75	10.90	13.15
14 x 21	9.00	10.35	13.35	2 1/4	14 x 21	13.50	14.85	17.85
15 x 21	11.50	13.20	17.20	2 1/8	15 x 21	13.50	14.85	17.85
15 x 22 1/2	11.50	13.20	17.20	2 1/8	15 x 22 1/2	17.00	18.70	22.70
16 x 23 1/2	13.50	15.30	19.30	2 1/4	16 x 23 1/2	20.00	21.80	25.80
18 x 25	18.00	18.00	24.00	2 1/2	18 x 25	24.00	26.00	32.00
20 x 27 1/2	19.00	21.50	28.50	2 3/4	20 x 27 1/2	28.00	30.50	37.50
22 x 29 1/2	22.00	25.00	34.00	2 3/4	22 x 29 1/2	33.00	36.00	45.00
24 x 32	27.00	30.50	39.50	3	24 x 32	40.00	43.50	52.50

For Malleable Iron Flanges, double the above Cast Iron Companion Flange list and discount applying to Malleable Iron Flanges.

Flanges and Flanged Fittings may be faced in any quarter, as the holes are drilled in multiples of four, and straddle center line.

See template for drilling, page 136.

NOTE—Flanges will always be furnished faced only, unless otherwise ordered.

When ordering Solid Flanges, always give the outside diameter.

Extra list price for galvanizing, page 138.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure



Fig. 68C Reducing Companion Flange



Fig. 68-O Eccentric Companion Flange

REDUCING COMPANION FLANGES

Size Inches	Price Faced Each	Price Faced and Drill'd Each	Price Faced Drilled and Bolted on Each	Size Inches	Price Faced Each	Price Faced and Drilled Each	Price Faced Drilled and Bolted on Each	Size Inches	Price Faced Each	Price Faced and Drilled Each	Price Faced Drilled and Bolted on Each
1 x 6	1.30	1.55	2.05	4 x 11	3.30	3.80	4.90	9 x 19	10.75	11.90	14.15
1 1/4 x 6	1.30	1.55	2.05	4 1/2 x 11	3.30	3.80	4.90	10 x 19	10.75	11.90	14.15
1 1/2 x 6	1.30	1.55	2.05	5 x 11	3.30	3.80	4.90	8 x 21	15.00	16.35	19.35
2 x 7	1.45	1.70	2.20	4 x 12 1/2	4.40	5.00	6.10	9 x 21	15.00	16.35	19.35
2 1/2 x 7 1/2	1.55	1.85	2.35	4 1/2 x 12 1/2	4.40	5.00	6.10	10 x 21	15.00	16.35	19.35
2 x 7 1/2	1.55	1.85	2.35	5 x 12 1/2	4.40	5.00	6.10	12 x 21	15.00	16.35	19.35
2 1/2 x 7 1/2	1.55	1.85	2.35	6 x 12 1/2	4.40	5.00	6.10	8 x 22 1/2	19.00	20.70	24.70
2 1/2 x 7 1/2	1.55	1.85	2.35	2 x 13 1/2	5.10	5.80	7.00	10 x 22 1/2	19.00	20.70	24.70
2 x 8 1/2	2.00	2.35	2.85	2 1/2 x 13 1/2	5.10	5.80	7.00	14 x 22 1/2	19.00	20.70	24.70
2 1/2 x 8 1/2	2.00	2.35	2.85	3 x 13 1/2	5.10	5.80	7.00	10 x 23 1/2	22.00	23.80	27.80
3 x 8 1/2	2.00	2.35	2.85	4 x 13 1/2	5.10	5.80	7.00	14 x 23 1/2	22.00	23.80	27.80
2 x 9	2.20	2.65	3.55	5 x 13 1/2	5.10	5.80	7.00	15 x 23 1/2	22.00	23.80	27.80
2 1/2 x 9	2.20	2.65	3.55	6 x 13 1/2	5.10	5.80	7.00	12 x 25	26.50	28.50	34.50
3 x 9	2.20	2.65	3.55	7 x 13 1/2	5.10	5.80	7.00	14 x 25	26.50	28.50	34.50
3 1/2 x 9	2.20	2.65	3.55	6 x 15	6.35	7.15	8.80	15 x 25	26.50	28.50	34.50
2 1/2 x 9 1/2	2.40	2.85	3.65	7 x 15	6.35	7.15	8.80	16 x 25	26.50	28.50	34.50
3 x 9 1/2	2.40	2.85	3.65	8 x 15	6.35	7.15	8.80	14 x 27 1/2	31.00	33.50	40.50
3 1/2 x 9 1/2	2.40	2.85	3.65	2 1/2 x 16	7.45	8.45	10.45	15 x 27 1/2	31.00	33.50	40.50
4 x 9 1/2	2.40	2.85	3.65	3 x 16	7.45	8.45	10.45	18 x 27 1/2	31.00	33.50	40.50
2 x 10	2.65	3.10	4.20	3 1/2 x 16	7.45	8.45	10.45	15 x 29 1/2	36.00	39.00	48.00
2 1/2 x 10	2.65	3.10	4.20	4 x 16	7.45	8.45	10.45	16 x 29 1/2	36.00	39.00	48.00
3 x 10	2.65	3.10	4.20	5 x 16	7.45	8.45	10.45	18 x 29 1/2	36.00	39.00	48.00
3 1/2 x 10	2.65	3.10	4.20	6 x 16	7.45	8.45	10.45	15 x 29 1/2	36.00	39.00	48.00
4 x 10	2.65	3.10	4.20	7 x 16	7.45	8.45	10.45	20 x 29 1/2	36.00	39.00	48.00
4 1/2 x 10	2.65	3.10	4.20	8 x 16	7.45	8.45	10.45	14 x 32	44.00	47.50	56.50
2 x 11	3.30	3.80	4.90	9 x 16	7.45	8.45	10.45	16 x 32	44.00	47.50	56.50
2 1/2 x 11	3.30	3.80	4.90	6 x 19	10.75	11.90	14.15	18 x 32	44.00	47.50	56.50
3 x 11	3.30	3.80	4.90	7 x 19	10.75	11.90	14.15	20 x 32	44.00	47.50	56.50
3 1/2 x 11	3.30	3.80	4.90	8 x 19	10.75	11.90	14.15				

Reducing Companion Flanges are the same thickness, and are drilled to the same template as our regular Companion Flanges of corresponding outside diameters.

When ordering Reducing Companion Flanges, be particular to give both the pipe size and outside diameter required.

Flanges will always be furnished faced only, unless otherwise ordered.

When it is desired to bring the larger and smaller pipe to the same level on the bottom, we can furnish Eccentric Companion Flanges, as shown in Fig. 68-O, at a special price.

See template for drilling, page 136.

Extra list price for galvanizing, page 138.

ORDER BY FIGURE NUMBERS

SPECIAL FLANGED FITTINGS

FOR LOW PRESSURE, STANDARD OR EXTRA HEAVY PRESSURES



Fig. 68P Elbow With Clean-out Flange

Fig. 68Q Flanged Y

Fig. 68R Special Angle Elbows

Fig. 68S Elbow Showing where Tapped Drain Bosses May Be Located

Fig. 68T Tee Showing where Tapped Drain Bosses May Be Located

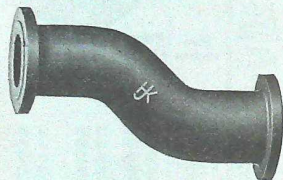


Fig. 68U Offset



Fig. 68V Bevelled Filling Ring Faced Both Sides for Closing Up Between 2 Flanges Which Do Not Face Squarely

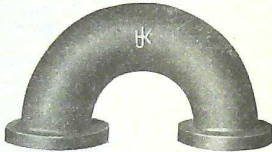


Fig. 68W Return Bend



Fig. 68X Return Bend with Back Outlet

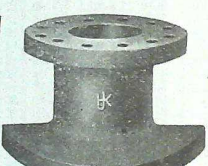


Fig. 68Y Saddle Nozzle

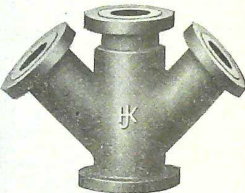


Fig. 68Z Double Lateral



Fig. 68 1/2 Cast Iron Pipe with Flange and Spigot

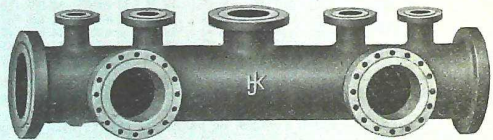


Fig. 68 1/2 A Distributing Header

Fig. 68 1/2 B Ring Closing Piece Faced Both Sides 6" or Less in Length

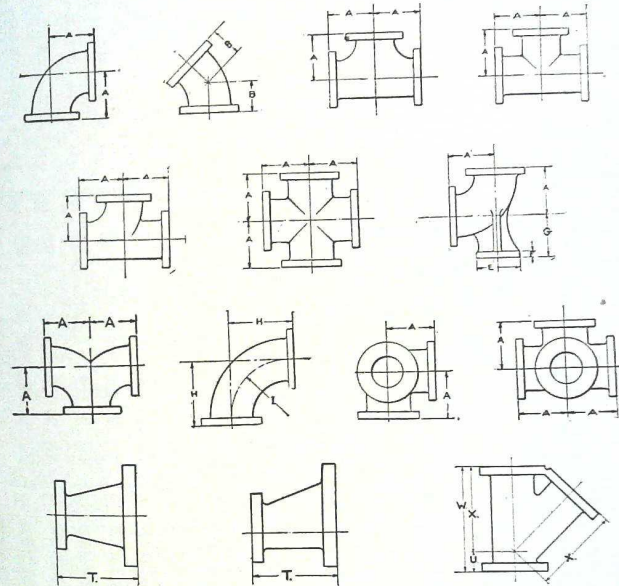
Flanged Fittings are made in many different designs for special purposes, and the above cuts show some of the patterns we have made. We can furnish the above or any other designs and, in ordering, submit sketch showing the design wanted and complete dimensions. Prices quoted upon application.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

DIMENSIONS OF CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure

STRAIGHT SIZES



For dimensions, see pages 132 and 133.

For diameter of Flanges, Bolt Circle, Etc., see page 136.

Flanged Fittings will always be furnished faced only, unless otherwise ordered.

ORDER BY FIGURE NUMBERS

DIMENSIONS OF CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure

American Standard, in Effect January 1, 1915

Table with columns for Size (inches) and rows for various dimensions like Face to Face, Tees and Crosses, Diameter of Base of Base Ells, etc.

Dimensions of Flanged Fittings larger than given above, see following page. Standard and Low Pressure Flanged Fittings furnished plain faced, unless otherwise ordered. All Reducing Fittings, 1 to 16-inch, inclusive, are the same dimensions as straight sizes, center to face.

ORDER BY FIGURE NUMBERS Hy-Tech Products

DIMENSIONS OF CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure

American Standard, in Effect January 1, 1915

Table with columns for Size (inches) and rows for various dimensions like Face to Face, Tees and Crosses, Diameter of Base of Base Ells, etc.

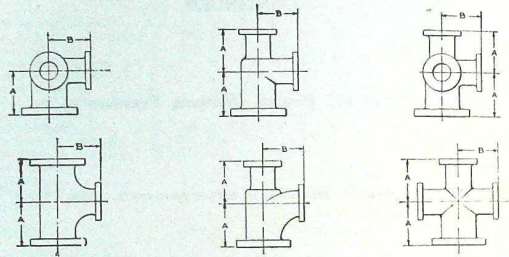
All Reducing Fittings, 1 to 16-inch, inclusive, are the same dimensions as straight sizes. Standard and Low Pressure Flanged Fittings furnished plain faced, unless otherwise ordered

ORDER BY FIGURE NUMBERS

DIMENSIONS OF
CAST IRON STANDARD FLANGED FITTINGS

For 125 Pounds Working Pressure

REDUCING SIZES



SHORT BODY PATTERN

Size.....inches	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
Size of Outlet and Smaller	12	14	15	16	18	18	20	20	22	24	24	26	28	28	30	32
Face to Face of Run...AA	26	28	28	30	32	32	36	36	38	40	40	44	46	46	48	52
Center to Face of Run...A	13	14	14	14	15	16	16	18	18	19	20	20	22	23	24	26
Center to Face of Outlet...B	15½	17	18	19	20	21	23	24	25	26	28	29	30	31	33	34

Size.....inches	50	52	54	56	58	60	62	64	66	68	70	72	74
Size of Outlet and Smaller	32	34	36	36	38	40	40	42	44	44	46	48	48
Face to Face of Run...AA	52	54	58	58	62	66	66	68	70	70	74	80	80
Center to Face of Run...A	26	27	29	29	31	33	33	34	35	35	37	40	40
Center to Face of Outlet...B	35	36	37	39	40	41	42	44	45	46	47	48	49

Size.....inches	76	78	80	82	84	86	88	90	92	94	96	98	100
Size of Outlet and Smaller	50	52	52	54	56	56	58	60	60	62	64	64	66
Face to Face of Run...AA	84	86	86	88	94	94	96	100	100	104	106	106	110
Center to Face of Run...A	42	43	43	44	47	47	48	50	50	52	53	53	55
Center to Face of Outlet...B	50	52	53	54	56	57	58	61	62	63	64	65	67

Long Body Patterns are used when branches are larger than given in above table, therefore have same dimensions as straight size Fittings.

Reducing Fittings, 16-inch and smaller, are the same dimensions as straight sizes, center to face.

Long Body Patterns are used when outlets on branches are larger than given in the above tables and, therefore, have the same dimensions as straight size Fittings.

Above tables do not cover dimensions of Tees increasing on outlets.

Bull Heads or Tees having outlet larger than the run will be the same length, center to face of all openings, as a Tee with all openings of the size of the outlet. Example: A 10x10x14-inch Tee will be governed by the dimensions of the 14-inch Long Body Tee, namely, 14 inches center to face of all openings, and 28 inches face to face.

Reducing Elbows carry the same center to face dimensions as regular Elbows of largest straight size.

The dimensions of Reducing Flanged Fittings are always regulated by the reduction of outlet. Template for drilling, see page 136.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

DIMENSIONS OF
STANDARD CAST IRON FLANGED LATERALS

For 125 Pounds Working Pressure



REDUCING FLANGED LATERALS—Short Body Pattern

Size.....inches	18	20	22	24	26	28	30
Size of Branch and Smaller	9	10	10	12	12	14	15
Face to Face of Run	26	28	29	32	35	37	39
Center to Face, Run...A	25	27	28½	31½	35	37	39
Center to Face, Run...B	1	1	½	½	0	0	0
Center to Face, Branch...C	27½	29½	31½	34½	38	40	42

Long Body Patterns are used when Branches are larger than given in the above table, therefore have same dimensions as straight size Fittings.

The dimensions of Reducing Flanged Fittings are always regulated by the reduction of the Branch. Fittings reducing on the run only, the Long Body Pattern will always be used.

ORDER BY FIGURE NUMBERS

DIAMETER OF FLANGES AND TEMPLATE FOR DRILLING
STANDARD FLANGED VALVES, FLANGED
FITTINGS AND FLANGES

For 125 Pounds Working Pressure

American Standard, in Effect January 1, 1915

Size Inches	Diameter of Flanges	Thickness of Flanges	Bolt Circle	Number of Bolts	Size of Bolts	Size Ins.	Diameter of Flanges	Thickness of Flanges	Bolt Circle	Number of Bolts	Size of Bolts
1	4	1/8	3	4	1/4 x 1 1/4	42	53	2 1/2	49 1/2	36	1 1/2 x 7 1/2
1 1/4	4 1/2	1/8	3 3/4	4	1/4 x 1 1/4	44	55 1/4	2 1/2	51 3/4	40	1 1/2 x 7 1/2
1 1/2	5	1/8	3 3/4	4	1/2 x 1 1/4	46	57 1/4	2 1/2	53 3/4	40	1 1/2 x 7 1/2
2	6	3/8	4 3/4	4	3/4 x 2	48	59 1/4	2 3/4	56	44	1 1/2 x 8
2 1/2	7	1/2	5 1/4	4	3/4 x 2 1/4	50	61 1/4	2 3/4	58 1/4	44	1 1/2 x 8
3	7 1/2	3/4	6	4	3/4 x 2 1/2	52	64	2 3/4	60 1/4	44	1 1/2 x 8
3 1/2	8 1/2	1/2	7	4	3/4 x 2 1/2	54	66 1/4	3	62 3/4	44	1 1/2 x 8 1/2
4	9	1/2	7 1/2	8	3/4 x 2 1/2	56	68 3/4	3	65	48	1 1/2 x 8 1/2
4 1/2	9 1/4	1/2	7 3/4	8	3/4 x 3	58	71	3 1/4	67 3/4	48	1 1/2 x 9
5	10	1/2	8 1/2	8	3/4 x 3	60	73	3 1/4	69 3/4	48	1 1/2 x 9
6	11	1	9 1/2	8	3/4 x 3	62	75 3/4	3 1/4	71 3/4	52	1 1/2 x 9
7	12 1/2	1 1/8	10 3/4	8	3/4 x 3	64	78	3 1/4	74	52	1 1/2 x 9
8	13 1/2	1 1/8	11 3/4	8	3/4 x 3 1/4	66	80	3 3/4	76	52	1 1/2 x 9 1/2
9	15	1 1/8	13 1/4	12	3/4 x 3 1/4	68	82 1/4	3 3/4	78 1/4	56	1 1/2 x 9 1/2
10	16	1 1/8	14 1/4	12	3/4 x 3 1/2	70	84 1/2	3 3/4	80 1/2	56	1 1/2 x 10
12	19	1 1/2	17	12	3/4 x 3 3/4	72	86 1/2	3 1/2	82 1/2	60	1 1/2 x 10
14	21	1 1/2	18 1/2	12	1 x 4 1/4	74	88 1/2	3 1/2	84 1/2	60	1 1/2 x 10
15	22 1/2	1 1/2	20	16	1 x 4 1/4	76	90 3/4	3 3/4	86 1/2	60	1 1/2 x 10
16	23 1/2	1 1/2	21 1/4	16	1 x 4 1/4	78	93	3 3/4	88 3/4	60	2 x 10 1/2
18	25	1 1/2	22 3/4	16	1 x 4 3/4	80	95 3/4	3 3/4	91	60	2 x 10 1/2
20	27 1/2	1 1/2	25	20	1 x 5	82	97 1/4	3 3/4	93 1/4	60	2 x 10 1/2
22	29 1/2	1 1/2	27 1/4	20	1 x 5 1/2	84	99 3/4	3 3/4	95 3/4	64	2 x 10 1/2
24	32	1 1/2	29 1/2	20	1 x 5 1/2	86	102	4	97 3/4	64	2 x 11
26	34 1/2	2	31 3/4	24	1 x 5 3/4	88	104 1/4	4	100	68	2 x 11
28	36 1/2	2 1/8	34	28	1 x 6	90	106 1/2	4 1/4	102 1/4	68	2 1/2 x 11 1/2
30	38 3/4	2 1/4	36	28	1 x 6 1/4	92	108 3/4	4 1/4	104 1/2	68	2 1/2 x 11 1/2
32	41 1/4	2 1/4	38 1/2	28	1 x 6 1/2	94	111	4 1/4	106 1/2	68	2 1/2 x 11 1/2
34	43 3/4	2 1/4	40 1/2	32	1 x 6 1/2	96	113 1/4	4 1/4	108 1/2	68	2 1/2 x 11 1/2
36	46	2 3/4	42 3/4	32	1 1/2 x 7	98	115 1/4	4 3/4	110 3/4	68	2 1/2 x 12
38	48 3/4	2 3/4	45 1/4	32	1 1/2 x 7	100	117 1/4	4 3/4	113	68	2 1/2 x 12
40	50 3/4	2 1/2	47 3/4	36	1 1/2 x 7	.....	.....	.....	.....	.....	.....

These drilling templates are in multiples of four, so that Fittings may be made to face in any quarter and bolt holes straddle the center line.

Bolt holes are drilled 1/4 inch larger than nominal diameter of bolts.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

GASKETS

For Standard and Low Pressure Flanged Valves and Fittings
Cloth-inserted and Rubber Gaskets, 1/8 Inch Thick

NET PRICE LIST

RING GASKETS						FULL GASKETS					
Size Inches	Inside Diameter of Gasket Inches	Outside Diameter of Gasket Inches	PRICE			Size Inches	Inside Diameter of Gasket Inches	Outside Diameter of Gasket Inches	PRICE		
			Cloth Inserted Each	Rubber Each	Corrugated Copper Each				Cloth Inserted Each	Rubber Each	Corrugated Copper Each
1	1	2 1/8	.02	.04	.02	1	1	4	.04	.08	.05
1 1/4	1 1/4	2 1/2	.03	.06	.03	1 1/4	1 1/4	4 1/2	.06	.12	.06
1 1/2	1 1/2	3	.03	.06	.04	1 1/2	1 1/2	5	.06	.12	.07
2	2	4 1/2	.03	.08	.05	2	2	6	.08	.16	.10
2 1/2	2 1/2	4 1/2	.04	.10	.06	2 1/2	2 1/2	7	.10	.20	.13
3	3	5 1/2	.05	.12	.07	3	3	7 1/2	.12	.24	.14
3 1/2	3 1/2	6 1/2	.06	.16	.09	3 1/2	3 1/2	8 1/2	.13	.32	.18
4	4	7 1/2	.07	.18	.10	4	4	9	.15	.35	.19
4 1/4	4 1/4	8 1/2	.07	.20	.11	4 1/4	4 1/4	9 1/4	.16	.40	.20
5	5	9 1/2	.08	.24	.12	5	5	11	.20	.56	.26
6	6	11 1/2	.10	.32	.15	6	6	12 1/2	.25	.64	.32
7	7	13 1/2	.12	.40	.17	7	7	14 1/2	.28	.70	.36
8	8	15 1/2	.13	.48	.19	8	8	16 1/2	.32	.80	.40
9	9	17 1/2	.16	.60	.23	9	9	18 1/2	.35	.90	.46
10	10	19 1/2	.18	.75	.25	10	10	20 1/2	.38	.95	.50
12	12	23 1/2	.25	.90	.36	12	12	24 1/2	.50	1.20	.65
14	14	27 1/2	.30	1.10	.42	14	14	28 1/2	.55	1.40	.75
15	15	29 1/2	.32	1.20	.45	15	15	30 1/2	.65	1.55	.80
16	16	31 1/2	.35	1.35	.48	16	16	32 1/2	.70	1.70	.90
18	18	35 1/2	.40	1.50	.55	18	18	36 1/2	.80	1.90	1.00
20	20	39 1/2	.44	1.80	.60	20	20	40 1/2	.85	2.10	1.10
22	22	43 1/2	.48	2.10	.65	22	22	44 1/2	.90	2.20	1.20
24	24	47 1/2	.60	2.40	.70	24	24	48 1/2	1.10	2.50	1.40
26	26	51 1/2	.70	2.70	.75	26	26	52 1/2	1.40	3.00	1.50
28	28	55 1/2	.80	3.00	.80	28	28	56 1/2	1.50	3.25	1.75
30	30	59 1/2	.90	3.30	.85	30	30	60 1/2	1.65	3.50	1.85
32	32	63 1/2	1.00	3.60	.90	32	32	64 1/2	1.80	3.75	2.00
34	34	67 1/2	1.15	3.90	.95	34	34	68 1/2	2.00	4.00	2.20
36	36	71 1/2	1.25	4.20	1.00	36	36	72 1/2	2.20	4.25	2.40
38	38	75 1/2	1.35	4.50	1.05	38	38	76 1/2	2.40	4.50	2.60
40	40	79 1/2	1.45	4.80	1.10	40	40	80 1/2	2.60	4.75	2.80
42	42	83 1/2	1.50	5.10	1.15	42	42	84 1/2	2.80	5.00	3.00
44	44	87 1/2	1.60	5.40	1.20	44	44	88 1/2	3.00	5.25	3.20
46	46	91 1/2	1.70	5.70	1.25	46	46	92 1/2	3.20	5.50	3.40
48	48	95 1/2	1.80	6.00	1.30	48	48	96 1/2	3.40	5.75	3.60

Ring Gaskets will always be furnished, unless otherwise ordered.
The commercial Corrugated Copper Gasket is made from 27-gauge sheet copper; and this gauge will be furnished on all orders for low pressure or standard Copper Gaskets. We can furnish these Gaskets made from heavier sheet copper at an extra price. We can furnish Gaskets made from any sheet rubber or metal that is manufactured.
Full Face Gaskets are furnished without bolt holes; bolt holes will be punched, at an extra price, when so ordered.

ORDER BY FIGURE NUMBERS

EXTRA PRICE FOR GALVANIZING

STANDARD FLANGED FITTINGS AND FLANGES

Standard Cast Iron Flanged Fittings Will Be Galvanized to Order at an Advance, as Below, Over the Black Price

EXTRA LIST PRICE FOR GALVANIZING

Size Inches	Fig. 61, Elbow Fig. 62A Reducing Elbow Fig. 62, 45° Elbow Figs. 67A, 67B Taper Reducers	Figs. 63, 66, 65 63A, 63B, 63C, 63D Tees and Reducing Tees Fig. 94 Base Elbows Fig. 62B Long Radius Elbow	Figs. 64 and 64A Crosses and Reducing Crosses Fig. 67, Laterals and Reducing Laterals	Fig. 68 Companion Flange	Figs. 68C, 68-O Reducing Companion Flanges Fig. 68B Solid Flange
	Each, Extra	Each, Extra	Each, Extra	Each, Extra	Each, Extra
1¼	2.40	3.60	4.80	.60	.90
1½	2.40	3.60	4.80	.60	.90
2	2.40	3.60	4.80	.70	1.00
2½	2.50	3.75	5.00	.75	1.10
3	2.75	4.15	5.50	.85	1.25
3½	3.25	4.90	6.50	1.00	1.50
4	3.65	5.50	7.25	1.20	1.80
4½	4.35	6.50	8.75	1.25	1.90
5	4.85	7.25	9.75	1.35	2.00
6	6.00	9.00	12.00	1.65	2.50
7	8.00	12.00	16.00	2.15	3.25
8	9.00	13.50	18.00	2.50	3.75
9	13.00	19.50	26.00	3.00	4.50
10	14.50	22.00	29.00	3.75	5.75
12	21.00	31.00	42.00	5.00	7.50
14	30.00	45.00	60.00	7.00	10.50
15	35.00	52.50	70.00	9.00	13.50
16	40.00	60.00	80.00	10.50	16.00

CAST IRON LOW PRESSURE FLANGED FITTINGS

For 25 Pounds Working Pressure



Fig. 68D 90° Elbow



Fig. 68E 45° Elbow

FLANGED ELBOWS

Size Inches	FLANGED 90° ELBOWS			Diameter of Flanges Inches	FLANGED 45° ELBOWS		
	Price Faced Each	Price Faced and Drilled Each	Center to Face Inches		Price Faced Each	Price Faced and Drilled Each	Center to Face Inches
16	52.00	57.00	15	23½	52.00	57.00	8
18	67.50	73.50	16½	25	67.50	73.50	8½
20	85.50	92.50	18	27½	85.50	92.50	9½
22	107.00	116.00	20	29½	107.00	116.00	10
24	133.00	143.00	22	32	133.00	143.00	11
26	167.50	180.00	23	34¼	167.50	180.00	13
28	190.00	210.00	24	36¼	190.00	210.00	14
30	225.00	245.00	25	38¾	225.00	245.00	15
32	270.00	290.00	26	41¾	270.00	290.00	16
34	315.00	340.00	27	43¾	315.00	340.00	17
36	360.00	385.00	28	46	360.00	385.00	18

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.
See template for drilling, page 148.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

ORDER BY FIGURE NUMBERS

CAST IRON LOW PRESSURE FLANGED FITTINGS

For 25 Pounds Working Pressure



Fig. 68F Long Radius Elbow

FLANGED LONG RADIUS ELBOWS

Size Inches	Price Faced Each	Price Faced and Drilled Each	Center to Face Inches	Radius Inches	Diameter of Flanges Inches
16	86.00	93.50	24	21 1/4	23 1/2
18	113.00	122.00	26 1/2	23 3/4	25
20	143.00	153.00	29	26	27 1/2
22	178.00	191.00	31 1/4	28 3/4	29 1/2
24	222.00	237.00	34	30 3/4	32

Sizes not listed above made to order at special net prices.

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.

See template for drilling, page 148.

Hy-Tech Products

CAST IRON LOW PRESSURE FLANGED FITTINGS

For 25 Pounds Working Pressure



Fig. 68G Tee



Fig. 68H Tee Reducing on Side



Fig. 68-I Tee Reducing on Run

FLANGED TEES

Size Inches	FLANGED TEES		Face to Face Inches	Center to Face Inches	Diameter of Flanges Inches	REDUCING FLANGED TEES	
	Price Faced Each	Price Faced and Drilled Each				Price Faced Each	Price Faced and Drilled Each
16	75.00	82.50	30	15	23 1/2	86.00	93.50
18	98.00	107.00	33	16 1/2	25	113.00	122.00
20	123.00	133.00	36	18	27 1/2	143.00	153.00
22	155.00	168.00	40	20	29 1/2	178.00	191.00
24	193.00	208.00	44	22	32	222.00	237.00
26	243.00	262.00	46	23	34 1/4	280.00	299.00
28	275.00	305.00	48	24	36 1/4	316.00	346.00
30	325.00	355.00	50	25	38 3/4	375.00	405.00
32	392.00	422.00	52	26	41 3/4	451.00	481.00
34	457.00	495.00	54	27	43 3/4	525.00	563.00
36	520.00	560.00	56	28	46	598.00	638.00

Reducing Low Pressure Tees in all reducing sizes made to order at regular list and discount.

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.

For dimensions of Reducing Flanged Tees and template for drilling, see pages 147 and 148.

ORDER BY FIGURE NUMBERS

CAST IRON LOW PRESSURE FLANGED FITTINGS

For 25 Pounds Working Pressure

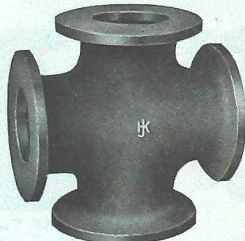


Fig. 68J Cross

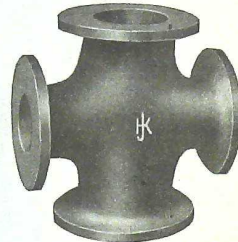


Fig. 68K Reducing Cross

FLANGED CROSSES

Size Inches	FLANGED CROSSES		Face to Face Inches	Center to Face Inches	Diameter of Flanges Inches	REDUCING FLANGED CROSSES	
	Price Faced Each	Price Faced and Drilled Each				Price Faced Each	Price Faced and Drilled Each
16	114.00	124.00	30	15	23½	130.00	140.00
18	150.00	162.00	33	16½	25	172.00	184.00
20	188.00	202.00	36	18	27½	217.00	231.00
22	235.00	253.00	40	20	29½	270.00	288.00
24	290.00	310.00	44	22	32	335.00	355.00
26	370.00	395.00	46	23	34½	425.00	450.00
28	420.00	460.00	48	24	36½	480.00	520.00
30	495.00	535.00	50	25	38¾	565.00	605.00
32	595.00	635.00	52	26	41¾	685.00	725.00
34	690.00	740.00	54	27	43¾	795.00	845.00
36	790.00	840.00	56	28	46	910.00	960.00

Reducing Low Pressure Crosses in all reducing sizes made to order at regular list and discount.
 NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.
 For dimensions of Reducing Flanged Crosses and template for drilling, see pages 147 and 148.

Hy-Tech Products

CAST IRON LOW PRESSURE FLANGED FITTINGS

For 25 Pounds Working Pressure

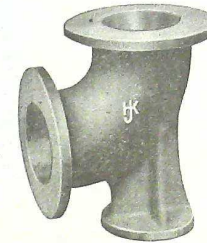


Fig. 68L Base Elbow
Round or Square Base

FLANGED BASE ELBOWS

Size Inches	Price Faced Each	Price Faced and Drilled Each	Price for Facing and Drilling Base Flange	Center to Face Inches	Center to Face of Base Inches	Diameter of Flanges Inches	Size Base Inches
16	85.00	90.00	7.50	15	14¾	23½	11
18	100.00	106.00	12.00	16½	15½	25	13½
20	114.00	121.00	12.00	18	16¾	27½	13½
22	142.00	151.00	12.00	20	17¾	29½	13½
24	180.00	190.00	12.00	22	18¾	32	13½

In ordering Base Elbows, state particularly whether Round or Square Base is desired.
 Edge to edge of square base is same measurement as diameter of round base.
 Flanged Base Tees made to order on application.
 Flanged Fittings will always be furnished faced only, unless otherwise ordered.
 See template for drilling, page 148.
 Diameter of flanges given above does not refer to base flange.

ORDER BY FIGURE NUMBERS

CAST IRON LOW PRESSURE FLANGED FITTINGS

For 25 Pounds Working Pressure

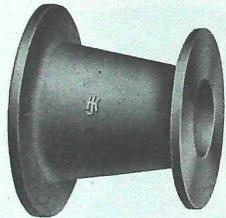


Fig. 68M
Flanged Taper Reducer



Fig. 68N
Flanged Eccentric Taper Reducer

TAPER AND ECCENTRIC TAPER REDUCERS

Size Inches	Diameter of Flanges Inches	Face to Face Ins.	Price Faced Each	Price Faced and Drilled Each	Size Inches	Diameter of Flanges Inches	Face to Face Ins.	Price Faced Each	Price Faced and Drilled Each
16x12	23 1/4 x 19	18	85.00	90.00	20x18	27 1/2 x 25	20	114.00	121.00
16x14	23 1/2 x 21	18	85.00	90.00	22x15	29 1/2 x 22 1/4	22	142.00	151.00
16x15	23 1/2 x 22 1/4	18	85.00	90.00	22x16	29 1/2 x 23 1/4	22	142.00	151.00
18x12	25 x 19	19	100.00	106.00	22x18	29 1/2 x 25	22	142.00	151.00
18x14	25 x 21	19	100.00	106.00	22x20	29 1/2 x 27 1/4	22	142.00	151.00
18x15	25 x 22 1/4	19	100.00	106.00	24x16	32 x 23 1/4	24	180.00	190.00
18x16	25 x 23 1/4	19	100.00	106.00	24x18	32 x 25	24	180.00	190.00
20x14	27 1/2 x 21	20	114.00	121.00	24x20	32 x 27 1/4	24	180.00	190.00
20x15	27 1/2 x 22 1/4	20	114.00	121.00	24x22	32 x 29 1/4	24	180.00	190.00
20x16	27 1/2 x 23 1/4	20	114.00	121.00					

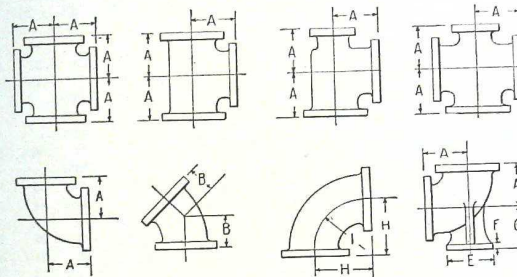
Prices for sizes other than given above on application.
NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.
See template for drilling, page 148.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

LOW PRESSURE CAST IRON FLANGED FITTINGS

For 25 Pounds Working Pressure



Referring to table on following page, dimensions are regulated by the size of the outlet.
Fittings reducing on the run only, the long body pattern table on page 146 will always be used.
Bull Heads or Tees having outlet larger than the run will be the same length, center to face of all openings, as a Tee with all openings of the size of the outlet.
EXAMPLE—A 10x16x20-inch Tee will be governed by the dimensions of the 20-inch Long Body Tee, namely, 18 inches center to face of all openings, and 36 inches face.

For Reducing Fittings with small outlet—short body pattern—see page 147.
For drilling template, see page 148.

ORDER BY FIGURE NUMBERS

DIMENSIONS OF
LOW PRESSURE CAST IRON FLANGED
FITTINGS

For 25 Pounds Working Pressure

American Standard, in Effect January 1, 1915

Size..... inches		16	18	20	22	24	26	28	30
Face to Face, Tees and Crosses.....	AA	30	33	36	40	44	46	48	50
Center to Face, Ells, Tees and Crosses..	A	15	16½	18	20	22	23	24	25
Center to Face of 45° Ells.....	B	8	8¾	9½	10	11	13	14	15
Diameter of Base of Base Ells.....	E	11	13½	13½	13½	13½			
Thickness of Base Flange of Base Ells..	F	1	1¼	1¼	1¼	1¼			
Center to Base of Base Ells.....	G	14¾	15½	16¾	17¾	18¾			
Center to Face of Long Radius Ells.....	H	24	26¾	29	31½	34	36½	39	41½
Radius of Long Radius Ells.....	I	21¼	23¾	26	28¾	30¾			
Face to Face of Laterals.....		36½	39	43	46	49½	53	56	59
Long Center to Face of Laterals.....		30	32	35	37½	40½	44	46½	49
Short Center to Face of Laterals.....		6½	7	8	8¾	9	9	9½	10
Face to Face of Reducers.....		18	19	20	22	24	26	28	30
Diameter of Flanges.....		23½	25	27½	29½	32	34½	36½	38¾
Thickness of Flanges.....		1½	1½	1½	1½	1½	2	2½	2½
Number of Bolts.....		16	16	20	20	20	24	28	28
Size of Bolts.....		1	1¼	1¼	1¼	1¼	1¼	1¼	1¼
Length of Bolts.....		4¾	4¾	5	5½	5½	5¾	6	6¼
Bolt Circle.....		21¼	22¾	25	27¼	29¾	31¾	34	36

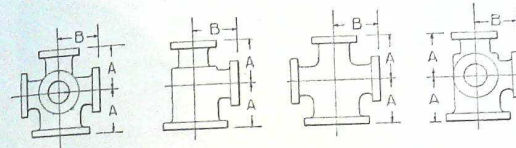
Size..... inches		32	34	36	38	40	42	44	46	48
Face to Face, Tees and Crosses.....	AA	52	54	56	58	60	62	64	66	68
Center to Face, Ells, Tees and Crosses..	A	26	27	28	29	30	31	32	33	34
Center to Face of 45° Ells.....	B	16	17	18	19	20	21	22	23	24
Center to Face of Long Radius Ells.....	H	44	46½	49	51½	54	56½	59	61½	64
Face to Face of Reducers.....		32	34	36	38	40	42	44	46	48
Diameter of Flanges.....		41¾	43¾	46	48¾	50¾	53	55¾	57¾	59½
Thickness of Flanges.....		2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾	2¾
Number of Bolts.....		28	32	32	32	36	36	40	40	44
Size of Bolts.....		1½	1½	1½	1½	1½	1½	1½	1½	1½
Length of Bolts.....		6½	6½	7	7	7	7½	7½	7½	8
Bolt Circle.....		38¾	40¾	42¾	45¾	47¾	49¾	51¾	53¾	56

See page 147 for Reducing Fittings with small outlet—short body.

Hy-Tech PRODUCTS

LOW PRESSURE CAST IRON FLANGED
FITTINGS

For 25 Pounds Working Pressure



DIMENSIONS OF REDUCING FITTINGS—Small Outlets, Short Body

Size..... inches					18
Face to Face.....	AA				26
Center to Face.....	A				13
Center to Face of Outlet.....	B				15½

Size..... inches		20	22	24	26	28
Face to Face.....	AA	28	28	30	32	32
Center to Face.....	A	14	14	15	16	16
Center to Face of Outlet.....	B	17	18	19	20	21

Size..... inches		30	32	34	36	38
Face to Face.....	AA	36	36	38	40	40
Center to Face.....	A	18	18	19	20	20
Center to Face of Outlet.....	B	23	24	25	26	28

Size..... inches		40	42	44	46	48
Face to Face.....	AA	44	46	46	48	52
Center to Face.....	A	22	23	23	24	26
Center to Face of Outlet.....	B	29	30	31	33	34

If outlet is larger than given in above table, use General Dimension Table, page 146
Template for drilling and diameter of flanges, see page 148.

ORDER BY FIGURE NUMBERS

DIAMETER OF FLANGES AND TEMPLATE FOR DRILLING
**LOW PRESSURE FLANGED FITTINGS, VALVES
 AND FLANGES**

For 25 Pounds Working Pressure

American Standard, in Effect January 1, 1915

Size Ins.	Diam. of Flanges	Thick-ness of Flanges	Bolt Circle	Num-ber of Bolts	Size of Bolts	Size Ins.	Diam. of Flanges	Thick-ness of Flanges	Bolt Circle	Num-ber of Bolts	Size of Bolts
						56	68¾	3	65	48	1½ x 8½
						58	71	3¾	67¼	48	1½ x 9
						60	73	3¾	69¼	52	1½ x 9
						62	75¾	3¾	71¾	52	1½ x 9
16	23½	1½	21¼	16	1 x 4¼	64	78	3¾	74	52	1½ x 9
18	25	1½	22¾	16	1½ x 4¼	66	80	3¾	76	52	1½ x 9½
20	27½	1½	25	20	1½ x 5	68	82¼	3¾	78¼	56	1½ x 9½
22	29½	1½	27¼	20	1½ x 5½	70	84½	3¾	80½	56	1½ x 10
24	32	1½	29½	20	1½ x 5½	72	86½	3¾	82½	60	1½ x 10
26	34½	2	31¾	24	1½ x 5¾	74	88½	3¾	84½	60	1½ x 10
28	36½	2½	34	28	1½ x 6	76	90¾	3¾	86¾	60	1½ x 10
30	38¾	2½	36	28	1½ x 6¼	78	93	3¾	88¾	60	2 x 10½
32	41¾	2½	38½	28	1½ x 6½	80	95¼	3¾	91	60	2 x 10½
34	43¾	2½	40½	32	1½ x 6½	82	97¼	3¾	93¼	60	2 x 10½
36	46	2¾	42¾	32	1½ x 7	84	99¾	3¾	95¾	64	2 x 10½
38	48¾	2¾	45¼	32	1½ x 7	86	102	4	97¾	64	2 x 11
40	50¾	2¾	47¼	36	1½ x 7	88	104¼	4	100	68	2 x 11
42	53	2¾	49½	36	1½ x 7½	90	106½	4	102½	68	2½ x 11½
44	55½	2¾	51¾	40	1½ x 7½	92	108¾	4	104¾	68	2½ x 11½
46	57½	2¾	53¾	40	1½ x 7½	94	111	4	106¾	68	2½ x 11½
48	59½	2¾	56	44	1½ x 8	96	113¼	4	108¾	68	2½ x 11½
50	61¾	2¾	58¼	44	1½ x 8	98	115¾	4	110¾	68	2½ x 12
52	64	2¾	60¾	44	1½ x 8	100	117¾	4	113	68	2½ x 12
54	66¾	3	62¾	44	1½ x 8½						

These drilling templates are in multiples of four, so that Fittings may be made to face in any quarter and bolt holes straddle the center line.

Bolt holes are drilled ¼ inch larger than nominal diameter of bolts.

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CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure



Fig. 77 90° Elbow



Fig. 78 45° Elbow

EXTRA HEAVY FLANGED ELBOWS

Size Inches	90° ELBOWS			Diameter of Flanges Inches	45° ELBOWS		
	Price Faced Each	Price Faced and Drilled Each	Center to Face Inches		Price Faced Each	Price Faced and Drilled Each	Center to Face Inches
1½	4.50	5.40	4¼	5	5.00	5.90	2½
1¾	4.50	5.40	4½	6	5.00	5.90	2¾
2	4.50	5.40	5	6½	5.00	5.90	3
2½	4.75	5.65	5½	7½	5.25	6.15	3½
3	5.15	6.25	6	8¼	5.65	6.75	3¾
3½	6.10	7.35	6½	9	6.75	8.00	4
4	6.75	8.25	7	10	7.50	9.00	4½
4½	8.25	9.75	7½	10½	9.00	10.50	4½
5	9.35	10.85	8	11	10.35	11.85	5
6	11.40	13.40	8½	12½	16.50	18.75	5½
7	15.75	18.00	9	14	19.00	21.50	6
8	18.00	20.50	10	15	26.75	30.10	6½
9	25.50	28.85	10½	16½	30.00	34.00	7
10	28.50	32.50	11½	17½	44.00	48.50	8
12	42.00	46.50	13	20½	62.00	67.50	8½
14	62.00	67.50	15	23	70.00	77.00	9
15	70.00	77.00	15½	24½	82.00	90.00	9½
16	82.00	90.00	16½	25½	106.00	115.00	10
18	106.00	115.00	18	28	135.00	145.00	10½
20	135.00	145.00	19½	30½	170.00	183.00	11
22	170.00	183.00	20¾	33	210.00	225.00	12
24	210.00	225.00	22½	36			

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered. Regularly furnished with ¼-inch raised face. These Fittings can be made Tongue and Groove or Male and Female, when so desired. See template for drilling, page 169. Extra list price for galvanizing, page 175.

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CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure



Fig. 78A Taper Reducing Elbow

FLANGED TAPER REDUCING ELBOWS

Size Inches	Price Faced Each	Price Faced and Drilled Each	Center to Face Ins.	Diameter of Flanges Inches	Size Inches	Price Faced Each	Price Faced and Drilled Each	Center to Face Ins.	Diameter of Flanges Inches
1 1/2 x 1 1/4	9.00	9.90	4 1/2	6 x 5	7 x 5	31.50	33.75	9	14 x 11
2 x 1 1/2	9.00	9.90	5	6 1/2 x 5	7 x 6	31.50	33.75	9	14 x 12 1/2
2 x 1 1/4	9.00	9.90	5	6 1/2 x 6	8 x 4	36.00	38.50	10	15 x 10
2 1/2 x 1 1/2	9.50	10.40	5 1/2	7 1/2 x 6	8 x 5	36.00	38.50	10	15 x 11
2 1/2 x 2	9.50	10.40	5 1/2	7 1/2 x 6 1/2	8 x 6	36.00	38.50	10	15 x 12 1/2
3 x 1 1/2	10.25	11.35	6	8 1/4 x 6	8 x 7	36.00	38.50	10	15 x 14
3 x 2	10.25	11.35	6	8 1/4 x 6 1/2	10 x 5	57.00	61.00	11 1/2	17 1/2 x 11
3 x 2 1/2	10.25	11.35	6	8 1/4 x 7 1/4	10 x 6	57.00	61.00	11 1/2	17 1/2 x 12 1/2
3 1/2 x 2	12.25	13.50	6 1/2	9 x 6 1/2	10 x 8	57.00	61.00	11 1/2	17 1/2 x 15
3 1/2 x 2 1/2	12.25	13.50	6 1/2	9 x 7 1/4	12 x 7	84.00	88.50	13	20 1/2 x 14
3 1/2 x 3	12.25	13.50	6 1/2	9 x 8 1/4	12 x 8	84.00	88.50	13	20 1/2 x 16 1/2
4 x 2	13.50	15.00	7	10 x 6 1/2	12 x 9	84.00	88.50	13	20 1/2 x 17 1/2
4 x 2 1/2	13.50	15.00	7	10 x 7 1/2	12 x 10	84.00	88.50	13	20 1/2 x 18 1/2
4 x 3	13.50	15.00	7	10 x 8 1/4	14 x 6	105.00	110.50	15	23 x 12 1/2
4 x 3 1/2	13.50	15.00	7	10 x 9	14 x 10	105.00	110.50	15	23 x 17 1/2
5 x 2 1/2	18.75	20.25	8	11 x 7 1/2	14 x 12	105.00	110.50	15	23 x 20 1/2
5 x 3	18.75	20.25	8	11 x 8 1/4	15 x 6	120.00	127.00	15 1/2	24 1/2 x 12 1/2
5 x 4	18.75	20.25	8	11 x 10	15 x 10	120.00	127.00	15 1/2	24 1/2 x 17 1/2
6 x 3	22.75	24.75	8 1/2	12 1/2 x 8 1/4	15 x 12	120.00	127.00	15 1/2	24 1/2 x 20 1/2
6 x 3 1/2	22.75	24.75	8 1/2	12 1/2 x 9	16 x 8	135.00	143.00	16 1/2	25 1/2 x 15
6 x 4	22.75	24.75	8 1/2	12 1/2 x 10	16 x 10	135.00	143.00	16 1/2	25 1/2 x 17 1/2
6 x 4 1/2	22.75	24.75	8 1/2	12 1/2 x 10 1/2	16 x 12	135.00	143.00	16 1/2	25 1/2 x 20 1/2
6 x 5	22.75	24.75	8 1/2	12 1/2 x 11	16 x 14	135.00	143.00	16 1/2	25 1/2 x 23
7 x 4	31.50	33.75	9	14 x 10					

Flanged Taper Reducing Elbows not listed above will be made to order at special prices. Flanges on these Fittings can be made Tongue and Groove or Male and Female, when so desired. Flanged Fittings will always be furnished faced only, unless otherwise ordered. Regularly furnished with 1/8-inch raised face. See template for drilling, page 169. Extra list price for galvanizing, page 175.

CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure



Fig. 78B Long Radius Elbow

FLANGED LONG RADIUS ELBOWS

Size Inches	Price Faced Each	Price Faced and Drilled Each	Center to Face Inches	Radius Inches	Diameter of Flanges Inches
1 1/2	7.50	8.85	6	5	6
2	7.50	8.85	6 1/2	5 1/2	6 1/2
2 1/2	8.00	9.35	7	5 3/4	7 1/2
3	8.60	10.25	7 3/4	6 1/4	8 1/4
3 1/2	10.25	12.15	8 1/4	6 3/4	9
4	11.25	13.50	9	7 3/4	10
4 1/2	13.75	16.00	9 1/2	7 3/4	10 1/2
5	15.50	17.75	10 1/4	8 1/4	11
6	19.00	22.00	11 1/4	9 3/4	12 1/2
7	26.50	29.85	12 3/4	10 3/4	14
8	30.00	33.75	14	12	15
9	42.50	47.50	15 1/4	13	16 1/2
10	47.75	53.75	16 1/2	14 1/2	17 1/2
12	70.00	76.75	19	16 1/2	20 1/2
14	103.50	111.75	21 1/2	18 1/2	23
15	117.00	127.00	22 3/4	20	24 1/2
16	137.00	149.00	24	21 1/4	25 1/2
18	177.00	191.00	26 1/2	23 3/4	28
20	225.00	240.00	29	26	30 1/2

Flanged Fittings will always be furnished faced only, unless otherwise ordered. Regularly furnished with 1/8-inch raised face. Flanges on these Fittings can be made with Tongue and Groove or Male and Female Faces, when so desired. See template for drilling, page 169. Extra list price for galvanizing, page 175.

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CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure

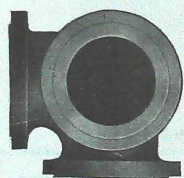


Fig. 78C
Side Outlet Elbow

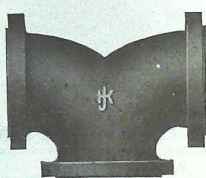


Fig. 78D
Double Branch Elbow

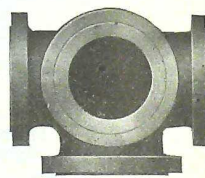


Fig. 78E
Four-way Tee

Size Inches	No. 78C		No. 78D		No. 78E	
	Faced Each	Faced and Drilled Each	Faced Each	Faced and Drilled Each	Faced Each	Faced and Drilled Each
4	35.75	38.00	35.75	38.00	42.00	45.00
5	37.75	40.00	42.75	45.00	47.00	50.00
6	42.00	45.00	49.50	52.50	53.50	57.50
7	51.75	55.00	56.50	60.00	63.00	67.50
8	61.25	65.00	66.25	70.00	72.50	77.50
10	89.00	95.00	84.00	90.00	102.00	110.00
12	113.25	120.00	108.25	115.00	131.00	140.00
14	146.75	155.00	141.75	150.00	159.00	170.00
16	168.00	180.00	168.00	180.00	184.00	200.00

Regularly furnished with 1/8 inch raised face.

Reducing Side Outlet Elbows are made reducing on the side outlet only.

Double Branch Elbows are made reducing on the run only.

See template for drilling, page 169.

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CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure

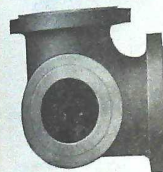


Fig. 78F
Side Outlet Elbow
Reducing

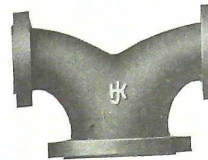


Fig. 78G
Double Branch Elbow
Reducing

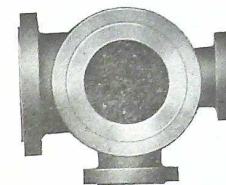


Fig. 78H
Four-way Tee
Reducing

Size Inches	No. 78F		No. 78G		No. 78H	
	Faced Each	Faced and Drilled Each	Faced Each	Faced and Drilled Each	Faced Each	Faced and Drilled Each
4	39.95	42.00	39.75	42.00	47.00	50.00
5	41.75	44.00	47.75	50.00	52.00	55.00
6	47.00	50.00	54.50	57.50	59.00	63.00
7	56.75	60.00	62.50	66.00	70.50	75.00
8	67.25	71.00	73.75	77.50	80.00	85.00
10	99.00	105.00	94.00	100.00	112.00	120.00
12	123.25	130.00	118.25	125.00	146.00	155.00
14	161.75	170.00	156.75	165.00	174.00	185.00
16	183.00	195.00	188.00	200.00	204.00	220.00

Regularly furnished with 1/8-inch raised face.

Reducing Side Outlet Elbows are made reducing on the side outlet only.

Double Branch Elbows are made reducing on the run only.

See template for drilling, page 169.

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CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure



Fig. 79 Tee



Fig. 82 Tee, Reducing on Side



Fig. 81 Tee, Reducing on Run

EXTRA HEAVY FLANGED TEES

Size Inches	FLANGED TEES		Face to Face Inches	Center to Center Inches	Diameter of Flanges Inches	REDUCING FLANGED TEES	
	Price Faced Each	Price Faced and Drilled Each				Price Faced Each	Price Faced and Drilled Each
1 1/4	6.50	7.85	8 1/2	4 1/4	5	7.50	8.85
1 1/2	6.50	7.85	9	4 1/2	6	7.50	8.85
2	6.50	7.85	10	5	6 1/2	8.00	9.35
2 1/2	6.90	8.25	11	5 1/2	7 1/2	8.00	9.35
3	7.50	9.15	12	6	8 1/2	8.60	10.25
3 1/2	8.90	10.80	13	6 1/2	9	10.25	12.15
4	9.75	12.00	14	7	10	11.25	13.50
4 1/2	12.00	14.25	15	7 1/2	10 1/2	13.75	16.00
5	13.50	15.75	16	8	11	15.50	17.75
6	16.50	19.50	17	8 1/2	12 1/2	19.00	22.00
7	23.00	26.35	18	9	14	26.50	29.85
8	26.00	29.75	20	10	15	30.00	33.75
9	37.00	42.00	21	10 1/2	16 1/2	42.50	47.50
10	41.50	47.50	23	11 1/2	17 1/2	47.75	53.75
12	61.00	67.75	26	13	20 1/2	70.00	76.75
14	90.00	98.25	30	15	23	103.50	111.75
15	102.00	112.00	31	15 1/2	24 1/2	117.00	127.00
16	119.00	131.00	33	16 1/2	25 1/2	137.00	149.00
18	154.00	168.00	36	18	28	177.00	191.00
20	185.00	210.00	39	19 1/2	30 1/2	225.00	240.00
22	247.00	267.00	41	20 1/2	33	285.00	305.00
24	305.00	328.00	45	22 1/2	36	350.00	373.00

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.
 Reducing Tees, 16-inch and smaller, have same dimensions as straight sizes, center to face.
 For Reducing Tees, sizes 18-inch and larger, the short body pattern is used. See page 168.
 For list of sizes of Reducing Flanged Tees carried in stock, see page 160.
 Regularly furnished with 1/8-inch raised face.
 The Flanges of these Fittings can be made with Tongue and Groove or Male and Female Faces, when so desired.
 See template for drilling, page 169.
 Extra list price for galvanizing, page 173.
 See page 160 for advanced prices beyond regular list and discount on Reducing Flanged Tees not carried in stock.

CAST IRON EXTRA HEAVY FLANGED FITTINGS
 For 250 Pounds Working Pressure



Fig. 79A Tee Single Sweep



Fig. 79B Reducing Tee Single Sweep Reducing in Run or Branch

SINGLE SWEEP FLANGED TEES

Size Inches	SINGLE SWEEP FLANGED TEES		Face to Face Inches	Center to Center Inches	Diameter Flanges Inches	REDUCING SINGLE SWEEP FLANGED TEES	
	Price Faced Each	Price Faced and Drilled Each				Price Faced Each	Price Faced and Drilled Each
2	7.50	8.85	10	5	6 1/2	9.15	10.50
2 1/2	8.00	9.35	11	5 1/2	7 1/2	9.90	11.55
3	8.60	10.25	12	6	8 1/2	11.75	13.65
3 1/2	10.25	12.15	13	6 1/2	9	13.00	15.25
4	11.25	13.50	14	7	10	15.75	18.00
4 1/2	13.75	16.00	15	7 1/2	10 1/2	17.85	20.10
5	15.50	17.75	16	8	11	22.00	25.00
6	19.00	22.00	17	8 1/2	12 1/2	30.50	33.85
7	26.50	29.85	18	9	14	34.50	38.25
8	30.00	33.75	18	9	14	49.00	54.00
9	42.50	47.50	20	10	15	55.00	61.00
10	47.75	53.75	23	11 1/2	17 1/2	80.00	86.75
12	70.00	76.75	26	13	20 1/2	119.00	127.25
14	103.50	111.75	30	15	24 1/2	135.00	145.00
15	117.00	127.00	31	15 1/2	25 1/2	158.00	170.00
16	137.00	149.00	33	16 1/2	26 1/2	204.00	218.00
18	177.00	191.00	36	18	28	260.00	275.00
20	225.00	240.00	39	19 1/2	30 1/2	327.00	347.00
22	285.00	305.00	41	20 1/2	33	402.00	425.00
24	350.00	373.00	45	22 1/2	36		

Reducing Single Sweep Flanged Tees are carried in stock in the following sizes: 4x4x2 1/4, 4x4x2, 6x6x4, 6x4x4, 8x8x6, 8x6x6.
 Single Sweep Tees are not made with side openings larger than the run.
 Reducing Tees, 16-inch and smaller, have same dimensions as straight sizes, center to face.
 For Reducing Tees, sizes 18-inch and larger, the short body pattern is used. See page 168.
 Regularly furnished with 1/8-inch raised face.
 Template for drilling, page 169. Dimensions, pages 166 and 167.
 Extra list price for galvanizing, page 173.
 See page 160 for advanced prices beyond regular list and discount on Reducing Flanged Tees not carried in stock.

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CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure



Fig. 79C Tee Double Sweep



Fig. 79D Reducing Tee Double Sweep

DOUBLE SWEEP FLANGED TEES

Size Inches	DOUBLE SWEEP FLANGED TEES		Face to Face Inches	Center to Face Inches	Diameter Flanges Inches	REDUCING DOUBLE SWEEP FLANGED TEES	
	Price Faced Each	Price Faced and Drilled Each				Price Faced Each	Price Faced and Drilled Each
2	7.50	8.85	10	5	6½	9.15	10.50
2½	8.00	9.35	11	5½	7½	9.90	11.50
3	8.60	10.25	12	6	8½	11.75	13.65
3½	10.25	12.15	13	6½	9	13.00	15.25
4	11.25	13.50	14	7	10½	15.75	18.00
4½	13.75	16.00	15	7½	11	17.85	20.10
5	15.50	17.75	16	8	12½	22.00	25.00
6	19.00	22.00	17	8½	14	30.50	33.85
7	26.50	29.85	18	9	15	34.50	38.25
8	30.00	33.75	20	10	16½	49.00	54.00
9	42.50	47.50	21	10½	17½	55.00	61.00
10	47.75	53.75	21	11	19	80.00	86.75
12	70.00	76.75	23	11½	20½	119.00	127.25
14	103.50	111.75	26	13	23	155.00	169.00
15	117.00	127.00	30	15	24½	180.00	196.00
16	137.00	149.00	31	15½	25½	235.00	253.00
18	177.00	191.00	33	16½	28	300.00	320.00
20	225.00	240.00	36	18	30½	375.00	401.00
22	285.00	305.00	39	19½	33	465.00	495.00
24	350.00	373.00	45	20½	36		

Reducing Double Sweep Flanged Tees are carried in stock in the following sizes: 5x5x4, 5x5x3, 6x6x3, 8x8x6, 8x8x5.

Double Sweep Tees are not made reducing on the run. Should these be wanted, patterns will be altered and the Fittings charged at a special price.

Reducing Tees, 16-inch and smaller, have same dimensions as straight sizes, center to face. For Reducing Tees, sizes 18-inch and larger, the short body pattern is used. See page 168.

Regularly furnished with ¼-inch raised face.

Template for drilling, page 169. Dimensions, pages 166 and 167.

Extra list price for galvanizing, page 175.

See page 160 for advanced prices beyond regular list and discount on Reducing Flanged Tees not carried in stock.

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CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure



Fig. 80 Cross



Fig. 80A Reducing Cross

Size Inches	FLANGED CROSSES		Face to Face Inches	Center to Face Inches	Diameter of Flanges Inches	REDUCING FLANGED CROSSES	
	Price Faced Each	Price Faced and Drilled Each				Price Faced Each	Price Faced and Drilled Each
1½	10.00	11.80	8½	4¼	5		
1¾	10.00	11.80	9	4½	6	11.50	13.30
2	10.00	11.80	10	5	6½	12.00	13.80
2½	10.50	12.30	11	5½	7½	13.25	15.50
3	11.50	13.75	12	6	8½	15.50	18.00
3½	13.50	16.00	13	6½	9	17.00	20.00
4	15.00	18.00	14	7	10½	21.00	24.00
4½	18.00	21.00	15	7½	11	23.50	26.50
5	20.50	23.50	16	8	12½	29.00	33.00
6	25.00	29.00	17	8½	14	40.00	44.50
7	35.00	39.50	18	9	15	46.00	51.00
8	40.00	45.00	20	10	16½	65.00	71.75
9	56.00	62.75	21	10½	17½	72.00	80.00
10	63.00	71.00	23	11½	20½	106.00	115.00
12	92.00	101.00	26	15	23	158.00	169.00
14	136.00	147.00	30	15½	24½	177.00	191.00
15	155.00	169.00	31	16	25½	207.00	223.00
16	180.00	196.00	33	16½	28	270.00	288.00
18	235.00	253.00	36	18	30½	345.00	365.00
20	300.00	320.00	39	19½	33	430.00	456.00
22	375.00	401.00	41	20½	36	535.00	565.00
24	465.00	495.00	45	22½			

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered.

Regularly furnished with ¼-inch raised face.

Dimensions of Extra Heavy Flanged Crosses are the same as Extra Heavy Flanged Tees, as shown on pages 167 and 168.

The Flanges of these Fittings can be made with Tongue and Groove or Male and Female Faces, when so desired.

Reducing Crosses, 16-inch and smaller, have same dimensions as straight sizes, center to face. For Reducing Crosses, sizes 18-inch and larger, the short body pattern is used. See page 168.

See template for drilling, page 169.

Extra list price for galvanizing, page 175.

For list of Reducing sizes carried in stock, see page 160.

See page 160 for advanced prices beyond regular list and discount on Reducing Flanged Crosses not carried in stock.

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CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure



Fig. 80B
Base Elbow, Round or Square Base

FLANGED BASE ELBOWS

Size Inches	Price Faced and Drilled Each	Price Faced and Drilled Each	Price for Facing and Drilling Base Flange	Center to Face Inches	Center to Face of Base Inches	Diameter of Flanges Inches	Size of Base Inches
4	13.50	15.00	4.50	7	7	10	6½
4½	16.50	18.00	4.50	7½	7½	10½	6½
5	18.75	20.25	5.25	8	7½	11	7½
6	22.75	24.75	5.25	8½	8	12½	7½
7	31.50	33.75	5.25	9	8½	14	7½
8	36.00	38.50	7.50	10	9½	15	10
9	51.00	54.35	7.50	10½	10	16½	10
10	57.00	61.00	7.50	11½	10½	17½	10
12	84.00	88.50	11.00	13	11	20½	12½
14	105.00	110.50	11.00	15	14	23	12½
15	120.00	127.00	11.00	15½	14½	24½	12½
16	135.00	143.00	11.00	16½	15½	25½	12½

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered. Regularly furnished with ⅜-inch raised face.
In ordering Base Elbows, state particularly whether Round or Square Base is desired. Edge to edge of Square Base is same measurement as diameter of Round Base.
Flanged Base Tees made to order on application.
Flanges on these Fittings can be made with Tongue and Groove or Male and Female Faces, when so desired.
See template for drilling, page 169.
Extra list price for galvanizing, page 175.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure

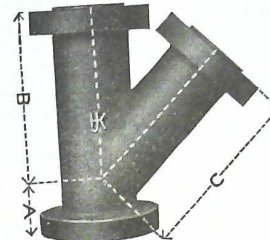


Fig. 83 Lateral

Size Inches	FLANGED LATERALS		Face to Face A and B Inches	Center to Face B or C Inches	Center to Face A Inches	Diameter of Flanges Inches	REDUCING FLANGED LATERALS	
	Price Faced Each	Price Faced and Drilled Each					Price Faced Each	Price Faced and Drilled Each
2	10.00	11.80	11½	9	2½	6½	11.50	13.30
2½	10.50	12.30	13	10½	2½	7½	12.00	13.80
3	11.50	13.75	14	11	3	8½	13.25	15.50
3½	13.50	16.00	15½	12½	3	9	15.50	18.00
4	15.00	18.00	16½	13½	3	10	17.00	20.00
4½	18.00	21.00	18	14½	3½	10½	21.00	24.00
5	20.50	23.50	18½	15	4	11	23.50	26.50
6	25.00	29.00	21½	17½	4	12½	29.00	33.00
7	35.00	39.50	23½	19	4½	14	40.00	44.50
8	40.00	45.00	25½	20½	5	15	46.00	51.00
9	56.00	62.75	27½	22½	5	16½	65.00	71.75
10	63.00	71.00	29½	24	5½	17½	72.00	80.00
12	92.00	101.00	33½	27½	6	20½	106.00	115.00
14	136.00	147.00	37½	31	6½	23	158.00	169.00
15	155.00	169.00	39½	33	6½	24½	177.00	191.00
16	180.00	196.00	42	34½	7½	25½	207.00	223.00
18	235.00	253.00	45½	37½	8	28	345.00	365.00
20	300.00	320.00	49	40½	8½	30½	430.00	456.00
22	375.00	401.00	53	43½	9½	33	535.00	565.00
24	465.00	495.00	57½	47½	10	36		

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered. Regularly furnished with ⅜-inch raised face.
Flanges on these Fittings can be made with Tongue and Groove or Male and Female Faces, when so desired.
For dimensions of Reducing Laterals, see page 168.
See template for drilling, page 169.
Extra list price for galvanizing, page 175.
For list of reducing sizes carried in stock, see page 160.
See page 160 for advanced prices beyond regular list and discount on Reducing Flanged Laterals not carried in stock.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST IRON REDUCING FLANGED FITTINGS

List of Sizes Carried in Stock

REDUCING FLANGED TEES

2½ x 2½ x 2	4 x 3 x 3	6 x 6 x 4½	7 x 7 x 2	6 x 6 x 8	12 x 12 x 6
2½ x 2½ x 1½	4 x 3 x 2	6 x 6 x 4	7 x 7 x 7	5 x 5 x 8	12 x 12 x 6
2½ x 2½ x 1¼	4 x 3 x 1½	6 x 6 x 3¾	7 x 8 x 6	9 x 9 x 6	12 x 12 x 4
2½ x 2 x 2	4 x 2½ x 2½	6 x 6 x 3	7 x 5 x 5	9 x 9 x 5	12 x 12 x 3
3 x 3 x 2½	4 x 2 x 3	6 x 6 x 2½	6 x 6 x 7	10 x 10 x 8	12 x 12 x 2½
3 x 3 x 2	3 x 3 x 4	6 x 6 x 2	8 x 8 x 7	10 x 10 x 7	12 x 10 x 12
3 x 3 x 1½	2½ x 2½ x 4	6 x 5 x 6	8 x 8 x 6	10 x 10 x 6	12 x 8 x 12
3 x 3 x 1¼	4½ x 4½ x 3	6 x 4 x 6	8 x 8 x 5	10 x 10 x 5	12 x 10 x 10
3 x 3 x 1	4½ x 4½ x 2	6 x 3 x 6	8 x 8 x 4½	10 x 10 x 4½	12 x 10 x 8
3 x 2½ x 3	4½ x 4 x 4½	6 x 2½ x 6	8 x 8 x 4	10 x 10 x 4	12 x 10 x 6
3 x 2 x 3	5 x 5 x 4	6 x 5 x 5	8 x 8 x 3½	10 x 10 x 3½	12 x 8 x 8
3 x 1½ x 3	5 x 5 x 3½	6 x 5 x 4	8 x 8 x 3	10 x 10 x 3	12 x 8 x 6
3 x 1¼ x 3	5 x 5 x 3	6 x 5 x 3	8 x 8 x 2½	10 x 10 x 2	10 x 10 x 12
3 x 2½ x 2½	5 x 5 x 2½	6 x 5 x 2½	8 x 8 x 2	10 x 8 x 10	8 x 8 x 12
3 x 2 x 2	5 x 5 x 2	6 x 5 x 2	8 x 6 x 8	10 x 6 x 10	14 x 14 x 12
2 x 2 x 3	5 x 5 x 1½	6 x 4 x 5	8 x 4 x 8	10 x 8 x 8	14 x 14 x 10
3½ x 3½ x 2½	5 x 4 x 5	6 x 4 x 4	8 x 3 x 8	10 x 8 x 6	14 x 14 x 8
3½ x 3½ x 2	5 x 3 x 5	6 x 4 x 3	8 x 7 x 6	10 x 8 x 5	14 x 14 x 7
3½ x 2½ x 3½	5 x 2½ x 5	6 x 3 x 3	8 x 7 x 5	10 x 6 x 8	14 x 14 x 6
4 x 4 x 3½	5 x 4 x 4	6 x 3 x 6	8 x 6 x 7	10 x 6 x 6	14 x 14 x 5
4 x 4 x 3	5 x 4 x 3	4½ x 4½ x 6	8 x 6 x 6	8 x 8 x 10	14 x 12 x 8
4 x 4 x 2½	5 x 4 x 2½	4 x 4 x 6	8 x 6 x 5	7 x 7 x 10	16 x 16 x 10
4 x 4 x 2	5 x 3 x 4	7 x 7 x 6	8 x 6 x 4	12 x 12 x 10	16 x 16 x 8
4 x 4 x 1½	5 x 3 x 3	7 x 7 x 5	8 x 5 x 6	12 x 12 x 9	16 x 16 x 7
4 x 3 x 4	4 x 4 x 5	7 x 7 x 4	8 x 5 x 5	12 x 12 x 8	16 x 16 x 6
4 x 2½ x 4	6 x 6 x 5	7 x 7 x 3	8 x 4 x 6	12 x 12 x 7	
4 x 2 x 4			8 x 4 x 4		

REDUCING FLANGED CROSSES

3 x 3 x 2½ x 2½	6 x 6 x 4 x 4	8 x 8 x 6 x 6	8 x 8 x 4 x 4
4 x 4 x 2½ x 2½	6 x 6 x 3 x 3	8 x 8 x 3 x 3	

REDUCING FLANGED LATERALS

4 x 4 x 2½	6 x 6 x 2½
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The sizes of Reducing Flanged Fittings listed, with our Reducing Companion Flanges, enable us to furnish, from stock, about every variety of Reducing Fitting required. We carry a full line of Reducing Ribbed Flanges in stock, and these are furnished the same thickness as regular Companion Flanges of corresponding outside diameter, and drilled to the same template. If reductions are desired in this manner, specify "Reduce by Flanges if necessary". The list of Reducing Crosses and Ys given are made to order only. Price list for Reducing Flanged Fittings given on preceding pages.

PRICES OF SIZES NOT CARRIED IN STOCK

Sizes not carried in stock are considered special, and are made to order at the following advance in prices, according to quantity of a size ordered at one time.

Add to Regular List Prices of Reducing Flanged Tees, Crosses and Laterals on Preceding Pages the Percentage Advances Given Below

Size	1 Piece	2 Pieces	3 Pieces	4 Pieces	5 Pieces	6 or More
3½-in. and Smaller	50%	40%	30%	20%	10%	No Advance
4 to 8-inch	25%	20%	15%	10%	5%	No Advance
9-inch and Larger	No Adv.	No Adv.	No Adv.	No Adv.	No Adv.	No Advance

ORDER BY FIGURE NUMBERS
Hy-Tech Products

CAST IRON EXTRA HEAVY FLANGED FITTINGS
For 250 Pounds Working Pressure



Fig. 83A Flanged Taper Reducer



Fig. 83B Flanged Eccentric Taper Reducer

FLANGED TAPER REDUCERS

Size Inches	Diameter of Flanges Inches	Face to Face Ins.	Price Faced Each	Price Faced and Drilled Each	Size Inches	Diameter of Flanges Inches	Face to Face Ins.	Price Faced Each	Price Faced and Drilled Each
2½ x 2	7½ x 6	6	9.50	10.40	12 x 5	20½ x 11	14	84.00	88.50
3 x 2	8¼ x 6½	6	10.25	11.35	12 x 6	20½ x 12½	14	84.00	88.50
3½ x 2½	9 x 7½	6½	12.25	13.50	12 x 8	20½ x 15	14	84.00	88.50
4 x 2	10 x 8	7	13.50	15.00	12 x 10	20½ x 17½	16	105.00	110.50
4 x 2½	10 x 7½	7	13.50	15.00	14 x 6	23 x 12½	16	105.00	110.50
4 x 3	10 x 8¼	7	16.50	18.00	14 x 8	23 x 15	16	105.00	110.50
4½ x 2	10½ x 6½	7½	16.50	18.00	14 x 10	23 x 17½	16	105.00	110.50
4½ x 3	10½ x 8¼	7½	16.50	18.00	14 x 12	23 x 20½	16	105.00	110.50
5 x 2	11 x 6½	8	18.75	20.25	15 x 8	24½ x 15	17	120.00	127.00
5 x 2½	11 x 7½	8	18.75	20.25	15 x 10	24½ x 17½	17	120.00	127.00
5 x 3	11 x 8¼	8	18.75	20.25	15 x 12	24½ x 20½	17	120.00	127.00
5 x 4	11 x 10	8	18.75	20.25	15 x 14	24½ x 23	17	120.00	127.00
6 x 3	12½ x 8¼	9	22.75	24.75	16 x 8	25½ x 15	18	135.00	143.00
6 x 3½	12½ x 9	9	22.75	24.75	16 x 10	25½ x 17½	18	135.00	143.00
6 x 4	12½ x 10	9	22.75	24.75	16 x 12	25½ x 20½	18	135.00	143.00
6 x 5	12½ x 11	9	31.50	33.75	16 x 14	25½ x 23	18	135.00	143.00
7 x 3	14 x 8¼	10	31.50	33.75	18 x 10	28 x 17½	19	157.00	166.00
7 x 4	14 x 10	10	31.50	33.75	18 x 12	28 x 20½	19	157.00	166.00
7 x 5	14 x 11	10	31.50	33.75	18 x 14	28 x 23	19	157.00	166.00
7 x 6	14 x 12½	10	31.50	33.75	18 x 16	28 x 25½	19	157.00	166.00
8 x 3	15 x 8¼	11	36.00	38.50	20 x 12	30½ x 20½	20	180.00	190.00
8 x 4	15 x 10	11	36.00	38.50	20 x 14	30½ x 23	20	180.00	190.00
8 x 5	15 x 11	11	36.00	38.50	20 x 16	30½ x 25½	20	180.00	190.00
8 x 6	15 x 12½	11	36.00	38.50	20 x 18	30½ x 28	20	180.00	190.00
9 x 4	16½ x 10	11½	51.00	54.35	22 x 14	33 x 23	22	225.00	238.00
9 x 5	16½ x 11	11½	51.00	54.35	22 x 16	33 x 25½	22	225.00	238.00
9 x 6	16½ x 12½	11½	51.00	54.35	22 x 18	33 x 28	22	225.00	238.00
9 x 8	16½ x 15	11½	51.00	54.35	22 x 20	33 x 30½	22	225.00	238.00
10 x 4	17½ x 10	12	57.00	61.00	24 x 16	36 x 25½	24	285.00	300.00
10 x 5	17½ x 11	12	57.00	61.00	24 x 18	36 x 28	24	285.00	300.00
10 x 6	17½ x 12½	12	57.00	61.00	24 x 20	36 x 30½	24	285.00	300.00
10 x 8	17½ x 15	12	57.00	61.00	24 x 22	36 x 33	24	285.00	300.00

NOTE—Flanged Fittings will always be furnished faced only, unless otherwise ordered. Regularly furnished with ¼-inch raised face. Prices furnished on application. Template for drilling, see page 169. Extra list price for galvanizing, page 175.

ORDER BY FIGURE NUMBERS

CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure

EXTRA HEAVY SCREWED COMPANION FLANGES



Fig. 83F Smooth Face



Fig. 83G Male Face



Fig. 83H Tongued Face



Fig. 83-I Corrugated Face



Fig. 83J Female Face



Fig. 83K Grooved Face



Fig. 83L Raised Face



Fig. 83M Spot Face Bolt Holes



Fig. 83N Calking Recess

NOTE—Extra Heavy Companion Flanges will always be furnished with 1/8-inch raised face and not drilled, unless otherwise ordered. For list prices, see page 163.
See template for drilling, page 169.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

CAST IRON EXTRA HEAVY COMPANION FLANGES

For 250 Pounds Working Pressure

Size Inches	SMOOTH OR RAISED FACE				NET PRICE LIST							
	Price Each	Price Faced and Drilled Each	Price Faced, Drilled and Bolted on Each	Price Faced, Drilled and Bolted on Each	1/4-inch Rainbow Ring Gasket Each	Corrugated Copper Ring Gasket Each	1/2-inch Asbestos Ring Gasket Each	Extra for Male or Female, Tongued or Grooved Face, Each	Extra for 1/8-inch Raised Face Each	Extra for Calking Recess Each	Extra for Spot Facing Bolt Holes per Flange	
1 x 4 1/4	.95	1.30	1.70	.08	.04	.10	.50	.50	.50	.50	.20	
1 1/4 x 5	1.00	1.35	1.75	.08	.04	.12	.50	.50	.50	.50	.20	
1 1/2 x 6	1.10	1.45	1.95	.08	.04	.15	.50	.50	.50	.50	.20	
2 x 6 1/2	1.25	1.60	2.10	.09	.05	.18	.50	.50	.50	.50	.20	
2 1/2 x 7 1/2	1.40	1.75	2.35	.12	.06	.22	.65	.65	.65	.65	.40	
3 x 8 1/4	1.60	2.05	3.15	.15	.08	.25	.65	.65	.65	.65	.40	
3 1/2 x 9	2.00	2.55	3.80	.16	.09	.30	.65	.65	.65	.65	.40	
4 x 10	2.25	2.95	4.20	.18	.10	.35	.65	.65	.65	.65	.40	
4 1/2 x 10 1/2	2.40	3.10	4.35	.21	.12	.40	.65	.65	.65	.65	.40	
5 x 11	2.65	3.35	4.60	.25	.15	.45	.65	.65	.65	.65	.60	
6 x 12 1/2	3.30	4.05	5.80	.30	.18	.50	.80	.80	.80	.80	.60	
7 x 14	4.40	5.30	7.55	.40	.21	.55	.80	.80	.80	.80	.60	
8 x 15	5.10	6.15	8.65	.42	.24	.60	1.00	1.00	1.00	1.00	.60	
9 x 16 1/4	6.30	7.50	10.50	.48	.27	.65	1.00	1.00	1.00	1.00	.80	
10 x 17 1/2	7.40	8.90	13.90	.55	.33	.75	1.00	1.00	1.00	1.00	.80	
12 x 20 1/2	10.75	12.50	18.50	.70	.42	.90	1.25	1.25	1.25	1.25	1.00	
14 x 23	15.00	17.00	25.00	1.00	.55	1.00	1.60	1.60	1.60	1.60	1.00	
15 x 24 1/2	19.00	21.50	31.00	1.05	.60	1.10	1.60	1.60	1.60	1.60	1.00	
16 x 25 1/2	22.25	25.00	35.00	1.20	.66	1.25	2.00	2.00	2.00	2.00	1.00	
18 x 28	26.00	29.00	41.00	1.35	.75	1.35	2.50	2.50	2.50	2.50	1.20	
20 x 30 1/2	31.00	35.00	51.00	1.45	.85	1.50	3.00	3.00	3.00	3.00	1.20	
22 x 33	36.00	41.00	58.00	1.55	.90	1.75	4.00	4.00	4.00	4.00	1.40	
24 x 36	45.00	50.00	69.00	1.90	1.05	2.00	5.00	5.00	5.00	5.00	1.40	

Size of all Fittings indicates inside diameter of Port, unless otherwise specified.
For Malleable Iron Flanges, double the above Cast Iron Companion Flange list and discount applying to Malleable Iron Flanges.
Template for drilling, see page 169.

ORDER BY FIGURE NUMBERS

CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure



Fig. 83E Reducing Companion Flange

REDUCING COMPANION FLANGES

Size Inches	Price Faced Each	Price Faced and Drilled Each	Price Faced and Bolted on Each	Size Inches	Price Faced Each	Price Faced and Drilled Each	Price Faced and Bolted on Each	Size Inches	Price Faced Each	Price Faced and Drilled Each	Price Faced and Bolted on Each
1 1/4 x 6	1.80	2.15	2.65	2 1/2 x 12 1/2	5.50	6.25	8.00	9 x 20 1/4	17.50	19.25	25.25
1 1/2 x 6 1/2	2.10	2.45	2.95	3 x 12 1/2	5.50	6.25	8.00	10 x 20 1/4	17.50	19.25	25.25
1 1/2 x 7 1/2	2.30	2.65	3.25	4 x 12 1/2	5.50	6.25	8.00	8 x 23	25.00	27.00	35.00
2 x 7 1/2	2.30	2.65	3.25	4 1/2 x 12 1/2	5.50	6.25	8.00	9 x 23	25.00	27.00	35.00
1 1/4 x 8 1/4	2.65	3.10	4.20	5 x 12 1/2	5.50	6.25	8.00	10 x 23	25.00	27.00	35.00
2 x 8 1/4	2.65	3.10	4.20	4 1/2 x 14	7.25	8.15	10.40	12 x 23	25.00	27.00	35.00
2 1/2 x 8 1/4	2.65	3.10	4.20	5 x 14	7.25	8.15	10.40	8 x 24 1/2	31.50	34.00	33.50
2 1/2 x 9	3.30	3.85	5.10	6 x 14	7.25	8.15	10.40	10 x 24 1/2	31.50	34.00	33.50
2 1/2 x 9	3.30	3.85	5.10	3 x 15	8.40	9.45	11.95	12 x 24 1/2	31.50	34.00	33.50
3 x 9	3.30	3.85	5.10	3 1/2 x 15	8.40	9.45	11.95	14 x 24 1/2	31.50	34.00	33.50
2 x 10	3.70	4.40	5.65	4 x 15	8.40	9.45	11.95	10 x 25 1/2	37.00	39.75	49.75
2 1/2 x 10	3.70	4.40	5.65	5 x 15	8.40	9.45	11.95	12 x 25 1/2	37.00	39.75	49.75
3 x 10	3.70	4.40	5.65	6 x 15	8.40	9.45	11.95	14 x 25 1/2	37.00	39.75	49.75
3 1/2 x 10	3.70	4.40	5.65	7 x 15	8.40	9.45	11.95	15 x 25 1/2	37.00	39.75	49.75
2 x 10 1/2	4.00	4.70	5.95	4 x 16 1/4	10.50	11.70	14.70	12 x 28	43.00	46.00	58.00
2 1/2 x 10 1/2	4.00	4.70	5.95	5 x 16 1/4	10.50	11.70	14.70	14 x 28	43.00	46.00	58.00
3 x 10 1/2	4.00	4.70	5.95	6 x 16 1/4	10.50	11.70	14.70	15 x 28	43.00	46.00	58.00
3 1/2 x 10 1/2	4.00	4.70	5.95	7 x 16 1/4	10.50	11.70	14.70	16 x 28	43.00	46.00	58.00
4 x 10 1/2	4.00	4.70	5.95	8 x 16 1/4	10.50	11.70	14.70	14 x 30 1/2	51.00	55.00	71.00
2 x 11	4.40	5.10	6.35	5 x 17 1/2	12.00	13.50	18.50	15 x 30 1/2	51.00	55.00	71.00
2 1/2 x 11	4.40	5.10	6.35	6 x 17 1/2	12.00	13.50	18.50	16 x 30 1/2	51.00	55.00	71.00
3 x 11	4.40	5.10	6.35	7 x 17 1/2	12.00	13.50	18.50	18 x 30 1/2	51.00	55.00	71.00
3 1/2 x 11	4.40	5.10	6.35	8 x 17 1/2	12.00	13.50	18.50	16 x 33	60.00	65.00	82.00
4 x 11	4.40	5.10	6.35	9 x 17 1/2	12.00	13.50	18.50	18 x 33	60.00	65.00	82.00
4 1/2 x 11	4.40	5.10	6.35	6 x 20 1/4	17.50	19.25	25.25	20 x 33	60.00	65.00	82.00
2 x 12 1/2	5.50	6.25	8.00	7 x 20 1/4	17.50	19.25	25.25	18 x 36	74.00	79.00	98.00
				8 x 20 1/4	17.50	19.25	25.25	20 x 36	74.00	79.00	98.00

Extra Heavy Reducing Companion Flanges are the same thickness and are drilled to same template as our regular Extra Heavy Companion Flanges of corresponding outside diameter.
 When ordering Reducing Companion Flanges, be particular to give both the pipe size and outside diameter.
 NOTE—Flanges will always be furnished faced only, unless otherwise ordered.
 Regularly furnished with 1/8-inch raised face.
 See template for drilling, page 169.
 Extra list price for galvanizing, page 175.

ORDER BY FIGURE NUMBERS
 Hy-Tech Products

CAST IRON EXTRA HEAVY FLANGED FITTINGS
 For 250 Pounds Working Pressure



Fig. 83C Solid Flange



Fig. 83D Shrink Flange

SOLID FLANGES				SHRINK FLANGES			
Size Inches	Price Faced Each	Price Faced and Drilled Each	Price Faced and Bolted on Each	Size Inches	Price Faced and Drilled But Not Bored Each	Extra for Tongue and Groove per Flange Net	Extra for Male or Female per Flange Net
1 x 4 1/4	1.45	1.80	2.20	2 x 6 1/2	4.50	5.50	50
1 1/4 x 5	1.50	1.85	2.25	2 1/4 x 7 1/2	5.00	6.00	.65
1 1/4 x 6	1.65	2.00	2.50	3 x 8 1/4	6.00	7.50	.65
2 x 6 1/2	1.90	2.25	2.75	3 1/2 x 9	7.00	9.00	.65
2 1/2 x 7 1/2	2.10	2.45	3.05	4 x 10	8.00	10.00	.65
3 x 8 1/4	2.40	2.85	3.95	4 1/2 x 10 1/2	9.00	11.00	.65
3 1/2 x 9	3.00	3.55	4.80	5 x 11	10.00	13.00	.80
4 x 10	3.35	4.05	5.30	6 x 12 1/2	11.00	16.00	.80
4 1/2 x 10 1/2	3.60	4.30	5.55	7 x 14	13.00	18.00	1.00
5 x 11	4.00	4.70	5.95	8 x 15	15.00	21.00	1.00
6 x 12 1/2	5.00	5.75	7.50	9 x 16 1/4	17.00	22.00	1.00
7 x 14	6.60	7.50	9.75	10 x 17 1/2	18.00	22.00	1.25
8 x 15	7.65	8.70	11.20	12 x 20 1/2	24.00	29.00	1.60
9 x 16 1/4	9.50	10.70	13.70	14 x 23	29.00	35.00	1.60
10 x 17 1/2	11.00	12.50	17.50	15 x 24 1/2	32.00	39.00	2.00
12 x 20 1/2	16.00	17.75	23.75	16 x 25 1/2	36.00	43.00	2.50
14 x 23	22.50	24.50	32.50	18 x 28	42.00	50.00	3.00
15 x 24 1/2	28.50	31.00	40.50	20 x 30 1/2	50.00	60.00	4.00
16 x 25 1/2	33.50	36.25	46.25	22 x 33	63.00	65.00	4.00
18 x 28	39.00	42.00	54.00	24 x 36	75.00	90.00	5.00
20 x 30 1/2	46.00	50.00	66.00				
22 x 33	54.00	59.00	76.00				
24 x 36	67.00	72.00	91.00				

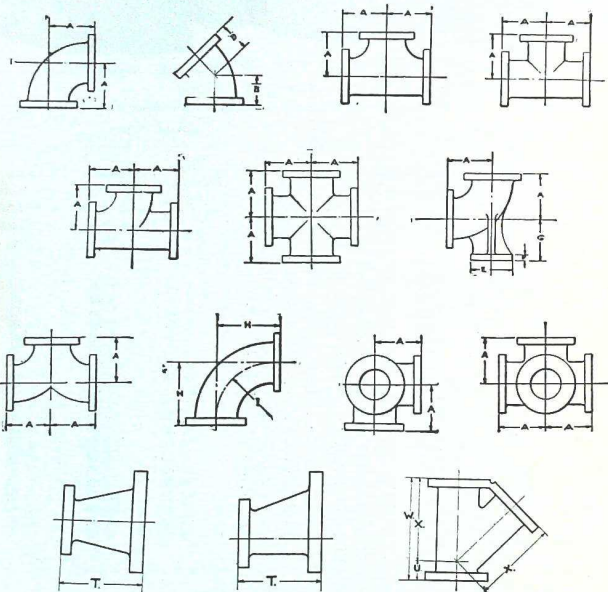
When ordering Solid Flanges, always give the outside diameter.
 NOTE—Flanges and Flanged Fittings may be faced in any quarter, as the holes are drilled in multiples of four and straddle center line.
 Flanges and Flanged Fittings will always be furnished faced only, unless otherwise ordered.
 Regularly furnished with 1/8-inch raised face.
 Sizes larger than 16-inch, outside diameter, have reinforced ribs on back.
 See template for drilling, page 169.
 Extra list price for galvanizing, page 175.

ORDER BY FIGURE NUMBERS

DIMENSIONS OF
CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure

STRAIGHT SIZES



All Extra Heavy Flanged Fittings, Flanged Valves and Flanges are made suitable for 250 pounds working pressure.

Dimensions for Tongue and Groove and Male and Female, see page 173.
We drill all our Extra Heavy Flanges, Flanged Valves and Flanged Fittings to the new standard, effective January 1, 1915.

For dimensions, see page 167.
For diameter of Flanges, Bolt Circle, Etc., see page 169.
Flanged Fittings will always be furnished faced only, unless otherwise ordered.

Hy-Tech Products

DIMENSIONS OF
CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure

American Standard, In Effect January 1, 1915

Size	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7
Face to Face, Tees and Crosses	AA 8	8 1/2	9	10	11	12	13	14	15	16	17	18
Center to Face, Ells, Tees and Crosses	A 4	4 1/4	4 1/2	5	5 1/2	6	6 1/2	7	7 1/2	8	8 1/2	9
Center to Face of 45° Ells	B 2	2 1/4	2 1/2	3	3 1/2	3 3/4	4	4 1/4	4 1/2	5	5 1/2	6
Diameter of Base of Base Ells	E 10	10	10	10	10	10	10	10	10	10	10	10
Thickness of Base Flange of Base Ells	F 1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Center to Base of Long Radius Ells	H 5	5 1/2	6	6 1/2	7	7 1/2	8	8 1/2	9	9 1/2	10 1/2	11 1/2
Center to Face of Long Radius Ells	I 8 1/2	9 1/2	11	11 1/2	13	14	15 1/2	16 1/2	18	18 1/2	21 1/2	23 1/2
Radius of Long Radius Ells	W 6 1/2	7 1/4	8 1/2	9	10 1/2	11	12 1/2	13 1/2	14 1/2	15 1/2	17 1/2	19
Face to Face of Laterals	X 2	2 1/4	2 1/2	2 1/2	2 1/2	3	3	3	3 1/2	3 1/2	4	4 1/4
Short Center to Face of Laterals	U 2	2 1/4	2 1/2	2 1/2	2 1/2	3	3	3	3 1/2	3 1/2	4	4 1/4
Diameter of Flanges	T 4 1/2	5	5 1/2	6	6 1/2	7 1/2	8 1/2	9	10 1/2	11	12 1/2	14
Number of Bolts	4	4	4	4	4	4	4	4	4	4	4	4
Length of Bolts	3 1/4	3 3/4	4 1/2	5	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	13 1/2
Bolt Circle	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Minimum Metal Thickness of Body	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2

Size	8	9	10	12	14	15	16	18	20	22	24	26
Face to Face, Tees and Crosses	AA 20	21	23	26	30	31	33	36	39	41	45	48
Center to Face, Ells, Tees and Crosses	A 10	10 1/2	11 1/2	13	15	15 1/2	16 1/2	18	19 1/2	20 1/2	22 1/2	24
Center to Face of 45° Ells	B 6	6 1/2	7	8	8 1/2	9	9 1/2	10	10 1/2	11	12	13
Diameter of Base of Base Ells	E 10	10	10	10	10	10	10	10	10	10	10	10
Thickness of Base Flange of Base Ells	F 1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Center to Base of Long Radius Ells	H 14	15 1/4	16 1/2	19	21 1/2	22 3/4	24	26 1/2	29	31 1/2	34	36 1/2
Center to Face of Long Radius Ells	I 12	13	14 1/2	16 1/2	18 1/2	20	21 1/2	23 1/2	26	28 1/2	30 1/2	33 1/2
Radius of Long Radius Ells	W 25 1/2	27 1/2	29 1/2	33 1/2	37 1/2	39 1/2	42	45 1/2	49	53	57 1/2	61 1/2
Face to Face of Laterals	X 5	5 1/2	6	6 1/2	6 1/2	7 1/2	8	8 1/2	9 1/2	10	10 1/2	11 1/2
Short Center to Face of Laterals	U 5	5 1/2	6	6 1/2	6 1/2	7 1/2	8	8 1/2	9 1/2	10	10 1/2	11 1/2
Diameter of Flanges	T 11	11 1/2	12	14	16	17	18	19	20	22	24	26
Number of Bolts	15	16 1/4	17 1/2	20 1/2	23	24 1/2	25 1/2	28	30 1/2	33	36	38 1/2
Length of Bolts	1 1/2	1 3/4	1 3/4	2	2 1/4	2 1/4	2 1/4	2 1/2	2 1/2	2 1/2	2 3/4	2 3/4
Bolt Circle	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Minimum Metal Thickness of Body	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2

Size	28	30	32	34	36	38	40	42	44	46	48
Face to Face, Tees and Crosses	AA 52	55	58	61	65	68	71	74	78	81	84
Center to Face, Ells, Tees and Crosses	A 26	27 1/2	29	30 1/2	32 1/2	34	35 1/2	37	39	40 1/2	42
Center to Face of 45° Ells	B 14	15	16	17	18	19	20	21	22	23	24
Center to Face of Long Radius Ells	H 39	41 1/4	44	46 1/4	49	51 1/4	54	56 1/4	59	61 1/4	64
Radius of Long Radius Ells	W 40 1/2	43	45 1/2	47 1/2	50	52 1/2	54 1/2	57	59 1/2	61 1/2	65
Diameter of Flanges	T 28	28	28	28	28	28	28	28	28	28	28
Number of Bolts	28	28	28	28	28	28	28	28	28	28	28
Length of Bolts	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Bolt Circle	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Minimum Metal Thickness of Body	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2

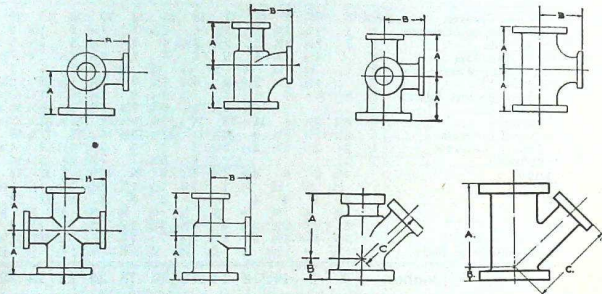
All Reducing Fittings, 1 to 16-inch, inclusive, are the same dimensions as straight sizes, center to face.

ORDER BY FIGURE NUMBERS

DIMENSIONS OF
CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure

REDUCING SIZES



SHORT BODY PATTERN

Size..... inches	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
Size of Outlet and Smaller	12	14	15	16	18	18	20	20	22	24	24	26	28	28	30	32
Face to Face of Run... A	28	31	33	34	38	38	41	41	44	47	47	50	53	53	55	58
Center to Face of Run... A	14	15½	16½	17	19	19	20½	20½	22	23½	23½	25	26½	26½	27½	29
Center to Face of Outlet... B	17	18½	20	21½	23	24	25½	26½	28	29½	30½	31½	33½	34½	35½	37½

REDUCING FLANGED LATERALS—Short Body Pattern

Size..... inches	18	20	22	24
Size of Branch and Smaller.....	9	10	10	12
Face to Face of Run.....	34	37	40	44
Center to Face, Run..... A	31	34	37	41
Center to Face, Run..... B	3	3	3	3
Center to Face, Branch..... C	32½	36	39	43

Long Body Patterns are used when outlets or branches are larger than given in above table, therefore have same dimensions as straight size Fittings.

Above tables do not cover dimensions of Tees increasing on outlets or bullheads.

Long Body Patterns are used when outlets or branches are larger than given in the above tables and, therefore, have the same dimensions as straight size Fittings.

Bullheads or Tees having outlet larger than the run will be the same length, center to face of all openings, as a Tee with all openings of the size of the outlet. Example: A 10x10x14-inch Tee will be governed by the dimensions of the 14-inch Long Body Tee, namely, 15 inches, center to face of all openings, and 30 inches, face to face.

Reducing Fittings, 16-inch and smaller, are the same dimensions as straight sizes, center to face.

Reducing Elbows carry the same center to face dimensions as regular Elbows of largest straight size.

Template for drilling, see page 169.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

DIAMETER OF FLANGES AND TEMPLATE FOR DRILLING
EXTRA HEAVY FLANGES, FLANGED FITTINGS
AND FLANGED VALVES

American Standard, in Effect January 1, 1915

Size Inches	Diameter of Flanges	Thickness of Flanges	Bolt Circle	Number of Bolts	Size of Bolts
1	4½	1½	3¾	4	½ x 2
1½	5	¾	3¾	4	½ x 2½
2	6	1½	4½	4	¾ x 2½
2½	6½	¾	5	4	¾ x 3
3	7½	1	5½	4	¾ x 3½
3½	8	1¼	6½	8	¾ x 3½
4	8½	1½	7¼	8	¾ x 3½
4½	9	1¾	7¾	8	¾ x 3½
5	10	1¾	8½	8	¾ x 3½
5½	10½	1¾	9¼	8	¾ x 3½
6	11	1¾	10	12	¾ x 3½
6½	12½	1¾	10½	12	¾ x 4
7	14	1½	11½	12	¾ x 4¼
7½	15	1½	13	12	1 x 4¼
8	16½	1½	14	12	1 x 5
8½	17½	1½	15¼	16	1 x 5
9	18	2	17¼	16	1½ x 5½
10	20½	2	20¼	20	1½ x 5¾
12	23	2½	21½	20	1½ x 6
14	24½	2½	22½	20	1½ x 6
15	25½	2½	24	24	1½ x 6¼
16	28	2½	24½	24	1½ x 6¼
18	30½	2½	27	24	1½ x 7
20	33	2½	29¼	24	1½ x 7½
22	36	2½	32	24	1½ x 8
24	38½	2½	34½	28	1½ x 8
26	40½	2½	37	28	1½ x 8
28	43	3	39½	28	1½ x 8½
30	45½	3	41½	28	1½ x 9
32	47½	3¼	43½	28	1½ x 9½
34	50	3¼	46	32	1½ x 9½
36	52½	3¾	48	32	1½ x 10
38	54½	3¾	50½	36	1½ x 10
40	57	3½	52½	36	2 x 10½
42	59½	3¾	55	36	2 x 10½
44	61½	3¾	57½	40	2 x 11
46	65	4	60½	40	2 x 11

These drilling templates are in multiples of four, so that Fittings may be made to face in any quarter and bolt holes straddle the center line.

Bolt holes are drilled ¼ inch larger than nominal diameter of bolts.

Dimensions for tongue and groove, male and female, see page 173.

ORDER BY FIGURE NUMBERS

GASKETS

For Extra Heavy Flanged Valves and Fittings

Rubber Gaskets $\frac{1}{8}$ Inch Thick Corrugated Are Copper, 27 Gauge

NET PRICE LIST

RING GASKETS					FULL GASKETS				
Size Inches	Inside Diam. of Gasket Inches	Outside Diam. of Gasket Inches	PRICE		Size Inches	Inside Diam. of Gasket Inches	Outside Diam. of Gasket Inches	PRICE	
			Rubber Each	Corrugated Copper Each				Rubber Each	Corrugated Copper Each
1	1	2½	.08	.04	1	1	4½	.18	.09
1¼	1¼	3¼	.08	.04	1¼	1¼	5	.18	.09
1½	1½	3¾	.08	.04	1½	1½	6	.18	.09
2	2	4¾	.09	.05	2	2	6½	.21	.12
2½	2½	5¾	.12	.06	2½	2½	7½	.25	.15
3	3	5¾	.15	.08	3	3	8¾	.32	.18
3½	3½	6¾	.16	.09	3½	3½	9	.35	.21
4	4	7¾	.18	.10	4	4	10	.45	.25
4½	4½	7¾	.21	.12	4½	4½	10½	.47	.27
5	5	8¾	.25	.15	5	5	11	.50	.30
6	6	9¾	.30	.18	6	6	12½	.60	.36
7	7	11	.40	.21	7	7	14	.75	.45
8	8	12¾	.42	.24	8	8	15	.80	.50
9	9	13	.48	.27	9	9	16½	.95	.55
10	10	14¾	.55	.33	10	10	17½	1.05	.65
12	12	16¾	.70	.42	12	12	20½	1.40	.80
14	13¾	19¾	1.00	.55	14	13¾	23	1.70	1.00
16	14¾	20¾	1.05	.60	15	14¾	24¾	1.90	1.10
18	15¾	21¾	1.20	.66	16	15¾	25¾	2.00	1.20
20	17¾	23¾	1.35	.75	18	17¾	28	2.20	1.30
22	19¾	25¾	1.45	.85	20	19¾	30¾	2.50	1.50
24	21¾	27¾	1.55	.90	22	21¾	33	2.80	1.60
	23¾	30¾	1.90	1.05	24	23¾	36	3.15	1.90

ORDER BY FIGURE NUMBERS

Hy-Tech Products

CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure

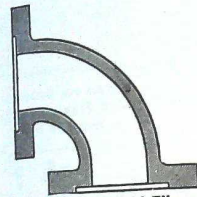


Fig. 83-O Flanged Elbow with Female Flanges

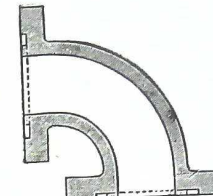


Fig. 83P Flanged Elbow with Grooved Flanges

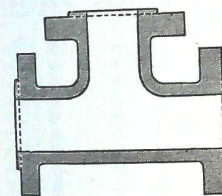


Fig. 83-Q Flanged Tee with Male Flanges

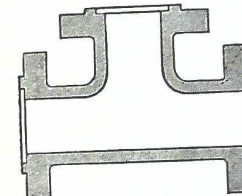


Fig. 83R Flanged Tee Tongued Flanges

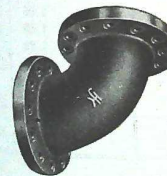


Fig. 83S Flanged Elbow Showing Bolt Holes Spot Faced



Fig. 83T Flanged Elbow Showing Wood Flange Protectors Bolted on

NOTE--For list prices, see page 172.

ORDER BY FIGURE NUMBERS

CAST IRON EXTRA HEAVY FLANGED FITTINGS

For 250 Pounds Working Pressure

NET PRICE LIST

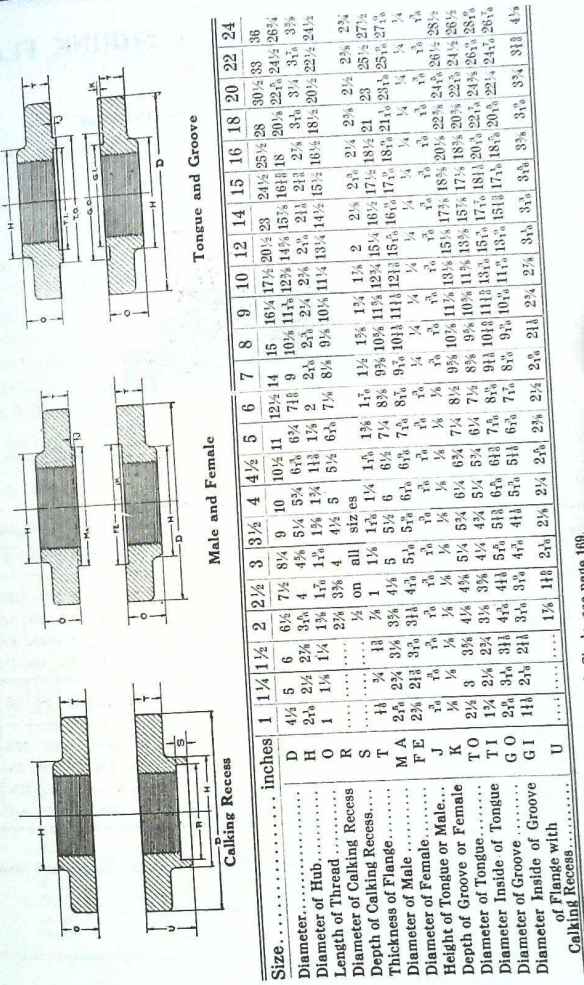
Size, Inches	EXTRA FOR MALE OR FEMALE, TONGUED OR GROOVED OR RAISED FACE FOR GRINDING			EXTRA FOR BOLTING COMPANION FLANGES TO FITTINGS NOT INCLUDING BOLTS			EXTRA FOR BOLTING ON WOOD FLANGE PROTECTORS WITH TWO BOLTS		
	Flanged Elbows, Tee, Reducers and Drip Pockets per Fitting	Flanged Tees and Side Outlet Elbows, per Fitting	Flanged Four-way, Tee, Crosses and Laterals and Laterals per Fitting	Flanged Elbows Reducers and Tee, Crosses per Fitting	Flanged Tee and Side Outlet Elbows per Fitting	Flanged Four-way Tee, Crosses and Laterals per Fitting	Flanged Elbows Reducers and Drip Pockets per Fitting	Flanged Tee and Side Outlet Elbows per Fitting	Flanged Four way Tee, Crosses and Laterals per Fitting
1 1/4	1.00	1.25	1.75	.20	.30	.40	.40	.60	.80
1 1/2	1.00	1.25	1.75	.20	.30	.40	.40	.60	.80
2	1.00	1.75	2.25	.20	.30	.40	.40	.60	.80
2 1/2	1.25	1.75	2.25	.20	.30	.40	.40	.60	.80
3	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
3 1/2	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
4	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
4 1/2	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
5	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
6	1.50	2.00	2.50	.40	.60	.80	.50	.75	1.00
7	1.50	2.00	2.50	.40	.60	.80	.60	.90	1.20
8	2.00	2.50	3.00	.40	.60	.80	.60	.90	1.20
9	2.00	2.50	3.00	.40	.60	.80	.60	.90	1.20
10	2.00	2.50	3.00	.40	.60	.80	.70	1.05	1.40
12	2.50	3.00	3.50	.50	.75	1.00	.70	1.05	1.40
14	3.25	4.00	5.00	.50	.75	1.00	.80	1.20	1.60
15	3.25	4.00	5.00	.50	.75	1.00	.80	1.20	1.60
16	4.00	5.00	6.00	.50	.75	1.00	.90	1.35	1.80
18	5.00	6.25	7.50	.50	.75	1.00	.90	1.35	1.80
20	6.00	7.50	9.00	.50	.75	1.00	1.00	1.50	2.00
22	8.00	10.00	10.00	.50	.75	1.00	1.00	1.50	2.00
24	10.00	12.50	12.50	.50	.75	1.00	1.00	1.50	2.00

Spot Facing Bolt Holes 5 cents, net, extra for each hole.
 Male, Female, Tongued or Grooved in any of the openings.
 The above net prices apply to straight and reducing sizes of Flanged Fittings.
 See template for drilling, page 169.

Hy-Tech ORDER BY FIGURE NUMBERS

GENERAL DIMENSIONS OF EXTRA HEAVY COMPANION FLANGES

For 250 Pounds Working Pressure



Tongue and Groove

Male and Female

Calking Recess

Size	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12	14	15	16	18	20	22	24
Diameter of Hub	4 1/4	5	6	6 3/4	7 1/4	8 1/4	9	10	10 3/4	11	12 1/2	14	15	16 1/2	18 1/2	20 3/4	23	24 1/2	25 1/2	28	30 3/4	33	36
Diameter of Groove or Male	2 1/2	3	3 1/4	4	4 1/4	5 1/4	5 3/4	6 1/4	6 3/4	7 1/4	8 1/4	9	10 1/4	11 1/4	12 1/4	14 1/4	15 1/4	16 3/4	18 1/4	21 1/4	23 1/4	24 1/4	26 1/4
Thickness of Flange	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/4	4	4 1/4	5	5 1/4	6 1/4	6 3/4	7 1/4	8 1/4	10 1/4	11 1/4	12 1/4	13 1/4	15 1/4	16 3/4	20 3/4	21 1/4
Diameter of Male	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/4	4	4 1/4	5	5 1/4	6 1/4	6 3/4	7 1/4	8 1/4	10 1/4	11 1/4	12 1/4	13 1/4	15 1/4	16 3/4	20 3/4
Diameter of Female	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/4	4	4 1/4	5	5 1/4	6 1/4	6 3/4	7 1/4	8 1/4	10 1/4	11 1/4	12 1/4	13 1/4	15 1/4	16 3/4	20 3/4
Height of Tongue or Male	3	3 1/4	3 1/2	4	4 1/4	4 1/2	5	5 1/4	5 3/4	6	6 3/4	7 1/4	8 1/4	9 1/4	10 1/4	12 1/4	13 1/4	14 1/4	15 1/4	16 3/4	20 3/4	21 1/4	
Depth of Groove or Female	3	3 1/4	3 1/2	4	4 1/4	4 1/2	5	5 1/4	5 3/4	6	6 3/4	7 1/4	8 1/4	9 1/4	10 1/4	12 1/4	13 1/4	14 1/4	15 1/4	16 3/4	20 3/4	21 1/4	
Diameter of Groove or Tongue	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/4	4	4 1/4	5	5 1/4	6 1/4	6 3/4	7 1/4	8 1/4	10 1/4	11 1/4	12 1/4	13 1/4	15 1/4	16 3/4	20 3/4
Diameter Inside of Tongue	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/4	4	4 1/4	5	5 1/4	6 1/4	6 3/4	7 1/4	8 1/4	10 1/4	11 1/4	12 1/4	13 1/4	15 1/4	16 3/4	20 3/4
Diameter Inside of Groove	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/4	4	4 1/4	5	5 1/4	6 1/4	6 3/4	7 1/4	8 1/4	10 1/4	11 1/4	12 1/4	13 1/4	15 1/4	16 3/4	20 3/4
Diameter of Flange with Calking Recess	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/4	4	4 1/4	5	5 1/4	6 1/4	6 3/4	7 1/4	8 1/4	10 1/4	11 1/4	12 1/4	13 1/4	15 1/4	16 3/4	20 3/4

For number and size of Bolts and Bolt Circle, see page 169.

ORDER BY FIGURE NUMBERS

CAST IRON EXTRA HEAVY SHRINK FLANGES

For 250 Pounds Working Pressure

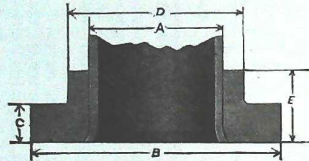


TABLE OF DIMENSIONS

Size..... inches	A	2	2½	3	3½	4	4½	5	6	7	8
Diameter of Flange..... inches	B	6½	7½	8½	9	10	10½	11	12½	14	15
Thickness of Flange..... "	C	¾	1	1¼	1½	1¾	1¾	1¾	1¾	1¾	1¾
Diameter of Hub..... "	D	3¾	4¾	4¾	5¾	6¾	6¾	7¾	8¾	9¾	10¾
Height of Flange..... "	E	2¾	3¾	3¾	3¾	3¾	3¾	4¾	4¾	4¾	4¾

Size..... inches	A	9	10	12	14	15	16	18	20	22	24
Diameter of Flange..... inches	B	16½	17½	20½	23	24½	25½	28	30½	33	36
Thickness of Flange..... "	C	1¾	1¾	2	2½	2¾	2¾	2¾	2¾	2¾	2¾
Diameter of Hub..... "	D	11¾	13¾	15¾	16¾	17¾	19¾	21¾	23¾	26	28¾
Height of Flange..... "	E	4½	4½	5½	5½	5½	6	6½	6½	6½	7½

NOTE—For variation such as Calking Recess, Male and Female, Tongue and Groove, see page 173.

Flanges of above table can also be spot faced or drilled for rivets.

These Flanges are bored and chamfered.

For drilling template, see page 169.

Hy-Tech Products

EXTRA PRICE FOR GALVANIZING

EXTRA HEAVY FLANGED FITTINGS AND FLANGES

Extra Heavy Cast Iron Flanged Fittings Will Be Galvanized to Order at an Advance, as Below, Over the Black Price

EXTRA LIST PRICE FOR GALVANIZING

Size	Fig. 77, Elbow Fig. 78A Reducing Elbow Fig. 78, 45° Elbow	Figs. 79, 82, 81 79A, 79B, 79C, 79D Tees and Reducing Tees Fig. 80B Base Elbows Fig. 78B Long Radius Elbow	Figs. 80 and 80A Crosses and Reducing Crosses Fig. 83, Laterals and Reducing Laterals	Figs. 83F to 83N Inclusive Companion Flanges	Fig. 83E Reducing Companion Flange Fig. 83C Solid Flange
Inches	Each, Extra	Each, Extra	Each, Extra	Each, Extra	Each, Extra
1¼	3.00	4.50	6.00	.85	1.25
1½	3.00	4.50	6.00	.85	1.25
2	3.00	4.50	6.00	1.00	1.50
2½	3.10	4.65	6.25	1.05	1.60
3	3.50	5.25	7.00	1.15	1.75
3½	4.10	6.15	8.25	1.40	2.10
4	4.50	6.75	9.00	1.65	2.50
4½	5.50	8.25	11.00	1.75	2.65
5	6.00	9.00	12.00	1.90	2.85
6	7.50	11.25	15.00	2.30	3.50
7	10.00	15.00	20.00	3.00	4.50
8	11.25	16.75	22.50	3.50	5.25
9	16.00	24.00	32.00	4.15	6.25
10	18.00	27.00	36.00	5.25	8.00
12	26.00	39.00	52.00	7.00	10.50
14	37.50	56.00	75.00	10.00	15.00
15	44.00	66.00	88.00	12.50	19.00
16	50.00	75.00	100.00	15.00	22.50

ORDER BY FIGURE NUMBERS

**SEMI-STEEL EXTRA HEAVY HYDRAULIC
FLANGED FITTINGS**

For 800 Pounds Working Pressure

Tested to 2000 Pounds Hydraulic Pressure per Square Inch

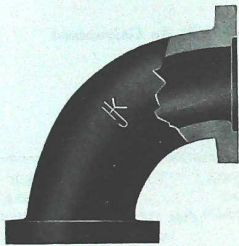


Fig. 83U Elbow



Fig. 83V 45° Elbow

MALE OR FEMALE

Size Inches	FLANGED ELBOWS		FLANGED 45° ELBOWS	
	Price Faced Each	Price Faced and Drilled Each	Price Faced Each	Price Faced and Drilled Each
1½	15.00	17.00	15.00	17.00
2	17.00	19.00	17.00	19.00
2½	18.00	20.50	18.00	20.50
3	20.00	22.50	20.00	22.50
3½	22.50	26.00	22.50	26.00
4	26.00	30.00	26.00	30.00
4½	33.50	37.50	33.50	37.50
5	38.00	42.00	38.00	42.00
6	46.00	50.00	46.00	50.00
7	57.50	65.00	57.50	65.00
8	67.50	75.00	67.50	75.00

NOTE—The above Fittings are made up to 8 inches, inclusive. Larger sizes can be furnished at special prices.

For dimensions, see page 179.

Template for drilling, page 178.

These Fittings are regularly furnished with male face, unless otherwise ordered.

Hy-Tech Products

**SEMI-STEEL EXTRA HEAVY HYDRAULIC
FLANGED FITTINGS**

For 800 Pounds Working Pressure

Tested to 2000 Pounds Hydraulic Pressure per Square Inch



Fig. 83W Tee

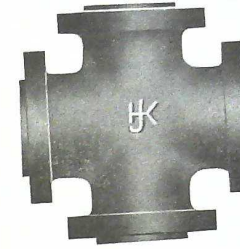


Fig. 83X Cross

MALE OR FEMALE

Size Inches	FLANGED TEES		REDUCING FLANGED TEES		FLANGED CROSSES		REDUCING FLANGED CROSSES	
	Price Faced Each	Price Faced and Drilled Each	Price Faced Each	Price Faced and Drilled Each	Price Faced Each	Price Faced and Drilled Each	Price Faced Each	Price Faced and Drilled Each
1½	20.00	22.50	20.00	22.50	28.50	31.50	28.50	31.50
2	22.50	25.00	22.50	25.00	32.00	35.00	32.00	35.00
2½	24.00	27.00	24.00	27.00	33.50	37.50	33.50	37.50
3	27.00	30.00	27.00	30.00	38.00	42.00	38.00	42.00
3½	30.00	35.00	30.00	35.00	43.00	49.00	43.00	49.00
4	35.00	40.00	35.00	40.00	49.00	55.00	49.00	55.00
4½	45.00	50.00	45.00	50.00	64.00	70.00	64.00	70.00
5	50.00	55.00	50.00	55.00	69.00	75.00	69.00	75.00
6	60.00	65.00	60.00	65.00	84.00	90.00	84.00	90.00
7	75.00	85.00	75.00	85.00	107.50	120.00	107.50	120.00
8	90.00	100.00	90.00	100.00	122.50	135.00	122.50	135.00

NOTE—The above Fittings are made in sizes up to 8 inches, inclusive. Larger sizes can be furnished at special prices.

For dimensions and template for drilling, see pages 178 and 179.

These Fittings are regularly furnished with male face, unless otherwise ordered.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY HYDRAULIC COMPANION FLANGES

For 800 Pounds Water Working Pressure

SEMI-STEEL



Fig. 84A Male Flange



Fig. 84B Female Flange

MALE OR FEMALE EXTRA HEAVY HYDRAULIC FLANGES

Size.....inches	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
Price, Faced.....each	1.70	1.80	2.50	3.20	3.50	3.90	4.35	4.60	6.50	7.50	8.40	10.25	13.00	20.00
" Faced and Drilled "	1.85	2.00	2.75	3.50	3.85	4.25	4.75	5.00	7.00	8.00	9.00	11.00	14.00	22.50



Fig. 84C



Fig. 84D

DIMENSIONS

Size.....inches	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
Diameter of Flange.....inches	6½	7½	8½	10	10½	11½	12½	13½	15	16	17	18½	21	23½
Thickness of Flange....."	1½	1¼	1½	1¾	1¾	1¾	1¾	1¾	2¼	2¼	2½	2¾	2¾	3¼
Diameter of Female....."	3½	3½	4½	5½	5½	6½	6½	7½	8½	9½	10½	11½	12½	15¼
Depth of Female....."	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾
Diameter of Male....."	3½	3½	4½	5	5½	6	6½	7¼	8¼	9¼	10¼	11¼	12¼	15¼
Thickness of Male....."	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾
Diameter of Hub....."	3¼	3¼	4¼	4¼	5¼	6	6¾	7¼	8¾	9¼	10¾	11¾	13	15¾
Diameter of Bolt Circle....."	5	5¾	6¾	8	8¼	9¾	10	11	12½	13¾	14¾	15¾	17¾	20¾
Number of Bolts.....	4	4	8	8	8	8	12	12	12	16	16	16	20	20
Size of Bolts.....inches	¾	¾	¾	¾	¾	1	1	1	1½	1½	1½	1½	1½	1¾
Length of Bolts....."	3¼	3¼	4	4¼	4¼	4¾	5	5¼	5¾	6	6¾	6¾	7¼	8

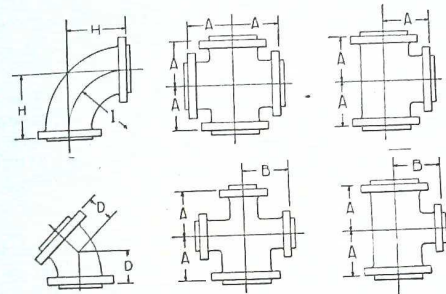
NOTE—Always state, when ordering, whether Male or Female is wanted.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

DIMENSIONS OF EXTRA HEAVY HYDRAULIC FLANGED FITTINGS

For 800 Pounds Water Working Pressure

SEMI-STEEL



Size.....inches	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
Diameter of Flanges.....inches	6½	7½	8½	10	10½	11½	12½	13½	15	16	17	18½	21	23½
Center to Face of Run or Outlet.....	A	5½	6	6½	7¼	8	8½	9½	10	11	11½	12½	13½	15
Straight or Reducing Tees & Crosses.....	H	7¼	8	8¾	9½	10	10¾	12¼	13¼	15	16½	17¾	20¼	22¼
Center to Face of Elbows.....	I	5¾	6¼	6¾	7¾	7¾	8¾	9¾	9¾	12	13	14¼	16¼	20
Radius of Sweep of Elbows.....	D	3¼	3¼	4	4½	5	5¼	5½	6	6½	7	7¼	7¾	8¾
Center to Face of 45° Elbows.....	D	3¼	3¼	4	4½	5	5¼	5½	6	6½	7	7¼	7¾	8¾

The length, center to face and face to face of Male, Female, Tongued or Grooved Extra Heavy Hydraulic Flanged Fittings are the same as Plain Faced, the measurements being from face of flange and not from tongue or recess.

Size.....inches	8	9	10	12
Size of Outlet.....inches	4½ and Smaller	4½ and Smaller	5 and Smaller	6 and Smaller
Center to Face of Run.....	A	10	10½	11
Center to Face of Outlet.....	B	12	13	14

* The dimensions of Reducing Fittings, sizes up to and including 7-inch, do not change by any reduction in the size of run or outlet, for larger sizes, short body pattern is used on smaller outlets—see lower table. Reducing Tees having outlet larger than the run will be governed by the dimensions of the Tee corresponding to the largest opening. For example—a 6x8-inch Tee will have the same dimensions as an 8-inch long body Tee, or 12½ inches center to face of all openings.

Dimensions of male and female faces, see page 178.

Template for drilling, see page 178.

ORDER BY FIGURE NUMBERS

Cast Steel Fittings

OWING to the increased demand for Steel Fittings, and to the lack of uniformity and quality in Castings purchased from steel foundries making a miscellaneous product, we decided, at no little expense to install our own Steel Foundry in order to make prompt deliveries and to maintain the high degree of excellence that has, at all times, been characteristic of the K. & J. product.

We can safely recommend our Steel Fittings under all conditions. The quality, strength, elasticity, elongation, reduction and bending are in accordance with the strictest specifications. The castings are free from sand holes and shrink holes.

None but the best grade raw material enters into the manufacture of our Steel Valves and Fittings, as our chemical laboratory is fully equipped for determining the quality of the raw material used.

We highly recommend our Cast Steel Fittings for all high pressure Saturated and Superheated Steam lines and extreme Hydraulic Service.

Send us your Specifications and Drawings for Special Steel Castings.

Cast Steel Valves Illustrated Page 427 to 442.

We list and illustrate a Standard Line of Cast Steel Fittings, but any other goods not shown can be made in Steel if desired at prices that will be furnished upon application.

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

FOR SUPERHEATED STEAM UP TO 350 POUNDS WORKING PRESSURE
AND A TOTAL TEMPERATURE OF 800 DEGREES

For Water Working Pressure from 500 to 1000 Pounds, According
to Size, 1 1/4 inch to 4 inch, 1000 Pounds; 4 1/2 inch to 8 inch,
800 Pounds; 9 inch to 24 inch, 500 Pounds.

Fittings for high pressure water lines have Male Face on flanges for which an extra price is charged. See page 195. For dimensions of Flanges, see page 204.

Special diameter of Flanges and special drilling will be furnished to order at an extra price. When ordering or making inquiry for prices on Special Flanged Fittings, submit dimension sketch or blue print.

The diameter of Flanges, thickness, bolt circle, size and number of bolts, on Steel Flanged Valves and Fittings are the latest established standards.

Reducing Flanged Fittings

On account of the large variety required, it is not possible to carry in stock a line of Cast Steel Reducing Flanged Fittings, but we have patterns for the sizes shown on the following pages, from which fittings can be made up on short notice. Prices on Application.

For sizes of Reducing Fittings not listed, we can furnish flanges as shown on page 200.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

For Superheated Steam up to 350 Pounds Working Pressure, and a Total Temperature of 800 Degrees.

For Water Working Pressures from 500 to 1000 Pounds, According to Size; 1 1/4 inch to 4 inch, 1000 Pounds; 4 1/2 inch to 8 inch, 800 Pounds; 9 inch to 24 inch, 500 Pounds



Fig. 1215 90° Elbow Steel



Fig. 1216 45° Elbow Steel

Size Inches	90° ELBOW		Center to Face Inches	Diameter of Flanges Inches	45° ELBOW		Center to Face Inches
	Faced Each	Faced Drilled and Spot Faced			Faced Each	Faced Drilled and Spot Faced	
1 1/4	9.00	11.00	4 1/4	5	9.00	11.00	2 1/2
1 1/2	10.00	12.00	4 1/2	6	10.00	12.00	2 3/4
2	11.00	13.00	5	6 1/2	11.00	13.00	3
2 1/2	13.00	15.00	5 1/2	7 1/2	13.00	15.00	3 1/2
3	14.00	17.00	6	8 1/4	14.00	17.00	4
3 1/2	17.00	20.00	6 1/2	9	17.00	20.00	4 1/2
4	19.00	22.00	7	10	19.00	22.00	4 3/4
4 1/2	22.00	25.00	7 1/2	10 1/2	22.00	25.00	4 3/4
5	24.00	27.00	8	11	24.00	27.00	5
5 1/2	25.00	33.00	8 1/2	12 1/2	25.00	33.00	5 1/2
6	28.00	41.00	9	14	28.00	41.00	6
6 1/2	43.00	48.00	10	15	43.00	48.00	6 1/2
7	52.00	57.00	10 1/2	16 1/4	52.00	57.00	7
8	61.00	67.00	11 1/2	17 1/2	61.00	67.00	7 1/2
9	77.00	84.00	13	20 1/2	77.00	84.00	8
10	100.00	108.00	15	25	100.00	108.00	8 1/2
12	112.00	120.00	16 1/4	24 1/2	112.00	120.00	9
14	130.00	140.00	16 1/2	25 1/2	130.00	140.00	9 1/2
16	170.00	180.00	18	28	170.00	180.00	10
18	210.00	225.00	19 1/2	30 1/2	210.00	225.00	10 1/2
20	270.00	290.00	20 1/2	33	270.00	290.00	11
22	300.00	335.00	22 1/2	36	300.00	335.00	12

Fittings for High Pressure Water Lines have Male Face on Flanges, for which an extra price is charged. See page 195.
For dimensions of Flanges, see page 204.
Dimensions and Templates for Drilling, page 197.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

For Superheated Steam up to 350 Pounds Working Pressure, and a Total Temperature of 800 Degrees

For Water Working Pressures from 500 to 1000 Pounds, According to Size; 1 1/4 to 4", 1000 Pounds; 4 1/2 to 8", 800 Pounds; 9 to 16", 500 Pounds



Fig. 1217 Taper Reducing Elbow

Size Inches	Faced Each	Faced Drilled and Spot Faced	Diameter of Flanges Inches	Center to Face Inches	Size Inches	Faced Each	Faced Drilled and Spot Faced	Diameter of Flanges Inches	Center to Face Inches
2 x 1 1/4	14.00	16.00	6 1/2 x 5	5	7 x 5	43.00	48.00	14 x 11	9
2 x 1 1/2	14.00	16.00	6 1/2 x 6	5	7 x 6	43.00	48.00	14 x 12 1/2	9
2 1/2 x 2	18.00	18.00	7 1/2 x 6	5 1/2	8 x 4	51.00	56.00	15 x 10	10
3 x 1 1/2	17.00	20.00	7 1/2 x 6 1/2	5 1/2	8 x 5	51.00	56.00	15 x 11	10
3 x 2	17.00	20.00	8 1/4 x 6	6	8 x 6	51.00	56.00	15 x 12 1/2	10
3 x 2 1/2	17.00	20.00	8 1/4 x 6 1/2	6	8 x 7	51.00	56.00	15 x 14	10
3 1/2 x 2	21.00	24.00	9 x 6 1/2	6 1/2	10 x 5	73.00	79.00	17 1/2 x 11	11 1/2
3 1/2 x 2 1/2	21.00	24.00	9 x 7 1/2	6 1/2	10 x 6	73.00	79.00	17 1/2 x 12 1/2	11 1/2
3 1/2 x 3	21.00	24.00	9 x 8 1/4	6 1/2	10 x 8	73.00	79.00	17 1/2 x 15	11 1/2
4 x 2	23.00	26.00	10 x 6 1/2	7	12 x 7	93.00	100.00	20 1/2 x 14	13
4 x 2 1/2	23.00	26.00	10 x 7 1/2	7	12 x 8	93.00	100.00	20 1/2 x 15	13
4 x 3	23.00	26.00	10 x 8 1/4	7	12 x 9	93.00	100.00	20 1/2 x 16 1/2	13
4 x 3 1/2	23.00	26.00	10 x 9	7	14 x 6	93.00	100.00	20 1/2 x 17 1/2	13
5 x 2 1/2	29.00	32.00	11 x 7 1/2	8	14 x 10	120.00	128.00	23 x 12 1/2	15
5 x 3	29.00	32.00	11 x 8 1/4	8	14 x 12	120.00	128.00	23 x 17 1/2	15
5 x 4	29.00	32.00	11 x 10	8	15 x 6	135.00	143.00	24 1/2 x 12 1/2	15 1/2
6 x 3	35.00	39.00	12 1/2 x 8 1/4	8 1/2	15 x 10	135.00	143.00	24 1/2 x 17 1/2	15 1/2
6 x 3 1/2	35.00	39.00	12 1/2 x 9	8 1/2	15 x 12	135.00	143.00	24 1/2 x 20 1/2	15 1/2
6 x 4	35.00	39.00	12 1/2 x 10	8 1/2	16 x 8	155.00	165.00	25 1/2 x 15	16 1/2
6 x 4 1/2	35.00	39.00	12 1/2 x 10 1/2	8 1/2	16 x 10	155.00	165.00	25 1/2 x 17 1/2	16 1/2
6 x 5	35.00	39.00	12 1/2 x 11	8 1/2	18 x 12	155.00	165.00	25 1/2 x 20 1/2	16 1/2
7 x 4	43.00	48.00	14 x 10	9	16 x 14	155.00	165.00	25 1/2 x 23	16 1/2

Fittings for High Pressure Water Lines have Male Face on Flanges, for which an extra price is charged. See page 195.

For dimensions of Flanges, see page 204.
Flanged Taper Reducing Elbows, not listed above, will be made to order at special prices.
Dimensions and Templates for drilling, see page 197.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

For Superheated Steam up to 350 Pounds Working Pressure and a Total Temperature of 800 Degrees

For Water Working Pressures From 500 to 1000 Pounds, According to Size; 4", 1000 Pounds; 4½ to 8", 800 Pounds; 9 to 24", 500 Pounds.



Fig. 1218 Base Elbow, Steel, Round or Square Base.

Size Inches	Faced Except Base Flange Each	Faced Drilled and Spot Faced Except Base Flange	Facing Drilling and Spot Facing Base Flange	Diameter of Flanges Except Base Flange Inches	Center to Face Inches	Center to Face of Round or Square Base Inches	Diameter of Base Flange Inches	Size of Pipe for Supporting Round Base Elbows Inches
4	28.00	32.00	3.00	10	7	7	6½	2
4½	33.00	37.00	3.00	10½	7½	7½	6½	2
5	37.00	41.00	3.00	11	8	8	7½	2½
6	44.00	50.00	3.00	12½	8½	8	7½	2½
7	54.00	61.00	6.00	14	9	8¾	7½	2½
8	63.00	70.00	6.00	15	10	9¼	10	4
9	76.00	83.00	8.00	16½	10½	10	10	4
10	88.00	97.00	8.00	17½	11½	10½	10	4
12	110.00	120.00	10.00	20½	13	11	12½	6
14	148.00	160.00	12.00	23	15	14	12½	6
15	165.00	177.00	13.00	24½	15½	14½	12½	6
16	190.00	205.00	15.00	25½	16½	15¼	12½	6
18	.....	.....	.....	28	18	15¾	15	8
20	.....	.....	.....	30½	19½	16¾	15	8
22	.....	.....	.....	33	20½	17¾	17½	10
24	.....	.....	.....	36	22½	18¾	17½	10

Fittings for High Pressure Water Lines have Male Face on Flanges, for which an extra price is charged. See page 195. For Dimensions of Flanges, see page 204. Sizes above 16", prices on application.

Edge to Edge of Square Base is same measurement as diameter of Round Base.

Flanged Base Tees made to order. Prices on application.

Dimensions and Templates for drilling, page 197.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

For Superheated Steam up to 350 Pounds Working Pressure, and a Total Temperature of 800 Degrees

For Water Working Pressures from 500 to 1000 Pounds, According to Size; 2 to 4" 1000 Pounds; 4½ to 8", 800 Pounds; 9 to 24", 500 Pounds.



Fig. 1219, Steel, Long Radius Elbow

Size Inches	Faced Each	Faced Drilled and Spot Faced	Diameter of Flanges Inches	Radius Inches	Center to Face Inches
2	14.00	17.00	6½	5¼	6½
2½	16.00	19.00	7½	5¾	7
3	18.00	22.00	8¼	6¼	7¾
3½	22.00	26.00	9	6¾	8½
4	25.00	29.00	10	7¼	9
4½	30.00	34.00	10½	7¾	9½
5	35.00	39.00	11	8¼	10¼
6	42.00	48.00	12½	9¾	11½
7	52.00	59.00	14	10¾	12¾
8	63.00	70.00	15	12	14
9	72.00	79.00	16¼	13	15¼
10	83.00	92.00	17¾	14¼	16¾
12	105.00	115.00	20½	16¾	19
14	145.00	157.00	23	18¾	21½
15	160.00	172.00	24½	20	22¾
16	190.00	205.00	25½	21¼	24
18	.....	.....	28	23¾	26½
20	.....	.....	30½	26	29
22	.....	.....	33	28¾	31½
24	.....	.....	36	30¾	34

Fittings for High Pressure Water Lines have Male Face on Flanges, for which an extra price is charged. See page 195. Dimensions of Flanges, page 204.

For Long Radius Elbows, sizes above 16", prices on application.

Long Radius Elbows, different dimensions than above, made to order at special prices.

Dimensions and Template for drilling, page 197.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

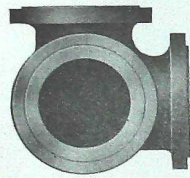


Fig. 1220 Steel Side Outlet Elbow

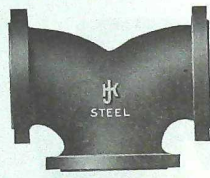


Fig. 1221 Steel Double Branch Elbow

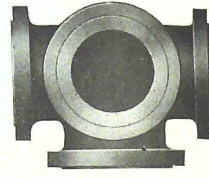


Fig. 1222 Steel Four-way Tee

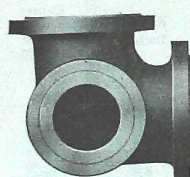


Fig. 1223 Steel Side Outlet Elbow Reducing



Fig. 1224 Steel Double Branch Elbow Reducing

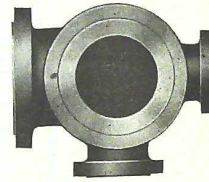


Fig. 1225 Steel Four-way Tee Reducing

The above Fittings are made to order only in sizes 2 to 24". Prices furnished on application
 Reducing Side Outlet Elbows are made reducing on the Side Outlet only.
 Double Branch Elbows are made reducing only on the Run. Dimensions on page 197.
 When ordering, or requesting prices, send sketch showing sizes of all openings.

ORDER BY FIGURE NUMBERS
 Hy-Tech Products

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

For Superheated Steam up to 350 Pounds Working Pressure, and a Total Temperature of 800 Degrees

For Water Working Pressures from 500 to 1000 Pounds, According to Size:
 1 1/4 to 4", 1000 Pounds; 4 1/2 to 8", 800 Pounds; 9 to 24", 500 Pounds



Fig. 1226 Tee, Steel



Fig. 1227, Tee, Steel Reducing on Side



Fig. 1228, Tee, Steel Reducing on Run

Size Inches	TEES		Diameter of Flanges	REDUCING TEES	
	Faced Each	Faced, Drilled and Spot Faced		Faced Each	Faced, Drilled and Spot Faced
1 1/4	13.00	16.00	5	.....	.....
1 1/2	14.00	17.00	6	.....	.....
2	15.00	18.00	6 1/2	15.00	18.00
2 1/2	17.00	20.00	7 1/2	17.00	20.00
3	19.00	23.00	8 1/2	19.00	23.00
3 1/2	22.00	26.00	9	22.00	26.00
4	25.00	29.00	10	25.00	29.00
4 1/2	30.00	34.00	10 1/2	30.00	34.00
5	33.00	37.00	11	33.00	37.00
6	40.00	46.00	12 1/2	40.00	46.00
7	49.00	56.00	14	49.00	56.00
8	58.00	65.00	15	58.00	65.00
9	69.00	76.00	16 1/2	69.00	76.00
10	81.00	90.00	17 1/2	81.00	90.00
12	100.00	110.00	20 1/2	100.00	110.00
14	135.00	147.00	23	135.00	147.00
15	150.00	162.00	24 1/2	150.00	162.00
16	175.00	190.00	25 1/2	175.00	190.00
18	230.00	245.00	28	230.00	245.00
20	300.00	320.00	30 1/2	300.00	320.00
22	375.00	405.00	33	375.00	405.00
24	460.00	490.00	36	460.00	490.00

Fittings for High Pressure Water Lines have Male Face on Flanges, for which an extra price is charged. See page 195. For dimensions of Flanges, see page 204.
 Dimensions and Templates for drilling, page 197.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

For Superheated Steam up to 350 Pounds Working Pressure, and a Total Temperature of 800 Degrees

For Water Working Pressures from 500 to 1000 Pounds, According to Size; 2 to 4", 1000 Pounds; 4½ to 8", 800 Pounds; 9 to 24", 500 Pounds.



Fig. 1229 Steel Single Sweep Tee



Fig. 1230 Steel Single Sweep Tee, Reducing, Reducing in Run or Branch

Size Inches	SINGLE SWEEP TEES		Diameter of Flanges Inches	REDUCING SINGLE SWEEP TEES	
	Faced Each	Faced, Drilled and Spot Faced		Faced Each	Faced, Drilled and Spot Faced
2	18.50	19.50	6½	.....	.....
2½	19.00	22.00	7½	19.00	22.00
3	21.00	25.00	8¼	21.00	25.00
3½	24.00	28.00	9	24.00	28.00
4	28.00	32.00	10	28.00	32.00
4½	33.00	37.00	10½	33.00	37.00
5	37.00	41.00	11	37.00	41.00
6	44.00	50.00	12½	44.00	50.00
7	54.00	61.00	14	54.00	61.00
8	63.00	70.00	15	63.00	70.00
9	76.00	83.00	16½	76.00	83.00
10	88.00	97.00	17½	88.00	97.00
12	110.00	120.00	20½	110.00	120.00
14	148.00	160.00	23	148.00	160.00
15	165.00	177.00	24½	165.00	177.00
16	190.00	205.00	25½	190.00	205.00
18	255.00	270.00	28	255.00	270.00
20	330.00	350.00	30½	330.00	350.00
22	415.00	445.00	33	415.00	445.00
24	505.00	535.00	36	505.00	535.00

Fittings for High Pressure Water Lines have Male Face on Flanges, for which an extra price is charged. See page 195.

For Dimensions of Flanges, see page 204.

Single Sweep Tees are not made with side openings larger than the Run.

Dimensions and Templates for drilling, page 197.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

For Superheated Steam up to 350 Pounds Working Pressure, and a Total Temperature of 800 Degrees

For Water Working Pressures from 500 to 1000 Pounds, According to Size; 2 to 4", 1000 Pounds; 4½ to 8", 800 Pounds; 9 to 24", 500 Pounds



Fig. 1231 Steel Single Sweep Tee



Fig. 1232 Steel Double Sweep Tee, Reducing, Reducing in Run or Branch

Size Inches	DOUBLE SWEEP TEES		Diameter of Flanges Inches	REDUCING DOUBLE SWEEP TEES	
	Faced Each	Faced Drilled and Spot Faced		Faced Each	Faced, Drilled and Spot Faced
2	16.50	19.50	6½	.....	.....
2½	19.00	22.00	7½	19.00	22.00
3	21.00	25.00	8¼	21.00	25.00
3½	24.00	28.00	9	24.00	28.00
4	28.00	32.00	10	28.00	32.00
4½	33.00	37.00	10½	33.00	37.00
5	37.00	41.00	11	37.00	41.00
6	44.00	50.00	12½	44.00	50.00
7	54.00	61.00	14	54.00	61.00
8	63.00	70.00	15	63.00	70.00
9	76.00	83.00	16½	76.00	83.00
10	88.00	97.00	17½	88.00	97.00
12	110.00	120.00	20½	110.00	120.00
14	148.00	160.00	23	148.00	160.00
15	165.00	177.00	24½	165.00	177.00
16	190.00	205.00	25½	190.00	205.00
18	255.00	270.00	28	255.00	270.00
20	330.00	350.00	30½	330.00	350.00
22	415.00	445.00	33	415.00	445.00
24	505.00	535.00	36	505.00	535.00

Fittings for High Pressure Water Lines have Male Face on Flanges, for which an extra price is charged. See page 195. For Dimensions of Flanges, see page 204. Double Sweep Tees are not made Reducing on the Run, unless so specified. Special prices on application.

Dimensions and Templates for drilling, page 197.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

For Superheated Steam up to 350 Pounds Working Pressure, and a Total Temperature of 800 Degrees

For Water Working Pressures from 500 to 1000 Pounds, According to Size; 2 to 4", 1000 Pounds; 4½ to 8", 800 Pounds; 9 to 24", 500 Pounds



Fig. 1236 Steel Flanged Taper Reducer



Fig. 1237 Steel Flanged Eccentric Taper Reducer

Size Inches	Diameter of Flanges Inches	Face to Face Inches	Size Inches	Diameter of Flanges Inches	Face to Face Inches	Size Inches	Diameter of Flanges Inches	Face to Face Inches
3 x 2	8¼ x 6½	6	8 x 5	15 x 11	11	15x14	24½ x 23	17
3½ x 2½	9 x 7½	6½	8 x 6	15 x 12½	11	16 x 8	25½ x 15	18
4 x 2	10 x 6½	7	9 x 4	16¼ x 10	11½	16x10	26¼ x 17½	18
4 x 2½	10 x 7½	7	9 x 5	16¼ x 11	11½	16x12	26¼ x 20½	18
4 x 3	10 x 8½	7	9 x 6	16¼ x 12½	11½	16x14	26¼ x 23	18
4½ x 2	10½ x 6½	7½	9 x 8	16¼ x 15	11½	18x10	28 x 17½	19
4½ x 3	10½ x 8½	7½	10 x 4	17½ x 10	12	18x12	28 x 20½	19
5 x 2	11 x 6½	8	10 x 5	17½ x 11	12	18x14	28 x 23	19
5 x 2½	11 x 7½	8	10 x 6	17½ x 12½	12	18x16	28 x 25½	19
5 x 3	11 x 8½	8	10 x 8	17½ x 15	12	20x12	30½ x 20½	20
5 x 4	11 x 10	8	12 x 5	20½ x 11	14	20x14	30½ x 23	20
6 x 3	12½ x 8½	9	12 x 6	20½ x 12½	14	20x16	30½ x 25½	20
6 x 3½	12½ x 9	9	12 x 8	20½ x 15	14	20x18	30½ x 28	20
6 x 4	12½ x 10	9	12 x 10	20½ x 17½	14	22x14	33 x 23	22
6 x 5	12½ x 11	9	14 x 6	23 x 12½	16	22x16	33 x 25½	22
7 x 3	14 x 8½	10	14 x 8	23 x 15	16	22x18	33 x 28	22
7 x 4	14 x 10	10	14 x 10	23 x 17½	16	22x20	33 x 30½	22
7 x 5	14 x 11	10	14 x 12	23 x 20½	16	24x16	36 x 25½	24
7 x 6	14 x 12½	10	15 x 8	24½ x 15	17	24x18	36 x 28	24
8 x 3	15 x 8½	11	15 x 10	24½ x 17½	17	24x20	36 x 30½	24
8 x 4	15 x 10	11	15 x 12	24½ x 20½	17	24x22	36 x 33	24

Fittings for High Pressure Water Lines have Male Face on Flanges, for which an extra price is charged. See page 195. For dimensions of Flanges, see page 204. Templates for drilling, page 197. Flanged Taper Reducers as above, or any other dimensions, will be made to order.

Prices on application.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

CAST STEEL SPECIAL FLANGED FITTINGS FOR ALL PRESSURES AND TEMPERATURES



Fig. 1238 Elbow with Clean-out Flange

Fig. 1239 Flanged Y

Fig. 1240 Special Angle Elbows 5°, 11°, 22½°, 30°, 60°

Fig. 1241 Elbow Showing where Tapped Drain Bosses May Be Located

Fig. 1242 Tee Showing where Tapped Drain Bosses May Be Located

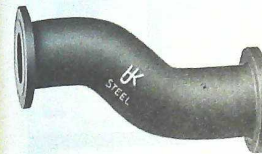


Fig. 1243 Offset



Fig. 1244 Bevelled Filling Ring Faced Both Sides for Closing Up Between 2 Flanges Which Do Not Face Squarely



Fig. 1245 Return Bend



Fig. 1246 Return Bend with Back Outlet



Fig. 1247 Saddle Nozzle



Fig. 1248 Double Lateral



Fig. 1249 Cast Iron Pipe with Flange and Spigot

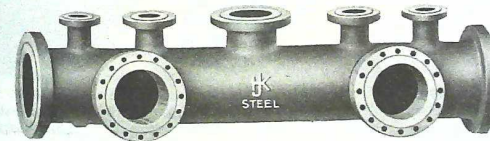


Fig. 1250 Distributing Header

Flanged Fittings are made in many different designs for special purposes, and the above cuts show some of the patterns we have made. We can furnish the above or any other designs, and in ordering, submit sketch showing the design wanted and complete dimensions. Prices quoted upon application.



Fig. 1251 Ring Closing Piece Faced Both Sides 6" or Less in Length

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EXTRA HEAVY
CAST STEEL FLANGED FITTINGS

SPECIAL FACING

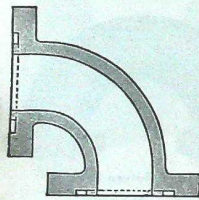


Fig. 1252 Steel Flanged Elbow with Grooved Flanges

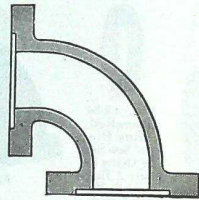


Fig. 1253 Steel Flanged Elbow with Female Flanges

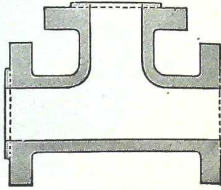


Fig. 1254 Steel Flanged Tee with Male Flanges

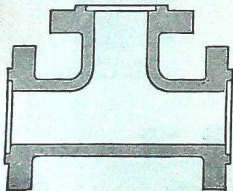


Fig. 1255 Steel Flanged Tee with Tongued Flanges

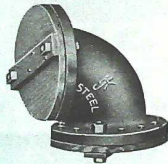


Fig. 1256 Steel Elbow showing Wood Flange Protectors Bolted on



Fig. 1257 Steel Flanged Elbow showing Holes Spot Faced

Prices for Special Facing on the following page.

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EXTRA HEAVY
CAST STEEL FLANGED FITTINGS

EXTRA NET PRICES FOR SPECIAL FACING, ETC.

Extra Net Prices for Special Facing

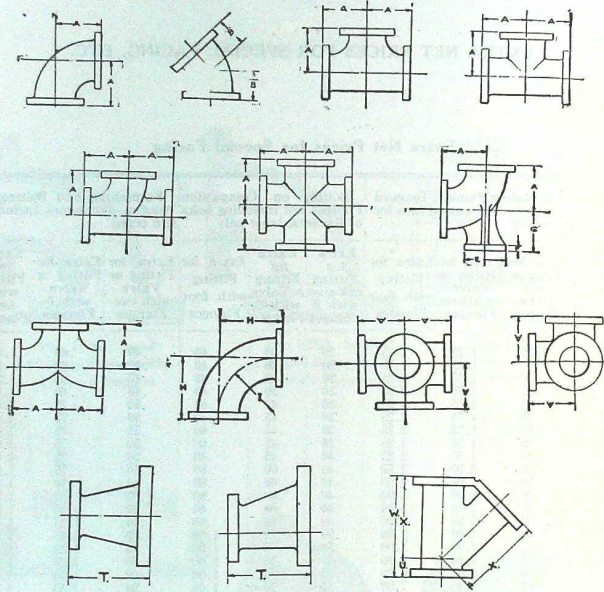
Size Inches	For Male or Female, Tongued or Grooved, or raised face for Grinding.			Bolting on Companion Flanges, not including bolts or Gaskets, labor only.			Furnishing and Bolting on Wooden Protectors, including two bolts.		
	Extra for Fitting or Valve with two Flanges	Extra for Fitting or Valve with three Flanges	Extra for Fitting with four Flanges	Extra for Fitting or Valve with 2 Flanges	Extra for Fitting or Valve with 3 Flanges	Extra for Fitting with four Flanges	Extra for Fitting or Valve with two Flanges	Extra for Fitting or Valve with 3 Flanges	Extra for Fitting with four Flanges
1 1/4	1.00	1.25	1.75	.20	.30	.40	.40	.60	.80
1 1/2	1.00	1.25	1.75	.20	.30	.40	.40	.60	.80
2	1.00	1.75	2.25	.20	.30	.40	.40	.60	.80
2 1/2	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
3	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
3 1/2	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
4	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
4 1/2	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
5	1.25	1.75	2.25	.30	.45	.60	.50	.75	1.00
6	1.50	2.00	2.50	.40	.60	.80	.60	.90	1.20
7	1.50	2.00	2.50	.40	.60	.80	.60	.90	1.20
8	2.00	2.50	3.00	.40	.60	.80	.60	.90	1.20
9	2.00	2.50	3.00	.40	.60	.80	.70	1.05	1.40
10	2.00	2.50	3.00	.40	.60	.80	.70	1.05	1.40
12	2.50	3.00	3.50	.50	.75	1.00	.80	1.20	1.60
14	3.25	4.00	5.00	.50	.75	1.00	.80	1.20	1.60
15	3.25	4.00	5.00	.50	.75	1.00	.80	1.20	1.60
16	4.00	5.00	6.00	.50	.75	1.00	.90	1.35	1.80
18	5.00	6.25	7.50	.50	.75	1.00	.90	1.35	1.80
20	6.00	7.50	9.00	.50	.75	1.00	1.00	1.50	2.00
22	8.00	10.00	10.00	.50	.75	1.00	1.00	1.50	2.00
24	10.00	12.50	12.50	.50	.75	1.00	1.00	1.50	2.00

Unless otherwise specified, Cast Steel Flanged Fittings, when ordered faced and drilled, will always be furnished with Spot Faced bolt holes. Above net prices apply to both straight and reducing sizes. In order to avoid mistakes in facing Flanges, we would recommend that a drawing be furnished. Gaskets furnished when ordered at a special price.

Dimensions of Male, Female, Tongued and Grooved Flanges, page 204.

ORDER BY FIGURE NUMBERS

DIMENSIONS OF EXTRA HEAVY CAST STEEL FLANGED FITTINGS



Flanged Fittings are drilled in multiples of four, so that they may be made to face in any quarter, and bolt holes straddle the center line.

Unless otherwise specified, we will always furnish our Extra Heavy Flanged Fittings, Companion Flanges and Valves with 1/8" Raised Face, for which no extra charge is made. This style of Facing will hold any Gasket, and is especially necessary where a thin Corrugated Copper Gasket is used, as this Gasket draws down very thin, and without the Raised Face, the heavy bolting would spring the Flanges until the edges touch without putting sufficient pressure upon the Gasket.

The Length, Center to Face, and Face to Face of Male, Female, Tongued or Grooved Extra Heavy Flanged Fittings, the measurements given are from Face to Face of Flange, and not from Tongue or Recess, with the exception of the Raised Face Flanges, the dimensions of which in all cases will be the measurement to the Face of Raised Face. For Facing dimensions, see page 204.

In the Table of Dimensions given, the dimensions are regulated by the size of the outlet.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

GENERAL DIMENSIONS AND TEMPLATES FOR DRILLING

EXTRA HEAVY CAST STEEL FLANGED FITTINGS

Table with columns for Size (inches) and rows for various fitting types: AA-Face to Face, A-Center to Face, B-Center to Face, etc. Dimensions are listed for sizes from 1 1/2 to 24 inches.

All Reducing Fittings 1 to 16" inclusive are the same dimensions as straight sizes Center to Face. Variations from above General Dimensions of Extra Heavy Reducing Flanged Fittings, Sizes 18 to 48", with Small Outlet, Short Body Pattern.

Table for Reducing Fittings, Sizes 18 to 48", with Small Outlet, Short Body Pattern. Columns for Size (inches) and rows for Size of Outlet and smaller, Face to Face on Run-AA, etc.

If the outlet is larger than given in this Lower Table, use the Upper Table.

REDUCING FLANGED LATERALS—Short Body Pattern

Table for Reducing Flanged Laterals—Short Body Pattern. Columns for Size (inches) and rows for Size of Branch and Smaller, Face to Face of Run, etc.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL COMPANION FLANGES

FOR SUPERHEATED STEAM UP TO 350 POUNDS WORKING PRESSURE
AND A TOTAL TEMPERATURE OF 800 DEGREES

For Water Working Pressure from 500 to 1000 Pounds, According
to Size, 1 inch to 4 inch, 1000 Pounds; 4½ to 8 inch,
800 Pounds; 9 inch to 24 inch, 500 Pounds.

The diameter, thickness, bolt circle, size and number of bolts of our Extra Heavy Cast Steel Companion Flanges, Flanged Fittings and Valves are the latest established standards, adopted by all of the leading manufacturers.

Companion Flanges for High Pressure Water Lines are equipped with Male Face, for which an extra price is charged as listed on page 203. For dimensions of Flanges, refer to page 204.

Reducing Ribbed Companion Flanges

These Flanges, used in connection with Straight or Stock size Reducing Fittings, enable us to fill all orders for Reducing Fittings without delay, and if fittings are desired reduced in this manner, specify on your order "Reduce by flanges if necessary".

Reducing Flanges will always be the same thickness as the Regular Companion Flanges of corresponding outside diameter and unless otherwise specified are always drilled to the template corresponding to the outside diameter.

In ordering Reducing Companion Flanges always give the screwed or reduced size first, then the outside diameter of the flange.

Fittings regularly carried in stock have a 1-16 inch raised face on flanges and bolt holes are spot faced.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY CAST STEEL COMPANION FLANGES



Fig. 1258
Raised Face



Fig. 1259
Spot Face Bolt Holes

Size Inches	Faced Each	Faced and Drilled Each	Spot Facing Net Each	Bolts Per Set for One Joint	Threading Pipe, Making On, and Refacing, not including Flange, net Each
1 x 4½	5.00	5.50	.20	.....	.60
1½ x 5	5.40	6.00	.20	.....	.65
1½ x 6	5.90	6.50	.20	.....	.70
2 x 6½	6.90	7.50	.20	.25	.75
2½ x 7½	7.30	8.50	.40	.40	.85
3 x 8½	8.70	10.00	.40	.40	.90
3½ x 9	12.10	13.50	.40	.40	.95
4 x 10	14.80	16.50	.40	.80	1.00
4½ x 10½	15.80	17.50	.40	.80	1.10
5 x 11	16.80	18.50	.40	.80	1.25
6 x 12½	20.40	22.00	.60	1.15	1.35
7 x 14	24.70	27.50	.60	1.80	1.55
8 x 15	27.00	30.00	.60	1.80	1.80
9 x 16½	29.50	32.50	.60	2.60	2.00
10 x 17½	34.50	37.50	.80	2.75	2.75
12 x 20½	46.00	50.00	.80	3.60	3.50
14 x 23	55.50	60.00	1.00	4.75	3.75
15 x 24½	64.00	70.00	1.00	4.75	4.75
16 x 25½	78.00	85.00	1.20	5.60	7.00
18 x 28	98.00	105.00	1.20	8.30	8.25
20 x 30½	117.00	125.00	1.40	10.00	9.50
22 x 33	140.00	150.00	1.40	10.00	11.00
24 x 36	165.00	175.00	1.40	10.00	

Cast Steel Companion Flanges, when ordered faced and drilled, will always be furnished with Spot Faced bolt holes, unless otherwise ordered, at an extra price as per above list.

Dimensions and Templates for drilling, page 204. Special Facing Methods, also Prices and Dimensions of Special Facing, pages 198 to 204.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY REDUCING CAST STEEL
COMPANION FLANGES

WITH RIBS



Fig. 1260 Steel

Size Inches	Faced Each	Faced and Drilled Each	Spot Facing Net Each	Size Inches	Faced Each	Faced and Drilled Each	Spot Facing Net Each
1 1/4 x 6	9.50	10.50	.20	3 x 12 1/2	30.90	32.50	.60
1 1/2 x 8 1/2	10.80	11.00	.20	4 x 12 1/2	30.90	32.50	.60
1 3/4 x 7 1/2	10.80	12.00	.20	4 1/2 x 12 1/2	30.90	32.50	.60
1 3/4 x 8 1/2	12.70	14.00	.40	5 x 12 1/2	36.70	39.50	.60
2 x 8 1/2	12.70	14.00	.40	5 1/2 x 14	40.00	43.00	.60
2 1/4 x 8 1/2	12.70	14.00	.40	6 x 14	40.00	43.00	.60
2 1/2 x 9	18.10	19.50	.40	3 x 15	40.00	43.00	.60
2 3/4 x 9	18.10	19.50	.40	3 1/2 x 15	40.00	43.00	.60
3 x 10	21.80	23.50	.40	4 x 15	40.00	43.00	.60
3 1/4 x 10	21.80	23.50	.40	7 x 15	40.00	43.00	.60
3 3/8 x 10 1/2	23.80	25.50	.40	4 x 16 1/4	44.00	47.00	.60
3 1/2 x 10 1/2	23.80	25.50	.40	5 x 16 1/4	44.00	47.00	.60
3 3/4 x 10 1/2	23.80	25.50	.40	6 x 16 1/4	44.00	47.00	.60
4 x 10 1/2	23.80	25.50	.40	8 x 16 1/4	44.00	47.00	.60
4 1/4 x 11	24.80	26.50	.40	5 x 17 1/2	52.00	55.00	.80
4 1/2 x 11	24.80	26.50	.40	6 x 17 1/2	52.00	55.00	.80
4 3/4 x 11	24.80	26.50	.40	8 x 17 1/2	52.00	55.00	.80
5 x 11 1/2	24.80	26.50	.40	9 x 17 1/2	70.00	74.00	.80
5 1/4 x 12 1/2	24.80	26.50	.40	6 x 20 1/2	70.00	74.00	.80
5 1/2 x 12 1/2	30.90	32.50	.60	7 x 20 1/2	70.00	74.00	.80
6 x 12 1/2	74.00	74.00	.80	9 x 20 1/2	70.00	74.00	.80
6 1/2 x 14	74.00	74.00	.80	10 x 20 1/2	70.00	74.00	.80
7 x 14	85.00	85.00	1.00	12 x 20 1/2	85.00	85.00	1.00
8 x 14	85.00	85.00	1.00	14 x 20 1/2	85.00	85.00	1.00
8 1/2 x 16	85.00	85.00	1.00	15 x 24 1/2	84.00	84.00	1.00
9 x 16	85.00	85.00	1.00	16 x 24 1/2	84.00	84.00	1.00
9 1/2 x 16	85.00	85.00	1.00	18 x 24 1/2	84.00	84.00	1.00
10 x 16	85.00	85.00	1.00	10 x 25 1/2	115.00	115.00	1.00
10 1/2 x 16	85.00	85.00	1.00	11 x 25 1/2	115.00	115.00	1.00
11 x 16	85.00	85.00	1.00	12 x 25 1/2	115.00	115.00	1.00
11 1/2 x 16	85.00	85.00	1.00	14 x 25 1/2	115.00	115.00	1.00
12 x 16	85.00	85.00	1.00	15 x 25 1/2	115.00	115.00	1.00
12 1/2 x 16	85.00	85.00	1.00	16 x 28	145.00	145.00	1.20
13 x 16	85.00	85.00	1.00	18 x 28	145.00	145.00	1.20
13 1/2 x 16	85.00	85.00	1.00	16 x 30 1/2	175.00	175.00	1.20
14 x 16	85.00	85.00	1.00	18 x 30 1/2	175.00	175.00	1.20
14 1/2 x 16	85.00	85.00	1.00	20 x 30 1/2	183.00	183.00	1.20
15 x 16	85.00	85.00	1.00	22 x 30 1/2	183.00	183.00	1.20
15 1/2 x 16	85.00	85.00	1.00	24 x 33	210.00	210.00	1.40
16 x 16	85.00	85.00	1.00	26 x 33	210.00	210.00	1.40
16 1/2 x 16	85.00	85.00	1.00	28 x 36	250.00	250.00	1.40
17 x 16	85.00	85.00	1.00	30 x 36	250.00	250.00	1.40
17 1/2 x 16	85.00	85.00	1.00				
18 x 16	85.00	85.00	1.00				
18 1/2 x 16	85.00	85.00	1.00				
19 x 16	85.00	85.00	1.00				
19 1/2 x 16	85.00	85.00	1.00				
20 x 16	85.00	85.00	1.00				
20 1/2 x 16	85.00	85.00	1.00				
21 x 16	85.00	85.00	1.00				
21 1/2 x 16	85.00	85.00	1.00				
22 x 16	85.00	85.00	1.00				
22 1/2 x 16	85.00	85.00	1.00				
23 x 16	85.00	85.00	1.00				
23 1/2 x 16	85.00	85.00	1.00				
24 x 16	85.00	85.00	1.00				
24 1/2 x 16	85.00	85.00	1.00				
25 x 16	85.00	85.00	1.00				
25 1/2 x 16	85.00	85.00	1.00				
26 x 16	85.00	85.00	1.00				
26 1/2 x 16	85.00	85.00	1.00				
27 x 16	85.00	85.00	1.00				
27 1/2 x 16	85.00	85.00	1.00				
28 x 16	85.00	85.00	1.00				
28 1/2 x 16	85.00	85.00	1.00				
29 x 16	85.00	85.00	1.00				
29 1/2 x 16	85.00	85.00	1.00				
30 x 16	85.00	85.00	1.00				
30 1/2 x 16	85.00	85.00	1.00				
31 x 16	85.00	85.00	1.00				
31 1/2 x 16	85.00	85.00	1.00				
32 x 16	85.00	85.00	1.00				
32 1/2 x 16	85.00	85.00	1.00				
33 x 16	85.00	85.00	1.00				
33 1/2 x 16	85.00	85.00	1.00				
34 x 16	85.00	85.00	1.00				
34 1/2 x 16	85.00	85.00	1.00				
35 x 16	85.00	85.00	1.00				
35 1/2 x 16	85.00	85.00	1.00				
36 x 16	85.00	85.00	1.00				
36 1/2 x 16	85.00	85.00	1.00				
37 x 16	85.00	85.00	1.00				
37 1/2 x 16	85.00	85.00	1.00				
38 x 16	85.00	85.00	1.00				
38 1/2 x 16	85.00	85.00	1.00				
39 x 16	85.00	85.00	1.00				
39 1/2 x 16	85.00	85.00	1.00				
40 x 16	85.00	85.00	1.00				

Bolts per set for one joint, see Price List, page 199. Cast Steel Reducing Companion Flanges, when ordered faced and drilled, will always be furnished with Spot Faced bolt holes at an extra price, unless otherwise ordered. See Price List above table. Dimensions and drilling Templates, page 204.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY CAST STEEL BLIND
FLANGES



Fig. 1261 Steel

Size Inches	Faced Each	Faced and Drilled Each	Spot Facing Net Each
1 1/2 x 6	.....	.....	.....
2 x 6 1/2	8.40	9.00	.20
2 1/2 x 7 1/2	8.80	10.00	.20
3 x 8 1/2	10.70	12.00	.40
3 1/2 x 9	14.60	16.00	.40
4 x 10	18.30	20.00	.40
4 1/2 x 10 1/2	19.80	21.50	.40
5 x 11	20.80	22.50	.40
6 x 12 1/2	24.90	26.50	.60
7 x 14	30.70	33.50	.60
8 x 15	34.00	37.00	.60
9 x 16 1/4	37.00	40.00	.60
10 x 17 1/2	52.00	55.00	.80
12 x 20 1/2	70.00	74.00	.80
14 x 23	85.00	90.00	1.00
15 x 24 1/2	94.00	100.00	1.00
16 x 25 1/2	115.00	122.00	1.00
18 x 28	145.00	152.00	1.20
20 x 30 1/2	175.00	183.00	1.20
22 x 33	210.00	220.00	1.40
24 x 36	250.00	260.00	1.40

Bolt holes per set for one joint, see Price List, page 199.
Cast Steel Blind Flanges, when ordered faced and drilled, will always be furnished with Spot Faced bolt holes, at an extra price, unless otherwise ordered. See Price List above table.
Special Eccentric Flanges, page 193. Dimensions and drilling Templates, page 204.

ORDER BY FIGURE NUMBERS

METHODS OF FACING

EXTRA HEAVY CAST STEEL COMPANION FLANGES



Fig. 1262 Steel Raised Face



Fig. 1263 Steel Male Face



Fig. 1264 Steel Female Face



Fig. 1265 Steel Spot Faced Bolt Holes



Fig. 1266 Steel Tongued Face



Fig. 1267 Steel Grooved Face



Fig. 1268 Steel Calking Recess

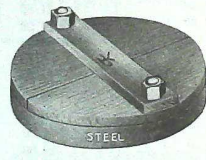


Fig. 1269 Steel showing Wooden Flange Protectors Bolted on



Fig. 1270 Steel showing Companion Flanges Bolted together

For price list of above see following page.
Gaskets will only be furnished when specified and at an extra charge.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

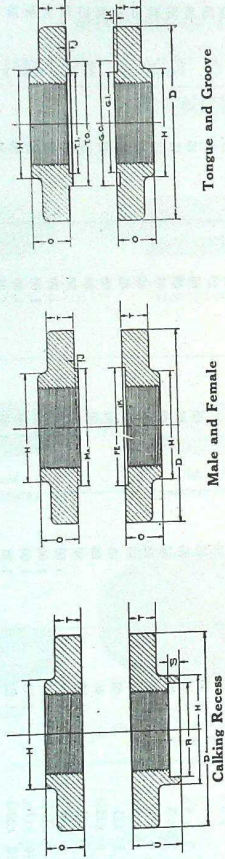
NET PRICE LIST FOR SPECIAL FACING OF
EXTRA HEAVY CAST STEEL COMPANION FLANGES

Size Inches	Extra for Male or Female Face, per Flange	Extra for Tongued or Grooved Face per Flange	Extra for 1/8" Raised Face per Flange	Extra for Calking Recess per Flange	Extra for Bolting on Fittings not including the 2 Gaskets per Flange	Extra for Wooden Protectors including the 2 bolts, per Flange
1 x 4 1/2	.50	.50	.50	.50	.10	.20
1 1/4 x 5	.50	.50	.50	.50	.10	.20
1 1/2 x 6	.50	.50	.50	.50	.10	.20
2 x 6 1/2	.50	.50	.50	.50	.10	.20
2 1/2 x 7 1/2	.65	.65	.65	.65	.10	.20
3 x 8 1/2	.65	.65	.65	.65	.15	.25
3 1/2 x 9	.65	.65	.65	.65	.15	.25
4 x 10	.65	.65	.65	.65	.15	.25
4 1/2 x 10 1/2	.65	.65	.65	.65	.15	.25
5 x 11	.65	.65	.65	.65	.15	.25
6 x 12 1/2	.80	.80	.80	.80	.20	.30
7 x 14	.80	.80	.80	.80	.20	.30
8 x 16 1/2	1.00	1.00	1.00	1.00	.20	.30
9 x 17 1/2	1.00	1.00	1.00	1.00	.20	.30
10 x 19 1/2	1.00	1.00	1.00	1.00	.20	.30
12 x 21 1/2	1.25	1.25	1.25	1.25	.25	.35
14 x 23	1.60	1.60	1.60	1.60	.25	.40
15 x 24 1/2	1.60	1.60	1.60	1.60	.25	.40
16 x 25 1/2	2.00	2.00	2.00	2.00	.25	.45
18 x 28	2.50	2.50	2.50	2.50	.25	.50
20 x 30 1/2	3.00	3.00	3.00	3.00	.25	.50
22 x 33	4.00	4.00	4.00	4.00	.25	.50
24 x 36	5.00	5.00	5.00	5.00	.25	.50

ORDER BY FIGURE NUMBERS

GENERAL DIMENSIONS OF EXTRA HEAVY CAST STEEL COMPANION FLANGES

AND SPECIAL FACING DIMENSIONS OF EXTRA HEAVY CAST STEEL FLANGED FITTINGS, FLANGES AND EXTRA HEAVY VALVES



Size	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12	14	15	16	18	20	22	24
H-Diameter of Hub	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	14	15	16 1/2	18 1/2	20 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30 1/2	32 1/2
D-Thickness of Flange	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	14	15	16 1/2	18 1/2	20 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30 1/2
T-Thickness of Pipe Thread	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
O-Outside Diameter of Flange	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	14	15	16 1/2	18 1/2	20 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30 1/2	32 1/2	34 1/2	36 1/2
L-Inside Diameter of Groove	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	14	15	16 1/2	18 1/2	20 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30 1/2
G-Outside Diameter of Groove	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	14	15	16 1/2	18 1/2	20 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30 1/2
K-Depth of Groove (Female)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
R-Depth of Groove (Male)	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
S-Depth of Calking Recess	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
U-Height of Flange with Calking Recess	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	14	15	16 1/2	18 1/2	20 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30 1/2

ORDER BY FIGURE NUMBERS

Hy-Tech Products

TEMPLATES FOR DRILLING

EXTRA HEAVY CAST STEEL FLANGED VALVES AND FLANGED FITTINGS

Size Inches	Diameter of Flanges Inches	Thickness of Flanges Inches	Bolt Circle Inches	Number of Bolts	STEAM Size of Bolts Inches	Length of Bolts Inches
1	4 1/2	1 1/2	3 3/4	4	3/4	2
1 1/2	5	3/4	3 3/4	4	3/4	2 1/4
1 3/4	6	1 1/2	4 1/2	4	3/4	2 1/2
2	6 1/2	7/8	5	4	3/4	2 1/2
2 1/2	7 1/2	1	5 1/2	4	3/4	3
3	8 1/2	1 1/2	6 1/2	8	3/4	3 1/4
3 1/2	9	1 1/2	7 1/2	8	3/4	3 1/4
4	10 1/2	1 3/4	7 3/4	8	3/4	3 1/2
4 1/2	10 3/4	1 3/4	8 1/2	8	3/4	3 1/2
5	11	1 3/4	9 1/2	8	3/4	3 3/4
6	12 1/2	1 3/4	10 1/2	12	3/4	3 3/4
7	14	1 1/2	11 1/2	12	3/4	4
8	15	1 3/4	13	12	3/4	4 1/4
9	16 1/2	1 3/4	14	1	1	4 3/4
10	17 1/2	1 3/4	15 1/2	16	1	5
12	20 1/2	2	17 3/4	16	1 1/4	5 1/2
14	23	2 1/2	20 1/4	20	1 1/4	5 3/4
15	24 1/2	2 1/2	21 1/2	20	1 1/4	6
16	25 1/2	2 1/2	22 1/2	20	1 1/4	6
18	28	2 3/4	24 3/4	24	1 1/4	6 1/4
20	30 1/2	2 3/4	27	24	1 3/4	6 1/4
22	33	2 3/4	29 1/4	24	1 3/4	7
24	36	2 3/4	32	24	1 3/4	7 1/4

These Drilling Templates are in multiples of four, so that fittings may be made to face in any quarter, and bolt holes straddle the center line.

Bolt holes are drilled 1/8 inch larger than nominal diameter of bolts.

Cast Steel Valves, Flanged Fittings and Flanges, when ordered faced and drilled, unless otherwise specified, will always be furnished with spot faced bolt holes.

For dimensions of tongued and grooved, and Male and Female Flanges, see page 204.

ORDER BY FIGURE NUMBERS

PRICE LIST FOR DRILLING
AND
SPOT FACING

EXTRA HEAVY CAST STEEL FLANGED VALVES

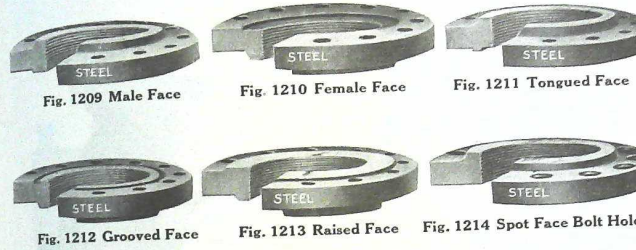
SIZE INCHES	GLOBE OR STRAIGHT-WAY EACH	ANGLE EACH
1¼	2.75	.....
1½	2.75	.....
2	3.00	3.50
2½	3.25	3.75
3	3.75	4.25
3½	4.00	4.50
4	4.50	5.00
4½	4.75	5.25
5	5.00	5.50
6	6.00	7.00
7	7.00	8.00
8	8.00	9.00
9	9.00	10.00
10	10.00	11.00
12	12.00	13.50
14	14.00	16.00
15	15.00	17.00
16	16.00	.....
18	20.00	.....
20	25.00	.....
22	30.00	.....
24	32.00	.....

Extra prices for special facing, see following page.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

PRICE LIST FOR SPECIAL FACING OF
FLANGES

EXTRA HEAVY CAST STEEL VALVES



Size..... inches	1	1¼	1½	2	2½	3	3½	4
For Male, Female, Tongued, Grooved or Raised Faces, add net per Valve with two Flanges.....	1.00	1.00	1.00	1.00	1.25	1.25	1.25	1.25
For Male, Female, Tongued, Grooved or Raised Faces, add net per Valve with three Flanges.....	1.25	1.25	1.25	1.75	1.75	1.75	1.75	1.75
Size..... inches	4½	5	6	7	8	9	10	12
For Male, Female, Tongued, Grooved or Raised Faces, add net per Valve with two Flanges.....	1.25	1.25	1.50	1.50	2.00	2.00	2.00	2.50
For Male, Female, Tongued, Grooved or Raised Faces, add net per Valve with three Flanges.....	1.75	1.75	2.00	2.00	2.50	2.50	2.50	3.00
Size..... inches	14	15	16	18	20	22	24	
For Male, Female, Tongued, Grooved or Raised Faces, add net per Valve with two Flanges.....	3.25	3.25	4.00	5.00	6.00	8.00	10.00	.....
For Male, Female, Tongued, Grooved or Raised Faces, add net per Valve with three Flanges.....	4.00	4.00	5.00	6.25	7.50	10.00	12.50	.....

All Flanges of Extra Heavy Cast Steel Valves, unless otherwise specified, will be furnished with 1/8" Raised Face, for which no extra charge is made.

Cast Steel Flanged Valves, when ordered faced and drilled, unless otherwise specified, will always be furnished with Spot Faced Bolt Holes, which is included in the list prices for drilling, page 206.

For dimensions of Flanges, see page 204.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY HYDRAULIC CAST STEEL
FLANGED FITTINGS

Tested to 3000 Pounds Hydraulic Pressure.
For 3000 Pounds Cold Water Working Pressure

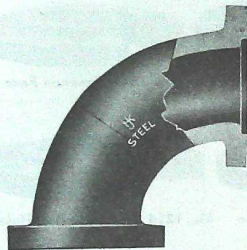


Fig. 1278 90° Elbow, Steel

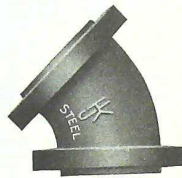


Fig. 1279 45° Elbow, Steel

MALE OR FEMALE FACE

Size Inches	Inside Diameter of Port Inches	90° ELBOWS		45° ELBOWS	
		Faced Each	Faced, Drilled and Spot Faced	Faced Each	Faced, Drilled and Spot Faced
1½	1¼	29.00	32.50	29.00	32.50
2	1½	31.50	35.00	31.50	35.00
2½	2	35.00	40.00	35.00	40.00
3	2½	42.50	47.50	42.50	47.50
4	3	51.50	57.50	51.50	57.50
5	4	68.50	77.50	68.50	77.50
6	5	80.00	90.00	80.00	90.00

For dimensions, see page 210.
Templates for drilling, page 211.
In ordering specify whether Male or Female Face is desired.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY HYDRAULIC CAST STEEL
FLANGED FITTINGS

Tested to 3000 Pounds Hydraulic Pressure.
For 3000 Pounds Cold Water Working Pressure



Fig. 1280 Tee, Steel.

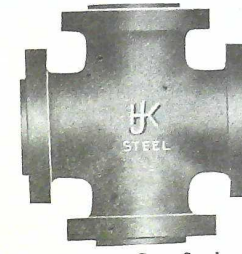


Fig. 1281 Cross, Steel

MALE OR FEMALE FACE

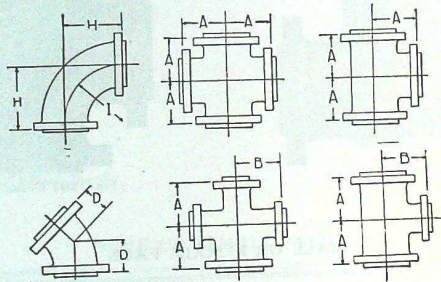
Size Inches	Inside Diameter of Port Inches	TEES		TEES, REDUCING		CROSSES		CROSSES, REDUCING	
		Faced Each	Faced, Drilled and Spot Faced	Faced Each	Faced, Drilled and Spot Faced	Faced Each	Faced, Drilled and Spot Faced	Faced Each	Faced, Drilled and Spot Faced
1½	1¼	35.00	40.00	35.00	40.00	53.00	60.00	53.00	60.00
2	1½	37.50	42.50	37.50	42.50	57.00	64.00	57.00	64.00
2½	2	41.00	48.00	41.00	48.00	62.00	72.00	62.00	72.00
3	2½	48.00	55.00	48.00	55.00	72.00	82.00	72.00	82.00
4	3	58.50	67.50	58.50	67.50	88.00	100.00	88.00	100.00
5	4	78.00	90.00	78.00	90.00	117.00	135.00	117.00	135.00
6	5	96.00	110.00	96.00	110.00	145.00	165.00	145.00	165.00

For dimensions, see page 210.
Templates for drilling, page 211.
In ordering specify whether Male or Female Face is desired.

ORDER BY FIGURE NUMBERS

DIMENSIONS OF
EXTRA HEAVY HYDRAULIC CAST STEEL
FLANGED FITTINGS

For Cold Water Working Pressure up to 3000 Pounds



Size..... inches	1½	2	2½	3	3½	4	4½	5	6
Diameter of Flanges..... inches	6½	7½	8¾	10	10¾	11½	12½	13½	15
Straight or Reducing Tees & Crosses	A 5½	6	6½	7½	8	8½	9½	10	11
Center to Face of Elbows.....	H 7½	8	8¾	9½	10	10¾	11½	12½	13½
Radius of Sweep of Elbows.....	I 5½	6½	6	7½	7¾	8½	9½	9¾	12
Center to Face of 45° Elbows.....	D 3½	3½	4	4½	5	5½	5½	6	6½

The length, center to face and face to face of Male, Female, Tongued or Grooved Extra Heavy Hydraulic Flanged Fittings are the same as Plain Faced, the measurements being from face of flange and not from tongue or recess.

The Dimensions of Reducing Fittings, sizes up to and including 6 inch, do not change by any reduction in the size of run or outlet.

Reducing Tees having outlet larger than the run will be governed by the dimensions of Tee corresponding to the largest opening, for example: a 4x4x6 inch Tee will have the same dimensions as a 6 inch Tee, 11 inches center to face of all openings.

Dimensions of Male and Female Faces and templates for drilling on the following page.

Hy-Tech Products

EXTRA HEAVY HYDRAULIC CAST STEEL
COMPANION FLANGES

For Cold Water Working Pressure up to 3000 Pounds.



Fig. 1282, Steel Male Flange



Fig. 1283, Steel Female Flange

MALE OR FEMALE EXTRA HEAVY HYDRAULIC FLANGES

Size..... inches	1½	2	2½	3	4	5	6
Price, Faced..... each	7.75	8.25	8.75	9.75	11.50	13.75	17.50
Faced, Drilled and Spot Faced.....	8.50	9.00	10.00	11.00	13.00	16.00	20.00



Fig. 1284, Steel



Fig. 1285, Steel

DIMENSIONS

Size..... inches	1½	2	2½	3	4	5	6
Diameter of Flange..... inches	6½	7½	8¾	10	11¼	13¼	15
Thickness of Flange.....	¾	1	1¼	1¼	1¾	1¾	1¾
Diameter of Female.....	2¾	2¾	3¾	4	5¼	6¼	7¼
Depth of Female.....	¾	¾	¾	¾	¾	¾	¾
Diameter of Male.....	2¼	2¼	3¼	3¼	5	6¼	7¼
Thickness of Male.....	¾	¾	¾	¾	¾	¾	¾
Diameter of Hub.....	2¾	3¾	4	4½	5¾	6¾	7¾
Diameter of Bolt Circle.....	5	5¾	6¾	8	9¾	11	12½
Number of Bolts.....	4	4	8	8	8	12	12
Size of Bolts..... inches	¾	¾	¾	¾	1	1	1
Length of Bolts.....	2¼	3¼	3¼	3¼	4¼	4¼	4¼

NOTE—Always state, when ordering, whether Male or Female is wanted.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL SCREWED FITTINGS

For Superheated Steam up to 350 Pounds Working Pressure, and a Total Temperature of 800 Degrees

For Water Working Pressures From 2000 to 5000 Pounds, According to Size; 1" and Smaller, 5000 Pounds; 1 1/4 to 2", 3500 Pounds; 2 1/2 to 4 1/2", 2500 Pounds; 5 and 6", 2000 Pounds



Fig. 1271 90° Elbow, Steel



Fig. 1272 45° Elbow, Steel



Fig. 1273 Tee, Steel



Fig. 1274 Cross, Steel

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Price, 90° Elbows.....each	1.40	1.50	1.60	1.75	2.10	2.50	4.00
" 45° Elbows....."	1.40	1.50	1.60	1.75	2.10	2.50	4.00
" Tees....."	2.10	2.25	2.40	2.65	3.15	3.75	6.00
" Crosses....."	2.80	3.00	3.20	3.50	4.20	5.00	8.00

Size.....inches	3	3 1/2	4	4 1/2	5	6
Price, 90° Elbows.....each	6.00	7.75	8.50	10.00	12.00	16.50
" 45° Elbows....."	6.00	7.75	8.50	10.00	12.00	16.50
" Tees....."	9.00	11.50	12.75	15.00	18.00	25.00
" Crosses....."	12.00	15.50	17.00	20.00	24.00	33.00

These Fittings have a longer radius than the ordinary fitting, reducing friction to the minimum.
Reducing sizes made to order at a special price.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

WROUGHT PIPE --- Prices in Effect January 1, 1913



STANDARD WROUGHT PIPE—Fig. 136A

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Thickness.....inches	.088	.088	.091	.109	.113	.133	.140	.145
Nominal Weight per ft. Plain Ends, lbs.	.244	.424	.567	.850	1.13	1.67	2.27	2.71
Number Threads per Inch of Screw.....	27	18	18	14	14	11 1/2	11 1/2	11 1/2
Price.....per foot	.05 1/2	.06	.06	.08 1/2	.11	.17	.23	.27 1/2

Size.....inches	3 1/2	4	4 1/2	5	6	7	8	9	10	11	12
Thickness.....inches	.226	.237	.247	.258	.280	.301	.322	.342	.365	.375	.375
Nominal Weight per ft. Plain Ends, lbs.	9.10	10.79	12.53	14.61	18.97	23.54	28.55	33.90	40.48	45.55	49.56
Number Threads per Inch of Screw.....	8	8	8	8	8	8	8	8	8	8	8
Price.....per foot	.92	1.09	1.27	1.48	1.92	2.38	2.88	3.45	4.12	4.63	5.07

EXTRA STRONG WROUGHT PIPE

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2
Actual Outside Diameter.....inches	.405	.540	.675	.840	1.05	1.31
Nominal Inside Diameter....."	.215	.302	.423	.546	.742	.957
Thickness....."	.095	.119	.126	.147	.154	.179
Nominal Weight per ft. Plain Ends, lbs.	.314	.535	.798	1.08	1.47	2.17
Price.....per foot	.12	.07 1/2	.07 1/2	.11	.15	.22

Size.....inches	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8
Actual Outside Diameter.....inches	2.87	3.50	4.00	4.50	5.00	5.56	6.62	7.62	8.62
Nominal Inside Diameter....."	2.32	2.90	3.36	3.82	4.29	4.81	5.76	6.62	7.62
Thickness....."	.276	.300	.318	.337	.355	.375	.432	.500	.500
Nominal Weight per ft. Plain Ends, lbs.	7.66	10.25	12.50	14.98	17.61	20.77	28.57	38.04	43.38
Price.....per foot	.77	1.03	1.25	1.50	1.80	2.08	2.86	3.81	4.34

DOUBLE EXTRA STRONG WROUGHT PIPE

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Actual Outside Diameter.....inches	.840	1.05	1.31	1.66	1.90	2.37	2.87	3.50
Nominal Inside Diameter....."	.252	.434	.599	.896	1.10	1.50	1.77	2.30
Thickness....."	.294	.308	.358	.382	.400	.436	.552	.600
Nominal Weight per ft. Plain Ends.....lbs.	1.71	2.44	3.65	5.21	6.40	9.02	13.69	18.5
Price.....per foot	.32	.35	.37	.52 1/2	.65	.91	1.37	1.86

Size.....inches	3 1/2	4	4 1/2	5	6	7	8
Actual Outside Diameter.....inches	4.00	4.50	5.00	5.56	6.62	7.62	8.62
Nominal Inside Diameter....."	2.72	3.15	3.58	4.06	4.89	5.87	6.87
Thickness....."	.636	.674	.710	.750	.864	.875	.875
Nominal Weight per ft. Plain Ends.....lbs.	22.8	27.5	32.5	38.5	53.1	63.0	72.4
Price.....per foot	2.30	2.76	3.26	3.86	5.32	6.35	7.25

Extra Strong Pipe furnished plain ends. Extra charge for threads and sockets.

ORDER BY FIGURE NUMBERS

WROUGHT COUPLINGS



Fig. 136 B

WROUGHT IRON COUPLINGS

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price.....each	.05	.06	.07	.10	.13	.17	.21	.28
" Galvanized....."	.06	.07	.08	.10	.13	.18	.25	.32
" Right and Left....."	.07	.08	.11	.15	.20	.25	.30	.40
" R. and L. Galv....."	.08	.08	.10	.14	.18	.23	.33	.41

Size.....inches	3 1/2	4	4 1/2	5	6	7	8	9	10	12	14
Price.....each	.80	1.00	1.50	1.65	2.40	3.25	4.25	5.50	7.50	10.00	18.75
" Galvanized....."	1.05	1.40	2.00	2.25	3.25	4.20	5.50	7.00	9.75	13.65	23.85
" Right and Left....."	1.60	2.00	3.00	3.50	5.00	6.50	8.50	11.00	14.50	20.00	36.00
" R. and L. Galv....."	1.90	2.40	3.50	4.00	5.50	7.00	9.00	11.50	15.50	21.00	38.00

LINE PIPE, DRIVE PIPE AND TUBING COUPLINGS



Fig. 136 C

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2
Price.....each	.10	.12	.15	.25	.30	.40	.60	.80	1.30	1.50	2.00
" Galvanized....."	.14	.16	.21	.37	.46	.57	.85	1.15	1.90	2.15	2.85
" R. & L. Plain....."	.15	.18	.23	.38	.45	.70	1.20	1.60	2.60	3.00	7.75
" R. & L. Galv....."	.21	.25	.31	.53	.63	.98	1.70	2.25	3.65	4.20	9.15

Size.....inches	5	6	7	8	9	10	11	12	13	14	15
Price.....each	2.40	2.80	3.85	4.00	5.00	6.00	8.00	10.00	13.00	17.00	20.00
" Galvanized....."	3.45	4.00	5.55	5.00	7.25	8.75	10.75	11.15	13.75	17.75	25.00
" R. & L. Plain....."	8.50	9.75	10.00	11.50	12.00	14.75	16.75	18.25	.....	.....	.....
" R. & L. Galv....."	10.50	12.00	12.75	15.75	16.75	20.25	23.20	25.50	.....	.....	.....

ORDER BY FIGURE NUMBERS
Hy-Tech Products

WROUGHT NIPPLES
THREADED RIGHT HAND



Fig. 128 Close

Fig. 128A Long

Fig. 129 Short

Close	Short	LENGTH, INCHES			Size Inches	PRICES			PRICES OF EXTRA LONG NIPPLES										
		4	5	6		Close	Short	Long	LENGTH, INCHES										
1/4	1 1/2	2	2 1/2	3	1/4	.04	.06	.07	4	5	6	7	8	9	10	11	12		
1/4	1 1/2	2	2 1/2	3	3/4	.04	.06	.07	4	5	6	7	8	9	10	11	12		
1/4	1 1/2	2	2 1/2	3	1	.05	.07	.08	4	5	6	7	8	9	10	11	12		
1/4	1 1/2	2	2 1/2	3	1 1/4	.06	.09	.10	4	5	6	7	8	9	10	11	12		
1/4	1 1/2	2	2 1/2	3	1 1/2	.08	.13	.15	4	5	6	7	8	9	10	11	12		
1/4	1 1/2	2	2 1/2	3	1 3/4	.11	.17	.20	4	5	6	7	8	9	10	11	12		
1/4	1 1/2	2	2 1/2	3	2	.18	.27	.32	4	5	6	7	8	9	10	11	12		
1/2	2	2 1/2	3	3 1/2	2 1/4	.39	.59	.68	4	5	6	7	8	9	10	11	12		
1/2	2	2 1/2	3	3 1/2	2 1/2	.48	.72	.85	4	5	6	7	8	9	10	11	12		
1/2	2	2 1/2	3	3 1/2	3	.75	1.05	1.20	4	5	6	7	8	9	10	11	12		
1/2	2	2 1/2	3	3 1/2	3 1/2	.85	1.20	1.52	4	5	6	7	8	9	10	11	12		
1/2	2	2 1/2	3	3 1/2	4	1.25	1.70	2.25	4	5	6	7	8	9	10	11	12		
3/4	3	3 1/2	4	4 1/2	4 1/2	1.55	2.45	2.58	4	5	6	7	8	9	10	11	12		
3/4	3	3 1/2	4	4 1/2	5	1.85	2.90	3.05	4	5	6	7	8	9	10	11	12		
3/4	3	3 1/2	4	4 1/2	5	3.20	3.60	4.05	4	5	6	7	8	9	10	11	12		
3/4	3	3 1/2	4	4 1/2	6	5.25	6.50	7.10	4	5	6	7	8	9	10	11	12		
4	4	4 1/2	5	5 1/2	6	6.75	8.25	8.90	4	5	6	7	8	9	10	11	12		
4	4	4 1/2	5	5 1/2	6	8.00	10.00	10.80	4	5	6	7	8	9	10	11	12		

For prices of Extra Long Nipples, sizes 13 to 24-inch, double the list of the smaller thus: The list of an Extra Long Nipple, as above, 1/2x7, is 12c; the price, therefore, of a Nipple 1/2x14 is 24c. Nipples made to order from extra heavy pipe at double above list, and special discount, according to quantity ordered.

All our Nipples are made from new pipe, and ends are reamed and chamfered.

LOCKNUT OR TANK NIPPLES—Not Illustrated.

List same as Standard Nipples. 2-inch and smaller always furnished 6 inches long, unless otherwise specified. 2 1/2-inch and larger, length must be specified.

LONG SCREW, WITH COUPLING AND LOCKNUT FACED

Made from Extra Heavy Pipe

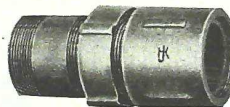


Fig. 43

Size.....inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price, Black.....each	.30	.35	.40	.55	.75	1.00	1.30	1.70	2.70	3.70	5.40	6.60
Galvanized....."	.35	.40	.50	.66	1.00	1.25	1.60	2.10	3.10	4.70	6.75	8.25
Standard Length.....inches	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	8 1/2	9

ORDER BY FIGURE NUMBERS

WROUGHT NIPPLES
THREADED RIGHT AND LEFT

Close	LENGTH, INCHES						PRICES			PRICES OF EXTRA LONG NIPPLES												
	Short	Long					Size Inches	Close	Short	Long	LENGTH, INCHES											
		4	5	6	7	8					9	10	11	12								
3/4	1 1/2	2	2 1/2	3	3 1/2	4	3/4	.05	.08	.09	.11	.13	.16	.18	.20	.23	.25	.27				
1	1 1/2	2	2 1/2	3	3 1/2	4	1	.05	.08	.09	.11	.13	.16	.18	.20	.23	.25	.27				
1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	1 1/4	.05	.08	.09	.11	.13	.16	.18	.20	.23	.25	.27				
1 1/2	1 1/2	2	2 1/2	3	3 1/2	4	1 1/2	.07	.10	.11	.13	.16	.18	.21	.24	.27	.29	.31				
1 3/4	2	2 1/2	3	3 1/2	4	4 1/2	1 3/4	.08	.12	.13	.15	.17	.20	.23	.27	.29	.32	.35				
2	2 1/2	3	3 1/2	4	4 1/2	5	2	.11	.15	.16	.18	.21	.24	.28	.31	.34	.37	.41				
2 1/4	2 1/2	3	3 1/2	4	4 1/2	5 1/2	2 1/4	.15	.23	.24	.27	.32	.39	.46	.50	.55	.60	.65				
2 1/2	2 1/2	3	3 1/2	4	4 1/2	5 1/2	2 1/2	.18	.27	.28	.31	.37	.45	.52	.57	.62	.67	.72				
2 3/4	3	3 1/2	4	4 1/2	5	5 1/2	2 3/4	.24	.36	.37	.43	.51	.61	.72	.80	.87	.96	1.03				
3	3	3 1/2	4	4 1/2	5	5 1/2	3	.52	.79	.80	.91	1.20	1.30	1.40	1.55	1.68	1.80					
3 1/4	4	4 1/2	5	5 1/2	6	6 1/2	3 1/4	.65	.96	.97	1.13	1.44	1.60	1.77	1.93	2.10	2.27					
3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	3 1/2	1.00	1.46	1.47	1.75	1.95	2.15	2.35	2.55	2.75						
3 3/4	4	4 1/2	5	5 1/2	6	6 1/2	3 3/4	1.15	1.60	1.61	2.00	2.25	2.50	2.75	3.00	3.25						

For prices of Extra Long Nipples, sizes 13 to 24-inch, double the list of the smaller thus: The list of an Extra Long Nipple, as above, 1/4x7, is 16c; the price list, therefore, of a Nipple 1/4x14 is 32c. Add 60 per cent. to above prices for Galvanized Nipples, Right and Left. All our Nipples are made from new pipe, and ends are reamed and chamfered.

WROUGHT NIPPLES

GALVANIZED RIGHT HAND

Close	LENGTH, INCHES						PRICES			PRICES OF EXTRA LONG NIPPLES												
	Short	Long					Size Inches	Close	Short	Long	LENGTH, INCHES											
		4	5	6	7	8					9	10	11	12								
3/4	1 1/2	2	2 1/2	3	3 1/2	4	3/4	.06	.11	.12	.15	.17	.21	.24	.26	.29	.31	.34				
1	1 1/2	2	2 1/2	3	3 1/2	4	1	.06	.11	.12	.15	.17	.21	.24	.26	.29	.31	.34				
1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	1 1/4	.06	.11	.12	.15	.17	.21	.24	.26	.29	.31	.34				
1 1/2	1 1/2	2	2 1/2	3	3 1/2	4	1 1/2	.06	.11	.12	.15	.17	.21	.24	.26	.29	.31	.34				
1 3/4	2	2 1/2	3	3 1/2	4	4 1/2	1 3/4	.08	.14	.15	.18	.21	.26	.29	.32	.35	.38	.41				
2	2 1/2	3	3 1/2	4	4 1/2	5	2	.11	.19	.20	.24	.28	.34	.38	.42	.47	.51	.55				
2 1/4	2 1/2	3	3 1/2	4	4 1/2	5 1/2	2 1/4	.17	.29	.30	.32	.38	.45	.51	.57	.63	.69	.75				
2 1/2	2 1/2	3	3 1/2	4	4 1/2	5 1/2	2 1/2	.21	.35	.36	.39	.46	.55	.63	.70	.77	.84	.91				
2 3/4	3	3 1/2	4	4 1/2	5	5 1/2	2 3/4	.27	.47	.48	.52	.61	.74	.83	.93	1.03	1.13	1.23				
3	3	3 1/2	4	4 1/2	5	5 1/2	3	.56	.86	.87	1.00	1.26	1.41	1.56	1.71	1.86	2.01					
3 1/4	4	4 1/2	5	5 1/2	6	6 1/2	3 1/4	.70	1.10	1.11	1.30	1.60	1.80	2.00	2.20	2.40	2.60					
3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	3 1/2	1.20	1.70	1.71	2.10	2.35	2.60	2.85	3.15	3.40						
3 3/4	4	4 1/2	5	5 1/2	6	6 1/2	3 3/4	1.35	1.87	1.88	2.30	2.60	2.90	3.20	3.50	3.80						
4	4 1/2	5	5 1/2	6	6 1/2	7	4	1.85	2.60	2.61	3.30	3.65	4.05	4.45	4.85	5.25						
4 1/4	4 1/2	5	5 1/2	6	6 1/2	7 1/4	4 1/4	2.30	3.15	3.16	3.75	4.20	4.60	5.00	5.40	5.85						
4 1/2	4 1/2	5	5 1/2	6	6 1/2	7 1/2	4 1/2	2.80	4.25	4.26	4.50	5.00	5.55	6.05	6.60	7.15						
4 3/4	4 1/2	5	5 1/2	6	6 1/2	7 3/4	4 3/4	4.25	6.65	6.66	6.65	7.50	8.05	8.55	9.10	9.20						
5	5	5 1/2	6	6 1/2	7	7 1/2	5	5.00	8.80	8.81	8.80	9.25	10.10	10.55	11.00							

For prices of Extra Long Nipples, sizes 13 to 24-inch, double the list of the smaller thus: The list of an Extra Long Nipple, as above, 1/4x7, is 21c; the price list, therefore, of a Nipple 1/4x14 is 42c. For list on Right and Left Galvanized Nipples, add 60 per cent. to Right and Left Plain Nipples. All our Nipples are made from new pipe, and ends are reamed and chamfered.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

BRASS STEAM FITTINGS
IRON PIPE SIZE

STANDARD BRASS FITTINGS

For 125 Pounds Working Pressure

Are furnished in all sizes from 1/4-inch to 3 inches inclusive.

HEAVY BRASS FITTINGS

MALLEABLE PATTERN

For 150 Pounds Working Pressure

We make a complete line of sizes from 1/4-inch to 6 inches inclusive.

BRASS FITTINGS

CAST IRON PATTERN

For 250 Pounds Working Pressure

We can furnish these in all sizes, straight or reducing—see lists of Standard Sizes Cast Iron Fittings, pages 14-18.

BRASS DRAINAGE FITTINGS

These Fittings are made from our Standard Cast Iron Drainage Fitting Patterns. For lists of sizes, see pages 31-51.

RECESSED BRASS FITTINGS

For Plumbing, Railing, Etc.; are furnished in sizes 3/8-inch to 1-inch inclusive.

ORDER BY FIGURE NUMBERS

STANDARD BRASS FITTINGS
MALLEABLE PATTERN

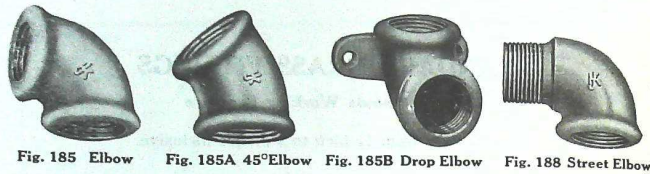


Fig. 185 Elbow Fig. 185A 45° Elbow Fig. 185B Drop Elbow Fig. 188 Street Elbow



Fig. 186 Tee Fig. 187 Cross Fig. 190 Cap

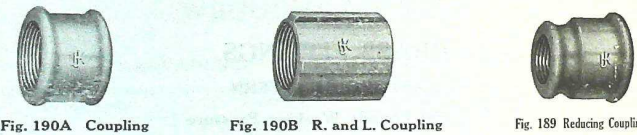


Fig. 190A Coupling Fig. 190B R. and L. Coupling Fig. 189 Reducing Coupling

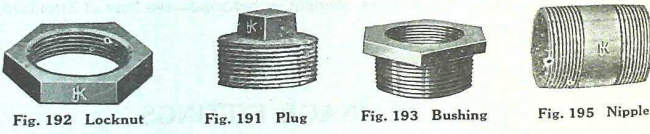


Fig. 192 Locknut Fig. 191 Plug Fig. 193 Bushing Fig. 195 Nipple

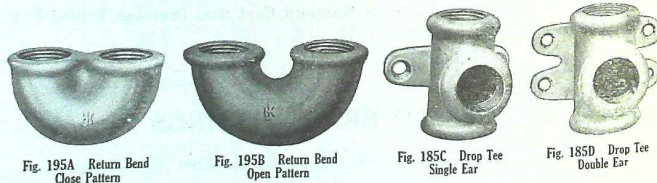


Fig. 195A Return Bend Close Pattern Fig. 195B Return Bend Open Pattern Fig. 185C Drop Tee Single Ear Fig. 185D Drop Tee Double Ear

Note—For lists, see following pages.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

BRASS STEAM FITTINGS

FOR STEAM WORKING PRESSURE UP TO 125 LBS.

Rough—For Iron Pipe

Size.....inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price, Elbows, 90°.....each	.12	.15	.20	.28	.40	.63	.90	1.20	2.00	3.50	6.00	8.00	10.00
" Elbows, Reducing ..	.16	.19	.25	.35	.50	.80	1.10	1.50	2.50	4.25	7.50	10.00	12.50
" Elbows, 45° ..	.25	.27	.33	.48	.63	.85	1.20	2.00	3.25	6.00	10.00	10.00	10.00
" Elbows, Street ..	.45	.60	.85	1.20	1.90	2.75	3.60	6.00	10.50	18.00	.....	.....	.....
" Elbows, Side Outlet ..	.....	.....	.35	.45	.65	1.05	1.50	2.00	3.40	.....	.....	.....	.....
" Elbows, Drop, Fem. ..	.17	.21	.28	.40	.55	.85	1.25	1.70	2.80	5.00	8.50	11.00	14.00
" Tees ..	.25	.35	.50	.70	1.05	1.55	2.10	3.50	6.25	10.50	14.00	17.50	.....
" Tees, Reducing ..	.....	.43	.57	.80	1.25	1.85	2.50	4.20	.....	.....	.....	.....	.....
" Tees, Drop, Sing. Ear ..	.....	.58	.74	1.05	1.70	2.45	3.30	5.60	.....	.....	.....	.....	.....
" Tees, Drop, Do'ble Ear ..	.....	.....	.....	1.20	1.65	2.50	3.75	5.00	8.50	.....	.....	.....	.....
" Tees, Side Outlet ..	.25	.30	.40	.55	.80	1.25	1.80	2.40	4.00	7.00	12.00	16.00	20.00
" Crosses ..	.....	.38	.50	.70	1.00	1.55	2.25	3.00	5.50	8.75	15.00	20.00	25.00
" Crosses, Reducing ..	.10	.13	.17	.25	.37	.55	.80	1.00	1.60	2.50	3.50	5.25	7.00
" Couplings ..	.13	.17	.22	.30	.45	.70	1.00	1.30	2.00	3.10	4.50	.....	.....
" Couplings, R. & L. ..	.....	.15	.20	.28	.40	.60	.90	1.10	1.75	2.75	4.00	6.00	8.00
" Couplings, Reduc'g ..	.10	.12	.15	.22	.35	.50	.70	1.00	1.50	2.50	3.75	5.00	.....
" Bushings, Regular ..	.12	.15	.19	.27	.44	.62	.87	1.25	1.85	3.10	4.75	6.25	8.25
" Bushings, Faced ..	.08	.10	.12	.15	.20	.30	.45	.60	.85	1.50	2.25	3.75	5.00
" Plugs, Regular ..	.....	.18	.22	.30	.45	.80	1.20	1.90	3.00	4.50	7.50	10.00	.....
" Plugs, Solid ..	.....	.22	.30	.45	.65	.90	1.40	.....	.....	.....	.....	.....	.....
" Plugs, Countersunk ..	.10	.13	.16	.20	.30	.42	.60	.80	1.25	2.50	3.50	5.50	7.00
" Caps ..	.10	.10	.12	.15	.20	.28	.40	.55	.80	1.75	2.75	4.00	5.00
" Locknuts ..	.30	.40	.55	.70	1.00	1.25	1.80	2.50	4.25	7.00	10.00	.....	.....
" Return Bends, Close ..	.40	.50	.60	.80	1.10	1.40	2.15	3.00	4.75	8.25	11.00	.....	.....
" Return Bends, Open ..	.60	.75	1.10	1.65	2.50	3.70	5.30	8.50	16.00	21.00	26.00	.....	.....
" Wyes ..	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Polished—For Iron Pipe

Size.....inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price, Elbows, 90°.....ea.	.30	.35	.45	.56	.75	1.10	1.55	2.00	3.00	5.50	9.00	14.00	17.50
" Elbows, Reducing ..	.44	.55	.70	.95	1.40	1.90	2.50	3.75	6.75	11.25	17.50	22.00	.....
" Elbows, 45° ..	.38	.45	.55	.66	.85	1.23	1.70	2.20	3.25	6.00	9.75	15.50	19.50
" Elbows, Street ..	.47	.52	.63	.83	1.08	1.45	2.30	3.00	4.50	8.50	13.75	.....	.....
" Elbows, Side Outlet ..	.....	1.05	1.35	1.70	2.25	3.30	4.70	6.00	9.00	16.50	27.00	.....	.....
" Tees ..	.42	.49	.65	1.05	1.40	2.00	2.80	3.60	5.40	.....	.....	.....	.....
" Tees, Reducing ..	.60	.77	1.00	1.30	1.85	2.65	3.50	5.25	9.75	15.80	24.50	30.50	.....
" Tees, Drop, Sing. Ear ..	.....	1.13	1.37	1.80	2.55	3.65	4.70	7.00	.....	.....	.....	.....	.....
" Tees, Drop, Do'ble Ear ..	.....	1.28	1.54	2.05	3.00	4.25	5.50	8.40	.....	.....	.....	.....	.....
" Tees, Side Outlet ..	.....	.....	.....	2.05	2.70	3.90	5.70	7.40	11.50	.....	.....	.....	.....
" Crosses ..	.70	.90	1.10	1.50	2.20	3.10	4.00	6.00	11.00	18.00	28.00	35.00	.....
" Crosses, Reducing ..	.60	.....	1.10	1.40	1.85	2.75	3.85	5.00	7.50	13.75	22.50	35.00	44.00
" Couplings ..	.24	.28	.36	.46	.63	.90	1.30	1.60	2.35	4.00	5.75	9.75	12.50
" Couplings, R. & L. ..	.31	.37	.47	.58	.80	1.15	1.65	2.10	3.00	5.10	7.50	.....	.....
" Couplings, Reduc'g ..	.....	.35	.45	.56	.75	1.05	1.55	1.90	2.75	4.75	7.00	12.00	15.50
" Bushings, Regular ..	.....	.22	.27	.35	.47	.70	1.00	1.40	2.00	3.00	4.50	6.25	8.00
" Bushings, Faced ..	.....	.23	.30	.37	.43	.55	.75	1.00	1.35	3.00	4.25	6.25	8.00
" Plugs, Regular ..	.....	.43	.50	.65	.90	1.35	1.90	2.90	4.50	6.50	10.00	13.00	.....
" Plugs, Solid ..	.....	.42	.55	.80	1.15	1.55	2.25	.....	.....	.....	.....	.....	.....
" Plugs, Countersunk ..	.20	.25	.31	.40	.55	.77	1.10	1.50	2.25	4.00	5.50	8.00	10.00
" Caps ..	.24	.25	.32	.40	.50	.65	.85	1.10	1.60	3.25	4.75	6.50	8.00
" Locknuts ..	.85	1.00	1.30	1.55	2.05	2.65	3.75	4.90	7.25	13.00	19.00	.....	.....
" Return Bends, Close ..	.95	1.10	1.35	1.65	2.15	2.80	4.10	5.40	7.75	14.25	20.00	.....	.....
" Return Bends, Open ..	.....	1.35	1.60	2.15	3.05	4.45	5.70	8.50	15.50	25.00	33.00	41.00	.....

Note—Right and Left Elbows and Right and Left Return Bends, furnished at an advance of 25% over above prices.

Bushings and Reducers, reducing more than two sizes furnished at an advance of 25% over above prices.

ORDER BY FIGURE NUMBERS

BRASS STEAM FITTINGS

FOR STEAM WORKING PRESSURE UP TO 125 LBS.

Rough, Tinned—For Iron Pipe

Table with columns: Size (inches), Price, and various fitting types (Elbows, Tees, Couplings, etc.) for rough, tinned iron pipe.

Polished and Nickel Plated—For Iron Pipe

Table with columns: Size (inches), Price, and various fitting types (Elbows, Tees, Couplings, etc.) for polished and nickel plated iron pipe.

Note—Right and Left Elbows and Right and Left Return Bends, furnished at an advance of 25% over above prices.

Bushings and Reducers, reducing more than two sizes furnished at an advance of 25% over above prices.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

BRASS STEAM FITTINGS

FOR STEAM WORKING PRESSURE UP TO 125 LBS.

Polished, Tinned - For Iron Pipe

Table with columns: Size (inches), Price, and various fitting types (Elbows, Tees, Couplings, etc.) for polished, tinned iron pipe.

Note—Right and Left Elbows and Right and Left Return Bends, furnished at an advance of 25% over above prices.

Bushings and Reducers, reducing more than two sizes furnished at an advance of 25% over above prices.

BRASS NIPPLES

Iron Pipe Sizes

Table showing lengths in inches for various iron pipe sizes (1/4, 1/2, 3/4, 1, 1 1/2, 2, 2 1/2, 3, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6).

Polished Brass Nipples, Longer than Close, 25% Extra.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY BRASS FITTINGS

For 250 Pounds Working Pressure

MADE FROM CAST IRON FITTINGS PATTERNS



Fig. 197 Elbow



Fig. 198 Reducing Elbow



Fig. 199 Elbow, Right and Left



Fig. 200 45° Elbow



Fig. 201 Tee

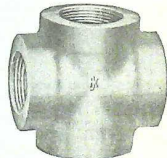


Fig. 202 Cross



Fig. 203 Return Bend Close Pattern



Fig. 203A Flange Union



Fig. 204 Return Bend Open Pattern



Fig. 204A Reducing Coupling



Fig. 204B Cap



Fig. 204C Coupling



Fig. 204D Locknut



Fig. 204E Bushing

NOTE—For lists, see following page.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY BRASS STEAM FITTINGS

FOR STEAM WORKING PRESSURE UP TO 250 LBS.

CAST IRON PATTERN—Rough, For Iron Pipe

Size inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Elbows, 90°	.33	.45	.65	1.00	1.50	2.25	3.00	4.50	8.00	11.25	16.00	22.00	\$27	\$35	\$45
Elbows, Reducing	.55	.75	1.20	1.80	2.60	3.50	5.25	9.00	13.00	19.00	25.00	30	40	50	60
Elbows, 45°	.45	.55	.75	1.20	1.80	2.60	3.50	5.25	9.00	13.00	19.00	25.00	30	40	51
Elbows, R. & L.	.45	.60	.90	1.35	2.00	3.00	4.00	6.00	10.75	15.00	22.00	30.00	36	46	60
Tees	.70	1.05	1.55	2.30	3.50	4.50	6.75	12.00	17.00	25.00	35.00	45	60	75	90
Tees, Reducing	.90	1.30	2.00	3.00	4.50	6.00	9.00	16.00	22.50	32.00	42.00	50	66	82	100
Crosses	1.10	1.50	2.40	3.60	5.25	7.00	10.50	18.00	26.00	38.00	50.00	65	85	110	140
Crosses, Reducing	.40	.50	.70	1.10	1.65	2.25	3.00	4.50	7.00	10.00	13.00	17.00	21	27	35
Couplings	.50	.65	.90	1.35	2.00	3.00	4.00	6.00	10.00	14.00	20.00	28.00	35	45	60
Return Bends, Close	1.80	2.75	4.00	5.50	8.00	11.00	16.00	25.00	35.00	50.00	65	85	110	140	180
Return Bends, Open	1.80	2.75	4.00	5.50	8.00	11.00	16.00	25.00	35.00	50.00	65	85	110	140	180
Wyes	.90	1.10	1.50	2.50	3.50	5.50	7.25	11.00	19.00	27.00	39.00	50.00	65	85	110

CAST IRON PATTERN—Rough, Tinned, For Iron Pipe

Size inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Elbows, 90°	.48	.65	.90	1.36	1.95	2.75	3.65	5.40	9.50	13.25	18.75	25.50	31.50	\$41	\$52.50
Elbows, Reducing	.60	.75	1.00	1.50	2.25	3.10	4.15	6.15	10.50	15.00	21.75	28.50	34.50	46	57.50
Elbows, 45°	.60	.75	1.00	1.40	2.10	3.00	3.90	5.40	9.50	13.25	18.75	25.50	31.50	41	52.50
Elbows, R. & L.	.58	.75	1.00	1.50	2.25	3.10	4.15	6.15	10.50	15.00	21.75	28.50	34.50	46	57.50
Tees	.65	.85	1.25	1.75	2.60	3.70	4.85	7.25	12.75	17.75	26.00	34.50	42.00	54	70.00
Tees, Reducing	.95	1.40	1.95	2.90	4.20	5.35	8.00	14.00	19.75	29.00	39.50	46.00	59	76.00	90
Crosses	1.25	1.75	2.50	3.75	5.35	7.00	10.50	20.25	29.25	37.00	48.00	57.00	76	94.50	110
Crosses, Reducing	.50	.65	.90	1.35	2.00	2.65	3.50	5.25	8.00	11.50	15.00	19.50	24.00	31	40.00
Couplings	1.45	1.95	2.90	4.35	6.10	8.00	12.00	20.25	29.25	37.00	48.00	57.00	76	94.50	110
Ret. Bends, Close	2.15	3.10	4.40	6.00	8.25	11.75	18.75	26.00	36.00	47.00	60.00	75.00	95	120	150
Ret. Bends, Open	2.30	3.35	4.90	6.50	9.25	12.75	20.75	29.00	41.00	52.00	66.00	82	105.00	130	165
Wyes	1.20	1.50	2.00	3.10	4.35	6.50	8.50	12.75	21.75	31.00	38.00	52.00	64.00	82	105.00

CAST IRON PATTERN—Polished, For Iron Pipe

Size inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Elbows, 90°	.73	.95	1.25	1.75	2.50	3.50	4.50	6.25	10.50	14.75	23.50	\$31	38.00	\$48	\$60
Elbows, Reducing	1.15	1.50	2.10	3.00	4.10	5.35	7.50	12.00	17.25	28.00	36	43.75	56	70	90
Elbows, 45°	.95	1.15	1.50	2.00	2.85	4.00	5.30	7.50	12.00	17.25	28.00	36	43.75	56	70
Elbows, R. & L.	.90	1.15	1.50	2.10	3.00	4.10	5.35	7.50	12.00	17.25	28.00	36	43.75	56	70
Tees	1.00	1.25	1.70	2.35	3.35	4.65	6.00	8.35	14.00	19.75	32.00	42	51.00	64	80
Tees, Reducing	1.50	2.05	2.80	4.00	5.50	7.00	9.75	16.00	23.00	37.00	50	58.00	70	90	110
Crosses	1.50	1.90	2.50	3.50	5.00	7.00	9.00	12.50	21.00	29.50	37.00	48.00	57.00	76	94.50
Crosses, Reducing	2.35	3.00	4.25	6.00	8.25	10.75	15.00	24.00	35.00	50.00	64	75.00	95	120	150
Couplings	.75	.90	1.15	1.70	2.40	3.20	4.15	5.85	9.00	13.00	18.50	24	29.00	37	47
Ret. Bends, Close	3.00	4.25	6.00	8.00	11.00	14.50	23.00	32.00	45.00	60.00	75	95	120	150	180
Ret. Bends, Open	3.00	4.25	6.00	8.00	11.00	14.50	23.00	32.00	45.00	60.00	75	95	120	150	180
Wyes	1.70	2.10	2.70	4.00	5.50	8.00	10.25	14.50	24.00	34.00	48.00	63	77.00	96	120

BRASS FLANGE UNIONS

Size inches	½	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Flange Unions, 125 lbs. Working Pressure, Iron Bolts	4.00	4.50	5.00	5.50	7.00	9.00	11.50	\$15	\$18	\$22	\$27	\$35	\$45
Extra Heavy Flange Unions, 250 Pounds Pressure	7.50	8.50	11.00	13.00	16.00	18.00	24	27	30	37	48	60	75

ORDER BY FIGURE NUMBERS

BRASS STEAM FITTINGS

FOR STEAM WORKING PRESSURE UP TO 125 LBS.

Rough—Fine Thread

Table with columns: Size (inches), Price, Elbows (90°, 45°, Street, Side Outlet, Drop), Tees (Reducing, Drop, Double Ear, Side Outlet), Crosses (Reducing), Couplings (Right & Left, Reducing), Bushings (Regular, Plugs, Solid), Caps, Locknuts, Return Bends (Close, Open), Wyes, and Rough Unions. Each item has a price for various sizes from 1/2 to 2 1/2 inches.

Polished—Fine Thread

Table with columns: Size (inches), Price, Elbows (90°, 45°, Street, Side Outlet, Drop), Tees (Reducing, Drop, Double Ear, Side Outlet), Crosses (Reducing), Couplings (Right & Left, Reducing), Bushings (Regular, Plugs, Solid), Caps, Locknuts, Return Bends (Close, Open), Wyes, and Unions. Each item has a price for various sizes from 1/2 to 2 1/2 inches.

NOTE—Right and Left Elbows and Right and Left Return Bends furnished at an advance of 25% over above prices.

Bushings and Reducers, reducing more than two sizes furnished at an advance of 25% over above prices.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

BRASS STEAM FITTINGS

FOR STEAM WORKING PRESSURE UP TO 125 LBS.

Polished and Nickel Plated—Fine Thread

Table with columns: Size (inches), Price, Elbows (90°, 45°, Street, Side Outlet, Drop), Tees (Reducing, Drop, Double Ear, Side Outlet), Crosses (Reducing), Couplings (Right & Left, Reducing), Bushings (Regular, Plugs, Solid), Caps, Locknuts, Return Bends (Close, Open), Wyes, and Unions. Each item has a price for various sizes from 1/2 to 2 1/2 inches.

Right and Left Elbows and Right and Left Return Bends furnished at an advance of 25% over above prices.

Bushings and Reducers, reducing more than two sizes, furnished at an advance of 25% over above prices.

FINE THREAD BRASS NIPPLES

Table with columns: Size (inches), Length (Close, 1 1/2, 2, 2 1/2, 3, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6). Each size has a price for various lengths.

Polished Nipples longer than close, 25% extra. Polished and Nickel Plated, longer than close, 50% extra.

ORDER BY FIGURE NUMBERS

STANDARD BRASS UNIONS

Ground Joints

For 125 Pounds Working Pressure

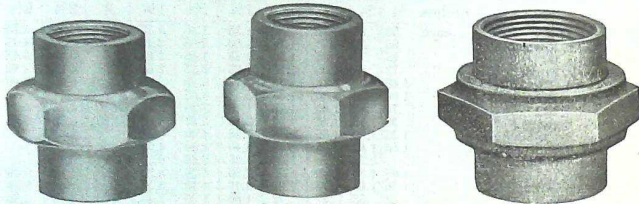


Fig. 196 Finished Fig. 196A Semi-finished Fig. 196-I Rough

BRASS UNIONS—Rough, Semi-finished, Polished or Polished and Tinned

Size.....inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Brass Unions, Rough.....	.40	.50	.65	.85	1.15	1.60	2.25	2.70	4.00	7.50	11.50	.....	.....
Brass Unions, Semi-finished.....	.45	.55	.75	.95	1.30	1.75	2.50	3.00	4.50	8.25	12.75	22.50	30.00
Brass Unions, Polished.....	.50	.60	.85	1.05	1.40	1.90	2.75	3.25	5.00	9.00	14.00	25.00	33.00
Brass Unions, Polished & Tinned.....	.65	.75	1.05	1.30	1.70	2.35	3.30	3.85	5.90	10.20	16.25	28.00	36.75

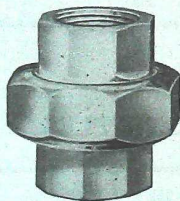


Fig. 196 1/4 "Octa," Finished

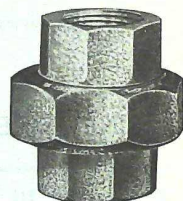


Fig. 196 1/2 "Octa," Rough

"OCTA" BRASS UNIONS—Rough or Polished

Size.....inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Octa Unions, Rough.....	.60	.65	.85	1.10	1.50	2.00	2.80	3.60	5.25	9.00	14.00	22.50	30.00
Octa Unions, Polished.....	.85	.90	1.15	1.45	1.90	2.50	3.35	4.25	6.00	10.00	16.00	25.00	33.00

Polished and Nickel Plated Unions, add 20% to Polished Union Price.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STANDARD BRASS FLANGED FITTINGS

For 150 Pounds Working Pressure

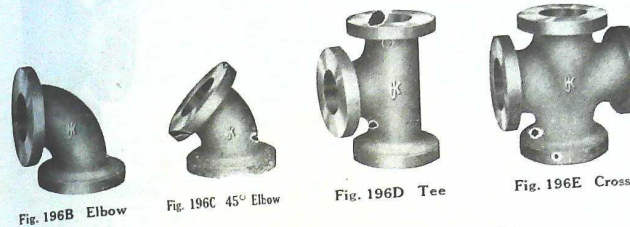


Fig. 196B Elbow Fig. 196C 45° Elbow Fig. 196D Tee Fig. 196E Cross

STANDARD BRASS FLANGED FITTINGS

Size.....inches	2	2 1/2	3	3 1/2	4	4 1/2	5	6
Price, Flanged 90° Elbows, Faced Only.....each	25.00	33.75	43.75	58.75	68.00	78.00	93.00	123.00
" Flanged 90° Elbows, Faced & Drilled....."	26.00	35.00	45.00	60.00	70.00	80.00	95.00	125.00
" Flanged 45° Elbows, Faced Only....."	27.50	37.25	47.75	63.75	73.00	83.00	98.00	133.00
" Flanged 45° Elbows, Faced & Drilled....."	28.50	38.50	49.00	65.00	75.00	85.00	100.00	135.00
" Flanged Tees, Faced Only....."	37.50	50.75	65.75	88.25	102.00	117.00	137.00	187.00
" Flanged Tees, Faced & Drilled....."	39.00	52.50	67.50	90.00	105.00	120.00	140.00	190.00
" Flanged Crosses, Faced Only....."	50.00	67.50	87.50	117.50	136.00	156.00	186.00	246.00
" Flanged Crosses, Faced and Drilled....."	52.00	70.00	90.00	120.00	140.00	160.00	190.00	250.00

Prices for sizes not given above furnished on application.

STANDARD BRASS COMPANION FLANGES—Not Illustrated

Size Inches	Price Faced Each	Price Faced and Drilled Each	DIMENSIONS OF FITTINGS AND FLANGES									
			Size Inches	Face to Face	Center to Face	Center to Face 45° Ell	Dia- meter of Flanges	Thick- ness of Flanges	Numb'r of Bolts	Size of Bolts	Bolt Circle	
1 x 4	5.75	6.00	1	7	3 1/2	1 1/4	4	3/4	4	3/8	3	
1 1/4 x 4 1/4	6.75	7.00	1 1/4	7 1/2	3 3/4	2	4 1/2	3/4	4	3/8	3 3/8	
1 1/2 x 5	8.75	9.00	1 1/2	8	4	2 1/4	5	3/4	4	3/8	3 3/4	
2 x 6	10.75	11.00	2	9	4 1/2	2 1/2	6	3/4	4	3/8	4 1/4	
2 1/4 x 7	12.50	13.00	2 1/4	9	5	3	7	3/4	4	3/8	5 1/4	
3 x 7 1/2	15.50	16.00	3	11	5 1/2	3	7 1/2	3/4	4	3/8	6	
3 1/4 x 8 1/4	19.25	20.00	3 1/4	12	6	3 1/2	8 1/2	3/4	4	3/8	7	
4 x 9	24.25	25.00	4	13	6 1/2	4	9	3/4	4	3/8	7 1/2	
4 1/4 x 9 1/4	26.75	27.50	4 1/4	14	7	4	9 1/2	3/4	4	3/8	7 3/4	
5 x 10	29.00	30.00	5	15	7 1/2	4 1/2	10	3/4	4	3/8	8 1/2	
6 x 11	36.50	37.50	6	16	8	5	11	3/4	4	3/8	9 1/2	
7 x 12 1/2	.....	.....	7	17	8 1/2	5 1/2	12 1/2	3/4	4	3/8	10 1/2
8 x 13 1/2	.....	.....	8	18	9	5 1/2	13 1/2	3/4	4	3/8	11 1/2
9 x 15	.....	.....	9	20	10	6	15	3/4	4	3/8	13 1/2
10 x 16	.....	.....	10	22	11	6 1/2	16	1	12	3/4	14 1/2
12 x 19	.....	.....	12	24	12	7 1/2	19	1 1/8	12	3/4	17

Above dimensions effective January 1, 1914.
Dimensions for sizes not given furnished on application.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY BRASS FLANGED FITTINGS

For 250 Pounds Working Pressure



Fig. 196F Elbow



Fig. 196G Flange Union



Fig. 196H Tee

EXTRA HEAVY BRASS FLANGED FITTINGS

Size inches	¾	1	1¼	1½	2	2½	3	3½	4	4½	5	6
Price, Flanged 90° Elbows, Faced Only each	13.00	15.00	20.00	25.00	33.75	43.75	58.75	68.00	78.00	83.00	123.00	
Price, Flanged 90° Elbows, Faced and Drilled each	14.00	16.00	21.00	26.00	35.00	45.00	60.00	70.00	80.00	95.00	125.00	
Price, Flanged 45° Elbows, Faced Only each	14.00	16.00	22.00	27.50	37.25	47.75	63.75	73.00	83.00	98.00	133.00	
Price, Flanged 45° Elbows, Faced and Drilled each	15.00	17.00	23.00	28.50	38.50	49.00	65.00	75.00	85.00	100.00	135.00	
Price, Flanged Tees, Faced Only each	19.50	22.50	30.00	37.50	50.75	65.75	88.25	102.00	117.00	137.00	187.00	
Price, Flanged Tees, Faced and Drilled each	21.00	24.00	31.50	39.00	52.50	67.50	90.00	105.00	120.00	140.00	190.00	
Price, Flanged Crosses, Faced Only each	26.00	30.00	40.00	50.00	67.50	87.50	117.50	136.00	156.00	186.00	246.00	
Price, Flanged Crosses, Faced and Drilled each	28.00	32.00	42.00	52.00	70.00	90.00	120.00	140.00	160.00	190.00	250.00	
Flange Unions, Diameter of Flanges inches	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾	¾
Number of Bolts	4	4	4	4	5	6	6	7	8	8	9	10

Prices for sizes not given above furnished on application.
For list on Flange Unions, see page 223.

EXTRA HEAVY BRASS COMPANION FLANGES—Not Illustrated

Size Inches	Price Faced Each	Price Faced and Drilled Each	DIMENSIONS OF FITTINGS AND FLANGES									
			Size Inches	Face to Face	Center to Face	Center to Face 45° Ell	Diameter of Flanges	Thick-ness of Flanges	Numbr of Bolts	Size of Bolts	Bolt Circle	
1 x 4½	5.75	6.00	1	8	4	2	4½	½	4	½	3¼	
1½ x 5	6.75	7.00	1½	8½	4½	2½	5	½	4	½	3¾	
1½ x 6	8.75	9.00	1½	9	4½	2½	5	½	4	½	4½	
2 x 6½	10.75	11.00	2	10	5	3	6½	¾	4	¾	5	
2½ x 7½	12.50	13.00	2½	11	5½	3½	7½	¾	4	¾	5½	
3 x 8¼	15.50	16.00	3	12	6	3½	8¼	¾	8	¾	6½	
3½ x 9	19.25	20.00	3½	13	6½	4	9	¾	8	¾	7½	
4 x 10	24.25	25.00	4	14	7	4½	10	¾	8	¾	7¾	
4½ x 10½	26.75	27.50	4½	15	7½	4½	10½	¾	8	¾	8½	
5 x 11	29.00	30.00	5	16	8	5	11	¾	8	¾	9¼	
6 x 12½	36.50	37.50	6	17	8½	5½	12½	1	12	¾	10½	
7 x 14	.....	.....	7	18	9	6	14	1½	12	¾	11¾
8 x 15	.....	.....	8	20	10	6	15	1½	12	1	13
9 x 16¼	.....	.....	9	21	10½	6½	16¼	1½	12	1	14
10 x 17½	.....	.....	10	23	11½	7	17½	1½	16	1	15¼
12 x 20½	.....	.....	12	26	13	8	20½	1½	16	1½	17¾

Above dimensions effective January 1, 1914.
Dimensions for sizes not given furnished on application.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

BRASS VALVES AND COCKS

The Brass Valves and Cocks illustrated in the following pages are carefully made from the best materials, and are well adapted for the pressures we recommend.

They are carefully inspected and tested before shipment.

The parts are made to standard gauges, and are interchangeable.

We guarantee these Valves and Cocks to give satisfactory service in all cases where they are properly used.

Workmen should be cautioned against applying a wrench to one end of a Valve or Cock when screwing it on the pipe at the opposite end, thus bringing a severe torsional strain upon the body, which is sure to destroy the perfect bearing of the seat and cause a leak.

When necessary to remove the bonnet of the valve to screw the body upon the pipe, see that the spindle and disc are turned back into the bonnet before attempting to return the latter to its position, thus keeping the disc from coming in contact with the seat before the bonnet has returned to its proper position.

Valves, especially the smaller sizes, are frequently used for drips to keep the water from condensation out of low places in pipes and fittings; and they are generally opened very slightly and left in this position where the steam or water, carrying particles of gritty scale or other abrasive material, passes through the narrow opening at the seat and cuts it away in grooves, soon destroying the Valve. It is much more economical to employ for this purpose one of the Steam Traps illustrated on page 456.

ORDER BY FIGURE NUMBERS

WHEELS AND HANDLES FOR VALVES



Fig. 241 Wood



Fig. 242 Milled Edge



Fig. 242A Lavatory



Fig. 242B Fluted



Fig. 242C Round



Fig. 242D Ball



Fig. 242E Coke Oven



Fig. 242G Non-heating



Fig. 242F Coke Oven Handle

NET PRICE LIST—BRASS AND WOOD WHEELS

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Fig. 241, Wood Wheel..... each net	.05	.05	.05	.05	.05	.05	.05	.05	.05	...
Top and Bottom Plate & Screw for Fig. 241, ..	.05	.05	.05	.05	.05	.05	.05	.05	.05	...
Fig. 242, Brass Wheel, Milled Edge.....	.25	.25	.30	.35	.50	.60	.70	1.00	1.50	2.00
Fig. 242, Brass Wheel, Milled Edge, N. P. ....	.30	.30	.36	.42	.60	.72	.84	1.20	1.80	2.40
Fig. 242A, Brass Wheel, Lavatory.....	..	..	.27	.32	.45	.55	..	..	..	..
Fig. 242B, Brass Wheel, Fluted.....	..	.15	.15	.20	.25	.35	..	..	..	..
Fig. 242C, Brass Wheel, Round.....	..	..	..	..	..	.50	.60	.80	1.35	1.90
Fig. 242D, Brass Wheel, Ball Pattern.....	..	..	.25	.30	.35	.50	.60	.75	1.00	1.50 2.00

NET PRICE LIST
CAST IRON AND MALLEABLE WHEELS AND HANDLES

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Fig. 242B, Cast Iron Wheel, Fluted..... each net	.03	.03	.03	.04	.05	.06	.07	.08	.10	.15
Fig. 242B, Cast Iron Wheel, Fluted, with Indicator Arrow.....	..	.03	.03	.04	.05	.06	.07	.08	.10	.15
Fig. 242C, Cast Iron Wheel, Round.....	..	.04	.04	.04	.05	.06	.07	.08	.10	.15
Fig. 242D, Cast Iron Wheel, Ball Pattern.....05	.06	.08	.09	.10	.11	.13	.17
Fig. 242E, Cast Iron Wheel, Coke Oven.....08	.10	.12	.15	.15
Fig. 242F, Cast Iron Handle, Coke Oven.....08	.10	.12	.15	.15
Fig. 242G, Non-heating Wheel, Mall. Iron.....	..	.04	.04	.05	.06	.07	.08	.09	.10	.15

ORDER BY FIGURE NUMBERS

Hy-Tech Products

REGRINDING "EXCELSIOR" VALVES

The Regrinding "Excelsior" Valve is designed to meet the constant and increasing demand for a valve that is suitable for working pressures from 200 to 300 pounds of live or superheated steam.

They are extensively used in modern steam plant construction, and in the United States Navy, whose requirements have been met in the design of these valves.

The Stuffing Box on these valves can be packed while under pressure, and to do this it is necessary to have the valve wide open. They can be reground while in position without disturbing the pipe connections; to do so, unscrew the union nut and take bonnet out; insert a nail or piece of wire through the hole in disc and stem; put some abrasive material on the disc and replace bonnet; by rotating the stem backward and forward, the valve is ground to a perfect seat.

All valves 1 inch and larger are furnished with loose or swivel discs, and have Gland Follower in Stuffing Box.

"Excelsior" Valves are made of the best grade of metal, which conforms in formula to that required by the United States Navy. This metal is of a very hard composition, and for durability is unexcelled.

We have a complete line of patterns for Globe, Angle, Cross and Check Valves of this style of valve, and can furnish any size from 1/4 to 4 inches inclusive.

We can furnish these valves with English, instead of American Standard, Pipe Threads, or with English, instead of American Standard, Flanges, when so ordered. They can be furnished flanged to the Navy Standard of Flanges, or with brass hand wheels, at an extra charge.

The Flag on the "Excelsior" Valves, which we have patented as a trade mark, is arranged to wave in the direction in which the steam is passing through, the inlet being at the staff end of the flag. By setting the valve accordingly, the pressure, at all times, comes on the under side of the disc.

Below, we show a sectional view of our "Excelsior" Valve with inside screw, which we can furnish for a Medium Pressure not to exceed 200 pounds pressure per square inch, and for Extra Heavy Pressures not to exceed 300 pounds per square inch. On page 238, we show a sectional view of our Regrinding "Excelsior" Valve with Outside Screw and Yoke, together with descriptive matter of same.

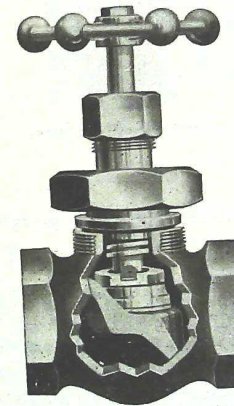


Fig. 206 Valve with Inside Screw

ORDER BY FIGURE NUMBERS

REGRINDING "EXCELSIOR" VALVES

For 200 Pounds Working Pressure

MEDIUM PRESSURE

BRASS

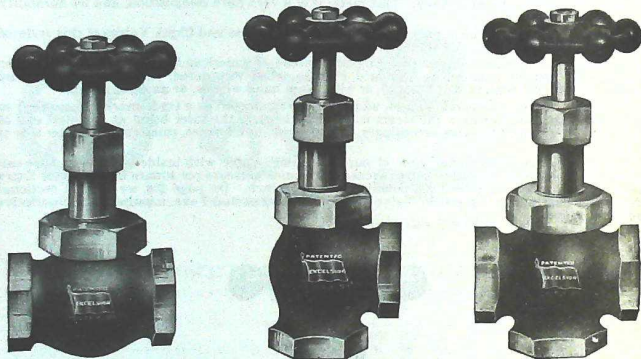


Fig. 205 Globe Valve

Fig. 205A Angle Valve

Fig. 205D Cross Valve

"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES—Screwed

Size.....inches	¼	½	¾	1	1¼	1½	2	2½	3	3½	4		
Globe Valves.....each	.70	.70	.85	1.15	1.45	2.00	2.80	3.90	6.20	12.00	16.50	30.00	40.00
Angle Valves....."	.70	.70	.85	1.15	1.45	2.00	2.80	3.90	6.20	12.00	16.50	30.00	40.00
Cross Valves....."	1.00	1.00	1.00	1.50	2.00	2.70	3.50	5.10	8.00	16.00	24.00	38.00	50.00
Globe Valves, finished all over, with Finished Brass Wheel, ea.	1.75	1.90	2.15	2.50	3.10	3.65	5.25	7.25	10.75	22.00	33.50	.....	.....
Angle Valves, finished all over, with Finished Brass Wheel, ea.	1.75	1.90	2.15	2.50	3.10	3.65	5.25	7.25	10.75	22.00	33.50	.....	.....
Cross Valves, finished all over, with Finished Brass Wheel, ea.	2.40	2.60	2.90	3.30	4.20	4.90	7.00	9.70	14.30	29.30	44.70	.....	.....

For dimensions, see page 256.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

REGRINDING "EXCELSIOR" VALVES

For 200 Pounds Working Pressure

MEDIUM PRESSURE

BRASS

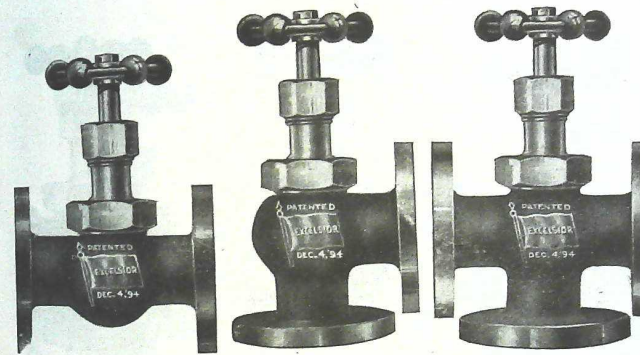


Fig. 205E Globe Valve

Fig. 205F Angle Valve

Fig. 205G Cross Valve

"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES—Flanged

Size.....inches	¾	1	1¼	1½	2	2½	3	3½	4		
Globe Valves.....each	2.20	3.40	4.70	5.80	8.00	11.00	14.50	21.00	29.00	39.00	52.00
Angle Valves....."	2.20	3.40	4.70	5.80	8.00	11.00	14.50	21.00	29.00	39.00	52.00
Cross Valves....."	3.20	5.10	7.00	8.40	12.00	15.00	20.50	29.00	40.00	52.00	69.00

For dimensions, see page 256.

ORDER BY FIGURE NUMBERS

REGRINDING "EXCELSIOR" VALVES

For 300 Pounds Working Pressure

EXTRA HEAVY

BRASS

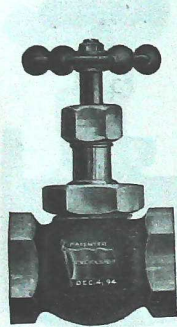


Fig. 205H Globe Valve

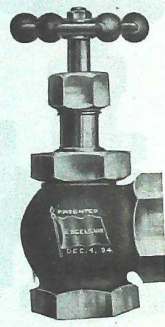


Fig. 205I Angle Valve

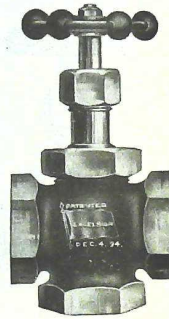


Fig. 205J Cross Valve

"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES—Screwed

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Globe Valves, each	.90	1.10	1.50	2.30	3.60	5.10	7.10	10.90	19.50	29.00	42.30	53.90
Angle Valves, "	.90	1.10	1.50	2.30	3.60	5.10	7.10	10.90	19.50	29.00	42.30	53.90
Cross Valves, "	1.20	1.30	1.90	2.90	4.50	6.30	8.60	13.10	23.40	34.50	50.40	63.60

For dimensions, see page 237.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

REGRINDING "EXCELSIOR" VALVES

For 300 Pounds Working Pressure

EXTRA HEAVY

BRASS

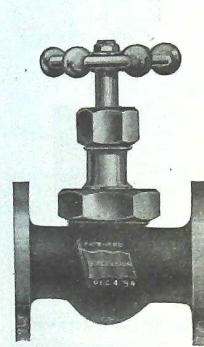


Fig. 205K Globe Valve

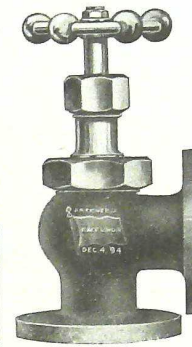


Fig. 205L Angle Valve

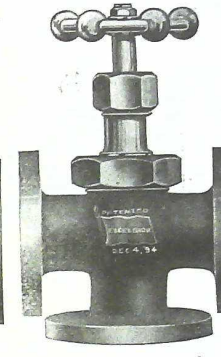


Fig. 205M Cross Valve

"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES—Flanged

Size..... inches	¾	1	1¼	1½	2	2½	3	3½	4		
Globe Valves..... each	2.50	4.10	5.80	7.60	11.00	14.00	20.00	32.00	44.00	60.00	74.00
Angle Valves..... "	2.50	4.10	5.80	7.60	11.00	14.00	20.00	32.00	44.00	60.00	74.00
Cross Valves..... "	3.50	5.90	8.20	10.50	14.50	19.00	27.00	43.00	57.00	77.00	94.00

For dimensions, see page 257.

ORDER BY FIGURE NUMBERS

REGRINDING "EXCELSIOR" VALVES

For 200 and 300 Pounds Working Pressure
MEDIUM PRESSURE AND EXTRA HEAVY

BRASS

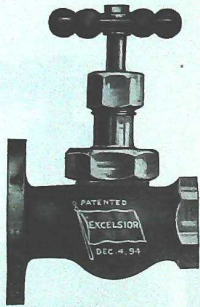


Fig. 205N Globe Valve

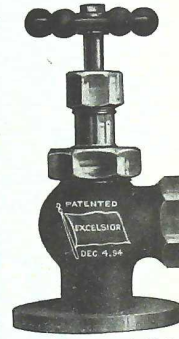


Fig. 205-O Angle Valve

"EXCELSIOR" GLOBE AND ANGLE VALVES—Flanged and Screwed

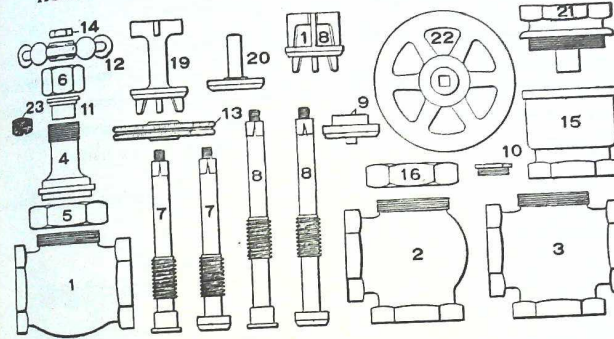
Size.....inches	¾	1	1¼	1½	2	2½	3	3½	4		
Medium Globe Valve.....each	1.40	2.10	3.00	3.70	5.30	7.10	10.10	14.90	21.10	27.60	39.90
Extra Heavy Globe Valve..... "	1.60	2.60	3.80	5.20	7.20	9.80	14.40	23.90	33.20	45.80	57.20
Medium Angle Valve..... "	1.40	2.10	3.00	3.70	5.30	7.10	10.10	14.90	21.10	27.60	39.90
Extra Heavy Angle Valve..... "	1.60	2.60	3.80	5.20	7.20	9.80	14.40	23.90	33.20	45.80	57.20

In ordering Valves with radial, instead of straight, flange, send sketch of the exact requirements, giving the radius of flange. Such Valves will be charged for at higher prices than listed above.
The Valves listed above have a heavy standard flange on one end and female thread on the other end.
An additional charge is made for Valves with male thread on the screw end, or blank stud, in addition to flange.
For dimensions, see pages 256 and 257.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

LIST OF PARTS FOR MEDIUM PRESSURE
REGRINDING "EXCELSIOR" VALVES
GLOBE, ANGLE AND CROSS VALVES
HORIZONTAL, ANGLE AND VERTICAL CHECK VALVES



PRICE LIST

Size of Valve.....inches	¾	1	1¼	1½	2	2½	3	3½	4				
1 Body for Globe or Horizontal Check Valve.....each	.25	.30	.35	.50	.75	1.20	1.55	2.30	4.20	6.50	13.00	19.00	26.00
2 Body for Angle or Angle Check Valve.....each	.25	.30	.35	.50	.75	1.20	1.55	2.30	4.20	6.50	13.00	19.00	26.00
3 Body for Cross Valve..... "	.35	.35	.45	.70	1.00	1.60	2.00	3.00	5.60	8.65	16.90	22.20	27.50
4 Hubs..... "	.15	.18	.20	.25	.30	.45	.70	.90	1.10	2.20	3.90	7.20	8.50
5 Hexagon Rings..... "	.13	.13	.15	.20	.25	.35	.45	.70	1.00	1.80	2.50	3.80	5.25
6 Stuffing Boxes..... "	.09	.10	.11	.18	.22	.25	.30	.40	.70	1.00	1.55	1.80	4.80
7 Stems for Globe Valves..... "	.16	.18	.20	.27	.35	.40	.55	.75	1.10	1.45	2.55	3.80	4.80
8 Stems for Angle or Cross Valves.....each	.16	.18	.20	.27	.35	.40	.55	.75	1.10	1.45	2.55	3.80	4.80
9 Discs for Globe, Angle or Cross Valves.....each					.15	.18	.25	.35	.60	1.10	2.35	3.10	3.70
10 Locknuts for Discs..... "					.05	.07	.10	.12	.15	.20	.35	.45	.65
11 Glands..... "					.10	.11	.16	.18	.22	.35	.45	.65	.90
12 Wheels (Iron)..... "	.09	.12	.12	.13	.17	.17	.20	.22	.35	.55	.80	1.10	1.45
13 Wheels (Brass), Solid Pattern, Knurled Edge.....each	.27	.37	.37	.53	.70	.85	1.00	1.20	1.70				
14 Locknuts for Wheels..... "	.05	.05	.06	.06	.07	.07	.09	.11	.15	.25	.35	.45	
15 Body for Vertical Check Valves.....each	.22	.33	.40	.53	.77	1.10	1.55	2.20	3.10	7.70	11.00	15.70	22.00
16 Caps for Horizontal and Angle Check Valves.....each	.15	.22	.27	.33	.45	.55	.70	.90	1.35	2.25	3.55	4.20	6.45
18 Discs for Horizontal Check Valves.....each	.11	.18	.22	.25	.35	.45	.55	.80	1.35	2.20	3.35	4.00	6.10
19 Discs for Angle Check Valves.....each	.11	.18	.22	.25	.35	.45	.55	.80	1.35	2.20	3.35	4.00	6.10
20 Discs for Vertical Check Valves.....each	.11	.18	.22	.25	.35	.45	.55	.80	1.35	2.20	3.35	4.00	6.10
21 Tops for Vertical Check Valves.....each	.18	.25	.31	.35	.55	.88	1.10	1.55	2.20	4.20	7.10	11.00	17.70
22 Wheel (Brass, Rough Spoke Pattern).....each	.20	.20	.20	.31	.45	.55	.77	1.00	1.20	2.10	2.75	3.75	5.90
23 Packing.....each	.05	.07	.07	.07	.09	.09	.10	.11	.13	.15	.30	.45	.55

When ordering repair parts, always specify size of Valves.

ORDER BY FIGURE NUMBERS

REGRINDING "EXCELSIOR" VALVES

The general make-up and description of the Re grinding "Excelsior" Valve on page 231 is applicable to the Outside Screw and Yoke Pattern, a sectional view of which is shown below, and in addition, the Yoked Pattern is preferable in steam pressure use, where the Valve is to be placed in an inverted position, as there are no threads to corrode and cause the Valve to turn hard.

The yoke has a tendency to strengthen the Valve; and a glance will show whether the Valve is open, partly open, or shut.

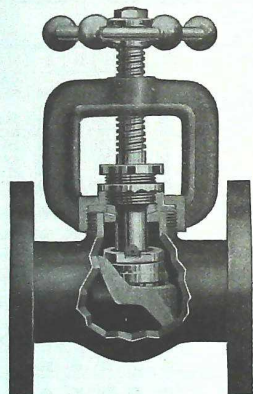


Fig. 205P
Valve with Outside Screw and Yoke

REGRINDING "EXCELSIOR" VALVES

WITH YOKE

For 200 Pounds Working Pressure

MEDIUM PRESSURE

BRASS

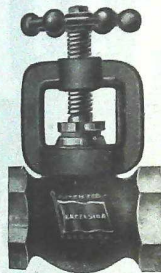


Fig. 205Q Globe Valve

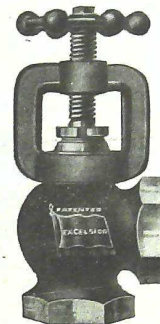


Fig. 205R Angle Valve

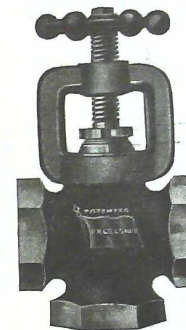


Fig. 205S Cross Valve

"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES—Screwed

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Globe Valves..... each	1.60	2.70	3.20	4.20	5.50	9.30	15.30
Angle Valves..... "	1.60	2.70	3.20	4.20	5.50	9.30	15.30
Cross Valves..... "	2.20	3.20	4.10	5.20	6.70	10.80	18.00

For dimensions, see page 258.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

REGRINDING "EXCELSIOR," VALVES

WITH YOKE

For 200 Pounds Working Pressure

MEDIUM PRESSURE

BRASS

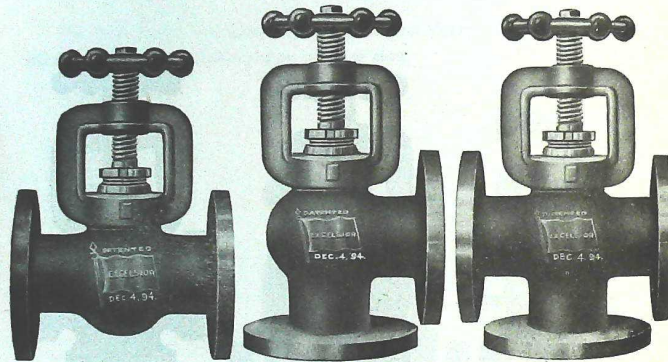


Fig. 205T Globe Valve

Fig. 205U Angle Valve

Fig. 205V Cross Valve

"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES—Flanged

Size..... inches	½	¾	1	1¼	1½	2	2½
Globe Valves..... each	4.00	5.50	6.70	9.20	12.00	16.00	22.50
Angle Valves..... "	4.00	5.50	6.70	9.20	12.00	16.00	22.50
Cross Valves..... "	5.70	7.70	9.30	13.00	16.50	21.50	30.00

For dimensions, see page 258.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

REGRINDING "EXCELSIOR," VALVES

WITH YOKE

For 300 Pounds Working Pressure

EXTRA HEAVY

BRASS

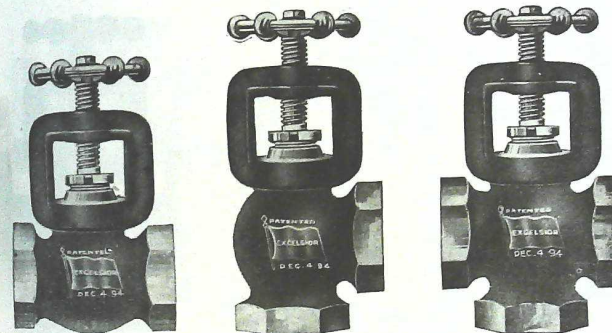


Fig. 205W Globe Valve

Fig. 205X Angle Valve

Fig. 205Y Cross Valve

"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES—Screwed

Size..... inches	½	¾	1	1¼	1½	2	2½
Globe Valves..... each	2.30	3.50	5.70	7.70	10.00	14.50	23.60
Angle Valves..... "	2.30	3.50	5.70	7.70	10.00	14.50	23.60
Cross Valves..... "	3.00	4.40	7.20	9.60	12.20	17.40	28.40

For dimensions, see page 259.

ORDER BY FIGURE NUMBERS

REGRINDING "EXCELSIOR" VALVES

WITH YOKE

For 300 Pounds Working Pressure

EXTRA HEAVY

BRASS

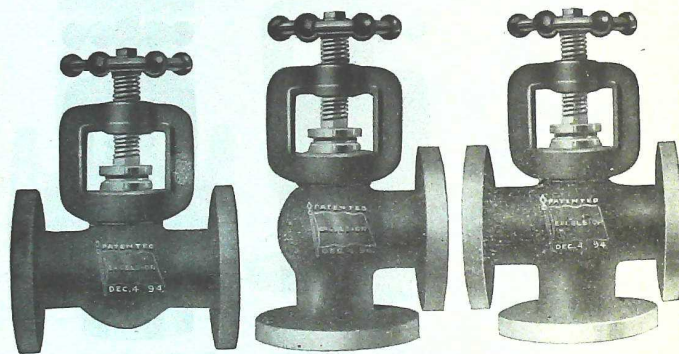


Fig. 205Z Globe Valve

Fig. 204S Angle Valve

Fig. 204T Cross Valve

"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES—Flanged

Size..... inches	½	¾	1	1¼	1½	2	2½
Globe Valves.....each	4.90	6.50	9.70	13.50	17.00	24.00	36.00
Angle Valves....."	4.90	6.50	9.70	13.50	17.00	24.00	36.00
Cross Valves....."	7.00	9.10	13.00	18.00	23.00	31.00	48.00

For dimensions, see page 259.

Hy-Tech Products

REGRINDING "EXCELSIOR" VALVES

For 200 Pounds Working Pressure

MEDIUM PRESSURE

BRASS

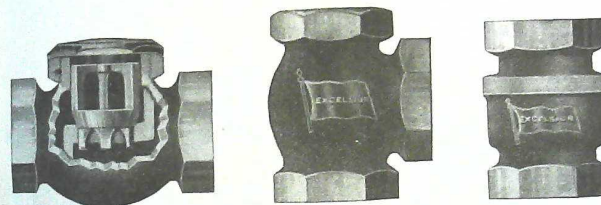


Fig. 205B Horizontal Check Valve

Fig. 205C Angle Check Valve

Fig. 206A Vertical Check Valve

"EXCELSIOR" CHECK VALVES—Screwed

Size..... inches	½	¾	1	1¼	1½	2	2½	3	3½	4			
Price, Horiz., Angle or Vert., each	.50	.50	.60	.85	1.15	1.55	2.30	3.25	5.20	10.00	14.00	19.75	30.75
Horizontal, Angle or Vertical, Finished..	.75	.75	.90	1.30	1.75	2.40	3.50	5.00	7.80	12.50	17.50	25.00	37.00
Horizontal, Enlarged Seats	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Horizontal, with Drain Cocks	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Horiz., with Enlarged Seats with Cocks...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTE—When Valves with enlarged seats are ordered, the diameter of the opening is made the same as that of the next larger size Valve.

Horizontal and Angle Check Valves, 2 inches and smaller, are furnished with hexagon caps; 2½ inches and larger are furnished with slotted caps.

For dimensions, see page 260.

ORDER BY FIGURE NUMBERS

REGRINDING "EXCELSIOR" VALVES

For 200 Pounds Working Pressure

MEDIUM PRESSURE

BRASS

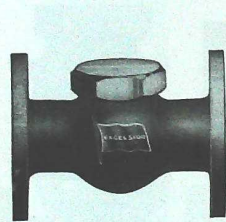


Fig. 206B
Horizontal Check Valve

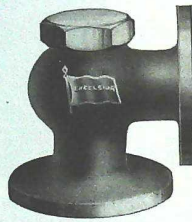


Fig. 206C
Angle Check Valve

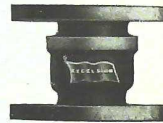


Fig. 206D
Vertical Check Valve

"EXCELSIOR" CHECK VALVES—Flanged

Size.....inches	¾	½	¾	1	1¼	1½	2	2½	3	3½	4
Price, Horizontal... each	1.90	3.00	4.30	5.20	7.30	9.70	13.30	18.20	25.80	32.90	46.00
" Angle..... "	1.90	3.00	4.30	5.20	7.30	9.70	13.30	18.20	25.80	32.90	46.00
" Vertical..... "	1.90	3.00	4.30	5.20	7.30	9.70	13.30	18.20	25.80	32.90	46.00

NOTE—Horizontal and Angle Check Valves, 2 inches and smaller, are furnished with hexagon caps; 2½ inches and larger are furnished with slotted caps.

For dimensions, see page 260.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

REGRINDING "EXCELSIOR" VALVES

For 300 Pounds Working Pressure

EXTRA HEAVY

BRASS

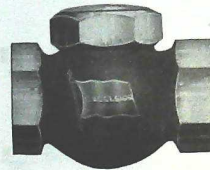


Fig. 206E
Horizontal Check Valve

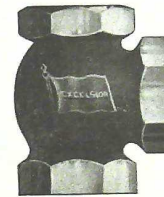


Fig. 206F
Angle Check Valve



Fig. 206G
Vertical Check Valve

"EXCELSIOR" CHECK VALVES—Screwed

Size..... inches	¼	¾	½	¾	1	1¼	1½	2	2½	3	3½	4
Price, Horizontal..... each	.90	1.00	1.20	1.70	2.80	3.90	5.50	8.90	16.20	24.30	35.40	45.20
" Angle..... "	.90	1.00	1.20	1.70	2.80	3.90	5.50	8.90	16.20	24.30	35.40	45.20
" Vertical..... "	.90	1.00	1.20	1.70	2.80	3.90	5.50	8.90	16.20	24.30	35.40	45.20

NOTE—Horizontal and Angle Check Valves, 2 inches and smaller, are furnished with hexagon caps; 2½ inches and larger are furnished with slotted caps.

For dimensions, see page 261.

ORDER BY FIGURE NUMBERS

REGRINDING "EXCELSIOR" VALVES

For 300 Pounds Working Pressure

EXTRA HEAVY
BRASS

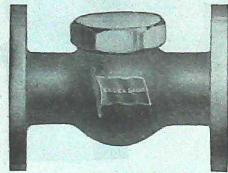


Fig. 206H
Horizontal Check Valve

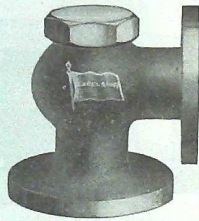


Fig. 206-I
Angle Check Valve

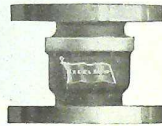


Fig. 206J
Vertical Check Valve

"EXCELSIOR" CHECK VALVES—Flanged

Size.....inches	¾	½	¾	1	1¼	1½	2	2½	3	3½	4
Price, Horizontal....each	2.20	3.70	5.20	6.80	9.40	12.70	18.10	29.00	39.10	52.80	65.20
" Angle..... "	2.20	3.70	5.20	6.80	9.40	12.70	18.10	29.00	39.10	52.80	65.20
" Vertical..... "	2.20	3.70	5.20	6.80	9.40	12.70	18.10	29.00	39.10	52.80	65.20

NOTE—Horizontal and Angle Check Valves, 2 inches and smaller, are furnished with hexagon caps; 2½ inches and larger, are furnished with slotted caps.
For general dimensions, see page 261.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

REGRINDING "EXCELSIOR" VALVES

For 200 and 300 Pounds Working Pressure

MEDIUM PRESSURE AND EXTRA HEAVY

BRASS

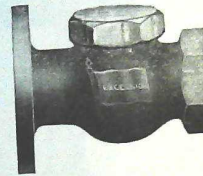


Fig. 206K
Horizontal Check Valve

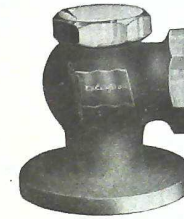


Fig. 206L
Angle Check Valve

"EXCELSIOR" CHECK VALVES—Flanged and Screwed

Size.....inches	¾	½	¾	1	1¼	1½	2	2½	3	3½	4
Price, Medium Pressure, Horizontal, each	1.70	2.50	3.40	4.30	6.00	8.00	11.10	17.20	24.00	33.40	45.40
" " " Angle..... "	1.70	2.50	3.40	4.30	6.00	8.00	11.10	17.20	24.00	33.40	45.40
" Extra Heavy, Horizontal..... "	2.00	3.00	4.40	6.00	8.40	11.30	16.50	27.20	37.90	52.80	65.90
" " " Angle..... "	2.00	3.00	4.40	6.00	8.40	11.30	16.50	27.20	37.90	52.80	65.90

NOTE—When ordering the above Valves, specify whether flanged outlet or inlet is desired.
Horizontal and Angle Check Valves, 2 inches and smaller, are furnished with hexagon caps; 2½ inches and larger are furnished with slotted caps.
For dimensions, see pages 260 and 261.

ORDER BY FIGURE NUMBERS

REGRINDING "EXCELSIOR" VALVES

RENEWABLE NICKEL SEAT

These Valves are of the same pattern as the Re grinding "Excelsior" Valves shown on the preceding pages, with the exception that the seat is so constructed as to permit of its easy removal for renewal purposes. This removal process is accomplished by the use of a flat bar to engage the lugs on the inside of the ring.

As the Valve is so constructed that all of the other working parts can be renewed, if necessary, the Valve is, therefore, practically indestructible and, where 200 pounds steam pressure is being used, this Valve receives our highest recommendation.

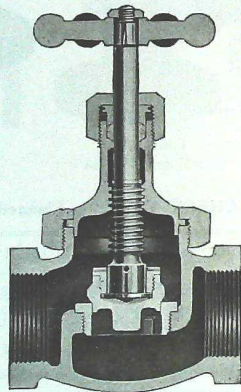


Fig. 206M

ORDER BY FIGURE NUMBERS

Hy-Tech Products

REGRINDING "EXCELSIOR" VALVES

RENEWABLE NICKEL SEAT

For 200 Pounds Working Pressure

BRASS

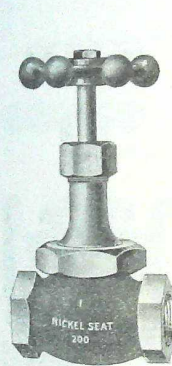


Fig. 207B Globe Valve

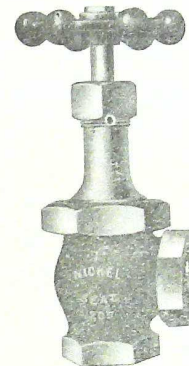


Fig. 207C Angle Valve

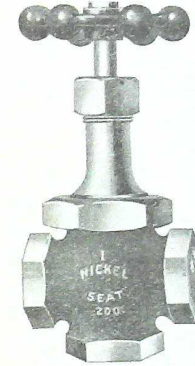


Fig. 207D Cross Valve

GLOBE, ANGLE AND CROSS VALVES—Screwed

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Price, Globe and Angle Valves each	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00	40.00	50.00
" Cross Valves..... "	1.70	2.00	2.25	2.50	3.25	4.75	6.25	9.50	20.00	27.50	45.00	60.00

For general dimensions, see page 262.

ORDER BY FIGURE NUMBERS

REGRINDING "EXCELSIOR" VALVES

RENEWABLE NICKEL SEAT

For 200 Pounds Working Pressure

BRASS

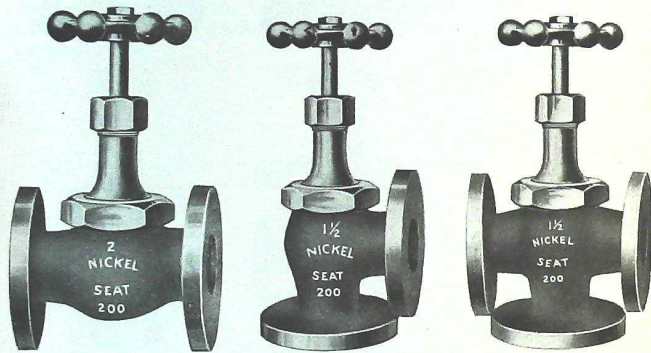


Fig. 207E Globe Valve Fig. 207F Angle Valve Fig. 207G Cross Valve

GLOBE, ANGLE AND CROSS VALVES—Flanged

Size..... inches	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4		
Price, Globe and Angle Valves each	4.00	4.00	5.00	6.00	9.00	11.00	16.50	25.00	34.00	55.00	70.00
" Cross Valves..... "	6.50	7.00	8.00	9.00	12.00	15.00	23.00	33.00	44.00	65.00	90.00

For general dimensions, see page 262.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

REGRINDING "EXCELSIOR" VALVES

RENEWABLE NICKEL SEAT

For 300 Pounds Working Pressure

BRASS

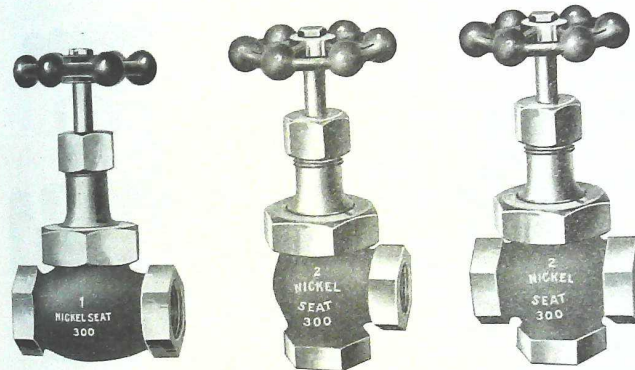


Fig. 207J Globe Valve Fig. 207K Angle Valve Fig. 207L Cross Valve

GLOBE, ANGLE AND CROSS VALVES—Screwed

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, Globe Valves..... each	1.60	1.70	2.50	3.80	4.90	6.50	9.00	14.00	25.00	36.00
" Angle "..... each	1.60	1.70	2.50	3.80	4.90	6.50	9.00	14.00	25.00	36.00
" Cross "..... each	2.10	2.30	3.40	4.60	6.00	7.80	10.50	16.00	29.00	42.00

For general dimensions, see page 263

ORDER BY FIGURE NUMBERS

REGRINDING "EXCELSIOR" VALVE

RENEWABLE NICKEL SEAT

For 300 Pounds Working Pressure

BRASS

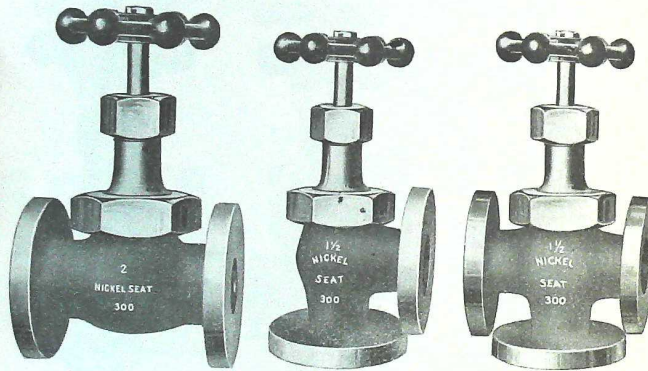


Fig. 207M Globe Valve

Fig. 207N Angle Valve

Fig. 207O Cross Valve

GLOBE, ANGLE AND CROSS VALVES—Flanged

Size.....inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, Globe Valves.....each	4.80	5.80	7.30	9.20	12.00	16.00	24.00	37.00	50.00
" Angle "....."	4.80	5.80	7.30	9.20	12.00	16.00	24.00	37.00	50.00
" Cross "....."	5.90	7.60	9.50	12.50	16.00	20.00	31.00	46.00	63.00

For general dimensions, see page 263.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

REGRINDING "EXCELSIOR" VALVES

RENEWABLE NICKEL SEAT

For 200 and 300 Pounds Working Pressure

BRASS

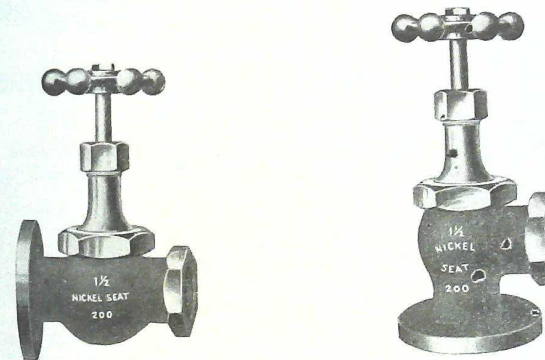


Fig. 207H Globe Valve

Fig. 207-I Angle Valve

GLOBE AND ANGLE VALVES—Flanged and Screwed

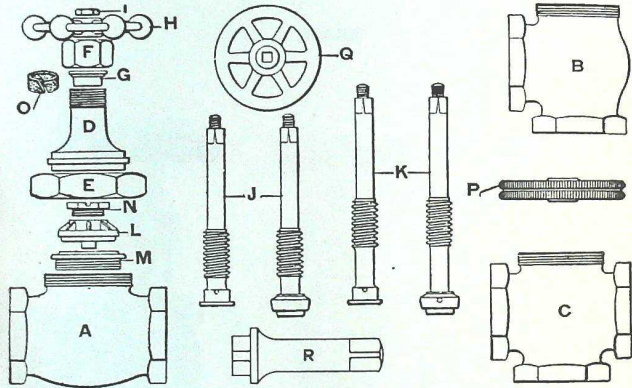
Size.....inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, Globe and Angle Valves 200lb. each	2.75	3.10	3.75	4.50	7.50	8.25	13.00	21.00	28.00
" 300lb. "....."	4.00	5.00	6.50	8.10	10.50	12.50	21.50	34.00	47.00

For general dimensions, see page 263.

ORDER BY FIGURE NUMBERS

PARTS FOR
REGRINDING "EXCELSIOR" VALVES

RENEWABLE NICKEL SEAT



PRICE LIST

Size.....	inches	¼	½	¾	1	1¼	1½	2	2½	3	
A Globe Valve Bodies.....	each	.55	.62	.80	1.10	1.40	2.00	2.75	4.38	7.88	11.00
B Angle Valve Bodies.....	"	.55	.62	.80	1.10	1.40	2.00	2.75	4.38	7.88	11.00
C Cross Valve Bodies.....	"	.85	1.00	1.12	1.25	1.62	2.38	3.12	4.75	10.00	13.75
D Hubs.....	"	.25	.25	.40	.55	.75	.90	1.20	2.30	3.70	5.00
E Bonnet Rings.....	"	.30	.30	.30	.35	.60	.85	1.20	1.75	3.10	4.20
F Stuffing Boxes.....	"	.20	.20	.25	.30	.35	.35	.40	.50	.90	1.30
G Glands.....	"	.18	.18	.20	.20	.20	.25	.30	.45	.60	1.00
H Wheels (Iron).....	"	.07	.07	.08	.09	.09	.12	.15	.20	.35	
I Wheel Locknuts.....	"	.40	.40	.45	.50	.65	.85	1.20	1.70	2.40	3.00
J Stems for Globe Valves.....	"	.50	.50	.55	.60	.75	.95	1.30	1.80	2.60	3.40
K Stems for Angle or Cross Valves.....	"	.18	.20	.35	.40	.50	.65	.80	1.20	2.10	2.80
L Discs.....	"	.10	.10	.12	.12	.12	.13	.15	.18	.20	.40
M Renewable Seats.....	"	.45	.45	.70	.90	.95	1.25	1.50	2.10	2.60	3.50
N Disc Locknuts.....	"	.25	.25	.40	.60	.70	.85	1.25	1.50	2.60	3.50
O Packings.....	"	1.70	1.70	1.80	1.80	2.00	2.30	2.40	2.60	2.80	3.30
P Wheels (Brass), Solid Pattern, Knurled Edge.....	"										
Q Wheels (Brass), Rough Spoke Pattern.....	"										
R Seat Wrench.....	"										

When ordering repair parts, always specify size of Valves.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

"FERRO" GLOBE, ANGLE AND CROSS VALVES

BRASS TRIMMINGS STEEL BODY

Self Cleaning Seat, Regrinding and Renewable Seat and Disc

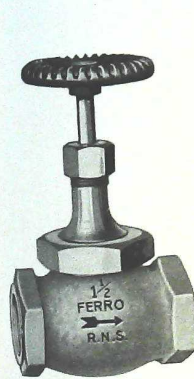


Fig. 207R Globe Valve



Fig. 207S Angle Valve



Fig. 207T Cross Valve

GLOBE, ANGLE AND CROSS VALVES—Screwed

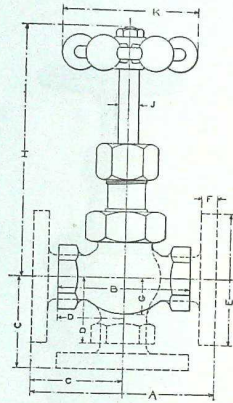
Size.....	inches	¼	1	1¼	1½	2
Price, Globe and Angle Valves.....	each	2.20	2.80	4.00	5.50	8.75
Cross Valves.....	each	2.50	3.25	4.75	6.25	9.50

With the exception of the Brass ring all parts of the "Ferro" Valve are interchangeable with those of the Excelsior Renewable Nickel Seat. Parts shown on page 254.

ORDER BY FIGURE NUMBERS

TABLE OF DIMENSIONS
 REGRINDING "EXCELSIOR" GLOBE, ANGLE AND
 CROSS VALVES

For 200 Pounds Working Pressure
 MEDIUM PRESSURE
 BRASS



"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES

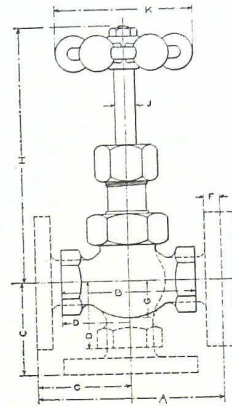
Size.....	inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
A Face to Face of Globe Valve, Flanged.....	inches		2 1/2	3 1/2	4 1/2	4 3/4	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2
B End to End of Globe Valve, Screwed.....	inches	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2
C C. to F. of Inlet or Outlet, Angle or Cross Valve, Flanged.....	inches	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2
D C. to F. of Inlet or Outlet, Angle or Cross Valve, Screwed.....	inches	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2
E Diameter of Flanges.....	inches	1	1 1/4	1 3/4	2	2 1/4	2 3/4	3 1/4	3 3/4	4 1/4	4 3/4	5 1/4	5 3/4	6 1/4
F Thickness of Flanges.....	"	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 3/4	1 7/8	2 1/8	2 1/4
G Center of Port to Bottom of Body.....	inches	1 1/2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2
H Center of Port to Top of Stem, when Open.....	inches	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2
H Center of Port to Top of Stem, when Closed.....	inches	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2
J Diameter of Stem.....	inches	3/8	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 3/4	1 7/8	2 1/8	2 1/4
K Diameter of Hand Wheel.....	"	1 1/2	2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2

The dimensions in the above table refer to Valves shown on pages 232, 233 and 236.

ORDER BY FIGURE NUMBERS
 Hy-Tech Products

TABLE OF DIMENSIONS
 REGRINDING "EXCELSIOR" GLOBE, ANGLE AND
 CROSS VALVES

For 300 Pounds Working Pressure
 EXTRA HEAVY
 BRASS



"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES

Size.....	inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
A Face to Face Globe Valve, Flanged.....	inches	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2
B End to End of Globe Valve, Screwed.....	inches	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2
C C. to F. of Inlet or Outlet, Angle or Cross Valve, Flanged.....	inches	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2
D C. to F. of Inlet or Outlet, Angle or Cross Valve, Screwed.....	inches	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2
E Diameter of Flanges.....	inches	1 1/2	2 1/4	3 1/4	4 1/4	5 1/4	6 1/4	7 1/4	8 1/4	9 1/4	10 1/4	11 1/4	12 1/4
F Thickness of Flanges.....	"	3/4	1	1 1/8	1 1/4	1 3/8	1 3/4	1 7/8	2 1/8	2 1/4	2 3/8	2 3/4	3 1/8
G Center of Port to Bottom of Body.....	inches	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2
H Center of Port to Top of Stem, when Open.....	inches	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2
H Center of Port to Top of Stem, when Closed.....	inches	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2
J Diameter of Stem.....	inches	3/4	1	1 1/8	1 1/4	1 3/8	1 3/4	1 7/8	2 1/8	2 1/4	2 3/8	2 3/4	3 1/8
K Diameter of Hand Wheel.....	"	2	2 1/2	3 1/2	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2

The dimensions in the above table refer to Valves shown on pages 234, 235 and 236.

ORDER BY FIGURE NUMBERS

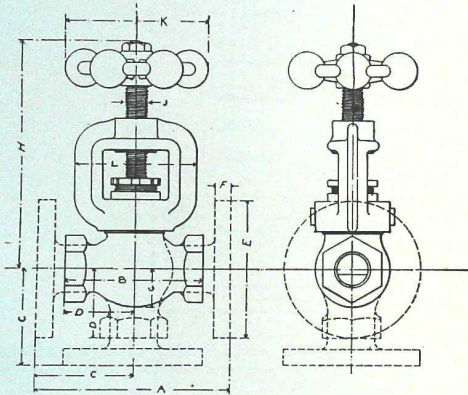
TABLE OF DIMENSIONS
 REGRINDING "EXCELSIOR" GLOBE, ANGLE AND
 CROSS VALVES

WITH YOKE

For 200 Pounds Working Pressure

MEDIUM PRESSURE

BRASS



"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES

Size	inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
A	Face to Face, Globe Valve, Flanged	3 3/4	4 1/4	4 3/4	4 3/4	5 1/4	6 1/4	7 1/4
B	End to End, Globe Valve, Screwed	2 7/8	2 1/4	3 1/4	3 1/4	4 1/4	5 1/4	6 1/4
C	C. to F. of Inlet or Outlet, Angle or Cross Valve, Flanged	1 3/4	2 1/4	2 3/4	2 3/4	3 3/4	3 3/4	4 3/4
D	C. to F. of Inlet or Outlet, Angle or Cross Valve, Screwed	1 7/8	1 3/4	1 3/4	1 3/4	2 3/4	2 3/4	3 3/4
E	Diameter of Flanges	3	3 1/2	4	4 1/2	5	6	7
F	Thickness of Flanges	3/8	3/8	3/8	3/8	3/8	3/8	3/8
G	Center of Port to Bottom of Body	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
H	Center of Port to Top of Stem, when Open	4 1/8	4 1/8	5 1/8	6 1/8	7 1/8	8 1/8	9 1/8
H	Center of Port to Top of Stem, when Closed	4 3/8	4 3/8	5 3/8	6 3/8	7 3/8	8 3/8	9 3/8
J	Diameter of Stem	1/8	3/8	3/8	3/8	3/8	3/8	3/8
K	Diameter of Hand Wheel	2 1/8	2 1/8	3 1/8	3 1/8	4 1/8	4 1/8	5 1/8
L	Width of Yoke	2 1/4	2 1/4	3 1/4	3 1/4	4 1/4	4 1/4	5 1/4

The dimensions in the above table refer to Valves shown on pages 239 and 240.

ORDER BY FIGURE NUMBERS

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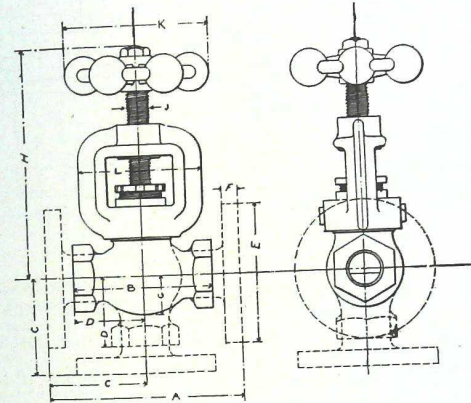
TABLE OF DIMENSIONS
 REGRINDING "EXCELSIOR" GLOBE, ANGLE AND
 CROSS VALVES

WITH YOKE

For 300 Pounds Working Pressure

EXTRA HEAVY

BRASS



"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES

Size	inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
A	Face to Face, Globe Valve, Flanged	3 3/4	4 1/4	4 3/4	5 1/4	6 1/4	7 1/4	8 1/4
B	End to End, Globe Valve, Screwed	2 7/8	3 1/4	3 3/4	4 1/4	4 3/4	5 1/4	6 1/4
C	C. to F. of Inlet or Outlet, Angle or Cross Valve, Flanged	2 1/8	2 1/4	2 3/4	3 1/4	3 3/4	4 1/4	4 3/4
D	C. to F. of Inlet or Outlet, Angle or Cross Valve, Screwed	1 3/4	1 3/4	1 3/4	2 3/4	2 3/4	3 3/4	4 3/4
E	Diameter of Flanges	3 1/2	4	4 1/2	5	6	7	8
F	Thickness of Flanges	3/8	3/8	3/8	3/8	3/8	3/8	3/8
G	Center of Port to Bottom of Body	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
H	Center of Port to Top of Stem, when Open	4 1/8	4 1/8	5 1/8	6 1/8	7 1/8	8 1/8	9 1/8
H	Center of Port to Top of Stem, when Closed	4 3/8	4 3/8	5 3/8	6 3/8	7 3/8	8 3/8	9 3/8
J	Diameter of Stem	1/8	3/8	3/8	3/8	3/8	3/8	3/8
K	Diameter of Hand Wheel	2 1/8	2 1/8	3 1/8	3 1/8	4 1/8	4 1/8	5 1/8
L	Width of Yoke	2 1/4	2 1/4	3 1/4	3 1/4	4 1/4	4 1/4	5 1/4

The dimensions in the above table refer to Valves shown on pages 241 and 242.

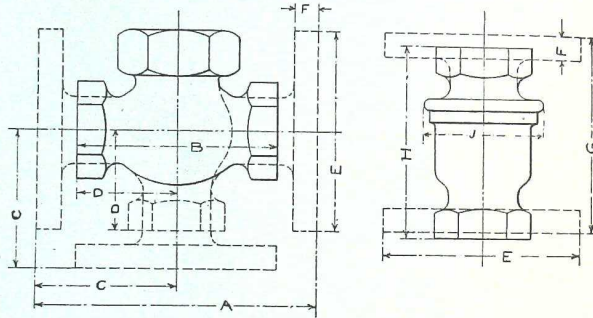
ORDER BY FIGURE NUMBERS

TABLE OF DIMENSIONS
**REGRINDING "EXCELSIOR" HORIZONTAL,
 ANGLE AND VERTICAL CHECK VALVES**

For 200 Pounds Working Pressure

MEDIUM PRESSURE

BRASS



"EXCELSIOR" HORIZONTAL AND ANGLE CHECK VALVES

Size.....	inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
A	Face to Face, Horizontal Valve, Flanged.....			2 3/8	3 1/8	4 1/8	4 3/8	4 7/8	5 3/8	6 1/8	7 1/8	8 1/8	9 1/8	10 1/8
B	End to End, Horizontal Valve, Screwed.....	1 1/8	2 1/8	2 3/8	2 7/8	3 1/8	3 3/8	3 7/8	4 1/8	5 1/8	6 1/8	7 1/8	7 3/8	8 1/8
C	C. to F. of Inlet or Outlet, Angle Valve, Flanged.....			1 3/8	1 3/8	2 1/8	2 1/8	2 3/8	2 3/8	3 1/8	3 1/8	4 1/8	4 1/8	5 1/8
D	C. to F. of Inlet or Outlet, Angle Valve, Screwed.....			1 3/8	1 3/8	2 1/8	2 1/8	2 3/8	2 3/8	3 1/8	3 1/8	4 1/8	4 1/8	5 1/8
E	Diameter of Flanges.....	1 1/8	1	1 1/8	1 1/8	1 3/8	1 3/8	1 7/8	2 1/8	2 1/8	2 3/8	3 1/8	3 1/8	4 1/8
F	Thickness of Flanges.....			3/8	3/8	1/2	1/2	3/4	3/4	7/8	7/8	1 1/8	1 1/8	1 1/8

"EXCELSIOR" VERTICAL CHECK VALVES

Size.....	inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
E	Diameter of Flanges.....			2 1/8	3	3 3/8	4	4 3/8	5	6	7	7 3/8	8 1/8	9 1/8
F	Thickness of Flanges.....			3/8	3/8	1/2	1/2	3/4	3/4	7/8	7/8	1 1/8	1 1/8	1 1/8
G	Face to Face, Flanged.....			2 3/8	2 3/8	2 3/8	3 1/8	3 1/8	3 1/8	4 1/8	5 1/8	5 1/8	6 1/8	6 1/8
H	End to End, Screwed.....			1 1/8	1 1/8	2 1/8	2 1/8	2 1/8	3 1/8	3 1/8	4 1/8	5 1/8	5 1/8	6 1/8
J	Extreme Outside Diameter of Body.....	1 1/8	1 1/2	1 5/8	1 3/4	1 3/4	2 1/8	2 1/8	2 3/8	3 1/8	4 1/8	5 1/8	5 1/8	6 1/8

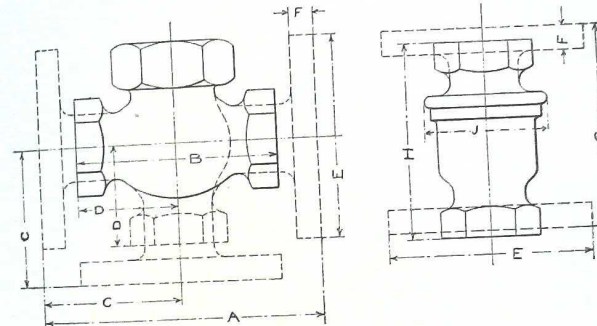
The dimensions in the above table refer to Valves shown on pages 243, 244 and 247.

TABLE OF DIMENSIONS
**REGRINDING "EXCELSIOR" HORIZONTAL,
 ANGLE AND VERTICAL CHECK VALVES**

For 300 Pounds Working Pressure

EXTRA HEAVY

BRASS



"EXCELSIOR" HORIZONTAL AND ANGLE CHECK VALVES

Size.....	inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
A	Face to Face, Horizontal Valve, Flanged.....			3 3/8	3 3/8	4 1/8	4 3/8	5 1/8	6 1/8	7 1/8	8 1/8	9 1/8	10 1/8
B	End to End, Horizontal Valve, Screwed.....	2 1/8	2 3/8	2 3/8	3 1/8	3 1/8	4 1/8	4 1/8	5 1/8	6 1/8	7 1/8	7 3/8	8 1/8
C	C. to F. of Inlet or Outlet, Angle Valve, Flanged.....			2 3/8	2 3/8	2 3/8	3 1/8	3 1/8	4 1/8	4 1/8	5 1/8	5 1/8	6 1/8
D	C. to F. of Inlet or Outlet, Angle Valve, Screwed.....			2 3/8	2 3/8	2 3/8	3 1/8	3 1/8	4 1/8	4 1/8	5 1/8	5 1/8	6 1/8
E	Diameter of Flanges.....	1	1 1/8	1 1/8	1 1/8	1 3/8	1 3/8	1 3/8	2 1/8	2 1/8	3 1/8	3 1/8	4 1/8
F	Thickness of Flanges.....			3/8	3/8	1/2	1/2	3/4	3/4	7/8	7/8	1 1/8	1 1/8

"EXCELSIOR" VERTICAL CHECK VALVES

Size.....	inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
E	Diameter of Flanges.....			3	3 3/8	4	4 3/8	5	6	6 3/8	7 1/8	8 1/8	9 1/8
F	Thickness of Flanges.....			3/8	3/8	1/2	1/2	3/4	3/4	7/8	7/8	1 1/8	1 1/8
G	Face to Face, Flanged.....			2 3/8	3	3 3/8	3 3/8	3 3/8	4 3/8	5	5 3/8	6 1/8	6 1/8
H	End to End, Screwed.....			1 1/8	2	2 3/8	2 3/8	3 3/8	4	4 3/8	5 1/8	5 1/8	6 1/8
J	Extreme Outside Diameter of Body.....	1 1/4	1 1/4	1 3/8	1 3/8	2 1/8	2 1/8	2 1/8	3 1/8	4 1/8	5 1/8	5 1/8	6 1/8

The dimensions in the above table refer to Valves shown on pages 245, 246 and 247.

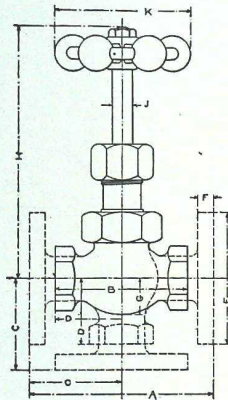
ORDER BY FIGURE NUMBERS

Hy-Tech Products

TABLE OF DIMENSIONS
**REGRINDING "EXCELSIOR" GLOBE, ANGLE AND
 CROSS VALVES**

RENEWABLE NICKEL SEAT
 For 200 Pounds Working Pressure

BRASS



"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES

Size	inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A	Face to Face of Globe Valve, Flanged	3	3 3/8	4	4 1/8	5 1/8	6 1/8	7 1/8	8	9	
B	End to End of Globe Valve, Screwed	2 1/8	2 3/8	2 1/2	3 1/8	3 3/8	4 1/8	4 3/8	5 1/8	6 1/8	7 1/8
C	Center to Face of Inlet or Outlet, Angle or Cross Valve, Flanged	1 1/8	1 3/8	2 1/8	2 1/8	2 1/8	2 1/8	3 1/8	3 1/8	4 1/8	4 1/8
D	Center to Face of Inlet or Outlet, Angle or Cross Valve, Screwed	1	1 1/8	1 1/8	1 1/8	1 1/8	2 1/8	2 1/8	3 1/8	3 1/8	3 1/8
E	Diameter of Flanges	2 1/2	3	3 1/4	4	4 1/2	5	6	7	7 1/2	8 1/2
F	Thickness of Flanges	1/8	3/8	1/2	3/4	1	1 1/8	1 1/8	1 1/2	1 3/4	2 1/8
G	Center of Port to Bottom of Body	3/8	3/8	1/2	1/2	1/2	1 1/8	1 1/8	1 1/2	1 3/4	2 1/8
H	Center of Port to Top of Stem, when Open	3/8	3/8	1/2	1/2	1/2	1 1/8	1 1/8	1 1/2	1 3/4	2 1/8
H	Center of Port to Top of Stem, when Closed	3/8	3/8	1/2	1/2	1/2	1 1/8	1 1/8	1 1/2	1 3/4	2 1/8
J	Diameter of Stem	3/8	3/8	1/2	1/2	1/2	1 1/8	1 1/8	1 1/2	1 3/4	2 1/8
K	Diameter of Hand Wheel	2 1/8	2 3/8	2 1/2	2 1/8	3	3 1/8	4 1/8	6	7	8

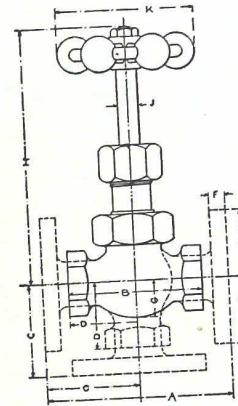
The dimensions in the above table refer to Valves shown on pages 249, 250 and 251.

Hy-Tech Products

TABLE OF DIMENSIONS
**REGRINDING "EXCELSIOR" GLOBE, ANGLE AND
 CROSS VALVES**

RENEWABLE NICKEL SEAT
 For 300 Pounds Working Pressure

BRASS



"EXCELSIOR" GLOBE, ANGLE AND CROSS VALVES

Size	inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
A	Face to Face of Globe Valve, Flanged	3 1/2	3 3/4	4 1/2	5 1/8	5 1/8	6 1/8	7	8	9	10
B	End to End of Globe Valve, Screwed	2 1/8	2 3/8	2 1/2	3 1/8	3 1/8	4 1/8	5 1/8	6 1/8	7 1/8	8 1/8
C	Center to Face of Inlet or Outlet, Angle or Cross Valve, Flanged	2 1/8	2 3/8	2 1/2	2 1/8	2 1/8	3 1/8	3 1/8	4 1/8	5 1/8	
D	Center to Face of Inlet or Outlet, Angle or Cross Valve, Screwed	1 3/8	1 3/8	1 3/8	1 3/8	2 1/8	2 1/8	3	3 1/8	4 1/8	
E	Diameter of Flanges	3	3 1/2	4	4 1/2	5	6	7	8	9	10
F	Thickness of Flanges	1/8	3/8	1/2	3/4	1	1 1/8	1 1/8	1 1/2	1 3/4	2 1/8
G	Center of Port to Bottom of Body	3/8	3/8	1/2	1/2	1/2	1 1/8	1 1/8	1 1/2	1 3/4	2 1/8
H	Center of Port to Top of Stem, when open	3/8	3/8	1/2	1/2	1/2	1 1/8	1 1/8	1 1/2	1 3/4	2 1/8
H	Center of Port to Top of Stem, when closed	3/8	3/8	1/2	1/2	1/2	1 1/8	1 1/8	1 1/2	1 3/4	2 1/8
J	Diameter of Stem	3/8	3/8	1/2	1/2	1/2	1 1/8	1 1/8	1 1/2	1 3/4	2 1/8
K	Diameter of Hand Wheel	2	2 1/8	2 1/2	2 1/8	3	3 1/8	4 1/8	6	7	8

The dimensions in the above table refer to Valves shown on page 251, 252 and 253.

ORDER BY FIGURE NUMBERS

PATENTED VALVE BONNET

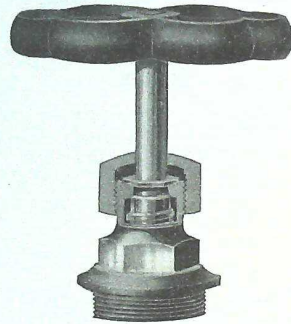


Fig. 125B

We wish to call your attention to the patented improvements we have made in our Valve Bonnets. The top of the Bonnet, under the packing nut, is cast with a polygonal block, which has a concave top. This is enough smaller than the diameter of the top of Bonnet to permit an outer coil of the packing to be pressed around the angular sides. When the packing nut is screwed down tightly, it will be seen that this provides a very neat and effective nut lock, making it impossible for either the packing or packing nut to turn when the Valve is being opened.

Attention is also called to the Angular Shoulder on the Spindle, just under the top of the Bonnet, which forms a steam-tight seat at this point when the Valve is wide open. This removes the pressure from the packing while the Valve is open, thus prolonging the life of the same, and also permits repacking the Valve when it is open, and the wheel farthest away from the Bonnet.

Another advantage we secure with this Bonnet is, that it is impossible to put any strain upon the Valve Disc or Locknut when the Valve is open, as these angular seats come together before the Valve Disc comes in contact with the lower part of the Bonnet, thus leaving the end of the Spindle and Disc free from strains which often destroy them. When it becomes necessary to repack these Valves, the old, worn-out packing is removed with less difficulty than would be the case were it crowded down into a recess.

All our Brass Valves with inside screw Bonnet connection, as above, are provided with this style of Bonnet, except when especially ordered with gland.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

STANDARD X GLOBE VALVE

BRASS

For 125 Pounds Working Pressure

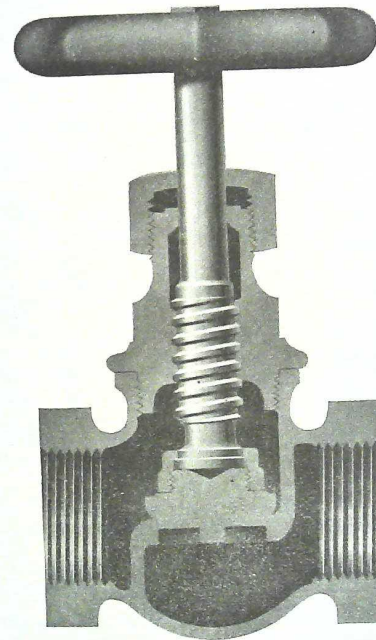


Fig. 314L

ORDER BY FIGURE NUMBERS

STANDARD X BRASS VALVES

For 125 Pounds Working Pressure



Fig. 314M Globe Valve



Fig. 314N Angle Valve

GLOBE AND ANGLE VALVES—Screwed

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price..... each	.72	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00	14.40	26.50	36.00



Fig. 314-O Globe Valve

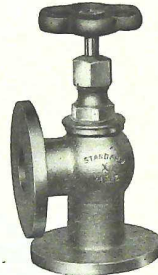


Fig. 314P Angle Valve

GLOBE VALVES—Flanged

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Price..... each	4.50	5.00	6.75	8.50	10.50	16.00	23.00	35.00	50.00	70.00	125.00	200.00
Face to Face..... inches	3	3 3/4	4	4 1/2	5	6	6 1/2	7 1/2	8	8 1/2	10	11
Diameter of Flanges.....	3	3 3/4	4	4 1/2	5	6	7	7 1/2	8 1/2	9	10	11

ANGLE VALVES—Flanged

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Price..... each	4.50	5.00	6.75	8.50	10.50	16.00	23.00	35.00	50.00	70.00	125.00	200.00
Center to Face of Side Flange, ins.	1 1/2	1 3/4	2	2 1/4	2 3/4	3 3/4	4 1/2	5 1/2	6 1/2	7 1/2	9 1/2	11 1/2
Center to Face of Bot. Flange, ..	2 1/2	2 3/4	3	3 1/4	3 3/4	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	10 1/2	12 1/2
Diameter of Flanges.....	3	3 3/4	4	4 1/2	5	6	7	7 1/2	8 1/2	9	10	11

STANDARD X BRASS CHECK VALVES

For 125 Pounds Working Pressure



Fig. 314Q Horizontal Check Valve

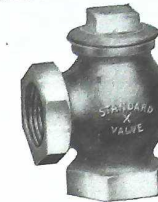


Fig. 314R Angle Check Valve

HORIZONTAL CHECK VALVES

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price..... each	.65	.65	.70	.90	1.15	1.60	2.25	3.15	4.75	9.00	13.00	24.00	32.50

ANGLE CHECK VALVES

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price..... each	.72	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00	14.40	26.50	36.00

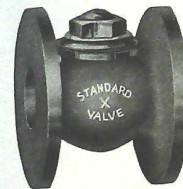


Fig. 314S Horizontal Check Valve



Fig. 314T Vertical Check Valve

HORIZONTAL CHECK VALVES—Flanged

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price..... each	4.40	4.90	6.50	8.25	10.15	15.50	22.00	33.50	47.50	66.50
Face to Face..... inches	3	3 3/4	4	4 1/2	5	6	6 1/2	7 1/2	8	8 1/2
Diameter of Flanges.....	3	3 3/4	4	4 1/2	5	6	7	7 1/2	8 1/2	9

ANGLE CHECK VALVES—Flanged. Not Illustrated

Size..... inches	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price..... each	6.75	8.50	10.50	16.00	23.00	35.00	50.00	70.00
Center to Face of Side Flange..... inches	2	2 1/4	2 3/4	3 1/2	4	4 1/2	5 1/2	6 1/2
Center to Face of Bottom Flange.....	3	3 1/4	3 3/4	4 1/2	5	5 1/2	6 1/2	7 1/2
Diameter of Flanges.....	4	4 1/2	5	6	7	7 1/2	8 1/2	9

VERTICAL CHECK VALVES—Screwed

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price..... each	.72	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00	14.40	26.50	36.00

ORDER BY FIGURE NUMBERS

Hy-Tech PRODUCTS

STANDARD X BRASS CROSS VALVES



Fig. 314U
Cross Valve—Screwed

For 125 Pounds Working
Pressure

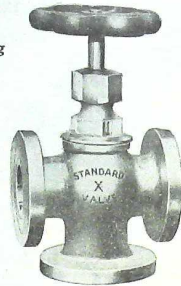


Fig. 314V
Cross Valve—Flanged

CROSS VALVES—Screwed and Flanged

Size.....inches	¼	¾	½	¾	1	1¼	1½	2	2½	3	3½	4
Price, Screwed.....each	1.25	1.25	1.50	2.00	2.50	3.50	5.00	8.00	16.00	24.00	45.00	60.00
Price, Flanged.....each	5.25	7.00	9.00	12.00	15.75	22.00	33.00	45.00	75.00	100.00		
Face to Face.....inches	3	3½	4	5	5½	7	7½	8	9½	10½		
Center of Valve to Bottom of Flange.....	2¾	2¾	3	3¾	3¾	4	4½	5	4½	4½	5½	
Diameter of Flanges.....	3	3½	4	4½	5	6	7	7½	8½	9		

GAS LOG VALVES



Fig. 314C Wood Wheel
GAS LOG VALVES

Size.....inches	¼	¾	½
Price, Plain, Wood Wheel.....each	1.60	1.75	2.00
" Plain, Finished Brass Wheel.....	2.10	2.25	2.50
" Nickel Plated Trimmings, Wood Wheel.....	1.85	2.00	2.25
" Nickel Plated Trimmings, Finished Brass Wheel.....	2.35	2.50	2.75

Extra charge for Valves with stems longer than 6 inches.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

NEEDLE POINT BRASS VALVES

For Working Pressures Up to 125 Pounds

GLOBE OR ANGLE

WITH OR WITHOUT UNION

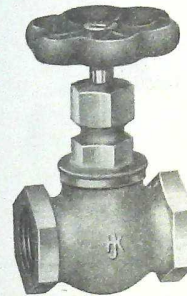
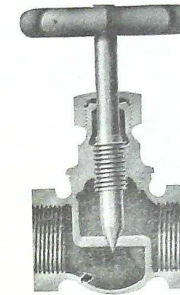


Fig. 314W Needle Point Valve



Sectional

NEEDLE POINT BRASS VALVES

Size.....inches	¼	¾	½	¾
Size of Feed Opening.....inches	¼	¾	½	¾
Price, Globe or Angle.....each	1.40	1.50	2.00	2.50
" with Union.....	2.00	2.20	3.00	3.50

Unless otherwise specified, these Needle Point Valves will be furnished with the above size feed openings.

State, in ordering, whether Globe or Angle is desired, and whether Valve is to be furnished with or without Union.

If a Needle Point Valve for a higher working pressure than given above is wanted, same can be furnished from our "Excelsior" Brass Valve pattern. Prices upon application.

ORDER BY FIGURE NUMBERS

STANDARD GLOBE VALVE

For 100 Pounds Working Pressure

BRASS

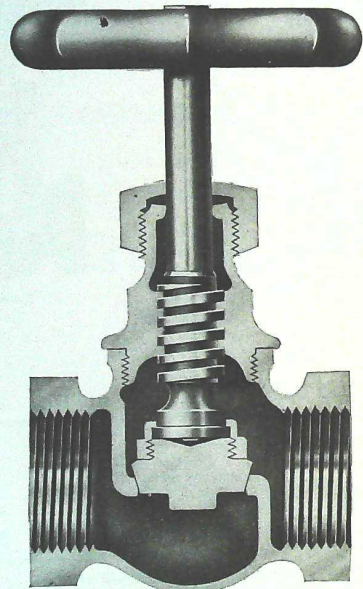


Fig. 207A

STANDARD BRASS VALVES

For 100 Pounds Working Pressure

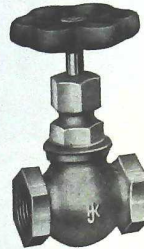


Fig. 207 Globe Valve

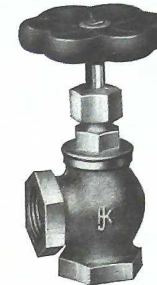


Fig. 208 Angle Valve

GLOBE AND ANGLE VALVES

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, Globe and Angle, Screwed...each	.72	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00	14.40
Globe and Angle, Flanged.....	.....	.....	.....	4.50	5.00	6.75	8.50	10.50	16.00	23.00	35.00
Diameter of Flanges.....inches	.....	.....	.....	3 1/2	.....	4	4 1/2	5	6	7	7 1/2

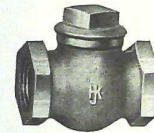


Fig. 210 Horizontal Check Valve



Fig. 211 Angle Check Valve

HORIZONTAL AND ANGLE CHECK VALVES

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, Horizontal, Screwed.....each	.65	.65	.70	.90	1.15	1.60	2.25	3.15	4.75	9.00	13.00
Angle, Screwed.....	.72	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00	14.40

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STANDARD BRASS CHECK VALVES

For 100 Pounds Working Pressure



Fig. 211B Horizontal Check Valve with Drip Cock



Fig. 212A Vertical Check Valve

HORIZONTAL CHECK VALVES—With Drip Cock

Size.....inches	½	¾	1	1¼	1½
Price.....each	2.15	2.55	3.15	4.05	5.40

VERTICAL CHECK VALVES

Size.....inches	½	¾	1	1¼	1½	2	2½	3			
Price.....each	.72	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00	14.40

LOCK SHIELD GLOBE AND ANGLE VALVES

FOR NATURAL GAS

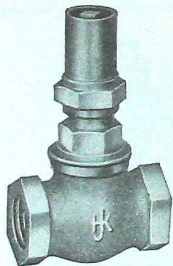


Fig. 1054 Globe Valve



Fig. 1054A Brass Key

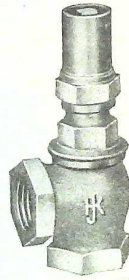


Fig. 1055 Angle Valve

LOCK SHIELD GLOBE AND ANGLE VALVES

Size.....inches	¾	1	1¼	1½	
Price.....each	1.10	1.35	1.60	2.25	3.25
Price, Rough Body, Plain.....each	1.40	1.65	1.95	2.65	3.70
Price, Rough Body, Plated All Over.....each	1.40	1.65	1.95	2.65	3.70
Price, Keys for Valves.....each	.25	.25	.40	.40	.40

ORDER BY FIGURE NUMBERS
Hy-Tech Products

STANDARD BRASS SAFETY VALVES

For 100 Pounds Working Pressure

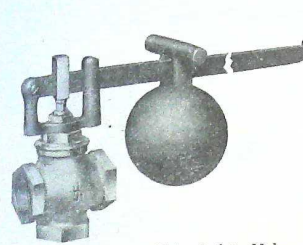


Fig. 313 Three-way Globe Safety Valve

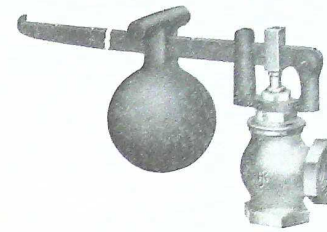


Fig. 313A Angle Safety Valve

THREE-WAY AND ANGLE SAFETY VALVES

Size.....inches	¼	¾	1	1¼	1½	2	2½	3		
Price, Screwed.....each	2.20	2.50	3.25	3.90	4.70	7.15	9.00	12.50	22.50	33.50

NOTE—The levers on above Valves are graduated from 30 to 100 pounds. Can be furnished graduated under 30 pounds at special price.

LOW PRESSURE BRASS SAFETY VALVES

With Iron Ball Weighted for 8 to 10 Pounds Pressure



Fig. 313B

LOW PRESSURE SAFETY VALVES

Size.....inches	1	1¼
Price.....each	3.00	4.00

ORDER BY FIGURE NUMBERS

SPECIAL PATTERN BRASS VALVES

For 100 Pounds Working Pressure



Fig. 314E Globe Valve



Fig. 314F Angle Valve

GLOBE AND ANGLE VALVES

Size.....inches	¼	⅜	½	¾	1	1¼	1½	2
Price, Globe and Angle, Screwed.....each	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30



Fig. 314G Horizontal Check Valve



Fig. 314H Angle Check Valve

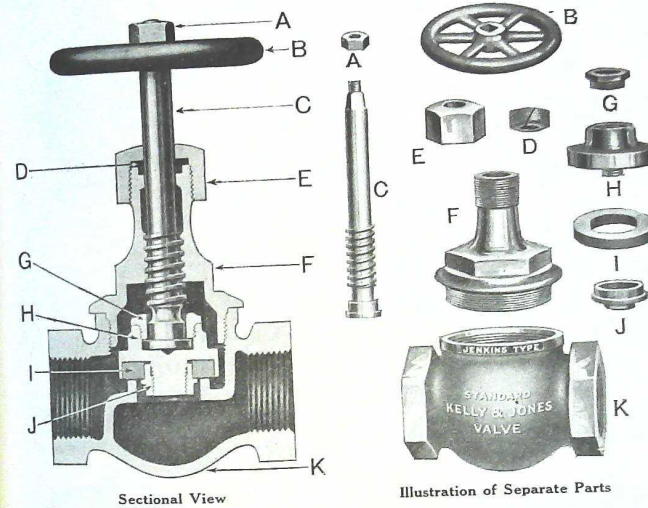
HORIZONTAL AND ANGLE CHECK VALVES

Size.....inches	¼	⅜	½	¾	1	1¼	1½	2
Price, Horizontal, Screwed.....each	.65	.70	.90	1.15	1.60	2.25	3.15	4.75
" Angle, Screwed....."	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30

JENKINS TYPE
STANDARD KELLY & JONES VALVES

BRASS

For 125 Pounds Working Pressure



PRICE LIST OF PARTS FOR JENKINS TYPE VALVES

Size.....inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
A—Wheel Nut.....	.04	.04	.04	.04	.08	.10	.10	.20	.25	.35
B—Wheel.....	.04	.04	.04	.06	.10	.10	.15	.25	.40	.50
C—Spindle.....	.15	.18	.25	.35	.40	.60	.75	1.35	2.00	3.25
D—Packing.....										
E—Waste Nut.....	.10	.12	.20	.20	.25	.35	.40	.50	.85	.85
F—Bonnet.....	.20	.25	.35	.50	.65	.90	1.35	1.95	4.30	.30
G—Locknut.....	.06	.06	.06	.10	.10	.12	.15	.25	.40	.50
H—Disc Holder.....	.12	.12	.15	.20	.25	.35	.65	1.15	1.80	.20
I—Disc.....	.04	.05	.06	.07	.08	.12	.16	.24	.32	.40
J—Disc Nut.....	.04	.04	.04	.05	.08	.10	.15	.20	.50	.75
Trimming Complete—All Parts Except Body.....	.80	.90	1.20	1.55	2.00	2.75	3.85	6.10	10.80	15.10
Disc Holder Complete—Parts G, H, I and J.....	.25	.27	.30	.42	.50	.70	1.10	1.85	3.00	3.85

ORDER BY FIGURE NUMBERS

Hy-Tech Products

JENKINS TYPE
STANDARD KELLY & JONES VALVES

BRASS

For 125 Pounds Working
Pressure

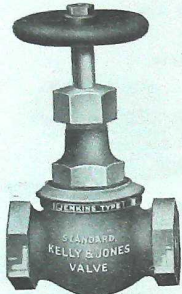


Fig. 216 Globe Valve



Fig. 217 Angle Valve

JENKINS TYPE GLOBE, ANGLE AND CROSS VALVES

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Globe and Angle, Screwed... each	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00
" Globe and Angle, Flanged... "	3.50	4.00	4.00	5.00	6.00	9.00	11.00	16.50	25.00	34.00
" Cross Valve, Screwed... "	1.70	2.00	2.25	2.50	3.25	4.75	6.25	9.50	20.00	27.50
" Cross Valve, Flanged... "			7.00	8.00	9.00	12.00	15.00	23.00	33.00	44.00
Diameter of Flanges..... inches	2½	2½	3	3½	4	4½	4½	5½	6½	8½
End to End, Globe, Screwed... "	2½	2¾	2¾	3½	3½	4½	4½	6	6½	7½
Face to Face, Globe, Flanged... "	2½	3	3½	3½	4	4½	4½	6	6½	7½
Center to Face, Angle, Screwed... "	1½	1½	1½	1½	1½	2½	2½	2½	3½	4½
Center to Face, Angle, Flanged... "	1½	2½	2½	2½	2½	2½	3½	3½	4½	4½

NOTE—These Jenkins Type Brass Valves are also made to 6 inches in size. Valves 3½ to 6 inches are somewhat different in design than above Valves. For lists and style of Valves 3½ to 6 inches, see following page.



Fig. 218 Horizontal Check Valve



Fig. 218A Angle Check Valve

JENKINS TYPE HORIZONTAL AND ANGLE CHECK VALVES

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Hor. and Angle Check Valves, Scrd. each	1.10	1.20	1.30	1.90	2.60	3.60	5.00	7.50	14.00	21.00
Hor. and Angle Check Valves, Flad.				4.00	5.00	6.00	8.00	10.00	15.00	23.00

JENKINS TYPE
STANDARD KELLY & JONES VALVES

BOLTED BONNETS BRASS GLAND STUFFING BOXES
ROUGH BODY FINISHED TRIMMINGS IRON WHEEL

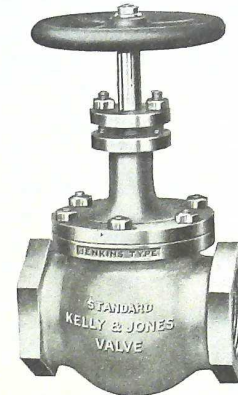


Fig. 218K

GLOBE AND ANGLE VALVES

Size..... inches	3½	4	5	6
Price, Screwed... each	52.00	75.00	105.00	175.00
" Flanged... "	82.00	96.00	132.00	210.00

Valves with Yoke Bonnets furnished at special price.

DISCS FOR
JENKINS TYPE VALVES



Fig. 218P Square Hole

NOTE—When Valves are used for steam service, the Discs furnished are made of hard composition; if for cold water, gas or air, soft composition. When used in high pressure service, the Discs are made of steam metal.



Fig. 218Q Round Hole

COMPOSITION DISCS

Size.. inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	5	6	7	8	10	12
Price... each	.04	.05	.06	.07	.08	.12	.16	.24	.32	.40	.50	.60	.80	1.00	1.20	1.40	1.75	2.00

STEAM METAL DISCS FOR EXTRA HEAVY PRESSURES

Size.. inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4	5	6	7	8	10	12
Price... each	.14	.14	.16	.20	.22	.28	.30	.34	.60	.85	1.35	1.60	2.30	2.60	3.70	4.00	5.60	7.30

ORDER BY FIGURE NUMBERS

ORDER BY FIGURE NUMBERS
Hy-Tech Products

**JENKINS TYPE
STANDARD KELLY & JONES VALVES
"Y" OR BLOW-OFF**

For 125 Pounds Working Pressure

BRASS

RENEWABLE SEAT RINGS

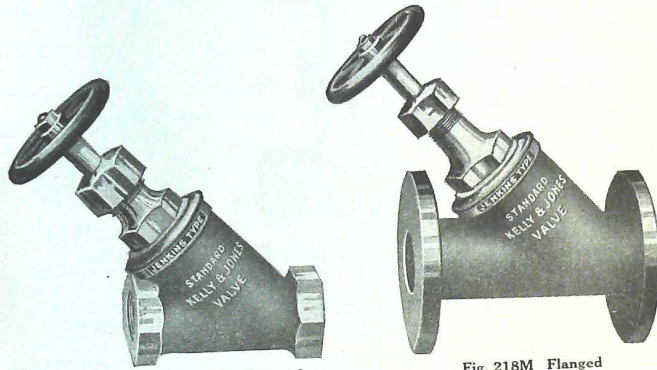


Fig. 218L Screwed

Fig. 218M Flanged

STANDARD JENKINS TYPE "Y" OR BLOW-OFF VALVES—Brass

Size..... inches	¾	1	1¼	1½	2	2½	3
Price, Screwed..... each	2.00	2.00	3.00	4.00	5.00	6.50	9.25
Price, Flanged..... each	2.00	2.00	3.00	4.00	5.00	6.50	9.25
				9.00	11.00	13.00	20.00
							28.00
							37.00

DIMENSIONS

Size..... inches	½	¾	1	1¼	1½	2	2½	3
End to End, Screwed..... inches	3¼	3¾	4¼	4¾	5¼	6¾	7¼	8¾
Face to Face, Flanged..... "	4¼	4¾	5¼	5¾	6¼	7¾	8¼	9¾
Flange to End of Hand Wheel, Open... "	1½	1¾	2¼	2¾	3¼	4¼	5¼	6¾
Hexagon to End of Hand Wheel, Open... "	2¾	3	3¾	4¼	5	6	7	8
Diameter of Flanges..... "	3	3¾	4	4¾	5	6	7	8
Thickness of Flanges..... "	¼	½	¾	¾	¾	¾	¾	¾
Center to Top of Hand Wheel, Open... "	4¾	5¼	6¼	7¾	8¾	9¾	13¾	15¾
Diameter of Hand Wheel..... "	2½	2¾	3	3¼	4	4¾	5	6

These "Y" or Blow-off Valves have a full opening very nearly in direct line with the pipe, which feature practically eliminates resistance to the free flow of steam or liquids.

In addition to the regular blow-off purpose for which these Valves were designed, they can be successfully used for any purpose requiring the handling of thick fluids, such as Sugar Refineries, Paper Mills, Chemical Works, Etc.

NOTE—Prices of Valve Parts on application.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

**JENKINS TYPE
SPECIAL KELLY & JONES VALVE
GLOBE**

For 100 Pounds Working Pressure

BRASS

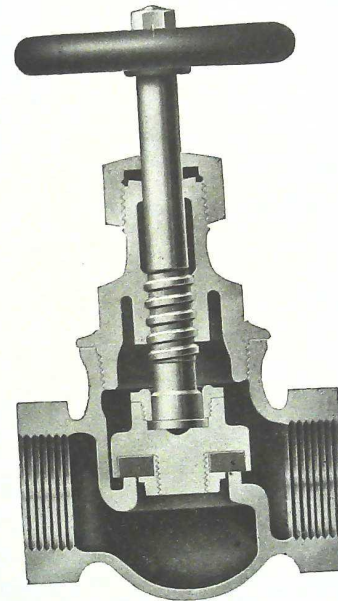


Fig. 218B

ORDER BY FIGURE NUMBERS

JENKINS TYPE
SPECIAL KELLY & JONES VALVES

BRASS

For 100 Pounds Working Pressure

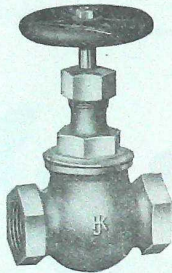


Fig. 218C Globe Valve

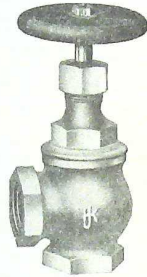


Fig. 218D Angle Valve

JENKINS TYPE GLOBE, ANGLE AND CROSS VALVES

Size.....inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Globe and Angle, Screwed...each	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00
" Globe and Angle, Flanged....."				5.00	6.00	9.00	11.00	16.50	25.00	34.00
" Cross Valve, Screwed....."	1.70	2.00	2.25	2.50	3.25	4.75	6.25	9.50	20.00	27.50
" Cross Valve, Flanged....."				8.00	9.00	12.00	15.00	23.00	33.00	44.00
Diameter of Flanges.....inches				3¼	4	4½	5	6	7	7½



Fig. 218E Horizontal Check Valve



Fig. 218F Angle Check Valve

JENKINS TYPE HORIZONTAL AND ANGLE CHECK VALVES

Size.....inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Hor. and Angle Check Valves, Scrd., each	1.10	1.20	1.30	1.90	2.60	3.60	5.00	7.50	13.50	21.00
" Hor. and Angle Check Valves, Flgd."				4.00	5.00	6.00	8.00	10.00	15.00	23.00

ORDER BY FIGURE NUMBERS
Hy-Tech Products

STANDARD X BRASS VALVES

WITH ENGLISH THREADS
STEAM METAL DISC

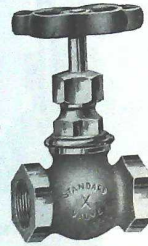


Fig. 315A Globe Valve

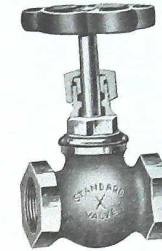


Fig. 315B Globe Valve with Gland in Stuffing Box

STANDARD X BRASS GLOBE VALVES

Size.....inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Price.....each	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30	10.00	14.40	26.50	36.00
" with Gland in Stuffing Box...."	.85	.95	1.20	1.46	2.00	2.82	3.90	5.90	10.85	15.60	33.00	44.00

WITH LEATHER DISC

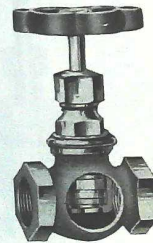


Fig. 315C Globe Valve

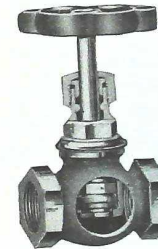


Fig. 315D Globe Valve with Gland in Stuffing Box

GLOBE VALVES

Size.....inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	3½	4
Price.....each	.85	.95	1.20	1.46	2.00	2.82	3.90	5.90	10.85	15.60	33.00	44.00
" with Gland in Stuffing Box...."	.98	1.13	1.40	1.66	2.20	3.12	4.30	6.50	11.70	16.80	36.00	48.00

Angle Valves same list as Globe Valves.

ORDER BY FIGURE NUMBERS

JENKINS TYPE
STANDARD KELLY & JONES VALVES

BRASS

WITH ENGLISH THREADS
GLAND STUFFING BOX

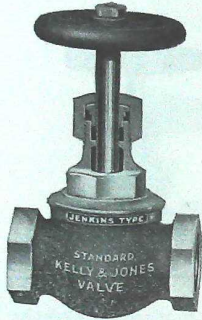


Fig. 215E Globe Valve



Fig. 215F Angle Valve

JENKINS TYPE GLOBE AND ANGLE VALVES

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Screwed..... each	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00
Flanged..... each				5.00	6.00	9.00	11.00	16.50	25.00	34.00
Diameter of Flanges..... inches				3½	4	4½	5	6	7	7½

JENKINS TYPE
SPECIAL
KELLY & JONES
VALVES

BRASS

WITH ENGLISH THREADS
GLAND STUFFING BOX

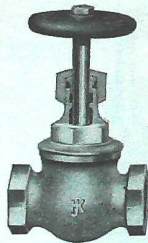


Fig. 215G Globe Valve

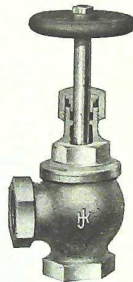


Fig. 215H Angle Valve

JENKINS TYPE GLOBE AND ANGLE VALVES

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Screwed..... each	1.10	1.25	1.60	2.20	2.80	4.00	5.50	8.75	15.75	22.00
Flanged..... each				5.00	6.00	9.00	11.00	16.50	25.00	34.00
Diameter of Flanges..... inches				3½	4	4½	5	6	7	7½

NOTE—These Valves furnished with Gland in Stuffing Box at special discount.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

SPECIAL BRASS GLOBE VALVES

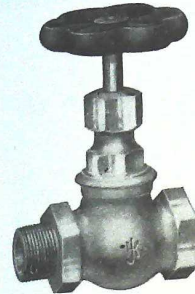


Fig. 225E Male and Female

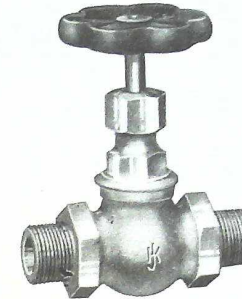


Fig. 225F Both Ends Male

GLOBE VALVES—Male, and Male and Female

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2
Price, Male and Female..... each	1.00	1.15	1.50	2.25	3.00	4.50	6.75	10.00
Both Ends Male..... each	1.10	1.25	1.65	2.50	3.30	5.00	7.75	11.25

Male and Female Valves are made with Male End on Inlet. Above Valves are made to order only

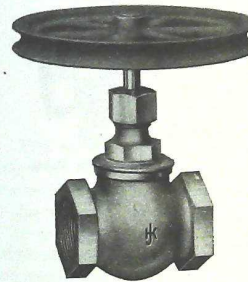


Fig. 221 With Large Wheel for Rope

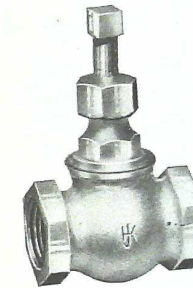


Fig. 1057 With Square Head

BRASS GLOBE VALVES—With Wheel for Rope

Size..... inches	1¼	1½	2
Price..... each	4.00	5.00	7.00
Grooved Wheels, 9 inches Diameter..... each			1.25

BRASS GLOBE VALVES—With Square Head

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2
Price..... each	1.10	1.10	1.35	1.60	2.25	3.20	4.40	6.50

ORDER BY FIGURE NUMBERS

LAVATORY VALVES

FULL FINISHED AND NICKEL PLATED
BRASS FIBRE DISC

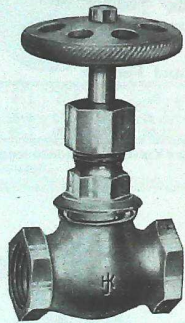


Fig. 314-I Globe Valve

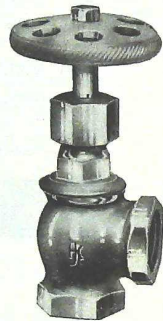


Fig. 314-J Angle Valve

LAVATORY VALVES, FULL FINISHED AND NICKEL PLATED

Size.....inches	3/8	1/2	3/4
Price, Globe or Angle.....each	1.75	1.90	2.50

ORDER BY FIGURE NUMBERS
Hy-Tech Products

JENKINS TYPE STANDARD KELLY & JONES
HOSE VALVE

As Approved by the Board of Fire Prevention of
New York City

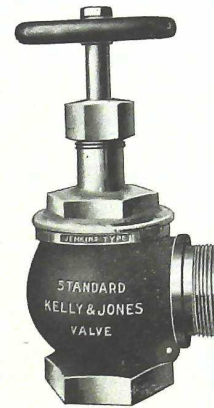


Fig. 226

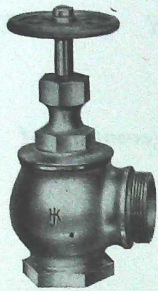
THE BOARD OF FIRE PREVENTION of New York City has made severe tests of 2 1/2 inch valves for stand pipe service in connection with hose racks, and now requires all such hose valves to be identical with the sample as submitted by the manufacturer and approved by the "Board."

Some Architects have been specifying the hose valves to be gate, but a glance at one of the test requirements of the "Board"—"Valves to stand opening and closing 500 times against a pressure of 300 pounds hydraulic pressure without leaking"—will convince the most skeptical that angle hose valves, with elastic discs only, will stay tight.

The valve first on the approved list is The Kelly & Jones Co.'s Fig. 226, weight, without wheel, 16 pounds, and when wide open the disc is 1 5-8 inches off the seat. Fig. 225A is the same valve with hose end, usually furnished with milled wheel, nickel plated all over.

Size.....inches	2 1/2
Price.....	17.10

ORDER BY FIGURE NUMBERS



**JENKINS TYPE
KELLY & JONES
VALVES**

HOSE

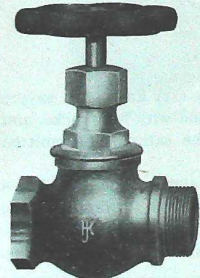
BRASS



Fig. 225A Finished, with Brass Wheel

Fig. 225B Rough Body, Iron Wheel

Size.....inches	½	¾	1	1¼	1½	2	2½	3
Price, Rough Body, Iron Wheel.....each	2.10	2.70	3.30	4.70	6.50	10.60	17.10	23.50
" Rough Body, Iron Wheel, with Cap and Chain ..	4.00	5.00	7.00	9.50	15.00	22.00	30.00	
" Rough Body, Brass Wheel....."	2.75	3.35	4.00	5.50	7.50	12.00	20.00	26.50
" Rough Body, Brass Wheel, with Cap and Chain ..	4.65	5.75	7.80	10.50	16.50	24.80	32.80	
" Rough Body, Brass Wheel, Nickel Plated....."	3.20	3.80	4.40	5.90	7.90	12.40	20.60	27.10
" Rough Body, Brass Wheel, Nickel Plated, with Cap and Chain....."	5.05	6.15	8.20	10.90	16.90	25.40	33.40	
" Finished All Over, Brass Wheel....."	3.20	3.90	4.60	6.20	8.40	12.50	22.50	30.00
" Finished All Over, Brass Wheel, Nickel Plated ..	3.60	4.20	5.00	6.60	8.80	13.00	23.00	31.00
" Finished All Over, Brass Wheel, with Cap and Chain....."	5.50	6.50	8.70	11.70	16.80	27.50	36.50	
" Finished All Over, Brass Wheel, Nickel Plated with Cap and Chain....."	5.90	6.90	9.00	12.00	17.20	28.00	37.50	



**GLOBE AND ANGLE
HOSE VALVES**

**WITH MALE HOSE THREAD
ON SIDE**

BRASS DISC

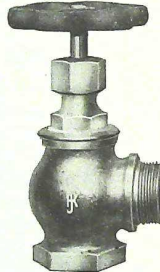


Fig. 225C Globe

Fig. 225D Angle

Size.....inches	½	¾	1	1¼	1½	2	2½	3
Price, Globe and Angle.....each	1.50	2.25	3.00	4.50	6.75	8.00	15.00	20.00

These Valves have Standard Iron Pipe Thread on inlet and Hose Thread on side.
Leather Discs, instead of Brass, furnished, when desired, at special price.
In ordering, specify Hose Thread required.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STANDARD GARDEN HOSE VALVES

BRASS

LEATHER DISC

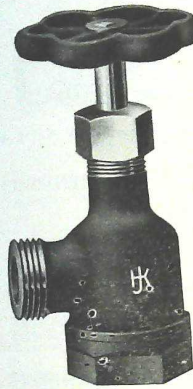


Fig. 225H

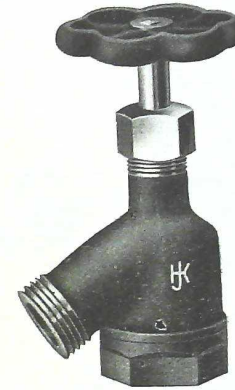


Fig. 225-1

STANDARD GARDEN HOSE VALVES

Size.....inches	½	¾	1	1¼	1½	2	2½
Price, Either Style.....each	1.65	1.65	2.20	3.40	4.75	7.00	15.00

These Valves have Standard Iron Pipe Thread on bottom, and are made with either Chicago or California Hose Thread on side. Can be furnished with other threads than those specified when so ordered.

In ordering, always specify the thread required.

ORDER BY FIGURE NUMBERS

STANDARD HOSE VALVES

BRASS

LEATHER DISC

(CHICAGO PATTERN)

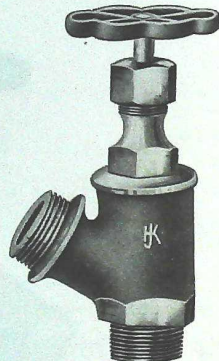


Fig. 225G

STANDARD HOSE VALVES

Size..... inches	1	1 1/4	1 1/2	2	2 1/2
Price, Rough Body, Plain.....each	3.15	3.70	4.75	7.00	8.50
" Rough Body, Plated All Over..... "	3.65	4.30	5.50	8.00	9.75
" Finished All Over with Finished Brass Wheel .. "			9.00	11.50	14.50
" Finished and Plated All Over with Finished Brass Wheel..... "			10.00	12.75	16.00

These Valves have Standard Iron Pipe Thread on bottom and Chicago Standard Hose Thread on side, 1 to 2-inch inclusive. The 2 1/2-inch has the Chicago Fire Department Thread on side. Can be furnished with other threads than those specified when wanted.

These Valves can be furnished with tee handle without extra charge.
An extra charge will be made for special hose thread other than those specified.
When so ordered, we will furnish these Valves with Iron Pipe Thread, both ends, at regular prices.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

FINISHED BRASS VALVES

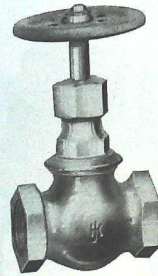


Fig. 218G With Brass Wheel



Fig. 218H With Wood Wheel

FINISHED BRASS GLOBE AND ANGLE VALVES—Brass Wheels

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price, Brass Disc, Finished.....each	2.75	3.00	3.15	3.50	4.25	5.60	7.00	10.25
" Jenkins Disc, Finished..... "	3.15	3.40	3.50	4.00	4.75	6.50	8.50	13.00
" Frink Disc, Finished..... "	2.85	3.25	3.50	3.90	4.70	6.10	7.55	10.90
" Fibre Disc, Finished..... "		3.20	3.40	3.75	4.90	6.30	7.75	11.25
" Brass Disc, Finished and Plated..... "	3.25	3.50	3.70	4.10	4.90	6.30	7.75	11.25
" Jenkins Disc, Finished and Plated..... "	3.65	3.80	4.05	4.60	5.40	7.20	9.25	14.00
" Frink Disc, Finished and Plated..... "	3.35	3.75	4.05	4.50	5.35	6.80	8.30	11.90
" Fibre Disc, Finished and Plated..... "		3.70	3.95	4.35				

FINISHED BRASS GLOBE AND ANGLE VALVES—Wood Wheels

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price, Brass Disc, Finished.....each	1.85	2.00	2.15	2.50	3.25	4.35	5.75	9.00
" Jenkins Disc, Finished..... "	2.25	2.40	2.50	3.00	3.75	5.25	7.25	11.75
" Frink Disc, Finished..... "	2.00	2.25	2.50	2.90	3.70	4.85	6.30	9.65
" Fibre Disc, Finished..... "		2.20	2.40	2.75	3.65	4.80	6.25	9.75
" Brass Disc, Finished and Plated..... "	2.15	2.30	2.45	2.85	3.65	4.80	6.25	9.75
" Jenkins Disc, Finished and Plated..... "	2.50	2.80	2.90	3.40	4.15	5.65	7.65	12.15
" Frink Disc, Finished and Plated..... "	2.25	2.55	2.80	3.25	4.10	5.30	6.80	10.40
" Fibre Disc, Finished and Plated..... "		2.50	2.70	3.10				

FINISHED CHECK VALVES—Not Illustrated

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price, Brass Disc, Finished.....each	1.85	2.00	2.15	2.50	3.25	4.35	5.75	9.00
" Brass Disc, Finished and Plated..... "	2.15	2.30	2.45	2.85	3.65	4.80	6.25	9.75

These Valves are made to order only.

ORDER BY FIGURE NUMBERS

JENKINS TYPE STANDARD KELLY & JONES VALVES BRASS SWING CHECK

For Working Pressures Up to 125 Pounds

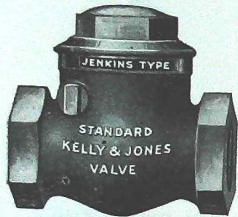


Fig. 218N Screwed

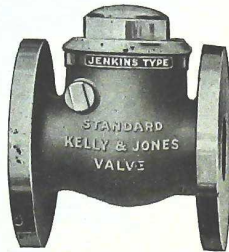
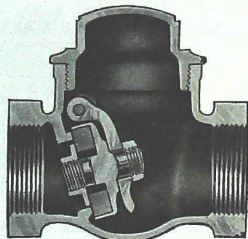


Fig. 218-O Flanged



Sectional

JENKINS TYPE BRASS SWING CHECK VALVES

Size	inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 1/4	1 1/2	2	2 1/2	3
Price, Screwed	each	1.20	1.30	1.90	2.60	3.60	5.00	7.50	14.00	21.00
" Flanged		4.00	5.00	6.00	8.00	10.00	15.00	23.00	32.00	
End to End, Screwed	inches	2 3/4	2 3/4	3 3/4	3 3/4	4 3/4	4 3/4	5 3/4	6 3/4	7 3/4
Face to Face, Flanged	"	3	3 3/4	3 3/4	4	4 3/4	4 3/4	6	6 3/4	7 3/4
Diameter of Flanges	"	2 1/2	3	3 3/4	4	4 3/4	5	6	7	7 3/4
Thickness of Flanges	"	3/8	7/8	1 1/4	1 1/4	1 3/4	1 3/4	2 1/4	2 3/4	3 1/4

The Swing Check Valves shown above are of the newest design, and have the globe-shaped bodies. The Valves are, therefore, attractive in appearance and durable in construction.

Discs can be renewed, and the seat is placed at an angle, which permits of easy opening, even at low pressure, and absorbs the shock of closing in the line piping when under high pressure.

The disc, when lifted, entirely clears the line of flow and permits an unobstructed passageway.

The disc holder is carried by the large bearing surface of the heavy hanger, and the long hanger pin bearing provides ample wearing surface.

A plug in each side of the body carries the pin, which construction permits of the easy removal of the pin, when desired.

These Swing Check Valves are perfectly adapted to and can be used as Vertical Checks.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

SPECIAL STRAIGHT-WAY SWINGING CHECK VALVES

For 100 Pounds Working Pressure

BRASS

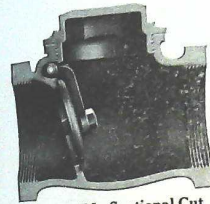


Fig. 214M Sectional Cut

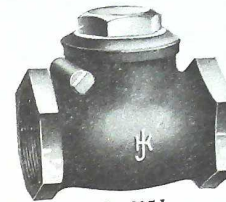


Fig. 215-1

SPECIAL STRAIGHT-WAY SWINGING CHECK VALVES

Size	inches	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 1/4	1 1/2	2	2 1/2	3
Price	each	1.80	1.80	2.00	2.25	2.80	3.65	4.75	6.75	15.00	24.00

STANDARD STRAIGHT-WAY SWINGING CHECK VALVES

For 125 Pounds Working Pressure

BRASS

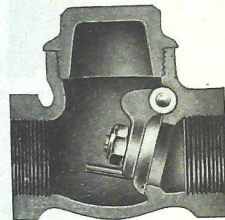


Fig. 214 Sectional Cut

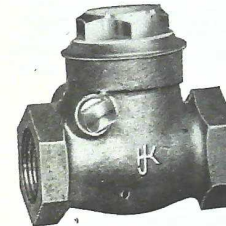


Fig. 215

STANDARD STRAIGHT-WAY SWINGING CHECK VALVES

Size	inches	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 1/4	1 1/2	2	2 1/2	3
Price	each	1.80	1.80	2.00	2.25	2.80	3.65	4.75	6.75	15.00	24.00
" with Leather Disc		2.00	2.00	2.25	2.50	3.15	4.05	5.25	7.50	16.50	26.25

These Valves can be used in a Horizontal or Vertical position.

The Disc revolves and is self-adjusting.

They can be made with flanged ends, if so desired, in Standard Pattern only.

Prices for special and larger size Valves given upon application.

Leather Disc Swing Check Valves are furnished especially to meet the requirements of the Fire Underwriters.

ORDER BY FIGURE NUMBERS

**REGRINDING
STRAIGHT-WAY SWINGING CHECK VALVES**

MEDIUM

For 150 Pounds Working Pressure

BRASS

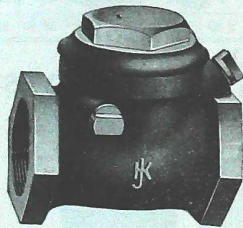


Fig. 214-I Screwed

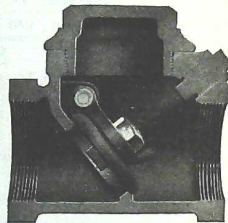


Fig. 214-J Sectional View

MEDIUM STRAIGHT-WAY SWINGING CHECK VALVES—Regrinding

Size .. inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Screwed .....each	2.50	2.50	2.75	3.10	4.00	5.50	7.00	10.00	19.00	27.00
" Flanged....."				10.00	12.50	17.00	21.00	35.00	50.00	65.00
Diameter of Flanges.....inches				3½	4	4½	5	6	7	7½

These Valves may be used in a Horizontal or Vertical position. The plug in body provides for regrinding the Valve without removing from line.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

**REGRINDING
STRAIGHT-WAY SWINGING CHECK VALVES**

EXTRA HEAVY

For 250 Pounds Working Pressure

BRASS

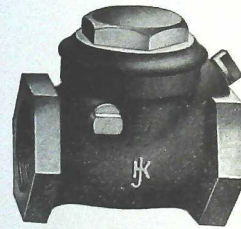


Fig. 214-A Screwed

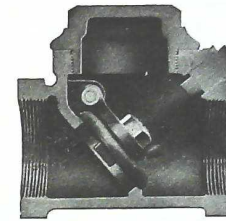


Fig. 214-B Sectional View

EXTRA HEAVY STRAIGHT-WAY SWINGING CHECK VALVES

	Regrinding			Screwed				
Size.....inches	½	¾	1	1¼	1½	2	2½	3
Price.....each	3.25	3.25	4.25	6.00	7.50	12.00	25.00	45.00

EXTRA HEAVY STRAIGHT-WAY SWINGING CHECK VALVES

	Regrinding	Flanged	(Not Illustrated)				
Size.....inches	1	1¼	1½	2	2½	3	
Price.....each	13.00	18.00	22.00	37.50	55.00	75.00	
Diameter of Flanges.....inches	4½	5	6	6½	7½	8½	
Thickness of Flanges....."	½	⅝	⅞	¾	1½	¾	

These Valves may be used in a Horizontal or Vertical position. The plug in body provides for regrinding the Valve without removing from line.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY
BRASS GLOBE AND ANGLE VALVES

HARD METAL

For 250 Pounds Working Pressure

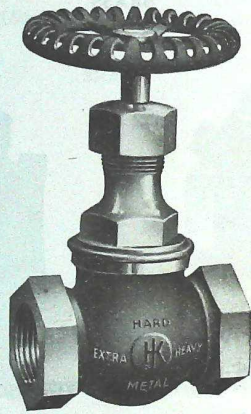


Fig. 214L

Size.....inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Globe or Angle, Screwed...each	1.30	1.50	1.90	2.50	3.50	5.00	7.00	11.00	20.00	29.00

These Valves are a very heavy type, and Body and Disc are made of "Hard Metal", successfully resisting the cutting effects of steam and water. Trimmings are made of a special high grade Brass.

May be packed while under pressure, and to do so, have Valve wide open.

Are furnished regularly with non-heating wheel.

Where a particularly strong Valve is desired for high pressure service, we fully recommend this type.

Be sure to state, when ordering, whether a Globe or Angle Valve is desired.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

LOCOMOTIVE VALVES—EXTRA HEAVY

BRASS

NON-HEATING WHEEL UNION BONNET

For 250 Pounds Working Pressure

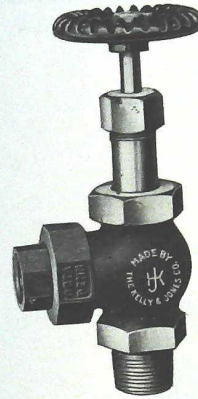


Fig. 226A
Male Inlet, Female Union Outlet with Malleable Nut.

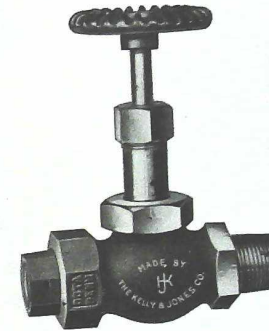


Fig. 226B
Male Inlet, Female Union Outlet with Malleable Nut.

Size.....inches	¾ x ¼	½ x ⅜	¾ x ½	1 x ¾	1¼ x 1	1½ x 1¼	2 x 1½	2½ x 2	2½ x 3
Price, Globe or Angle	2.40	2.60	3.60	4.90	7.35	9.50	13.00	20.50	38.00

These Valves are designed especially for Locomotive service.

The Male Inlet end is one pipe size larger than the Female Union Outlet end.

The size of the valve is determined by the size of the union outlet.

ORDER BY FIGURE NUMBERS

**EXTRA HEAVY
HYDRAULIC BRASS GLOBE AND ANGLE VALVES**

WITH GLAND

Valves, 1-inch and Smaller, for 2000 Pounds Water Working Pressure

Valves, 1 1/4-inch, for 1500 Pounds Water Working Pressure

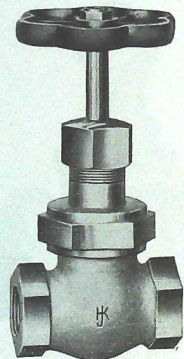


Fig. 214D

EXTRA HEAVY HYDRAULIC GLOBE AND ANGLE VALVES

Screwed

Size..... inches	3/8	1/2	3/4	1	1 1/4
Price, Globe or Angle..... each	6.00	6.00	7.00	9.00	13.00

These Valves may be packed while under pressure; to do so, see that they are wide open.
The Body and Disc of these Valves are made of a special "Hard Metal", and all other parts are made of a high grade Brass, with the exception of the wheel.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

**EXTRA HEAVY HYDRAULIC
BRASS HORIZONTAL CHECK VALVES**

HARD METAL SCREWED

Valves, 1-inch and Smaller, for 2000 Pounds Water Working Pressure

Valves, 1 1/4-inch, for 1500 Pounds Water Working Pressure

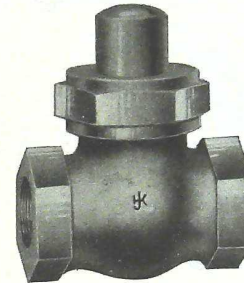


Fig. 214E

EXTRA HEAVY HYDRAULIC HORIZONTAL CHECK VALVES

Size..... inches	3/8	1/2	3/4	1	1 1/4
Price, Screwed..... each	5.00	5.00	6.00	8.00	11.00

The body and disc are made of a special hard metal. All other parts are made of a high grade brass.

ORDER BY FIGURE NUMBERS

**EXTRA HEAVY
HYDRAULIC BRASS GLOBE VALVES**

BOLTED BONNET WITH GLAND

For 2500 Pounds Water Working Pressure

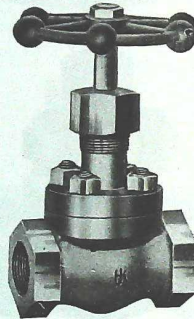


Fig. 214F

EXTRA HEAVY HYDRAULIC GLOBE VALVES—Screwed

Size..... inches	1	1¼	1½	2
Price..... each	22.50	27.50	35.00	47.50

These Valves may be packed while under pressure; to do so, see that they are wide open.
The body and disc of these Valves are made of a special hard metal, and all other parts are made of a high grade brass, with the exception of the wheel

Hy-Tech Products

**EXTRA HEAVY HYDRAULIC
BRASS HORIZONTAL CHECK VALVES**

HARD METAL BOLTED BONNET SCREWED

For 2500 Pounds Water Working Pressure

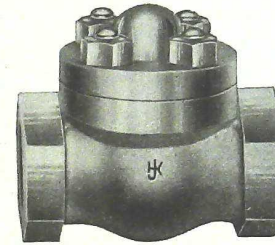


Fig. 214G

EXTRA HEAVY HYDRAULIC HORIZONTAL CHECK VALVES

Size..... inches	1	1¼	1½	2
Price, Screwed..... each	18.00	22.50	27.50	40.00

The body and disc are made of a special hard metal. All other parts are made of a high grade brass.

ORDER BY FIGURE NUMBERS

RADIATOR VALVES

On the following pages, we illustrate a complete variety of Radiator Valves for steam and hot water heating.

Radiator Valves are generally furnished with wood wheels, but, if desired, we can supply them with iron, brass or wire wheels, or with lock shields and keys.

Radiator Valves are usually furnished with male unions on outlet, but can be furnished with the inlet and outlet screwed ends.

Offset Corner Valves have the inlet at right angles with the outlet, and are made with outlet either right or left hand. To distinguish between a right and left Offset Corner Valve, face the inlet or opening admitting the steam under the disc; if the outlet is on the right, the valve is of the right hand pattern; if on the left, it is left hand.

Hot Water Radiator Valves are usually furnished with male unions, but can be supplied without unions.

Gate Valves are frequently used as Radiator Valves; and a very complete list will be found on the following pages. They are made with male or female unions, and can be furnished with iron or wood wheels, or with lock shields and keys.

Radiator Union Ells are made in all sizes.

For style and finish of valves, we refer to the following lists.

STANDARD RADIATOR VALVE

MALE UNION WOOD WHEEL

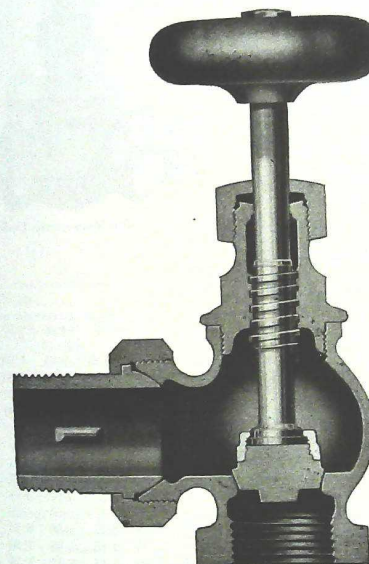


Fig. 228A

ORDER BY FIGURE NUMBERS

ORDER BY FIGURE NUMBERS
Hy-Tech Products

STANDARD RADIATOR VALVES

WOOD WHEELS

BRASS DISCS

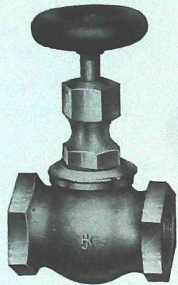


Fig. 218-I Globe Valve

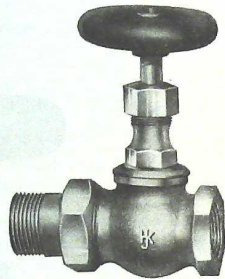


Fig. 218J Globe Valve with Union

RADIATOR VALVES

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain..... each	1.35	1.60	2.25	3.25	4.50	7.00
2	" Rough Body, Plated All Over..... "	1.65	1.95	2.65	3.70	5.00	7.75
3	" Finished All Over..... "	1.85	2.15	2.85	4.00	5.50	8.50
4	" Finished and Plated All Over..... "	2.15	2.50	3.25	4.45	6.00	9.25

RADIATOR VALVES WITH UNION

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
5	Price, Rough Body, Plain..... each	2.05	2.45	3.25	4.50	6.50	10.00
6	" Rough Body, Plated All Over..... "	2.40	2.85	3.65	5.05	7.10	10.85
7	" Finished All Over..... "	2.55	3.00	3.85	5.25	7.50	11.50
8	" Finished and Plated All Over..... "	2.90	3.40	4.30	5.80	8.10	12.35
9	Add to above list for Finished Brass Wheels..... "	1.00	1.00	1.25	1.25	1.25	1.25
10	Add to above list for Plated Brass Wheels..... "	1.25	1.25	1.50	1.50	1.50	1.50

For convenience when ordering, use number for style or finish of Valves.

Hy-Tech Products

STANDARD RADIATOR VALVES

WOOD WHEELS BRASS DISCS



Fig. 228 Angle Valve



Fig. 229 Angle Valve with Union

RADIATOR VALVES

No.	Size..... inches	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain..... each	1.60	2.25	3.25	4.50	7.00
2	" Rough Body, Plated All Over..... "	1.95	2.65	3.70	5.00	7.75
3	" Finished All Over..... "	2.15	2.85	4.00	5.50	8.50
4	" Finished and Plated All Over..... "	2.50	3.25	4.45	6.00	9.25

RADIATOR VALVES WITH UNION

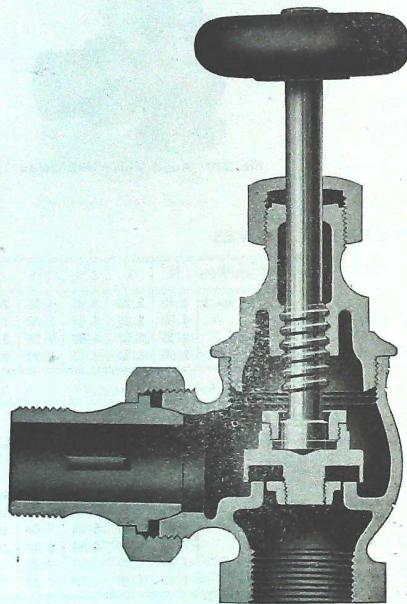
No.	Size..... inches	3/4	1	1 1/4	1 1/2	2
5	Price, Rough Body, Plain..... each	2.45	3.25	4.50	6.50	10.00
6	" Rough Body, Plated All Over..... "	2.85	3.65	5.05	7.10	10.85
7	" Finished All Over..... "	3.00	3.85	5.25	7.50	11.50
8	" Finished and Plated All Over..... "	3.40	4.30	5.80	8.10	12.35
9	Add to above list for Finished Brass Wheels..... "	1.00	1.00	1.25	1.25	1.25
10	Add to above list for Plated Brass Wheels..... "	1.25	1.25	1.50	1.50	1.50

These Valves will be tapped Right Hand, unless otherwise ordered.
They can be furnished with Lock Shields at same list as above.
For convenience when ordering, use number for style or finish of Valves.

ORDER BY FIGURE NUMBERS

JENKINS TYPE
STANDARD KELLY & JONES VALVE
RADIATOR

MALE UNION WOOD WHEEL



Sectional

Hy-Tech Products

JENKINS TYPE
STANDARD KELLY & JONES VALVES
RADIATOR
WOOD WHEELS

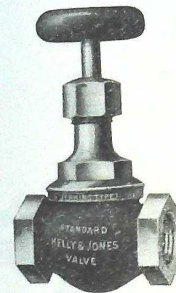


Fig. 230A Globe Valve

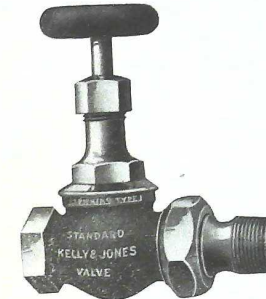


Fig. 230B Globe Valve with Union.

JENKINS TYPE RADIATOR VALVES

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain..... each	2.00	2.50	3.20	4.50	6.25	10.50
2	" Rough Body, Plated All Over..... "	2.50	2.85	3.65	4.90	6.75	11.00
3	" Finished All Over..... "	2.65	3.00	3.75	5.25	7.25	11.75
4	" Finished and Plated All Over..... "	2.85	3.10	4.00	5.40	7.75	12.25

JENKINS TYPE RADIATOR VALVES WITH UNION

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
5	Price, Rough Body, Plain..... each	2.75	3.50	4.30	5.85	7.75	12.60
6	" Rough Body, Plated All Over..... "	3.05	3.80	4.75	6.40	8.10	13.10
7	" Finished All Over..... "	3.25	4.00	4.80	6.40	8.75	13.85
8	" Finished and Plated All Over..... "	3.50	4.25	5.25	7.00	9.25	14.35
9	Add to above list for Finished Brass Wheel..... "	1.00	1.00	1.00	1.25	1.25	1.25
10	Add to above list for Plated Brass Wheel..... "	1.25	1.25	1.50	1.50	1.50	1.50

These Valves furnished with Lock Shields at same list as above.
These Valves will be tapped Right Hand, unless otherwise ordered.
For convenience when ordering, use number for style or finish of Valves.

ORDER BY FIGURE NUMBERS

JENKINS TYPE
STANDARD KELLY & JONES VALVES
RADIATOR
WOOD WHEELS

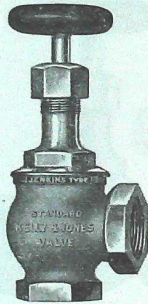


Fig. 230 Angle Valve

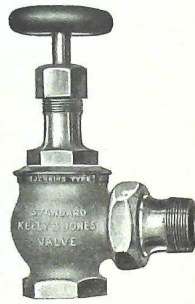


Fig. 231 Angle Valve with Union

JENKINS TYPE RADIATOR VALVES

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain..... each	2.00	2.50	3.20	4.50	6.25	10.50
2	" Rough Body, Plated All Over..... "	2.50	2.85	3.65	4.90	6.75	11.00
3	" Finished All Over..... "	2.65	3.00	3.75	5.25	7.25	11.75
4	" Finished and Plated All Over..... "	2.85	3.10	4.00	5.40	7.75	12.25

JENKINS TYPE RADIATOR VALVES WITH UNION

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
5	Price, Rough Body, Plain..... each	2.75	3.50	4.30	5.85	7.75	12.60
6	" Rough Body, Plated All Over..... "	3.05	3.80	4.75	6.40	8.10	13.10
7	" Finished All Over..... "	3.25	4.00	4.80	6.40	8.75	13.85
8	" Finished and Plated All Over..... "	3.50	4.25	5.25	7.00	9.25	14.35
9	Add to above list for Finished Brass Wheel..... "		1.00	1.00	1.25	1.25	1.25
10	Add to above list for Plated Brass Wheel..... "		1.25	1.25	1.50	1.50	1.50

These Valves furnished with Lock Shields at same list as above.
These Valves will be tapped Right Hand, unless otherwise ordered.
For convenience when ordering, use number for style or finish of Valves.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

JENKINS TYPE
SPECIAL KELLY & JONES VALVE
RADIATOR

MALE UNION WOOD WHEEL

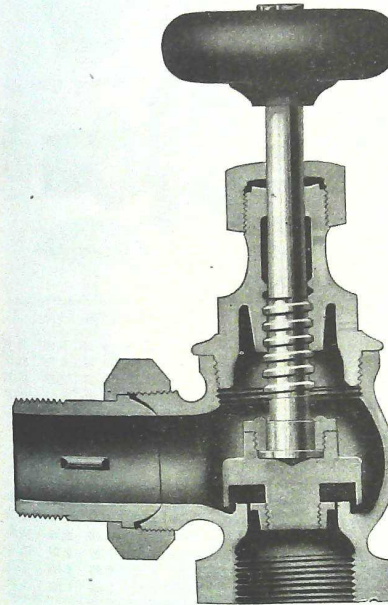


Fig. 231A

ORDER BY FIGURE NUMBERS

JENKINS TYPE
SPECIAL KELLY & JONES VALVES
RADIATOR
WOOD WHEELS

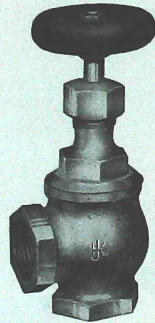


Fig. 231B Angle Valve

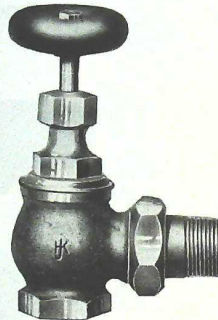


Fig. 231C Angle Valve with Union

JENKINS TYPE RADIATOR VALVES

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain..... each	2.00	2.50	3.20	4.50	6.25	10.50
2	" Rough Body, Plated All Over..... "	2.50	2.85	3.65	4.90	6.75	11.00
3	" Finished All Over..... "	2.65	3.00	3.75	5.25	7.25	11.75
4	" Finished and Plated All Over..... "	2.85	3.10	4.00	5.40	7.75	12.25

JENKINS TYPE RADIATOR VALVES WITH UNION

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
5	Price, Rough Body, Plain..... each	2.75	3.50	4.30	5.85	7.75	12.60
6	" Rough Body, Plated All Over..... "	3.05	3.80	4.75	6.40	8.10	13.10
7	" Finished All Over..... "	3.25	4.00	4.80	6.40	8.75	13.85
8	" Finished and Plated All Over..... "	3.50	4.25	5.25	7.00	9.25	14.35
9	Add to above list for Finished Brass Wheel..... "	1.00	1.00	1.25	1.25	1.25	1.25
10	Add to above list for Plated Brass Wheel..... "	1.25	1.25	1.50	1.50	1.50	1.50

These Valves furnished with Lock Shields at same list as above.
These Valves will be tapped Right Hand, unless otherwise ordered.
For convenience when ordering, use number for style or finish of Valves.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

JENKINS TYPE
STANDARD
KELLY & JONES
VALVES
OFFSET
CORNER RADIATOR
WOOD WHEELS



Fig. 231D Right Hand Valve



Fig. 231E Left Hand Valve

CORNER RADIATOR VALVES

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain..... each	2.25	2.75	3.50	5.00	7.00	11.55
2	" Rough Body, Plated All Over..... "	2.65	3.15	4.00	5.50	7.50	12.10
3	" Finished All Over..... "	2.75	3.40	4.25	5.75	8.00	13.05
4	" Finished and Plated All Over..... "	3.15	3.80	4.75	6.25	8.50	13.60

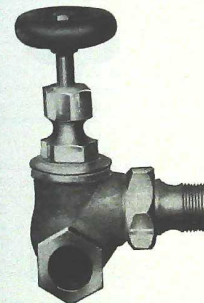


Fig. 231F Right Hand Valve

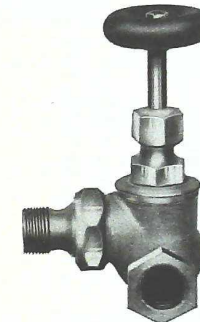


Fig. 231G Left Hand Valve

CORNER RADIATOR VALVES WITH UNION

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
5	Price, Rough Body, Plain..... each	3.05	3.85	4.75	6.45	8.55	13.85
6	" Rough Body, Plated All Over..... "	3.45	4.20	5.25	7.05	8.95	14.45
7	" Finished All Over..... "	3.50	4.50	5.50	7.20	9.55	15.35
8	" Finished and Plated All Over..... "	3.90	4.85	6.00	7.80	9.95	15.95

When ordering, state if Right or Left Hand Valves are wanted, and how they should be tapped.
Corner Valves with Lock Shields same list as with Wood Wheel.
For convenience when ordering, use number for style or finish of Valves.

ORDER BY FIGURE NUMBERS

JENKINS TYPE
SPECIAL
KELLY & JONES
VALVES



Fig. 235 Right Hand Valve



Fig. 235A Left Hand Valve

OFFSET
CORNER RADIATOR

WOOD WHEELS

CORNER RADIATOR VALVES

No.	Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain.....each	2.25	2.75	3.50	5.00	7.00	11.55
2	" " Rough Body, Plated All Over....."	2.65	3.15	4.00	5.50	7.50	12.10
3	" " Finished All Over....."	2.75	3.40	4.25	5.75	8.00	13.05
4	" " Finished and Plated All Over....."	3.15	3.80	4.75	6.25	8.50	13.60

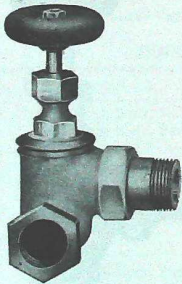


Fig. 235B Right Hand Valve

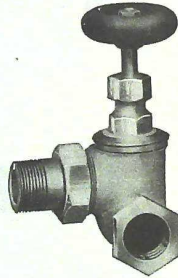


Fig. 236 Left Hand Valve

CORNER RADIATOR VALVES WITH UNION

No.	Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2
5	Price, Rough Body, Plain.....each	3.05	3.85	4.75	6.45	8.55	13.85
6	" " Rough Body, Plated All Over....."	3.45	4.20	5.25	7.05	9.35	14.45
7	" " Finished All Over....."	3.50	4.50	5.50	7.20	9.55	15.35
8	" " Finished and Plated All Over....."	3.90	4.85	6.00	7.80	9.95	15.95

When ordering, state if Right or Left hand Valves are wanted, and how they should be tapped.
Corner Valves with Lock Shields same list as with Wood Wheels.
For convenience when ordering, use number for style or finish of Valves.

RADIATOR STRAIGHT-WAY VALVES

BRASS PEET PATTERN



Fig. 239 Female

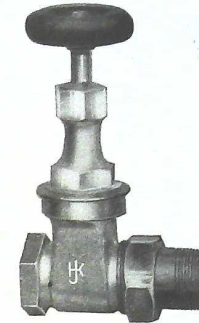


Fig. 239A With Union

RADIATOR STRAIGHT WAY VALVES

No.	Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain.....each	2.00	2.55	3.40	4.50	6.00	8.90
2	" " Rough Body, Plated All Over....."	2.40	3.00	3.85	5.00	6.60	9.65
3	" " Finished All Over....."	3.30	4.00	5.10	6.75	9.00	13.90
4	" " Finished and Plated All Over....."	3.70	4.50	5.60	7.35	9.70	14.80

RADIATOR STRAIGHT-WAY VALVES WITH UNIONS

No.	Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2
5	Price, Rough Body, Plain.....each	3.20	3.75	4.65	6.00	8.25	11.90
6	" " Rough Body, Plated All Over....."	3.65	4.25	5.20	6.60	9.00	12.80
7	" " Finished All Over....."	4.45	5.25	6.35	8.25	11.25	16.90
8	" " Finished and Plated All Over....."	4.90	5.75	7.00	9.00	12.00	17.90

LOCK SHIELD RADIATOR STRAIGHT-WAY VALVES

ADD TO LISTS OF WOOD WHEEL VALVES

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2
Finished All Over, Add.....each	.55	.60	.70	.85	1.00	1.45
Finished and Nickel Plated All Over, Add....."	.65	.70	.85	1.00	1.20	1.70

These Valves have rising stems and open to the left.
For convenience when ordering, use number for style or finish of Valves.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

RADIATOR STRAIGHT-WAY VALVES

BRASS WEDGE PATTERN

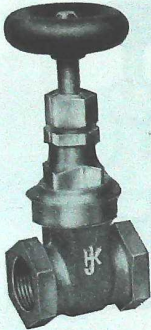


Fig. 239B Female

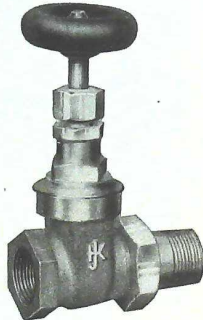


Fig. 239C With Union

RADIATOR STRAIGHT-WAY VALVES

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain..... each	2.00	2.55	3.40	4.50	6.00	8.90
2	" Rough Body, Plated All Over..... "	2.40	3.00	3.85	5.00	6.60	9.65
3	" Finished All Over..... "	3.30	4.00	5.10	6.75	9.00	13.90
4	" Finished and Plated All Over..... "	3.70	4.50	5.60	7.35	9.70	14.80

RADIATOR STRAIGHT-WAY VALVES WITH UNION

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
5	Price, Rough Body, Plain..... each	3.20	3.75	4.65	6.00	8.25	11.90
6	" Rough Body, Plated All Over..... "	3.65	4.25	5.20	6.60	9.00	12.80
7	" Finished All Over..... "	4.45	5.25	6.35	8.25	11.25	16.90
8	" Finished and Plated All Over..... "	4.90	5.75	7.00	9.00	12.00	17.90

LOCK SHIELD RADIATOR STRAIGHT-WAY VALVES
ADD TO LISTS OF WOOD WHEEL VALVES

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
Finished All Over, Add..... each	.55	.60	.70	.85	1.00	1.45
Finished and Nickel Plated All Over, Add..... "	.65	.70	.85	1.00	1.20	1.70

These Valves have stationary stems and open to the left.
For convenience when ordering, use number for style or finish of Valves.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

**THE JEWEL QUICK OPENING
HOT WATER RADIATOR VALVES**

WITH BY-PASS

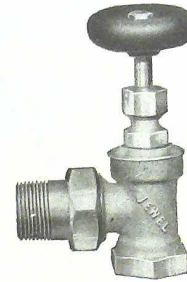


Fig. 237 With Union

HOT WATER RADIATOR VALVES

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain..... each	2.15	2.45	3.25	4.50	6.50	10.00
2	" Rough Body, Plated All Over..... "	2.40	2.85	3.65	5.05	7.10	10.85
3	" Finished All Over..... "	2.55	3.00	3.85	5.25	7.50	11.50
4	" Finished and Plated All Over..... "	2.90	3.40	4.30	5.80	8.10	12.35

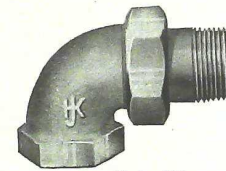


Fig. 238 Union Elbow

UNION ELBOWS—Brass—For Hot Water Radiators

No.	Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain..... each	1.50	1.75	2.25	2.95	3.70	6.00
2	" Rough Body, Plated All Over..... "	1.75	2.00	2.50	3.20	4.00	7.00
3	" Finished All Over..... "	1.90	2.20	2.75	3.60	4.60	7.50
4	" Finished and Plated All Over..... "	2.15	2.40	3.00	3.90	4.85	8.50

For convenience when ordering, use number for style or finish of Valves.

ORDER BY FIGURE NUMBERS

THE **JK** QUICK OPENING
1910
HOT WATER RADIATOR VALVES

BONNETLESS

BRASS MALE UNION WOOD WHEEL WITH BY-PASS

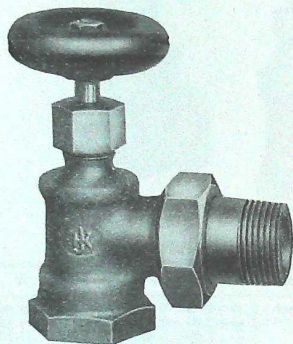


Fig. 237B

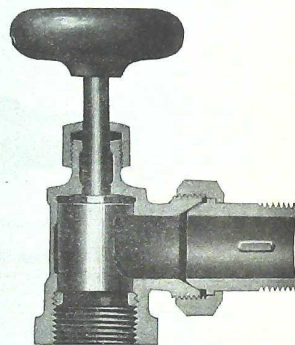


Fig. 237C Sectional View

HOT WATER RADIATOR VALVES

No.	Size	inches	1/2	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain	each	2.15	2.45	3.25	4.50	6.50	10.00
2	" Rough Body, Plated All Over	"	2.40	2.85	3.65	5.05	7.10	10.85
3	" Finished All Over	"	2.55	3.00	3.85	5.25	7.50	11.50
4	" Finished and Plated All Over	"	2.90	3.40	4.30	5.80	8.10	12.35

In the Valves illustrated above, the body and the bonnet are cast in one piece, thus making one less joint than in the ordinary Radiator Valve. The disc and stem being cast in one piece insure a perfectly rigid position of the Valve at all times. As only the top and bottom of the disc come in contact with the body of the Valve, it is impossible for the disc to stick to the Valve body.

An arrow on the top plate indicates position of the Valve. When the Valve is open, the arrow points in the direction of the side opening or union.

This Valve can be furnished with Lock Shield, if desired, at same list as above; extra charge for keys.

For convenience when ordering, use number for style or finish of Valves.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

LOCK SHIELD RADIATOR VALVES

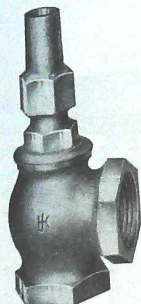


Fig. 232 Angle Valve



Fig. 233 Radiator Valve Key

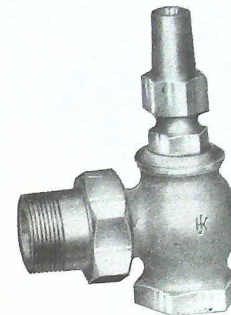


Fig. 234 Valve with Union

LOCK SHIELD RADIATOR VALVES—Brass Disc

No.	Size	inches	3/4	1	1 1/4	1 1/2	2
1	Price, Rough Body, Plain	each	1.60	2.25	3.25	4.50	7.00
2	" Rough Body, Plated All Over	"	1.95	2.65	3.70	5.00	7.75
3	" Finished All Over	"	2.15	2.85	4.00	5.50	8.50
4	" Finished and Plated All Over	"	2.50	3.25	4.45	6.00	9.25
5	" Rough Body, Plain	} Male {	2.45	3.25	4.50	6.50	10.00
6	" Rough Body, Plated All Over		2.85	3.65	5.05	7.10	10.85
7	" Finished All Over	} Female {	3.00	3.85	5.25	7.50	11.50
8	" Finished and Plated All Over		3.40	4.30	5.80	8.10	12.35

LOCK SHIELD RADIATOR VALVES—Jenkins Type Disc

No.	Size	inches	3/4	1	1 1/4	1 1/2	2
9	Price, Rough Body, Plain	each	2.50	3.20	4.50	6.25	10.50
10	" Rough Body, Plated All Over	"	2.85	3.65	4.90	6.75	11.00
11	" Finished All Over	"	3.00	3.75	5.25	7.25	11.75
12	" Finished and Plated All Over	"	3.10	4.00	5.40	7.75	12.25
13	" Rough Body, Plain	} Male {	3.50	4.30	5.85	7.75	12.60
14	" Rough Body, Plated All Over		3.80	4.75	6.40	8.10	13.10
15	" Finished All Over	} Female {	4.00	4.80	6.40	8.75	13.85
16	" Finished and Plated All Over		4.25	5.25	7.00	9.25	14.35

Nickel Plated Keys—Fig. 233—extra, each 50 cents.

For convenience when ordering, use number for style or finish of Valves.

ORDER BY FIGURE NUMBERS

RADIATOR AIR VALVES

FINISHED BRASS AND NICKEL PLATED



Fig. 243



Fig. 246



Fig. 245



Fig. 245A



Fig. 245B



Fig. 244



Fig. 244A

AIR VALVES

Finished Brass Air Valves

Nickel Plated Air Valves

No.	Size.....inches	1/8	1/4	3/8	No.	Size.....inches	1/8	1/4	3/8
1	Price.....each	.65	.70	.....	1	Price.....each	.70	.75	.....
2	"....."	.60	.....	.....	2	"....."	.65	.....	.....
3	"....."	.60	.....	.....	3	"....."	.65	.....	.....
4	"....."	.65	.70	.....	4	"....."	.70	.75	.....
5	"....."	.65	.70	.....	5	"....."	.70	.75	.....
6	"....."	.65	.....	.....	6	"....."	.70	.....	.....
7	"....."	.60	.65	.70	7	"....."	.65	.70	.75

Three Keys only furnished with each dozen Valves. Extra Keys charged at net prices.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

BRASS WEDGE GATE VALVES

SOLID WEDGE

On the following pages, we list and illustrate the most complete line of Brass Wedge Gate Valves on the market. These are all the latest improved design; are well proportioned; of a good weight; and suitable for the different pressures recommended. These Valves are made Special Pattern for pressures up to 100 pounds; Standard for 125 pounds; Heavy Standard for 150 pounds; Medium for 175 pounds and 200 pounds; Extra Heavy for 250 pounds; and Extra Heavy Hydraulic for 1000 pounds.

The guides on the discs and the ribs in the bodies of these Valves are fitted accurately, insuring a true and easy movement, and prevents wear of the faces; also keeps the disc from touching the seats in the bodies, except at the closing point.

Each Brass Wedge Gate Valve we manufacture is thoroughly tested before shipment is made.

BRASS PEET GATE VALVES

DOUBLE GATE

We illustrate and list, following our Brass Wedge Gate Valves, a line of Brass Peet Gate (Double Gate) Valves, which have been in satisfactory use for years, and are still in general demand.

The line illustrated is most complete, and are only recommended for the working pressures specified.

The Standard Pattern is recommended for 125 pounds; but, if a Double Gate Valve for higher pressure than this is required, we have patterns for a 150-pound Valve, which is sold at special prices.

Each Double Gate Valve we make is thoroughly tested before shipment.

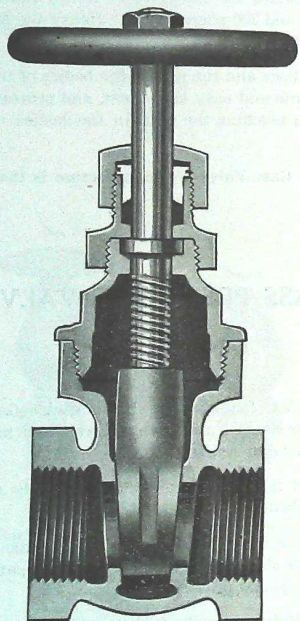
ORDER BY FIGURE NUMBERS

BRASS STRAIGHT-WAY VALVES

SOLID WEDGE

OPEN TO THE LEFT

NON-RISING SPINDLE



Sectional

ORDER BY FIGURE NUMBERS
Hy-Tech Products

SPECIAL PATTERN STRAIGHT-WAY VALVES

BRASS

WEDGE GATE

Open to the Left

Non-rising Spindle

For Working Pressures up to 100 Pounds



Fig. 244E Screwed

SPECIAL PATTERN GATE VALVES—Screwed

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
Price, Screwed..... each	1.65	2.05	2.80	3.70	5.00	7.30
End to End, Screwed..... inches	1 1/2	2	2 1/4	2 3/4	3 1/2	4 1/2

This Special Pattern Solid Wedge Gate Valve has been designed to meet the requirements and demands for such a Valve in Plumbing and Heating Systems, or any service where the pressure does not require as heavy a Valve as our Standard Pattern.

This Valve is attractively designed and correctly proportioned; and where a Brass Wedge Gate Valve for light pressure is required, we highly recommend this style.

ORDER BY FIGURE NUMBERS

STANDARD STRAIGHT-WAY VALVES

BRASS WITH GLAND WEDGE GATE

Open to the Left Non-rising Spindle

For 125 Pounds Working Pressure

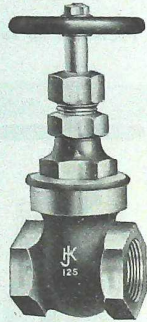


Fig. 244F Screwed

STANDARD GATE VALVES—Screwed

Size..... inches	¼	¾	1	1½	2	2½	3
Price, Screwed..... each	1.45	1.45	1.65	2.05	2.80	3.70	5.00
Flanged.....			9.00	10.25	12.00	15.00	25.00
End to End, Screwed..... inches	1½	1½	1¾	2¾	2¾	3	3½
Face to Face, Flanged.....			3¾	3¾	4¾	5¾	6¾
Diameter of Flanges.....			4	4½	5	6	7

STANDARD GATE VALVES—With Finished Brass Wheel

Size..... inches	¼	¾	1	1½	2	2½	3
Price, Rough Body, Plain..... each	2.90	3.30	4.65	5.85	7.60	10.60	16.70
.. Rough Body, Nickel Plated All Over ..	3.35	3.80	5.20	6.45	8.35	11.55	17.95
.. Finished Body ..	4.15	4.80	6.35	8.10	10.60	15.60	24.00
.. Finished Body, Nickel Plated All Over ..	4.60	5.30	6.95	8.80	11.40	16.50	25.25

This Standard Wedge Gate Valve is designed for general service; and where a Wedge Gate Valve is required for 125 pounds pressure, this style is highly recommended.

Our line of Standard Wedge Gate Valves is most carefully designed, each Valve being made of exact weight and proportions, sufficiently heavy to stand the strain of pressure recommended.

The construction of this Valve is such that it can be re-packed while under pressure when Valve is wide open.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

STANDARD STRAIGHT-WAY VALVES

BRASS WEDGE GATE

Open to the Left Non-rising Spindle
For 125 Pounds Working Pressure

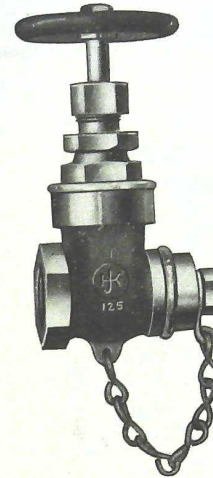


Fig. 244H Hose Valve

HOSE END GATE VALVES—Screwed

Size..... inches	¼	1	1½	2	2½	3
Price, Rough Body, Iron Wheel, without Cap and Chain..... each	2.45	3.35	4.70	6.25	9.00	15.00
.. Rough Body, Iron Wheel, with Cap and Chain ..	3.95	5.10	6.70	8.85	12.60	20.00
.. Rough Body, Finished Brass Wheel, without Cap and Chain.....	3.70	5.20	6.85	8.85	12.30	18.70
.. Finished Body, Finished Brass Wheel, without Cap and Chain.....	5.20	6.90	9.10	11.85	17.30	26.00
.. Finished Body, Finished Brass Wheel, with Cap and Chain.....	6.70	8.65	11.10	14.45	20.90	31.00
.. Finished Body, Finished Wheel, Nickel Plated All Over, without Cap & Chain ..	5.70	7.50	9.80	12.65	18.30	27.25
.. Finished Body, Finished Wheel, Nickel Plated All Over, with Cap and Chain ..	7.20	9.25	11.80	15.25	21.90	32.25

These Hose Valves have standard iron pipe thread on female end, and hose thread on male end. When ordering, specify the hose thread required. Unless otherwise specified, valves will be furnished without cap and chain.

ORDER BY FIGURE NUMBERS

HEAVY STANDARD STRAIGHT-WAY VALVES

BRASS WITH GLAND WEDGE GATE

Open to the Left

Non-rising Spindle

For 150 Pounds Working Pressure

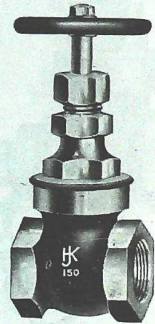


Fig. 225M Screwed

HEAVY STANDARD GATE VALVES—Screwed or Flanged

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Screwed.....each	1.45	1.45	1.65	2.05	2.80	3.70	5.00	7.30	13.00	19.00
" Flanged.....each				9.00	10.25	12.00	15.00	25.00	33.00	39.00
End to End, Screwed.....inches	1½	1½	2	2¼	2¾	3¼	3¾	4¾	5¾	6¾
Face to Face, Flanged....."				3¾	4	4½	5	6	7	7¾
Diameter of Flanges....."				4	4	4½	5	6	7	7¾

For a Brass Wedge Gate Valve heavier than our Standard Pattern, the above Valve has been designed. These Valves are of slightly larger proportions and heavier than the Standard Pattern Valves, and will stand a greater pressure and strain.

These Valves can be repacked while under pressure when Valve is wide open.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

HEAVY STANDARD STRAIGHT-WAY HOSE VALVE

UNDERWRITERS APPROVED

BRASS WITH GLAND WEDGE GATE

Open to the Left

Non-rising Spindle

For 150 Pounds Working Pressure.

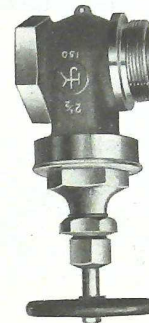


Fig. 225-O

Size..... inches	2½
Price, Rough Body with Iron Wheel.....	15.00
" Finished " " Finished Brass Wheel.....	18.70
" Finished " " " Nickel-Plated all over.....	26.00
" Finished Cap and Chain.....	27.25
	5.00

This Valve was designed to meet the requirements for Automatic Sprinkler Equipment. Threads on Hose End National Standard. Other end Standard Iron Pipe threads. Unless otherwise specified valves will be furnished without Cap and Chain.

ORDER BY FIGURE NUMBERS

OUTSIDE SCREW AND YOKE STRAIGHT-WAY VALVES

BRASS WITH GLAND WEDGE GATE
Open to the Left Rising Spindle

Standard for 125 Pounds Working Pressure
Heavy Standard for 150 Pounds Working Pressure

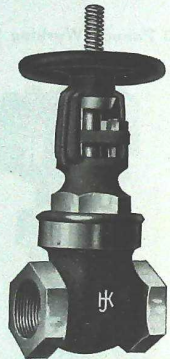


Fig. 244G Screwed

STANDARD GATE VALVES—OUTSIDE SCREW AND YOKE

Size..... inches	¾	1	1¼	1½	2	2½
Price, Screwed..... each	7.50	8.50	9.70	12.00	16.30	25.00
End to End, Screwed..... inches	2½	2¾	3	3	3½	4½

HEAVY STANDARD GATE VALVES—OUTSIDE SCREW AND YOKE

Size..... inches	¾	1	1¼	1½	2	2½
Price, Screwed..... each	8.75	10.25	12.00	15.00	22.00	32.00
End to End, Screwed..... inches	2¾	3	3½	3¾	4½	5½

The above style Valve has been designed to meet the requirements of the Underwriters.
May be packed while under pressure when Valve is wide open.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

MEDIUM PRESSURE STRAIGHT-WAY VALVES

BRASS WITH GLAND WEDGE GATE

Open to the Left Non-rising Spindle

For 175 Pounds Working Pressure

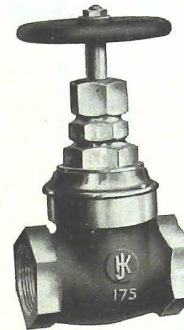


Fig. 225L Screwed

MEDIUM PRESSURE GATE VALVES—Screwed or Flanged

Size..... inches	¼	¾	½	¾	1	1¼	1½	2	2½	3
Price, Screwed..... each	2.35	2.35	2.75	3.25	4.50	6.00	8.00	13.00	20.00	32.50
Flanged..... each				10.25	12.50	16.25	21.50	31.00	45.00	67.50

TABLE OF DIMENSIONS

Size..... inches	¼	¾	½	¾	1	1¼	1½	2	2½	3
End to End, Screwed..... inches	2½	2¾	3	3½	3¾	4½	5	5¾	6½	7
Face to Face, Flanged..... inches	2½	2¾	3¼	3½	4	4½	5	6	7	8½
Diameter of Flanges..... inches		2½	3	3½	4	4½	5	6	7	8½
Thickness of Flanges..... inches		¾	¾	¾	¾	¾	¾	¾	¾	¾
Center to Top of Hand Wheel, Open..... inches	4¾	4¾	4¾	5¾	6¾	6¾	7¾	8¾	9¾	11¾

These Valves are somewhat heavier than our Heavy Standard Pattern, and are of the double face, solid wedge type, interchangeable throughout. Have Gland Stuffing Boxes; and may be packed while under pressure when Valve is wide open.

ORDER BY FIGURE NUMBERS

MEDIUM PRESSURE STRAIGHT-WAY VALVES

BRASS WITH GLAND WEDGE GATE

Open to the Left Non-rising Spindle

For 200 Pounds Working Pressure

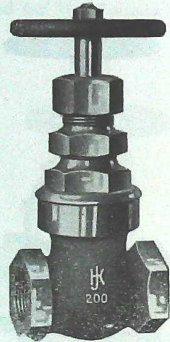


Fig. 225N Screwed

MEDIUM PRESSURE GATE VALVES—Screwed or Flanged

Size.....inches	½	¾	1	1¼	1½	2	2½	3
Price, Screwed.....each	2.75	3.25	4.50	6.00	8.00	13.00	20.00	32.50
Flanged....."		10.25	12.50	16.25	21.50	31.00	45.00	67.50

TABLE OF DIMENSIONS

Size.....inches	½	¾	1	1¼	1½	2	2½	3
End to End, Screwed.....inches	2½	2½	3½	3½	3½	4½	5½	5½
Face to Face, Flanged....."		3½	3½	4½	4½	6	6½	8½
Diameter of Flanges....."		3½	4	4½	5	6	7	7½

These Valves are somewhat heavier than our Heavy Standard Pattern, and are of the same design, but of slightly larger and heavier proportions throughout.
For high pressure service, this Valve is highly recommended.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY STRAIGHT-WAY VALVES

BRASS WITH GLAND WEDGE GATE

Open to the Left Non-rising Spindle

For 250 Pounds Working Pressure

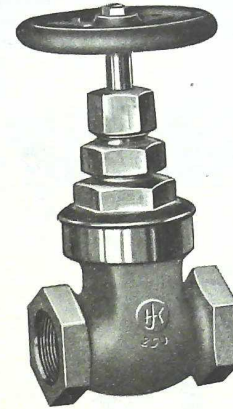


Fig. 225K Screwed

SCREWED

Size.....inches	¾	1	1¼	1½	2	2½	3
Price, Screwed.....each	4.00	5.00	6.00	8.00	11.25	16.50	23.00
End to End, Screwed.....inches	2½	2½	3½	3½	4½	4½	5½

FLANGED

Size.....inches	¾	1	1¼	1½	2	2½	3
Price, Flanged.....each	13.00	16.00	21.50	30.00	41.00	65.00	100.00
Dimensions, Face to Face.....inches		4½	4½	5½	6½	7½	8½
Diameter of Flanges....."		4½	5	6	6½	7½	8½

This Valve is attractively designed, heavy, and correctly proportioned, and where a Brass Wedge Gate Valve for high pressure is required, we highly recommend this style.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY HYDRAULIC STRAIGHT-WAY VALVES

HARD METAL WITH GLAND WEDGE GATE
 Open to the Left Non-rising Spindle

For 1000 Pounds Water Working Pressure

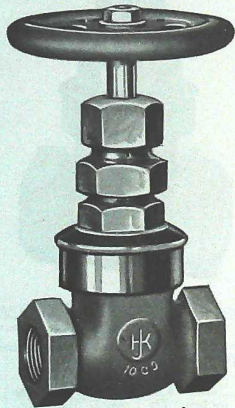


Fig. 214H Screwed

EXTRA HEAVY HYDRAULIC STRAIGHT-WAY VALVES—Screwed

Size..... inches	½	¾	1	1¼	1½	2
Price, Screwed..... each	7.50	9.00	12.00	15.50	22.50	34.50
End to End, Screwed..... inches	2½	3¼	3½	4¼	4¾	5¾

These Valves may be packed while under pressure; to do so, see that they are wide open.
 The body and disc are made of a special hard metal. All other parts, except wheel, are made of a high grade brass.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STRAIGHT-WAY VALVES

QUICK OPENING BRASS WEDGE GATE

For 100 Pounds Working Pressure

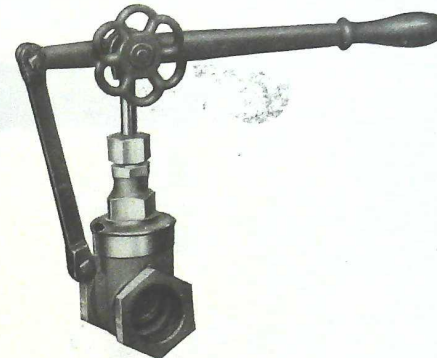


Fig. 224

QUICK OPENING GATE VALVES

Size..... inches	½	¾	1	1¼	1½	2	2½	3
Price, Screwed..... each	3.50	3.60	4.80	6.20	8.50	11.80	20.25	30.00
Flanged.....			12.50	14.50	18.50	23.50	40.00	50.00
End to End, Screwed..... inches	1½	2¼	2¾	3	3¼	3¾	4¾	5
Face to Face of Flanges.....						5½	6	7½
Diameter of Flanges.....						6	7	7½

These Valves are opened or closed by a movement of the lever, which method of operating makes the Valves desirable for use where quick opening is necessary.

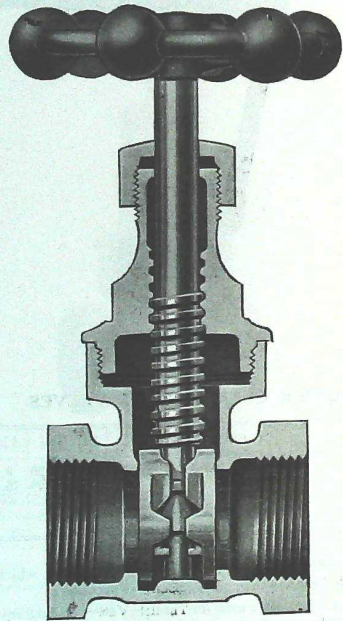
Quick Opening Valves are generally used for Throttle Valves on Engines. When used for this purpose, another Valve should be in the line between engine and boiler, in case of accident.

The wheel on top of spindle locks the disc in any desired position.

ORDER BY FIGURE NUMBERS

BRASS STRAIGHT-WAY VALVES

DOUBLE GATE PEET PATTERN OPEN TO THE LEFT
 PARALLEL SEATS RISING SPINDLE



Sectional

ORDER BY FIGURE NUMBERS
 Hy-Tech Products

STANDARD STRAIGHT-WAY VALVES

DOUBLE GATE PEET PATTERN BRASS
 Open to the Left Parallel Seats Rising Spindle

Sizes 3-inch and Smaller, up to 125 Pounds Working Pressure
 Sizes 3½-inch and Larger, up to 100 Pounds Working Pressure

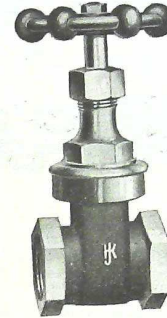


Fig. 223

SCREWED

Size..... inches	¼	⅜	½	¾	1	1¼	1½
Price..... each	1.45	1.45	1.65	2.05	2.80	3.70	5.00
End to End, Screwed..... inches	1½	2¼	2½	3¼	4	5	6
Size..... inches	2	2½	3	3½	4	5	6
Price..... each	7.30	13.00	19.00	43.00	58.00	110.00	165.00
End to End, Screwed..... inches	3¾	4¾	5½	7	7½	8	9

FLANGED

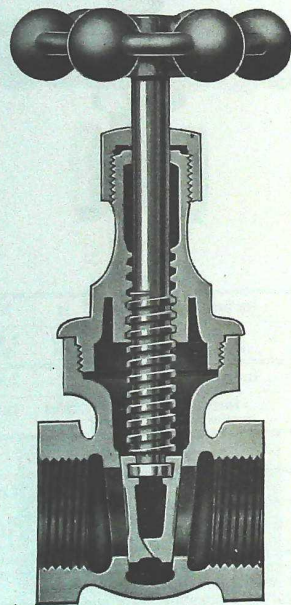
Size..... inches	2	2½	3	3½	4	5	6
Price..... each	25.00	33.00	39.00	68.00	83.00	135.00	190.00
Diameter of Flanges..... inches	6	7	7½	8½	9	10	11
Face to Face, Flanged..... inches	5½	6	6½	6¾	7	9¼	10¾

These Valves—sizes 3½ to 6-inch—are made with a flanged bonnet, non-rising spindle, and are made to order only. Prices on application.
 These Valves are constructed with parallel seats, and the bearing of the wedge being central, it acts uniformly on all parts of the discs and, as a result, will force the discs to their seats and have an equal bearing on all parts.
 We also make a Peet Pattern Gate Valve, same style as above, in a heavier type, for 150 pounds working pressure. Prices on application.

ORDER BY FIGURE NUMBERS

BRASS STRAIGHT-WAY VALVES

DOUBLE GATE TAPER SEAT OPEN TO THE LEFT
 RISING SPINDLE



Sectional

ORDER BY FIGURE NUMBERS
 Hy-Tech Products

STANDARD STRAIGHT-WAY VALVES

DOUBLE GATE TAPER SEAT BRASS
 Open to the Left Rising Spindle

For 125 Pounds Working Pressure

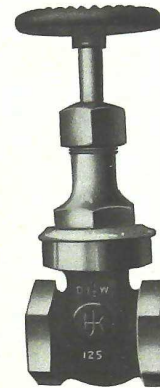


Fig. 223A

DOUBLE GATE VALVES—Taper Seats

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3
Price, Screwed..... each	1.45	1.45	1.65	2.05	2.80	3.70	5.00	7.30	13.00	19.00
End to End, Screwed..... inches	1½	1½	1¾	2¼	2¾	3¼	3	3¾	4¾	4¾

These Valves are made somewhat heavier than the Valve shown on the preceding page, and have the taper instead of parallel seats. The self-adjusting discs have their bearings near the outer edge and give maximum strength at their essential points and bring the discs tightly and uniformly to their seats.

ORDER BY FIGURE NUMBERS

STANDARD STRAIGHT-WAY VALVES

DOUBLE GATE TAPER SEAT BRASS

Open to the Left Rising Spindle

For 125 Pounds Working Pressure

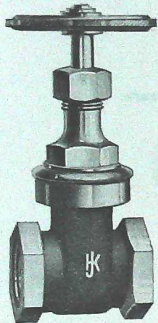


Fig. 240 With Finished Brass Wheel

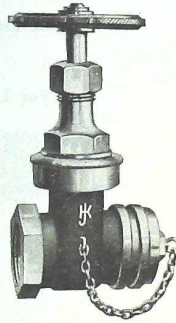


Fig. 225 Hose Valve

STRAIGHT-WAY VALVES—With Finished Brass Wheels

Size.....inches	½	¾	1	1¼	1½	2	2½	3
Price, Rough Body, Plain.....each	2.90	3.30	4.65	5.85	7.60	10.60	16.70	24.30
“ Rough Body, Nickel Plated All Over.....	3.35	3.80	5.20	6.45	8.35	11.55	17.95	25.80
“ Finished Body.....	4.15	4.80	6.35	8.10	10.60	15.60	24.00	35.00
“ Finished Body, Nickel Plated All Over.....	4.60	5.30	6.95	8.80	11.40	16.50	25.25	36.75
End to End, Screwed.....inches	1½	2¼	2¾	2¾	3	3¾	4¾	4¾

HOSE END GATE VALVES—Screwed

Size.....inches	¾	1	1¼	1½	2	2½	3
Price, Rough Body, Iron Wheel, without Cap and Chain, each	2.45	3.35	4.70	6.25	9.00	15.00	22.00
“ Rough Body, Iron Wheel, with Cap and Chain.....	3.95	5.10	6.70	8.85	12.60	20.00	29.50
“ Rough Body, Finished Brass Wheel, without Cap and Chain.....	3.70	5.20	6.85	8.85	12.30	18.70	27.30
“ Finished Body, Finished Brass Wheel, without Cap and Chain.....	5.20	6.90	9.10	11.85	17.30	26.00	38.00
“ Finished Body, Finished Brass Wheel, with Cap and Chain.....	6.70	8.65	11.10	14.45	20.90	31.00	45.50
“ Finished Body, Finished Brass Wheel, Nickel Plated All Over, without Cap and Chain.....	5.70	7.50	9.80	12.65	18.30	27.25	39.75
“ Finished Body, Finished Brass Wheel, Nickel Plated All Over, with Cap and Chain.....	7.20	9.25	11.80	15.25	21.90	32.25	47.25

These Valves are made with taper seats and have standard iron pipe thread on female end and hose thread on male end. In ordering, specify hose thread required. Unless otherwise specified, will be furnished without cap and chain.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STANDARD STRAIGHT-WAY VALVES

QUICK OPENING BRASS PEET PATTERN DOUBLE GATE

For 125 Pounds Working Pressure

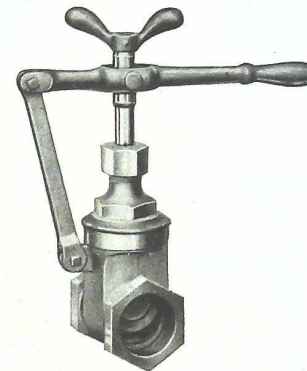


Fig. 225J

QUICK OPENING GATE VALVES

Size.....inches	½	¾	1	1¼	1½	2	2½	3
Price, Screwed.....each	3.50	3.60	4.80	6.20	8.50	11.80	20.25	30.00
“ Flanged.....	12.50	14.50	18.50	29.50	40.00	50.00		
End to End, Screwed.....inches	2¼	2½	2¾	3¾	3¾	4¾	5¾	5¾
Face to Face of Flanges.....inches	2¼	2½	2¾	3¾	3¾	4¾	5¾	5¾
Diameter of Flanges.....	4	4½	5	6	6	7	7½	7½

These Valves are opened or closed by a movement of the lever, which method of operating makes the Valve desirable for use where quick opening is necessary.

Quick opening Valves are generally used for Throttle Valves on Engines. When used for this purpose, another Valve should be in the line between engine and boiler, in case of accident. The nut on top of spindle locks the disc in any desired position.

ORDER BY FIGURE NUMBERS

COKE OVEN VALVES AND COUPLINGS

BRASS, WITH LEATHER DISC



Fig. 222 Coke Oven Valve



Fig. 222 1/2 Coupling for Coke Oven Valve

Size..... inches	1	1 1/4
Price, Coke Oven Valves..... each	1.50	2.50
Couplings for Coke Oven Valves.....	.40	.70

These Valves have a Cast Iron Handle. All parts are interchangeable.
These Valves can be furnished with round wheel at same price.

**EXTRA HEAVY TUYERE COCKS
WITH CAP AND COUPLING—FOR BLAST FURNACE**

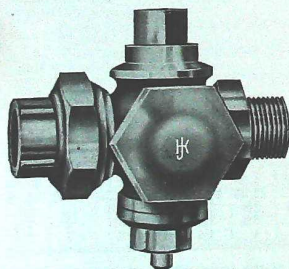


Fig. 322 Tuyere Cock



Coupling



Cap



Half Coupling



Fig. 322A

Size..... inches	1 1/4
Price, Tuyere Cock and Cap..... each	10.00
Coupling..... "	5.00
Half Coupling..... "	3.00
Cap..... "	1.50

ORDER BY FIGURE NUMBERS
Hy-Tech Products

BRASS STEAM COCKS

The line of Steam Cocks illustrated on the following pages will be found complete and of the very latest design. They are made of a superior grade of metal, have full openings, are carefully ground, and are warranted to be steam tight.

When ordering Steam Cocks, be sure to specify whether square or flat head is desired. Unless otherwise ordered, we will furnish with square head.

SPECIAL STEAM COCKS

Special Steam Cocks are recommended for service where the pressure does not exceed 100 pounds.

STANDARD STEAM COCKS

For steam working pressures up to 125 pounds.

HEAVY PATTERN STEAM COCKS

Our Heavy Pattern Steam Cocks we recommend for extreme pressures up to 150 pounds.

EXTRA HEAVY STEAM COCKS

Extra Heavy Steam Cocks are very much heavier than the Standard Pattern, and are recommended for working pressures up to 250 pounds per square inch. A special high grade metal is used in their manufacture.

ACID METAL COCKS

We make Acid Metal Cocks in either the Special, Standard, Heavy or Extra Heavy Patterns; and, by reason of the special composition of which they are made, they are very desirable for use in connection with acids or strong sulphur water.

ORDER BY FIGURE NUMBERS

STANDARD BRASS STEAM COCKS

For 125 Pounds Working Pressure

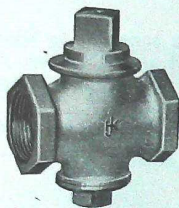


Fig. 318 Steam Cock, Square Head

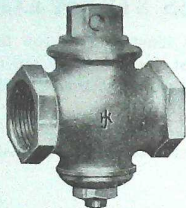


Fig. 318A Steam Cock, Flat Head



Fig. 319 Steam Cock, Tee Head

STEAM COCKS—Screwed

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price, Square, Flat or Tee Head, each	.85	.85	1.00	1.25	1.70	2.35	3.70	4.85	7.30	14.50	22.50	38.50	50.00
.. Male and Female	1.35	1.35	1.45	2.00	2.50	3.00	5.35	6.75	9.85	17.50	25.75		
.. with Check Pin..... ..	1.00	1.00	1.15	1.40	1.90	2.55	3.95	5.15	7.65	15.00	23.25	39.50	51.50
.. with Iron Lever Handle. ..	.85	.95	1.10	1.35	1.85	2.60	4.10	5.25	7.80	18.50			

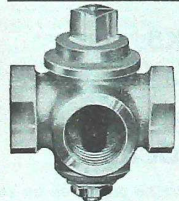


Fig. 319A Three-way, Screwed

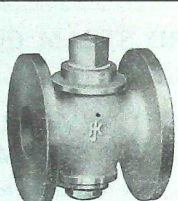


Fig. 319B Flanged Steam Cock

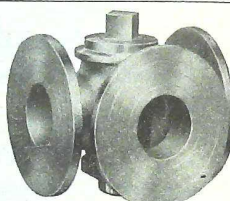


Fig. 319C Three-way, Flanged

STEAM COCKS—Flanged

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Price, 3-way, Screwed, each	2.10	2.50	3.00	3.75	5.75	7.15	11.00	18.75	26.00	50.00	70.00	
.. Sq. or Fl. Hd., Flgd. ..	4.75	5.50	7.30	9.70	11.75	18.00	27.50	43.00	62.00	84.00	150.00	275.00
.. 3-way, Flanged	7.75	8.75	11.25	14.75	17.75	27.00	38.25	57.00	85.00	121.00		
Face to Face of Flanges, ins.	2 1/2	2 3/4	4	4 1/2	5	6	7	8	9	9 1/2	11	12
F. to F. of Flanges, 3-way ..	4 1/2	4 3/4	5 1/4	5 3/4	6 1/4	7 1/4	8 3/4	9	10	10 1/2	11 1/2	12 1/2
C. to F. of Flanges, 3-way ..	2 1/2	2 3/4	2 3/4	2 3/4	3 1/4	3 1/4	4 1/4	4 1/4	5	5 1/4	5 1/4	6 1/4
Diameter of Flanges.....	3	3 1/2	4	4 1/2	5	6	7	7 1/2	8 1/2	9	10	11



Fig. 40 Cock Wrench, Square Head

MALLEABLE IRON COCK WRENCHES

FOR GAS AND STEAM COCKS



Fig. 40F Cock Wrench, Flat Head

Fig. 40—SQUARE HEAD COCK WRENCHES

No. of the Wrench	1	2	3	3 1/2	4	4 1/2	5	5 1/2	6	6 1/2	7	8	9	10	11	12
Size of Sq. Opening ins.	3/4	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/4	3 1/2	4	4 1/4	4 1/2	5	5 1/4	5 1/2
Size of Cock.....	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3	3 1/4	3 1/2	4	4 1/4	4 1/2	5	5 1/4	5 1/2	6
Price..... each	.05	.06	.07	.08	.09	.12	.14	.17	.19	.23	.25	.44	.56	.56	1.00	1.00

Fig. 40F—FLAT HEAD COCK WRENCHES

No. of the Wrench	20	21	22	23	24	25	26	27	28
Size of Opening..... ins.	3/4 x 3/4	3/4 x 1	1/2 x 1	1/2 x 1 1/4	1/2 x 1 1/2	3/4 x 1 1/2	3/4 x 1 3/4	3/4 x 1 3/4	3/4 x 2 1/2
Price..... each	.07	.09	.14	.25	.44	.56	.80	1.00	1.50

ORDER BY FIGURE NUMBERS
Hy-Tech Products

SPECIAL PATTERN BRASS STEAM COCKS

For 100 Pounds Working Pressure

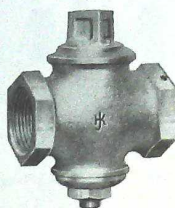


Fig. 319D Steam Cock, Square Head

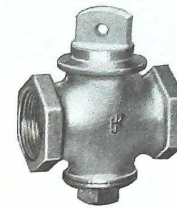


Fig. 319E Steam Cock, Flat Head

STEAM COCKS—Screwed

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
Price, Square or Flat Head... each	.85	.85	1.00	1.25	1.70	2.35	3.70	4.85	7.30	14.50	22.50	38.50	50.00

STANDARD ACID (AJAX) METAL COCKS

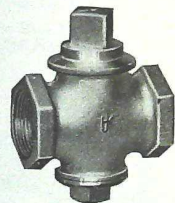


Fig. 40C Acid Metal Cock, Screwed



Fig. 40D Acid Metal Cock, Flanged

ACID METAL COCKS

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Price, Screwed..... each	.85	1.00	1.25	1.70	2.35	3.70	4.85	7.30	14.50	22.50	38.50	50.00		
.. Flanged..... ..	4.75	5.50	7.30	9.70	11.75	18.00	27.50	43.00	62.00	84.00	150.00	275.00		
Face to Face of Flgs. ins.	2 1/2	2 3/4	4	4 1/2	5	6	7	8	9	9 1/2	11	12		
Diameter of Flanges ..	3	3 1/2	4	4 1/2	5	6	7	7 1/2	8 1/2	9	10	11		

These Cocks are made from the Extra Heavy Pattern, when desired, at special prices.

ORDER BY FIGURE NUMBERS

HEAVY PATTERN BRASS STEAM COCKS

For 150 Pounds Working Pressure

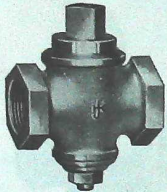


Fig. 40A Steam Cock, Screwed



Fig. 40B Steam Cock, Flanged

HEAVY PATTERN STEAM COCKS

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, Screwed..... each	1.25	1.70	2.35	3.70	4.85	7.30	14.50	22.50
" Flanged..... each	4.75	5.50	7.30	9.70	11.75	18.00	27.50	43.00
Face to Face of Flanges..... inches	2 1/2	3	4	4 1/2	5	6	7	8
Diameter of Flanges..... inches	3	3 3/4	4	4 1/2	5	6	7	7 1/2

EXTRA HEAVY HARD METAL STEAM COCKS

For 250 Pounds Working Pressure

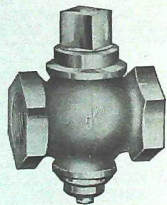


Fig. 321F Steam Cock, Screwed

EXTRA HEAVY STEAM COCKS

Size..... inches	3/8	1/2	3/4	1	1 1/4	2	2 1/2	3
Price..... each	1.75	1.75	2.40	3.60	6.00	7.75	11.50	23.00
								35.00

These Cocks are Extra Heavy, are made of hard metal and have full opening. The keys are carefully ground in the bodies, and are warranted to be perfectly steam tight.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

**STANDARD BRASS
GAS SERVICE AND METER COCKS**

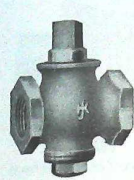


Fig. 40E Gas Service Cock Square Head



Fig. 326 Gas Service Cock Flat Head



Fig. 327 Gas Service Cock Tee Head



Fig. 329 Gas Service Cock Male and Female



Fig. 330 Gas Meter Cock

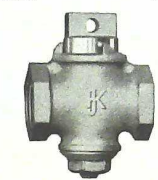


Fig. 328 Gas Service Cock with Check Pin

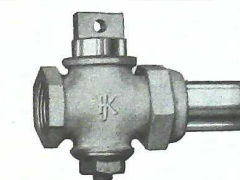


Fig. 331 Union Meter Cock

GAS SERVICE AND METER COCKS

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, Service Cocks, Square, Flat, or Tee Head..... each	.90	.90	1.00	1.10	1.30	2.10	3.25	4.60
Price, Service Cocks, Male and Fem. ..	1.20	1.30	1.55	2.40	3.65	5.45	9.15	17.50
" " with Check Pin ..	1.15	1.30	1.55	2.40	3.70	5.10	8.75	18.50
" Gas Meter Cocks.....	1.00	1.10	1.30	2.10	3.25	4.60	8.00	28.25
" Union Meter Cocks.....	1.55	1.70	2.05	3.10	4.65	6.70	10.90	

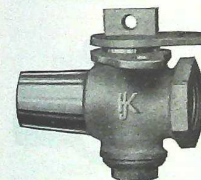


Fig. 332 Lock Meter Cock



Fig. 332A Lock Service Cock

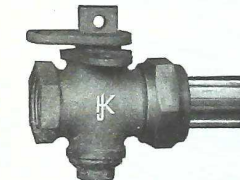


Fig. 333 Lock Union Meter Cock

LOCK SERVICE AND METER COCKS

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price, Lock Meter Cocks..... each	1.30	1.40	1.60	2.50	3.85	5.35	9.00	
" Lock Service Cocks.....	1.20	1.30	1.40	1.60	2.50	3.85	5.35	9.00
" Lock Union Meter Cocks.....	1.85	2.00	2.35	3.50	5.25	7.45	11.90	

Above Prices do not include Lock.

ORDER BY FIGURE NUMBERS

**ROUND-WAY BRASS
GAS SERVICE AND
METER COCKS**

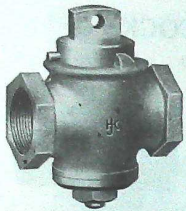


Fig. 333A Gas Service Cock



Fig. 333B Gas Service Cock, Male and Female

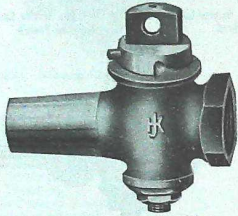


Fig. 333C Gas Meter Cock

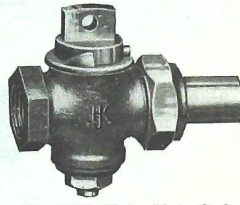


Fig. 333D Union Meter Cock

GAS SERVICE AND METER COCKS

Size.....inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price, Service Cocks, Square, Flat or T Head, with Check Pin.....each	1.55	1.80	2.25	3.60	5.35	7.85	14.15
" Service Cocks, Sq., Flat or T Head, without Check Pin ..	1.40	1.60	2.00	3.30	4.90	7.35	13.40
" Service Cocks, Male and Female, with Check Pin ..	1.75	2.00	2.50	3.90	5.75	8.70	15.30
" Service Cocks, Male and Female, without Check Pin ..	1.60	1.80	2.25	3.60	5.30	8.20	14.55
" Service Cocks, Male and Female, with Check Pin ..	1.55	1.80	2.25	3.60	5.35	7.85	14.15
" Gas Meter Cocks, with Check Pin.....	1.40	1.60	2.00	3.30	4.90	7.35	13.40
" Gas Meter Cocks, without Check Pin.....	2.10	2.40	3.00	4.60	6.75	9.95	17.05
" Union Meter Cocks, with Check Pin.....	1.95	2.20	2.75	4.30	6.30	9.45	16.30
" Union Meter Cocks, without Check Pin.....	1.95	2.20	2.75	4.30	6.30	9.45	16.30

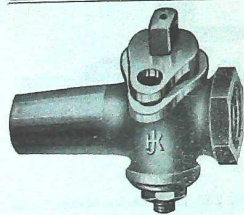


Fig. 333E Lock Meter Cock

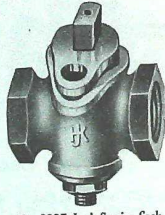


Fig. 333F Lock Service Cock

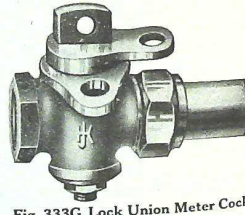


Fig. 333G Lock Union Meter Cock

LOCK SERVICE AND METER COCKS

Size.....inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price, Lock Meter Cocks.....each	1.70	1.90	2.30	3.70	5.50	8.10	14.40
" Lock Service Cocks.....	1.70	1.90	2.30	3.70	5.50	8.10	14.40
" Lock Union Meter Cocks.....	2.25	2.50	3.05	4.70	6.90	10.20	17.30

Above prices do not include Lock.

SPECIAL BRASS GAS SERVICE COCKS

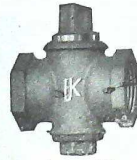


Fig. 333H Gas Service Cock Square Head



Fig. 333-I Gas Service Cock Flat Head



Fig. 333J Gas Service Cock Tee Head

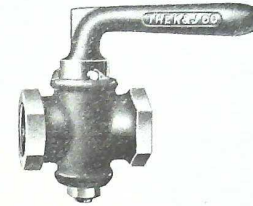


Fig. 233K Gas Service Cocks, Lever Handle

GAS SERVICE COCKS

Size.....inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3		
Price, Service Cocks, Square, Flat or Tee Head or Lever Handle.....each	.90	.90	1.00	1.10	1.30	2.10	3.25	4.60	8.00	17.50	27.00

LOCK METER COCKS

MALE AND FEMALE

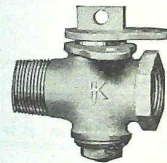


Fig. 325D Lock Meter Cock

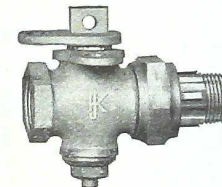


Fig. 325E Lock Union Meter Cock

LOCK METER COCKS—Male and Female

Size.....inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Fig. 325D, Lock Meter Cock, Standard.....each	1.50	1.60	1.85	2.80	4.25	6.20	10.15
Fig. 325D, Lock Meter Cock, Extra Heavy.....	1.70	1.80	2.35	3.70	5.50	8.10	13.35
Fig. 325E, Lock Union Meter Cock, Standard....	2.05	2.20	2.60	3.75	5.80	8.55	13.75
Fig. 325E, Lock Union Meter Cock, Extra Heavy ..	2.25	2.40	3.10	4.65	7.05	10.45	16.95

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY GAS SERVICE COCKS

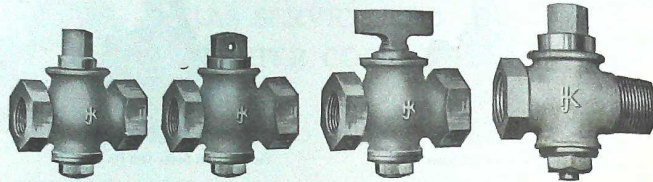


Fig. 325 Square Head Fig. 325A Flat Head Fig. 325B Tee Head Fig. 325C Male and Female

EXTRA HEAVY GAS SERVICE COCKS

Size.....inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, Service Cocks, Square, Flat or Tee Head.....each	1.10	1.10	1.20	1.30	1.80	3.00	4.50	6.50	11.20	24.50	37.80
Price, Service Cocks, Male and Fem. "	1.40	1.50	2.05	3.30	4.90	7.35	12.35				
" Service Cocks with Check Pin "	1.35	1.50	2.05	3.30	4.95	7.00	11.95	25.50	39.05		
" Gas Meter Cocks, (Not Illus.) "	1.20	1.30	1.80	3.00	4.50	6.50	11.20				
" Gas Union Meter Cocks	2.05	2.20	2.85	4.40	6.50	9.35	15.10				

BRASS EXPANSION JOINTS

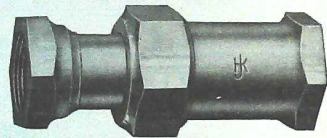


Fig. 219 Brass Expansion Joint

STANDARD TRAVERSE—"Western"

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Traverse.....inches	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4
End to End when Closed.....	4	4 1/4	5	5	5 1/2	6	7 1/2	7 3/4
Price.....each	1.50	2.20	2.75	4.00	5.00	8.00	17.50	24.00

SPECIAL TRAVERSE

Traverse.....	Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
4 inches.....	Price.....each	3.80	4.00	4.90	6.30	7.40	9.10	24.00
6 "	"	"	8.25	9.00	10.00	11.50	13.50	27.00
8 "	"	"	9.00	10.00	11.25	13.00	15.50	30.00
10 "	"	"	9.75	11.00	12.50	14.50	17.50	33.00
12 "	"	"	10.50	12.00	13.75	16.00	19.50	33.00

†Eastern Traverse.
NOTE—The Expansion will average about 1 inch in 50 feet of pipe.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

LARD TANK COCKS

ALL IRON, ALL BRASS, OR BRASS WITH IRON HANDLE

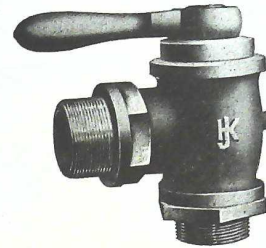


Fig. 321-1

LARD TANK COCKS

Size.....inches	1 1/2	2
Price, All Iron.....each	7.50	10.00
" All Brass....."	14.00	18.00
" Brass with Iron Handle....."	13.00	16.00

These Lard Tank Cocks are well made and used extensively by the meat packing trade.

GAS ENGINE THROTTLE COCKS
WITH DIAL INDICATOR BRASS

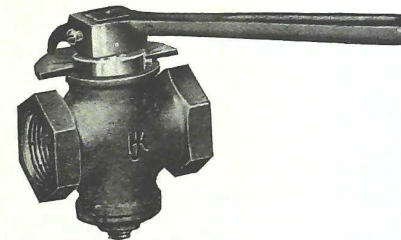


Fig. 321G

GAS ENGINE THROTTLE COCKS—Screwed

Size.....inches	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
Price, with Polished Brass Handle, each	2.70	2.90	3.40	4.50	7.10	9.25	14.00	29.00	44.00

This style of Stop Cock is extensively used on gas engines for controlling the supply of gas to the mixer. It has a graduated dial, by which the adjustment for the proper amount of gas can accurately be made.

The opening through the key being diamond-shaped, provides for a very close regulation, and prevents all waste of gas.

These Cocks can also be used for throttling gasoline engines.

ORDER BY FIGURE NUMBERS

SPECIAL AIR COCKS

FOR ROCK DRILLS

BRASS

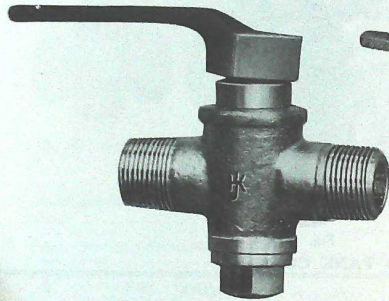


Fig. 321A Rock Drill Air Cock

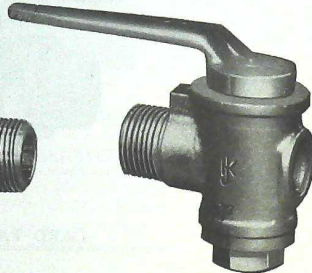


Fig. 321B Rock Drill Oiler

ROCK DRILL AIR COCKS

Size.....	inches	¾	1
Price.....	each	1.80	2.30

ROCK DRILL OILERS

Size.....	inches	¾	1
Price.....	each	2.00	2.50

EXTRA HEAVY LOCK SHIELD AIR COCKS

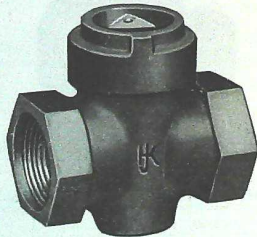


Fig. 321C

EXTRA HEAVY LOCK SHIELD AIR COCKS—Brass

Size.....	inches	1¼
Price, with One Key.....	each	3.00
Extra Keys, Malleable Iron.....		.30

ORDER BY FIGURE NUMBERS
Hy-Tech Products

IRON BODY VALVES

The Steam Working Pressure of each valve is indicated by the figures on side of body.

In determining the admissible Water Working Pressures to which valves may be subjected proportional to the designated Steam Working Pressures, the following conservative rule is suggested, although a much greater range can be safely used with the smaller valves.

To the Steam Working Pressure, add 40% for Water Working Pressure on all valves of Low Pressure, Standard and Medium, 12 inch and smaller; and 20% to 14 inch and larger. This also applies to Extra Heavy Globe Valves and screwed fittings and all Extra Heavy goods larger than 8 inches.

Extra Heavy Gate Valves, Check Valves and Flanged Fittings will stand 400-pound Water or Natural Gas Working Pressure on size 8 inch and smaller when temperature does not exceed 100 Fahrenheit.

ORDER BY FIGURE NUMBERS

STANDARD IRON BODY VALVES

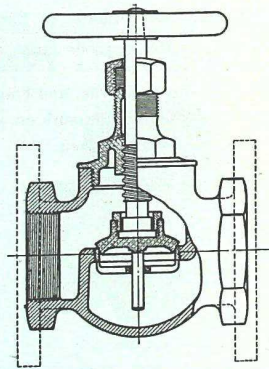
GLOBE, ANGLE AND CROSS

For 125 Pounds Working Pressure

Standard Iron Body Valves are made any size from 1 to 3 inches, inclusive in the Brass Mounted Pattern, and from 2 to 16 inches, inclusive, in the Yoked Pattern. Either pattern can be furnished with Screwed or Flanged Ends, as desired. We can also furnish English, instead of American Standard, Threads, when so ordered, at a special price.

All our Iron Body Valves are made of a superior grade of close grain iron, and the trimmings, with the exception of the hand wheel, are made of a high grade composition. The Valves are carefully tested and inspected before they are accepted and placed in stock; and they are well adapted for the pressure we recommend.

These Standard Iron Body Valves can be repacked while under pressure; but, in order to do so, the Valve must be wide open.



Sectional View
STANDARD IRON BODY BRASS MOUNTED VALVE

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STANDARD IRON BODY VALVES

BRASS MOUNTED

For 125 Pounds Working Pressure

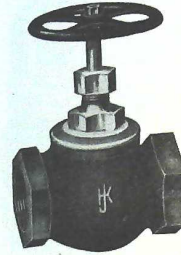


Fig. 431 Globe Valve

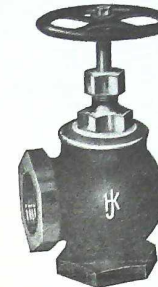


Fig. 432 Angle Valve

GLOBE AND ANGLE VALVES—Screwed

Size.....	inches	1	1 1/4	1 1/2	2	2 1/2	3
Price, Globe or Angle.....	each	2.25	2.75	3.50	5.40	7.35	9.80

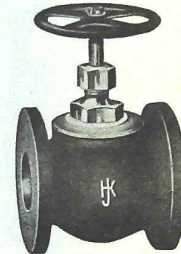


Fig. 437 Globe Valve

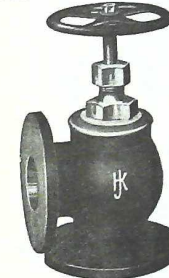


Fig. 438 Angle Valve

GLOBE AND ANGLE VALVES—Flanged

Size.....	inches	1	1 1/4	1 1/2	2	2 1/2	3
Price, Globe or Angle.....	each	3.25	3.85	4.80	7.00	9.00	12.50
Diameter of Flanges.....	inches	4	4 1/2	5	6	7	7 1/2

ALL IRON GLOBE AND ANGLE VALVES—Not Illustrated

Size.....	inches	1	1 1/4	1 1/2	2	2 1/2	3
Price, Screwed.....	each	5.70	6.00	6.60	7.50	9.40	12.50
Price, Flanged.....	each	6.90	7.25	7.80	9.00	11.50	16.50

All Iron Valves are specially adapted for use in systems where it is necessary to handle alkaline, cyanide or other acetous solutions. Unless otherwise ordered, we will be particular to specify when All Iron Valves are wanted. For galvanizing Iron Body Valves, add 25 per cent. to regular list. For dimensions, see page 360. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

STANDARD IRON BODY VALVES

WITH YOKE

For 125 Pounds Working Pressure

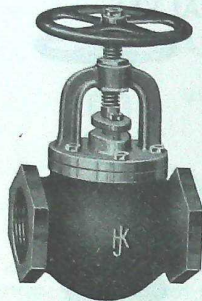


Fig. 434 Globe Valve

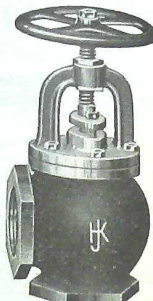


Fig. 435 Angle Valve

SCREWED

Size.....inches	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
Price, Globe or Angle, each	7.00	9.00	12.50	15.25	19.00	24.00	27.00	37.50	63.00	72.00	93.00	114.00	170.00

FLANGED

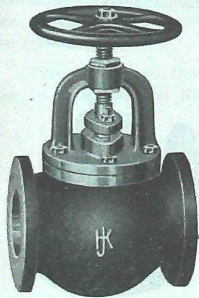
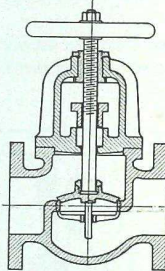


Fig. 439 Globe Valve



Sectional View



Fig. 440 Angle Valve

Size .ins.	2	2½	3	3½	4	4½	5	6	7	8	9	10	12	14	16
Price, Globe or Angle, each	8.60	10.75	15.00	18.50	22.50	27.50	31.00	42.00	68.00	77.00	100.00	123.00	187.00	350.00	475.00
Diameter of Flanges ins.	6	7	7½	8½	9	9½	10	11	12½	13½	15	16	19	21	23½

ALL IRON GLOBE AND ANGLE VALVES—Not Illustrated

Size.....inches	2½	3	3½	4	4½	5	6	7	8
Price, Screwed.....each	22.00	25.00	27.75	31.80	39.00	40.50	52.50	77.00	93.00
Price, Flanged.....each	25.00	27.00	29.55	33.70	41.00	44.70	57.60	81.00	99.00

All Iron Valves are specially adapted for use in systems where it is necessary to handle alkaline, cyanide or other acetous solutions. Be particular to specify when All Iron Valves are wanted. For dimensions, see pages 361 and 362. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STANDARD IRON BODY CROSS VALVES

For 125 Pounds Working Pressure

BRASS MOUNTED



Fig. 433 Cross Valve, Screwed

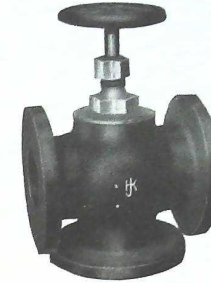


Fig. 433A Cross Valve, Flanged

CROSS VALVES

Size.....inches	2	2½	3
Price, Screwed.....each	6.50	9.00	12.50
Price, Flanged.....each	9.00	11.75	16.50
Diameter of Flanges.....inches	6	7	7½

WITH YOKE

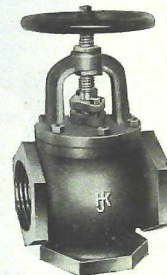


Fig. 436 Cross Valve, Screwed



Fig. 436A Cross Valve, Flanged

CROSS VALVES

Size.....inches	2	2½	3	3½	4	4½	5	6
Price, Screwed.....each	8.50	11.75	16.25	20.00	23.50	30.65	35.25	47.25
Price, Flanged.....each	11.00	14.50	20.00	25.00	28.50	36.00	41.00	54.00
Diameter of Flanges.....inches	6	7	7½	8½	9	9½	10	11
Size.....inches	7	8	9	10	12	14	16	
Price, Screwed.....each	78.00	92.00	125.00	162.00	240.00	500.00	600.00	
Price, Flanged.....each	85.00	100.00	135.00	175.00	265.00	500.00	600.00	
Diameter of Flanges.....inches	12½	13½	15	16	19	21	23½	

For dimensions, see pages 360 and 362. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

STANDARD IRON BODY CHECK VALVES

For 125 Pounds Working Pressure



Fig. 441 Horizontal Check Valve Screwed

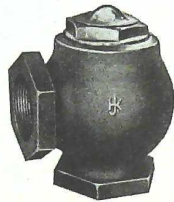


Fig. 442 Angle Check Valve Screwed

HORIZONTAL AND ANGLE CHECK VALVES

Size..... inches	1	1¼	1½	2	2½	3
Price, Screwed..... each	1.75	2.20	2.65	3.60	6.50	8.90
Flanged.....	2.75	3.25	4.00	5.25	8.25	11.50

For dimensions, see page 360.

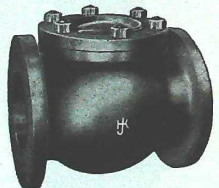


Fig. 442A Horizontal Check Valve Flanged



Fig. 442B Angle Check Valve Flanged

HORIZONTAL AND ANGLE CHECK VALVES

Size... inches	2	2½	3	3½	4	4½	5	6	7	8	10	12	14	16
Price, Scrd., each	4.50	6.50	8.90	12.25	14.25	19.00	22.00	30.00	45.00	57.00	105.00	155.00	225.00	285.00
Flgd., "	6.00	8.25	11.50	15.50	18.00	22.50	26.00	35.00	60.00	62.00	115.00	175.00	300.00	425.00
Diam. of Flanges, ins.	6	7	7½	8½	9	9¼	10	11	12½	13½	16	19	21	23½

For dimensions, 2½ to 6-inches, see page 365. For dimensions, 7-inch and larger, see page 362 Template for drilling, page 136.

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STANDARD IRON BODY CHECK VALVES

For 125 Pounds Working Pressure



Fig. 442C Vertical Check Valve, Screwed

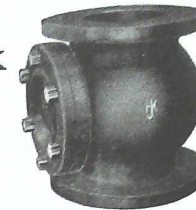


Fig. 442D Vertical Check Valve, Flanged

VERTICAL CHECK VALVES

Size..... inches	2	2½	3	3½	4	4½	5	6	7	8	10
Price, Screwed..... each	7.00	9.50	12.50	17.00	21.00	30.00	33.00	40.00	62.00	73.00	135.00
Flanged.....	8.75	11.50	15.00	20.00	25.00	33.50	37.00	45.00	67.00	78.00	135.00
Diameter of Flanges... in.	6	7	7½	8½	9	9¼	10	11	12½	13½	16
End to End, Screwed "	5½	6½	7½	8¼	9	9¾	11	12¼	14	16¼	20
Face to Face, Flanged "	6	6¾	8¼	8¾	10¼	10¾	11½	13	16	17	20

Vertical Check Valves, all sizes, have Cast Iron Cap on side, both screwed and flanged.

IRON BODY BACK PRESSURE VALVES

STANDARD—For Back Pressure Not Over 5 Pounds

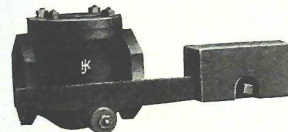
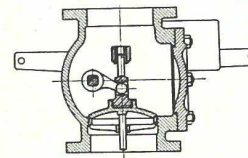


Fig. 456 Horizontal



Fig. 456A Vertical



Sectional View

BACK PRESSURE VALVES—Screwed or Flanged

Size..... inches	2	2½	3	3½	4	4½	5
Price, Screwed..... each	11.00	13.00	15.00	19.00	22.50	28.50	33.50
Flanged.....	12.75	15.00	17.50	22.00	26.00	32.00	37.00
Diameter of Flanges..... inches	6	7	7½	8½	9	9¼	10
Size..... inches	6	7	8	10	12	14	16
Price, Screwed..... each	43.00	70.00	85.00	120.00	180.00	350.00	475.00
Flanged.....	47.00	75.00	90.00	130.00	200.00	350.00	475.00
Diameter of Flanges..... inches	11	12½	13½	16	19	21	23½

For dimensions of Back Pressure Valves, 2 to 6-inch, see page 365. For Valves, 7-inch and up see page 362. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

STANDARD IRON BODY SAFETY VALVES

For 125 Pounds Working Pressure

SCREWED

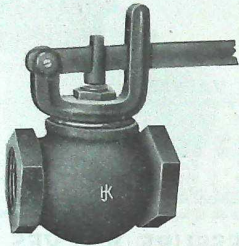


Fig. 436J Globe Safety Valve



Fig. 436K Angle Safety Valve

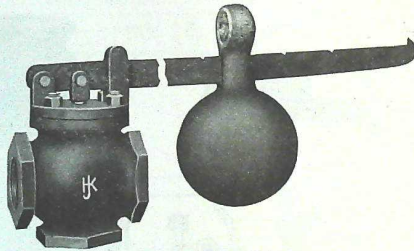


Fig. 455 Three-way Safety Valve

GLOBE, ANGLE AND THREE-WAY SAFETY VALVES—Screwed

Size..... inches	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2
Price, Globe, Angle or Three-way.....each	4.00	5.00	5.80	7.80	13.25	17.25	23.00
Size..... inches	4	4 1/2	5	6	7	8	
Price, Globe, Angle or Three-way.....each	28.75	34.50	41.50	57.75	93.50	132.00	

NOTE—Sizes from 1 to 3-inch, inclusive, have Swivel Top; larger sizes have Cast Iron Top and can be set at any 90° angle.
 Levers are graduated from 30 to 100 pounds.
 For dimensions, see pages 361 and 362.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STANDARD IRON BODY SAFETY VALVES

For 125 Pounds Working Pressure

FLANGED

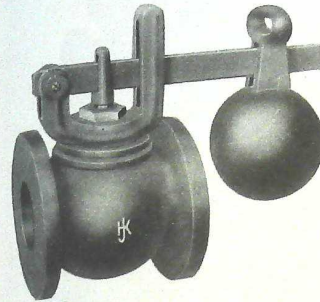


Fig. 455A Globe Safety Valve



Fig. 455B Angle Safety Valve

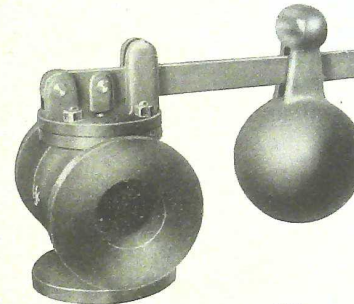


Fig. 455C Three-way Safety Valve

GLOBE, ANGLE AND THREE-WAY SAFETY VALVES—Flanged

Size..... inches	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8
Price, Globe, Angle or Three-way, each	10.25	16.00	21.50	27.50	34.00	40.00	48.00	65.00	100.00	140.00
Diameter of Flanges..... inches	6	7	7 1/2	8 1/2	9	9 1/2	10	11	12 1/2	13 1/2

NOTE—Sizes from 1 to 3-inch, inclusive, have Swivel Top; larger sizes have Cast Iron Top and can be set at any 90° angle.
 Levers are graduated from 30 to 100 pounds.
 For dimensions, see pages 361 and 362. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

**JENKINS TYPE
STANDARD KELLY & JONES VALVES
"Y" OR BLOW-OFF**

For 125 Pounds Working Pressure

WITH YOKE

BRASS MOUNTED

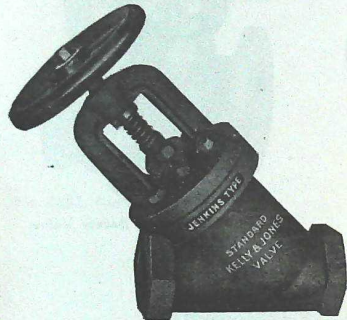
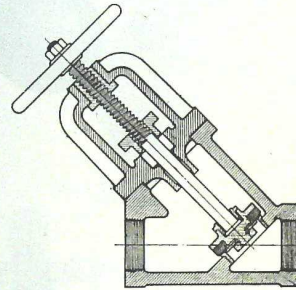


Fig. 455D Screwed



Sectional View

STANDARD IRON BODY "Y" VALVES

Size..... inches	2	2½	3
Price, Screwed..... each	11.00	15.00	20.00
Flanged..... each	13.00	18.00	23.00

DIMENSIONS

Size..... inches	2	2½	3
End to End, Screwed..... inches	8	9½	11¼
Face to Face, Flanged..... "	8¾	11	12¾
Flange to End of Hand Wheel, Valve Open..... "	8½	7¼	7
Hexagone to End of Hand Wheel, Valve Open..... "	7¼	8¾	7¾
Diameter of Flanges..... "	6	7	7¾
Thickness of Flanges..... "	¾	1	¾
Center to Top of Hand Wheel, Valve open..... "	13¼	15¼	16¾
Diameter of Hand Wheel..... "	5¼	6¾	7¾

This is a new style "Y" or Blow-off Valve of strong and rigid construction. Has a full straight opening which permits of a free and unobstructed passage of the flow. This style Valve is well adapted for thick fluid service.

When used as a Blow-off Valve where mud and scale will accumulate from the dirty water, a Plug Cock or Gate Valve should be placed between the Valve and the Boiler, by which method of installation the mud and sediment will be kept away from the seat.

Always install this Valve in such a position that the pressure will be under the disc when closed.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

STANDARD IRON BODY SWING CHECK VALVES

For 125 Pounds Working Pressure



Fig. 476B Screwed

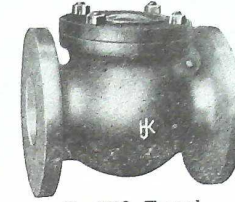


Fig. 476C Flanged

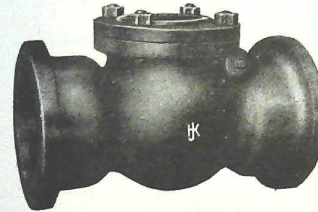
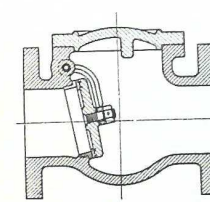


Fig. 450 Hub End



Sectional View

STANDARD IRON BODY SWING CHECK VALVES

Size..... inches	2	2½	3	3½	4	4½	5	6	7	8
Price, Screwed..... each	11.00	12.00	13.50	17.50	20.00	26.00	30.00	36.00	55.00	70.00
Flanged..... "	13.00	14.50	17.00	21.00	24.00	30.00	34.00	41.00	60.00	75.00
Hub End..... "	14.25	19.00	27.00	38.00	45.00	62.50				
Leather or Vulcanized Rubber Disc, Extra..... each	1.25	1.50	2.00	2.50	3.00	3.50	4.00	4.00	6.00	7.50

Size..... inches	10	12	14	15	16	18	20	24	30
Price, Screwed..... each	110.00	160.00	340.00	400.00	450.00	600.00	700.00	1000.00	1650.00
Flanged..... "	115.00	168.00	340.00	400.00	450.00	600.00	700.00	1000.00	1650.00
Hub End..... "	125.00	185.00	340.00		450.00	600.00	700.00	1000.00	1650.00
Leather or Vulcanized Rubber Disc, Extra..... each	10.00	12.00							

DIMENSIONS

Size..... inches	2	2½	3	3½	4	4½	5	6	7	8	10	12
End to End, Screwed Valve..... inches	6½	6¾	8¾	8¾	9¾	10¾	11¾	13¾	15¾	15¾	20¾	22¾
Face to Face, Flanged Valve..... "	7	7¼	9½	9½	11¾	11¾	12¾	14	15¾	17¾	20	22¾
End to End, Hub Socket..... "			4¾	5¾	6¾	7¾	10	12	14¾			
End to End of Pipe when Laid in Bell..... "			7	8¾	8¾	11¾	13¾	14	17			
Diameter of Flanges..... "	6	7	7¾	8¾	9	9¾	10	11	12¾	13¾	16	19

Swing Check Valves, when used for water, preferably should have Leather Discs; for steam, Bronze-faced Discs.

Unless otherwise specified, Screwed and Flanged Check Valves will be furnished with Bronze-faced Discs.

Hub End Check Valves always have Leather Discs, price for which is included in list. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

BECKWITH PIPE LINE SWING CHECK VALVES

ALL IRON OR IRON WITH LEAD GASKET

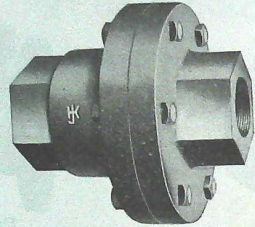


Fig. 214K

BECKWITH SWING CHECKS

Size..... inches	2	3	4	6
Standard..... each	4.75	10.00	.....	.....
Weight..... pounds	28	52	.....	.....
Extra Heavy with Lead Gasket..... each	8.00	15.00	25.00	50.00
Weight..... pounds	43	85	100	275

NOTE—Extra Heavy can be furnished Lip for Lead at same price.

EXTRA HEAVY HYDRAULIC SWING CHECK VALVES

SEMI-STEEL

COMPOSITION SEATS

For 800 Pounds
Water Working
Pressure



Fig. 214C

Tested to
2000 Pounds Hydraulic
Pressure
per Square Inch

EXTRA HEAVY HYDRAULIC SWING CHECK VALVES

Size..... inches	2½	3	4	5	6	7	8	10	12
Price, Screwed..... each	30.00	40.00	55.00	75.00	110.00	150.00	190.00	240.00	350.00
Flanged..... "	30.00	40.00	55.00	75.00	110.00	150.00	190.00	240.00	350.00
Price for Drilling Extra Heavy Hydraulic Flanged Valves..... each	1.10	1.20	1.30	2.25	3.00	5.00	6.00	8.00	9.00
End to End, Screwed..... inches	12	13½	15¼	17¼	19	21	24½	26½	.....
Face to Face, Flanged..... "	12½	14	16	18	20	22	26	30	34
Diameter of Flanges..... "	8¾	10	11½	13¼	15	16	17	21	23½

NOTE—Cast Steel Valves for working pressures higher than given above made to order.
Cast Steel Valves larger than listed made to order.
Flanged Valves are always furnished with male face, unless specified otherwise; and Companion Flanges, when ordered with Valves, are furnished female face.
For dimensions, see page 425. Template for drilling, page 178.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

EXTRA HEAVY IRON BODY SWING CHECK VALVES

For 250 Pounds Working Pressure

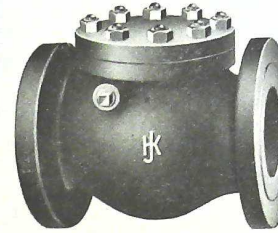


Fig. 476G Flanged

EXTRA HEAVY IRON BODY SWING CHECK VALVES

Size..... inches	2	2½	3	3½	4	4½	5
Price, Screwed..... each	15.00	20.00	28.00	36.00	41.00	49.00	54.00
Flanged..... "	17.00	22.00	30.00	38.00	44.00	52.00	57.00
Size..... inches	6	7	8	10	12	14	15
Price, Screwed..... each	66.00	84.00	100.00	170.00	.....	.....	.....
Flanged..... "	70.00	88.00	105.00	175.00	250.00	350.00	350.00

DIMENSIONS

Size..... inches	2	2½	3	3½	4	4½	5
End to End, Screwed..... inches	9½	10¾	11¾	12¾	13	14	15
Face to Face, Flanged..... "	10½	11½	12½	13¼	14	15	15¾
Diameter of Flanges..... "	6½	7½	8¼	9	10	10½	11
Size..... inches	6	7	8	10	12	14	15
End to End, Screwed..... inches	16½	18¾	20	23¼	.....	.....	.....
Face to Face, Flanged..... "	17½	19¼	21	24½	28	33	33
Diameter of Flanges..... "	12½	14	15	17½	20½	23	24½

ORDER BY FIGURE NUMBERS

DIMENSIONS OF
STANDARD IRON BODY VALVES
BRASS MOUNTED

For 125 Pounds Working Pressure

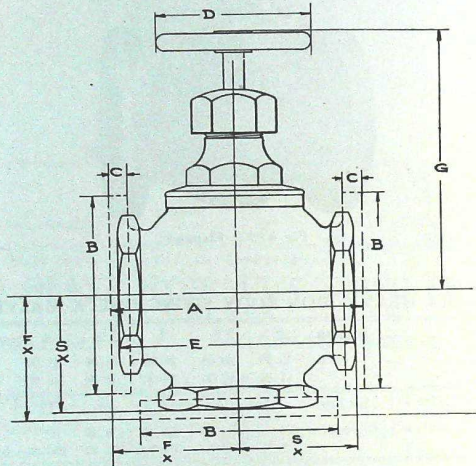


TABLE OF DIMENSIONS

Size..... inches		1	1½	2	2½	3
Face to Face of Flanged Globe.....	A	3¾	4½	5	5¾	7¼
Diameter of Flanges.....	B	4	4½	5	6	7
Thickness of Flanges.....	C	¾	¾	¾	¾	¾
Diameter of Wheel.....	D	2¾	3¼	3¾	4½	5½
Length of Screwed Globe or Cross.....	E	3¾	4½	5	5½	6¾
Center to Face of Inlet or Outlet of Flanged Angle or Cross.....	FX	2¾	3	3¾	3¾	4½
Center of Valve to Top of Spindle on Globe, Open.....	G	5½	6¼	6¾	7¼	9
Center of Valve to Top of Spindle on Angle, Open.....	H	5½	6¼	6¾	7¼	9
Center to End of Inlet or Outlet of Screwed Angle.....	SX	1¾	2¼	2½	2¾	3¾

Template for drilling, page 136

ORDER BY FIGURE NUMBERS
Hy-Tech Products

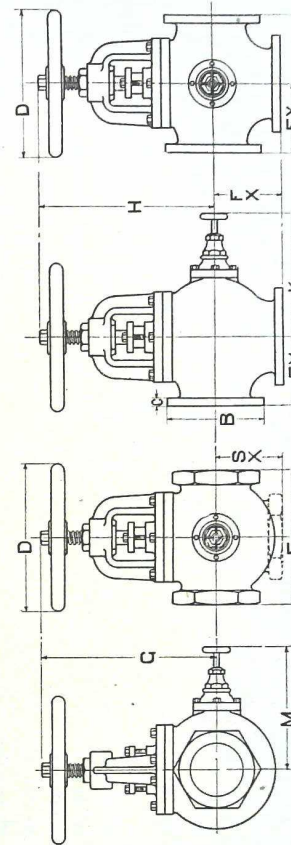
DIMENSIONS OF
STANDARD GLOBE, ANGLE AND CROSS VALVES

FLANGED OR SCREWED

WITH YOKE

BRASS MOUNTED

For 125 Pounds Working Pressure



For dimensions, see following page.

ORDER BY FIGURE NUMBERS

STANDARD IRON BODY VALVES

GLOBE, ANGLE, CROSS AND BACK PRESSURE VALVES; HORIZONTAL, ANGLE AND VERTICAL CHECK VALVES—WITH YOKE

For 125 Pounds Working Pressure

TABLE OF DIMENSIONS

Size.....inches	2	2½	3	3½	4	4½	5	6	7	8	9	10	12	14	16
Face to Face of Flanged Globe.....inches	A 8	8½	9½	10½	11	12	13	14	16	17	18½	20	24	28	32
Diameter of Flanges.....inches	B 6	7	7½	8½	9	9½	10	11	12½	13½	15	16	19	21	23½
Thickness of Flanges.....inches	C ¾	¾	¾	¾	¾	¾	¾	1	1½	1½	1½	1½	1½	1½	1½
Diameter of Wheel.....inches	D 7	7	8	8	9	9	11	12	12	14	14	16	18	20	24
Length of Screwed Globe.....inches	E 5½	6½	7½	8½	9½	10½	11½	12½	14	14	16	18	20½	22½	25½
Center to Face of Inlet or Outlet of Flanged Angle or Cross.....inches	F X 4	4½	4½	5½	5½	6	6½	7	8	8½	9½	10	12	14	16
Center of Valve to Top of Spindle on Globe, Open.....inches	G 10	11½	13	14	15½	15½	17	18½	20½	22½	23	25½	28½	32	36
Center of Valve to Top of Spindle on Angle, Open.....inches	H 10	12	13	14	15	15½	17	18½	20½	22½	23	25½	29	32½	36
Center of Valve to Outside of By-pass on Angle.....inches	K								16½	17	17½	18½	20½	22	25
Center of Valve to Outside of By-pass on Globe.....inches	M								16½	17	17½	18½	20½	22	25
Center to End of Inlet or Outlet of Screwed Angle or Cross.....inches	S X 2½	3½	4½	4½	5	5½	6	6½	7½	8½	9	10	11	14	16
Number of Turns to Open.....inches	3	4	5	5	6	7	7	8	9	9	10	11	14	16	16
Size of By-pass.....inches									1½	1½	1½	1½	2	2	2

Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

SPECIAL PATTERN IRON BODY VALVES

For 100 Pounds Working Pressure



Fig. 436F Globe Valve

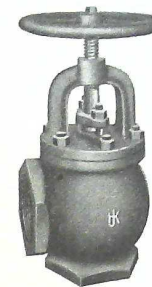


Fig. 436G Angle Valve

WITH YOKE

GLOBE AND ANGLE VALVES—Screwed

Size.....inches	2½	3	3½	4	4½	5	6	7	8
Price, Globe or Angle.....each	9.00	12.50	15.25	19.00	24.00	27.00	37.50	63.00	72.00
Cross (not illustrated).....each	11.75	16.25	20.00	23.50	30.65	35.25	47.25	78.00	92.00

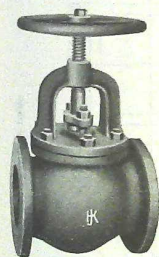
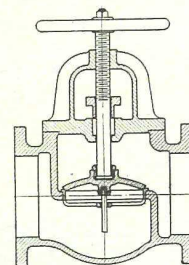


Fig. 436H Globe Valve



Sectional View

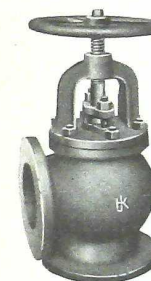


Fig. 436-I Angle Valve

GLOBE AND ANGLE VALVES—Flanged

Size.....inches	2½	3	3½	4	4½	5	6	7	8
Price, Globe or Angle.....each	10.75	15.00	18.50	22.50	27.50	31.00	42.00	68.00	77.00
Diameter of Flanges.....inches	7	7½	8½	9	9½	10	11	12½	13½
Price, Cross, (not illustrated).....each	14.50	20.00	25.00	28.50	36.00	41.00	54.00	85.00	100.00

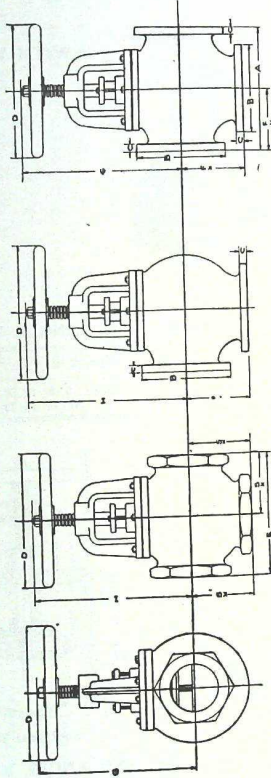
For dimensions, see following pages. Template for drilling, page 135.

ORDER BY FIGURE NUMBERS

DIMENSIONS OF
SPECIAL PATTERN GLOBE, ANGLE AND CROSS VALVES

IRON BODY
FLANGED OR SCREWED
WITH YOKE
BRASS MOUNTED

For 100 Pounds Working Pressure



For dimensions, see following page.

Hy-Tech Products
ORDER BY FIGURE NUMBERS

SPECIAL PATTERN IRON BODY VALVES
GLOBE, ANGLE AND CROSS VALVES

HORIZONTAL, ANGLE AND VERTICAL CHECK VALVES

For 100 Pounds Working Pressure

TABLE OF DIMENSIONS

Size.....	inches	2½	3	3½	4	4½	5	6	7	8
Face to Face of Flanged Globe.....	A	6¾	8¾	8¾	10¾	10¾	11¾	13	15½	16½
Diameter of Flanges.....	B	7	7½	8½	9	9¾	10	11	12½	13½
Thickness of Flanges.....	C	¾	¾	1¾	1½	1½	1½	1	1½	1½
Diameter of Wheel.....	D	7	8	8	9	9	11	12	12	14
Length of Screwed Globe.....	E	6¾	7½	8¾	9	9¾	11	12½	14½	15¾
Center to Face of Inlet or Outlet of Flanged Angle.....	F X	4¾	4¾	5¾	5¾	5¾	6½	6¾	7¾	8¾
Center of Valve to Top of Spindle on Globe, Open.....	G	9¾	11½	12½	13½	14	16	17½	18¾	20½
Center of Valve to Top of Spindle on Angle, Open.....	H	10¾	11½	12½	13½	14	15½	17½	19	20½
Center to End of Inlet or Outlet of Screwed Angle.....	S X	3¾	3¾	4¾	4¾	4¾	5¾	6¾	7¾	7¾
Number of Turns to Open.....		3¾	4¾	4¾	4¾	5¾	6	7	9	10

Template for drilling, see page 136.

ORDER BY FIGURE NUMBERS

MEDIUM IRON BODY VALVES

GLOBE ANGLE AND CROSS

Screwed or Flanged

For 175 Pounds Working Pressure

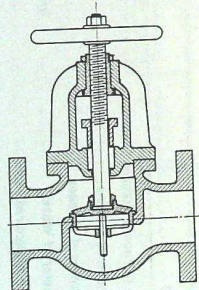
Medium Iron Body Valves are made any size from 2 to 12 inches, inclusive both Screwed and Flanged.

In designing these Valves, we have endeavored to meet the requirements and increasing demand for a Valve suitable for a pressure between Standard and Extra Heavy, and no effort has been spared to make them mechanically correct in every detail. The material used in their construction is of the highest quality; and it has been our aim to add strength where the greatest amount of strain is caused, due to the expansion and contraction of the piping.

When it is necessary to use Medium Valves larger than 6 inches, we would recommend that Flanged Valves be used; and Valves 8 inches and larger, should have a By-pass.

These Medium Iron Body Valves can be repacked while under pressure; but, in order to do so, the Valve must be wide open.

These Valves are regularly furnished with $\frac{1}{16}$ -inch raised face.



Sectional View

Hy-Tech Products

MEDIUM IRON BODY VALVES

For 175 Pounds Working Pressure

WITH YOKE

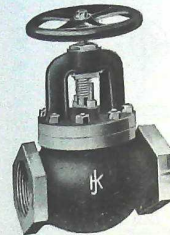


Fig. 437B Globe Valve

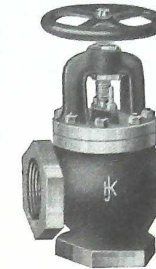


Fig. 437C Angle Valve

GLOBE, ANGLE OR CROSS VALVES—Screwed

Size inches	2	2½	3	3½	4	4½	5	6	7	8	10	12
Price, Globe or Angle, each	13.00	16.00	20.00	24.00	28.00	35.00	42.00	50.00	80.00	90.00	135.00	190.00
Cross	18.00	22.00	27.00	32.00	37.00	45.00	54.00	65.00	100.00	115.00	165.00	260.00

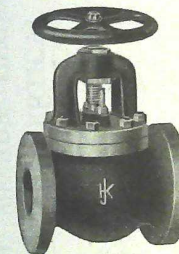


Fig. 437D Globe Valve

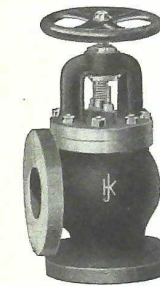


Fig. 437E Angle Valve

GLOBE, ANGLE OR CROSS VALVES—Flanged

Size inches	2	2½	3	3½	4	4½	5	6	7	8	10	12
Price, Globe or Angle, each	15.00	18.00	23.00	28.00	33.00	40.00	47.00	55.00	85.00	95.00	145.00	200.00
with By-pass											125.00	185.00
Cross	21.00	25.00	31.00	37.00	43.00	52.00	60.00	72.00	107.00	122.00	185.00	275.00
with By-pass											152.00	245.00
Size of By-pass inches											1½	2
Diameter of Flanges	6½	7½	8½	9	10	10½	11	12½	14	15	17½	20½

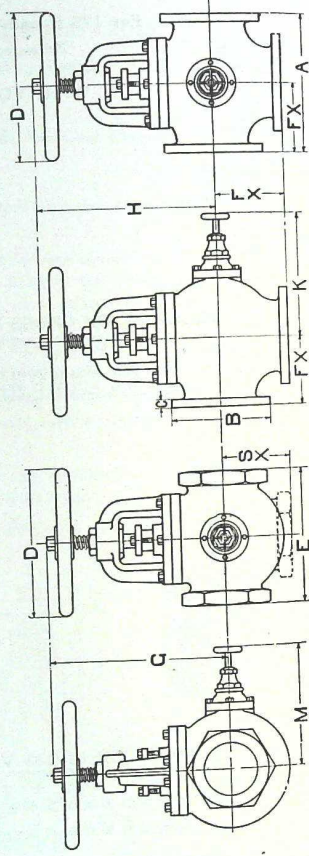
The use of Screwed Valves larger than 8-inch is not recommended. Valves, 6-inch and larger, should have a By-pass. For dimensions, see page 419. Template for drilling, page 413. Price list for drilling, page 420.

ORDER BY FIGURE NUMBERS

DIMENSIONS OF
MEDIUM GLOBE, ANGLE AND CROSS VALVES

IRON BODY
FLANGED OR SCREWED
WITH YOKE
BRASS MOUNTED

For 175 Pounds Working Pressure



For dimensions, see following page.

Hy-Tech Products
ORDER BY FIGURE NUMBERS

IRON BODY MEDIUM GLOBE, ANGLE AND CROSS VALVES
HORIZONTAL, VERTICAL AND ANGLE CHECK VALVES

For 175 Pounds Working Pressure

TABLE OF DIMENSIONS

Size.....	2	2½	3	3½	4	4½	5	6	7	8	10	12	
Face to Face of Flanged Globe or Cross Valve.....inches	A	9	10	11	12	13	13½	14½	16	17½	20	22½	25½
Center to Face of Inlet or Outlet of Flanged Angle Valves...	F X	4½	5	5½	6	6½	6¾	7¼	8	8¾	10	11¼	12¼
Center to End of Inlet or Outlet of Screwed Angle Valves....	S X	3¾	4	4½	4¾	5¼	5½	6¾	7	8¾	9¾	11¼	12¼
Length of Screwed Globe or Cross Valves.....	E	7¾	8	8¾	9¾	10¾	11¼	12¾	14	17	18¾	22¼	25½
Center of Valve to Top of Spindle on Globe, Open.....	G	13¾	15¼	16¼	17	17½	18¾	19¾	20	21¾	24	29¼	31
Center of Valve to Top of Spindle on Angle, Open.....	H	13¾	15¼	16¼	17	17½	18¾	19¾	20	21¾	24	29¼	31
Diameter of Flanges.....	B	6¾	7½	8¼	9	10	10¾	11	12½	14	15	17½	20½
Thickness of Flanges.....	C	¾	1	1¼	1½	1¾	1¾	1¾	1¾	1¾	1¾	1¾	2
Diameter of Wheel.....	D	7¼	7½	9	9	10	10	10	14	16	16	20	24
Number of Turns to Open.....		3½	4	4	4	5	5½	6	7	8	9	10	11
Center of Valve to Outside of By-pass Angle or Cross Valve, inches	K												
Center of Valve to Outside of By-pass Globe Valve.....	M												
Size of By-pass.....													

Template for drilling, page 413.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY IRON BODY VALVES

GLOBE, ANGLE AND CROSS

Screwed or Flanged

IRON BODY WITH YOKE BRASS MOUNTED

For Steam Working Pressures Up to 250 Pounds

Tested to 800 Pounds Hydraulic Pressure per Square Inch

These Extra Heavy Valves are of the very latest and most improved design. Body is made very heavy and its barrel shape permits of large and free openings.

The Extra Heavy Hard Metal Seat in the body has a bridge of improved design to guide the swivel disc.

The Disc will not rattle, even though the Valve is partly opened, as the combination of the guide on the disc and the bridge on the seat insures a perfectly tight seating of the disc at all times. Seats are made of a special hard metal to prevent wear.

These Valves may be easily packed while under pressure and when open, as they are fitted with a disc nut of improved design. To pack while under pressure, open the Valve to the point where the disc nut comes into contact with the lower face of the bonnet flange and forms a joint.

These Valves are all made with steel stem and malleable iron stuffing box flange with brass follower, giving additional strength and durability to these parts.

The over-size wheel gives maximum leverage to the operator in opening or closing the Valve.

Regularly furnished with 1/8-inch raised face.

Hy-Tech Products

EXTRA HEAVY IRON BODY VALVES

WITH YOKE

For 250 Pounds Working Pressure

Tested to 800 Pounds Hydraulic Pressure per Square Inch

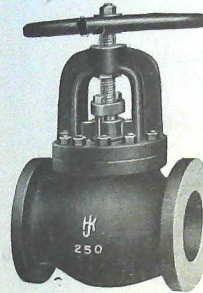
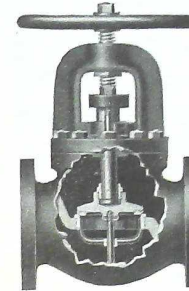


Fig. 436D Globe Valve



Sectional View

GLOBE, ANGLE OR CROSS VALVES—Screwed. (Not Illustrated)

Size.....inches	2	2½	3	3½	4	4½	5	6	7	8	10
Price, Globe or Angle.....each	26.00	33.00	37.00	42.00	46.00	56.00	61.00	75.00	95.00	114.00	190.00
Price, Cross.....each	33.00	40.00	45.00	50.00	55.00	70.00	75.00	95.00	120.00	145.00	240.00

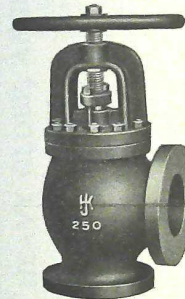


Fig. 436E Angle Valve



Fig. 436L Cross Valve

GLOBE, ANGLE OR CROSS VALVES—Flanged

Size, inches	2	2½	3	3½	4	4½	5	6	7	8	10	12	14	15
Glo. or Ang., each	27.50	35.00	40.00	45.00	50.00	60.00	65.00	80.00	100.00	120.00	200.00	300.00	400.00	400.00
With By-pass " "	110.00	130.00	150.00	250.00	350.00	450.00	450.00	550.00	650.00	750.00	1100.00	1500.00	2000.00	2000.00
Cross..... " "	35.00	43.00	50.00	55.00	60.00	75.00	80.00	100.00	125.00	150.00	250.00	375.00	500.00	500.00
With By-pass " "	180.00	300.00	425.00	550.00	550.00	750.00	800.00	1000.00	1250.00	1500.00	2500.00	3750.00	5000.00	5500.00
Size of " " in.	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Diam. Flngs., in.	6½	7½	8¼	9	10	10½	11	12½	14	15	17½	20½	23	24½

The use of Screwed Valves larger than 6-inch is not recommended. Valves 8-inch and larger should have a By-pass. For dimensions, see following pages. Template for drilling, page 169. Price list for drilling, page 420.

ORDER BY FIGURE NUMBERS

DIMENSIONS OF
EXTRA HEAVY GLOBE, ANGLE AND CROSS VALVES

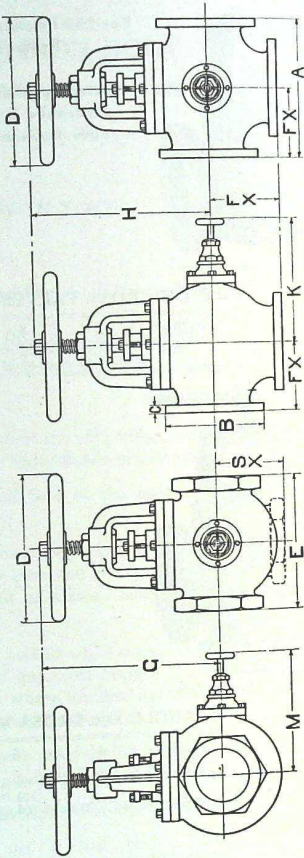
BRASS MOUNTED

SCREWED OR FLANGED

WITH YOKE

IRON BODY

For 250 Pounds Working Pressure



For dimensions, see following page.

Hy-Tech Products

IRON BODY
EXTRA HEAVY GLOBE, ANGLE AND CROSS VALVES

For 250 Pounds Working Pressure

TABLE OF DIMENSIONS

Size	2	2½	3	3½	4	4½	5	6	7	8	10	12	14	15
Face to Face, Flanged	10½	11½	12½	13¾	14	15	15¾	17½	19¾	21	24½	28	33	33
Center to Face, Flanged	F X	5½	6½	6¾	7	7½	8¾	9¾	10½	10½	12½	14	16½	16½
Center to Face, Flanged	B	6¾	7½	8¾	9	10	10½	11	12½	14	15	17½	20½	23
Diameter of Flanges	C	7	1	1½	1½	1½	1½	1½	1½	1½	1½	1½	2	2½
Thickness of Flanges	E	9½	10¾	11¾	12¾	13	14	15	16½	18¾	20	23¾	2	2½
End to End, Screwed	S X	4¾	5¾	6¾	6¾	7	7½	8¾	9¾	10	11¾	13¾	15¾	15¾
Center to End, Screwed	G	13¾	14½	17½	17½	19½	21½	25	26¾	29¾	33¾	39	42	42
Center to Top of Stem, Scrd., Open	H	13¾	14½	17½	17½	19½	21½	25	26¾	29¾	33¾	39	42	42
Center to Top of Stem, Flgd., Open	D	7½	9	10	10	14	16	18	20	24	27	30	36	36
Diameter of Wheel	K	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½	2	2
Size of By-pass	M	14¾	15¾	18¾	18¾	19¾	21¾	25	26¾	29¾	33¾	39	42	42
Center to Outside of By-pass, Flgd.		14¾	15¾	18¾	18¾	19¾	21¾	25	26¾	29¾	33¾	39	42	42
Center to Outside of By-pass, Scrd.		14¾	15¾	18¾	18¾	19¾	21¾	25	26¾	29¾	33¾	39	42	42
Number of Turns to Open		3½	3¾	4½	5¼	6	7¼	8¾	9¾	11	12¾	13¾	16	18

ORDER BY FIGURE NUMBERS

Template for drilling, page 169. Price list for drilling, page 429.

**JENKINS TYPE
STANDARD KELLY & JONES VALVES**

IRON BODY

For 125 Pounds Working Pressure

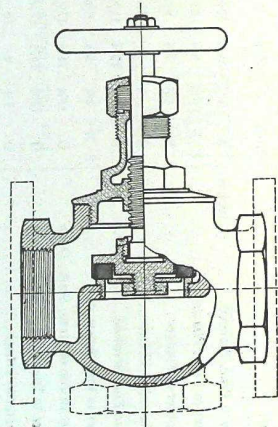
We manufacture a full and complete line of Jenkins Type Iron Body Globe, Angle, Cross, Check and Safety Valves in both Screwed and Flanged Patterns, and any size from 2 to 12 inches, inclusive.

The Brass Mounted Valves are made in sizes 2, 2½ and 3-inch, which sizes can also be furnished with Yoke, if desired.

All sizes are furnished with Yoke, unless otherwise specified; and customers, in placing orders, should be careful to state whether the Brass Mounted or Yoked Pattern is desired.

When these Jenkins Type Valves are to be used for Cold Water Service, the purchaser should be sure to supply this information, as a Soft Disc is used for this kind of work, which Disc is furnished at the same price as the regular Hard Disc, which it replaces.

The construction of the Standard Jenkins Type Iron Body Valves is such that they can be packed under full steam pressure; but, in order to do so, the Valve must be wide open.



Sectional View

ORDER BY FIGURE NUMBERS

Hy-Tech Products

**JENKINS TYPE
STANDARD KELLY & JONES VALVES**

IRON BODY

BRASS MOUNTED

**For 125 Pounds
Working Pressure**

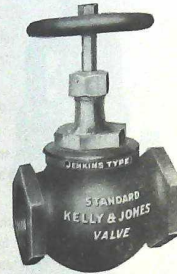


Fig. 451 Globe Valve



Fig. 451A Angle Valve

JENKINS TYPE GLOBE AND ANGLE VALVES—Screwed

Size..... inches	2	2½	3
Price, Globe or Angle..... each	7.25	11.00	16.00



Fig. 451B Globe Valve

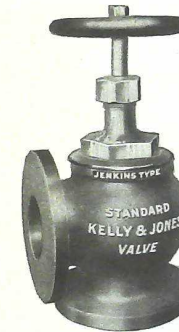


Fig. 451C Angle Valve

JENKINS TYPE GLOBE AND ANGLE VALVES—Flanged

Size..... inches	2	2½	3
Price, Globe or Angle..... each	8.50	13.00	18.00
Diameter of Flanges..... inches	6	7	7½

For dimensions, see page 379 Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

JENKINS TYPE
STANDARD KELLY & JONES VALVES

IRON BODY
WITH YOKE

For 125 Pounds
Working Pressure

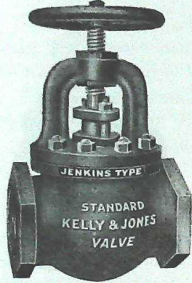


Fig. 452 Globe Valve

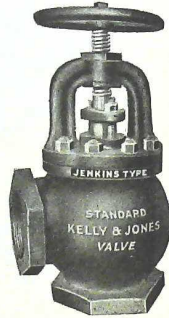


Fig. 452A Angle Valve

JENKINS TYPE GLOBE AND ANGLE VALVES—Screwed

Size..... inches	2	2½	3	3½	4	4½	5	6	7	8	10	12
Price..... each	10.00	12.00	16.75	19.50	24.00	32.00	40.00	48.00	80.00	90.00	130.00	185.00

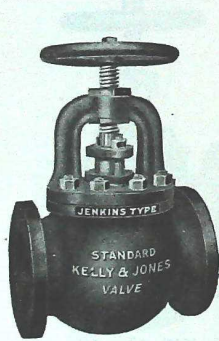
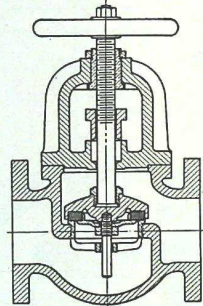


Fig. 453 Globe Valve



Sectional View

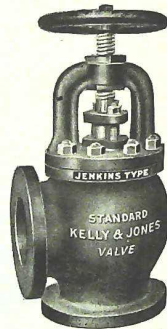


Fig. 453A Angle Valve

JENKINS TYPE GLOBE AND ANGLE VALVES—Flanged

Size..... inches	2	2½	3	3½	4	4½	5	6	7	8	10	12
Price..... each	11.75	14.00	18.50	21.50	26.00	34.00	42.00	50.00	80.00	90.00	130.00	185.00
Diameter of Flanges... inches	6	7	7½	8½	9	9½	10	11	12½	13½	16	19

For dimensions, see pages 380 and 381. Template for drilling, page 136.

JENKINS TYPE
STANDARD KELLY & JONES VALVES

IRON BODY

For 125 Pounds Working Pressure

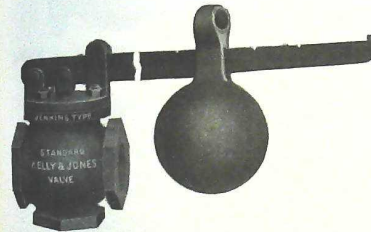


Fig. 453B Three-way Safety Valve

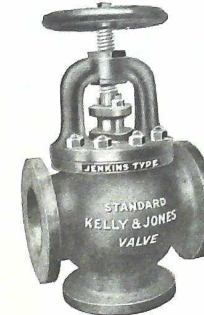


Fig. 453C Cross Valve

JENKINS TYPE GLOBE, ANGLE AND THREE-WAY SAFETY VALVES
Screwed

Size..... inches	2½	2½	3	3½	4	4½	5	6
Price..... each	11.00	17.00	22.00	31.00	38.00	47.00	55.00	73.00

JENKINS TYPE GLOBE, ANGLE AND THREE-WAY SAFETY VALVES
Flanged. Not Illustrated

Size..... inches	2	2½	3	3½	4	4½	5	6
Price..... each	13.00	19.00	25.50	34.00	42.00	52.00	62.00	80.00
Diameter of Flanges... inches	6	7	7½	8½	9	9½	10	11

JENKINS TYPE CROSS VALVES—Screwed and Flanged

Size..... inches	2½	3	3½	4	4½	5	6
Price, Screwed (not illustrated) .. each	16.00	21.00	26.00	30.00	42.00	45.00	58.00
Price, Flanged..... each	19.00	24.00	29.00	33.00	45.00	48.00	62.00
Diameter of Flanges..... inches	7	7½	8½	9	9½	10	11

Levers on Safety Valves are graduated from 50 to 125 pounds.

For dimensions, see pages 380 and 381. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

JENKINS TYPE
STANDARD KELLY & JONES VALVES
IRON BODY

For 125 Pounds Working Pressure



Fig. 453D Horizontal Check Valve Screwed

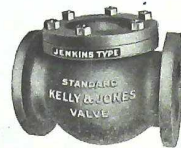


Fig. 453E Horizontal Check Valve Flanged



Fig. 453F Angle Check Valve Screwed



Fig. 453G Angle Check Valve Flanged

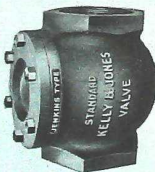


Fig. 453H Vertical Check Valve Screwed



Fig. 453-I Vertical Check Valve Flanged

JENKINS TYPE
HORIZONTAL, ANGLE AND VERTICAL CHECK VALVES

Size.....inches	2½	3	3½	4	5	6
Price, Horizontal, Angle and Vertical, Screwed.....each	11.00	14.00	17.00	20.00	30.00	40.00
" Horizontal, Angle and Vertical, Flanged.....	13.00	16.50	20.00	23.00	33.00	43.00
Diameter of Flanges.....inches	7	7½	8½	9	10	11

For dimensions, see page 381. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

JENKINS TYPE
STANDARD KELLY & JONES VALVES
IRON BODY

BRASS MOUNTED

For 125 Pounds Working Pressure

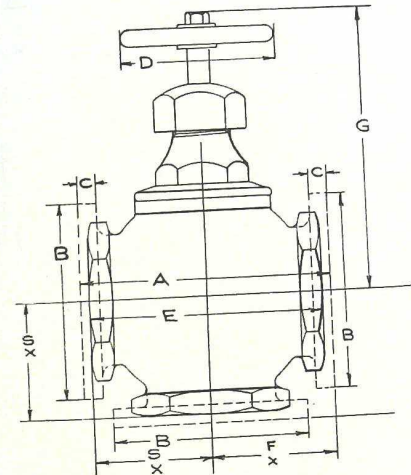


TABLE OF DIMENSIONS

Size.....inches	2	2½	3
Face to Face of Flanged Globe.....inches	A	7½	9¼
Diameter of Flanges.....	B	6	7½
Thickness of Flanges.....	C	¾	1¼
Diameter of Wheel.....	D	4¼	5
Length of Screwed End, Globe or Cross.....	E	6½	7¾
Center to Face of Inlet or Outlet of Flanged Angle.....	F X	3¾	4½
Center of Valve to Top of Spindle on Globe, Open.....	G	9¼	10¼
Center of Valve to Top of Spindle on Angle, Open.....	G	8¾	10¾
Center to End of Inlet or Outlet of Screwed Angle.....	S X	3½	3¾

Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

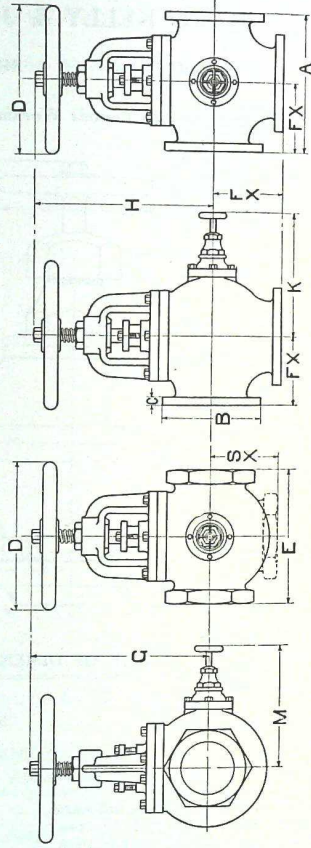
DIMENSIONS OF
JENKINS TYPE STANDARD KELLY & JONES VALVES
GLOBE, ANGLE AND CROSS—Flanged or Screwed

BRASS MOUNTED

WITH YOKE

IRON BODY

For 125 Pounds Working Pressure



For dimensions, see following page.

Hy-Tech Products

JENKINS TYPE STANDARD KELLY & JONES VALVES
GLOBE, ANGLE AND CROSS—Flanged or Screwed

BRASS MOUNTED

WITH YOKE

IRON BODY

For 125 Pounds Working Pressure

TABLE OF DIMENSIONS

Size.....	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
Face to Face, Flanged.....	A 7½	7½	9½	10	11½	12½	13½	16	16½	18½	20	21½	24½
Diameter of Flanges.....	B 6	7	7½	8½	9	9½	10	11	12½	13½	15	16	19
Thickness of Flanges.....	C ¾	¾	¾	¾	1	1	1	1	1½	1½	1½	1½	1½
Diameter of Wheel.....	D 5½	6½	7½	8	8½	9½	10	12	12½	14	15	16	18
End to End, Screwed.....	E 6½	7½	9½	10	12	12½	13½	16	16½	18½	20	21½	25¾
Center to Face of Inlet or Outlet, Flanged.....	F X 3½	4½	4½	5½	5½	6½	6½	8	8	9½	10	10½	12½
Center of Valve to Top of Stem on Globe, Open.....	G 9½	11	12½	13½	14½	15½	17	19	20¾	22	22½	24½	28¾
Center of Valve to Top of Stem on Angle, Open.....	H 10½	11½	13½	14½	15	15½	18	19¾	22	23½	24	25½	31
Center of Valve to Outside of By-pass on Angle, Open.....	K .....	.....	.....	.....	7½	8	8½	10½	11½	13½	14½	15½	21½
Center of Valve to Outside of By-pass on Globe, Open.....	M .....	.....	.....	.....	7½	8½	8½	10½	11½	13½	14½	15½	21½
Center to End of Inlet or Outlet, Screwed.....	S X 3½	3½	4½	5	6	6½	6½	8	8½	9½	10	10½	12½
Size of By-pass.....	.....	.....	.....	1	1	1	1	1½	1½	1½	1½	1½	2

Template for drilling, page 136.

ORDER BY FIGURE NUMBER 2

BACK PRESSURE VALVES

DOUBLE DISC NOISELESS PISTON TYPE
 IRON BODY BRASS MOUNTED

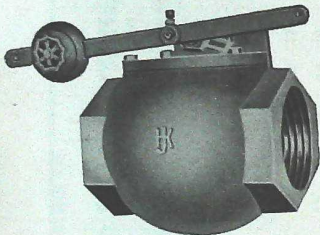


Fig. 456B Horizontal

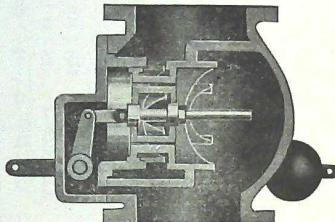


Fig. 456C Vertical

SCREWED—Horizontal or Vertical

Size.....inches	2	2½	3	3½	4	4½	5	6
Price.....each	14.00	16.00	18.00	22.00	25.00	30.00	40.00	60.00

FLANGED—Horizontal or Vertical

Size.....inches	2	2½	3	3½	4	4½	5	6	7	8
Price.....each	14.00	16.00	18.00	22.00	25.00	30.00	40.00	60.00	80.00	100.00
Diam. of Flanges.....inches	6	7	7½	8½	9	9¾	10	11	12½	13½
Size.....inches	9	10	12	14	15	16	18	20	24	
Price.....each	120.00	145.00	220.00	345.00	400.00	465.00	600.00	750.00	1050.00	.....
Diam. of Flanges.....inches	15	16	19	21	22½	23½	25	27½	32	.....

These Valves have double discs, are semi-balanced, and have a full area of the pipe.

They are weighted for back pressure up to 6 pounds; but can be furnished for pressures up to 30 pounds without extra charge.

Template for drilling, see page 136.

ORDER BY FIGURE NUMBERS
 Hy-Tech Products

EXTRA HEAVY
 AUTOMATIC STOP-CHECK VALVES

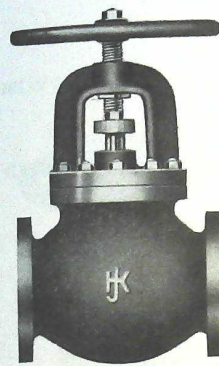


Fig. 1057A Stop-Check Valve

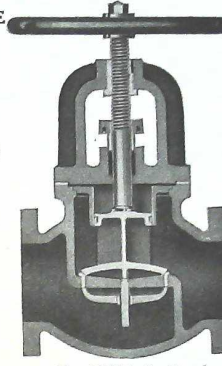


Fig. 1057B Sectional

GLOBE AND ANGLE

IRON BODY

HARD METAL SEATS

BRASS MOUNTED

For 250 Pounds Working Pressure

AUTOMATIC STOP-CHECK VALVES

Size.....inches	2	2½	3	3½	4	4½	5
Price, Globe, Screwed.....each	38.50	43.00	47.00	51.00	55.00	70.00	75.00
" Globe, Flanged....."	40.00	45.00	50.00	55.00	60.00	75.00	80.00
" Angle, Screwed....."	38.50	43.00	47.00	51.00	55.00	70.00	75.00
" Angle, Flanged....."	40.00	45.00	50.00	55.00	60.00	75.00	80.00
End to End, Globe, Screwed.....inches	9½	10¾	11¾	12¾	13	14	15
Face to Face, Globe, Flanged....."	10½	11½	12½	13½	14	15	15¾
Center to Face, Angle, Screwed....."	4¾	5¾	6¾	7¾	8¾	10	11
Center to Face, Angle, Flanged....."	5¾	6¾	7¾	8¾	9	10	11
Diameter of Flanges....."	6¾	7¾	8¾	9	10	10½	11
Size.....inches	6	7	8	10	12	14	15
Price, Globe, Screwed.....each	90.00	115.00	140.00	230.00	.....	.....	.....
" Globe, Flanged....."	95.00	120.00	145.00	240.00	360.00	480.00	480.00
" Angle, Screwed....."	90.00	115.00	140.00	230.00	.....	.....	.....
" Angle, Flanged....."	95.00	120.00	145.00	240.00	360.00	480.00	480.00
End to End, Globe, Screwed.....inches	16½	18¾	20	23¾	.....	.....	.....
Face to Face, Globe, Flanged....."	17½	19¾	21	24¾	28	33	33
Center to Face, Angle, Screwed....."	8¾	9¾	10	11½	.....	.....	.....
Center to Face, Angle, Flanged....."	8¾	9¾	10	11½	14	16½	16½
Diameter of Flanges....."	12½	14	15	17½	20½	23	24½

NOTE—An Automatic Stop-Check Valve should be included in the equipment of every Steam Plant having more than one boiler. It should be placed in the piping from each boiler to the main steam line. These Valves close automatically and instantly, cutting out the boiler to which they are connected and, in case a tube blows out or a joint in the boiler bursts, the valve will act immediately as a non-return Valve, and will prevent the back flow of steam from the main.

This Valve also prevents steam entering or backing into a cold boiler while work is being done and, in this way, acts as a Safety-stop Valve. These Valves open automatically and promptly when the boilers to which they are connected reach the full pressure in the main; but it will remain closed against a higher pressure in the main. This closing against a higher main pressure is a means toward detecting a sluggish boiler, and the firing should then be given attention.

To attain their greatest efficiency, these Valves should be placed with wheel up and in such a manner as to allow the boiler pressure to come underneath the disc.

ORDER BY FIGURE NUMBERS

STOP AND CHECK VALVES

IRON BODY WITH YOKE BRASS MOUNTED

For 125 Pounds Working Pressure



Fig. 1057D, Angle Stop-Check Valve

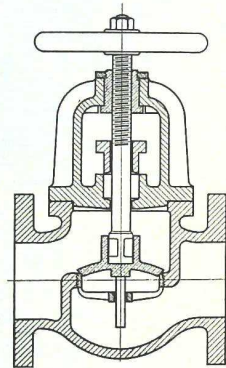


Fig. 1057E Globe Stop-Check Valve

The above style valves are designed for such service where check valves are used and it is desired to regulate the rise of the disc.

The regulation is accomplished by means of a threaded stem which can be screwed up or down to limit the lift of the disc. No provision is made for raising the disc off its seat.

These Valves can be made either Globe, Angle or Cross.

SIZES, PRICES, AND DIMENSIONS ON APPLICATION

ORDER BY FIGURE NUMBERS
Hy-Tech Products

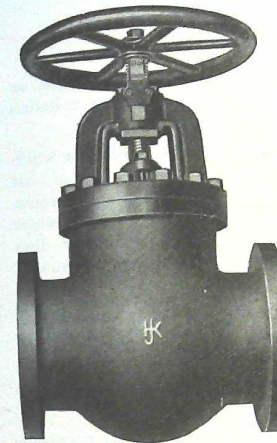
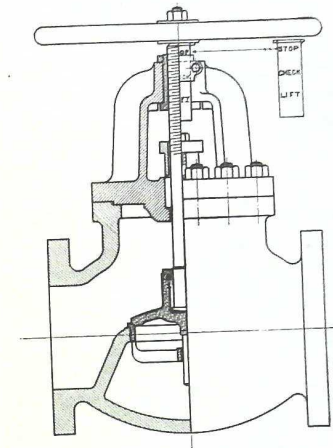
STOP, CHECK AND LIFT VALVES

WITH INDICATOR

IRON BODY

WITH YOKE

BRASS MOUNTED

Fig. 1057C
Stop, Check and Lift Valve

Sectional View

The above style Valves are designed for such service where Check Valves are wanted in which the lift of the disc can be regulated and raised off the seat when desired.

These Valves are made of the very best grade raw material and are mechanically correct. Can easily be reground without removal from the pipe line; and the stuffing boxes can be repacked while under pressure by opening Valve as far as possible.

The indicator at top of Valve shows clearly the position of the disc, and can be placed by turning hand wheel to points marked "Stop", "Check" or "Lift".

The above Valves can be made either Globe, Angle or Cross.

SIZES, PRICES AND DIMENSIONS ON APPLICATION

ORDER BY FIGURE NUMBERS

IRON BODY STRAIGHT-WAY VALVES

DOUBLE GATE PARALLEL SEATS

For 125 or 250 Pounds Steam Working Pressure

The Double Disc Iron Body Straight-way Valve provides, when open, an absolutely unobstructed passageway for the steam, water, air or other materials controlled by it.

The faces of the discs and seats being parallel, and the principle on which the disc is constructed, makes it self adjustable and at all times insures at least one disc closing, making the Valve a positive shut-off. This important operation of the discs is accomplished by means of a wedge bearing between them, which permits of sufficient play in any direction, eliminates all danger of the discs sticking to the seats, and provides for the expansion and contraction strains, shocks or sagging of the pipe line.

The Iron Body Double Disc Straight-way Valves are heavy and well designed, and open by turning to the left. They are made of the very best grades of grey iron and bronze composition; and are thoroughly tested before shipment.

The Standard Pattern is used extensively for hot water washout systems and in water conserving plants.

For wood preserving plants, these Valves are furnished with Monel Stems and Trimmings; and the flanged joints are made up with Special Gaskets. Prices for Valves of this make-up on application.

PRESSURE TEST

Standard—for 125 Pounds Steam Working Pressure

Sizes 12-inch and smaller, tested to 175 pounds water working pressure.
 Sizes 14-inch and larger, tested to 150 pounds water working pressure.

Extra Heavy—for 250 Pounds Steam Working Pressure

Tested to 350 pounds water working pressure.

Hy-Tech Products
ORDER BY FIGURE NUMBERS

STANDARD STRAIGHT-WAY VALVES

For 125 Pounds Steam Working Pressure

IRON BODY BRASS MOUNTED DOUBLE DISC
PARALLEL SEATS OPEN TO THE LEFT

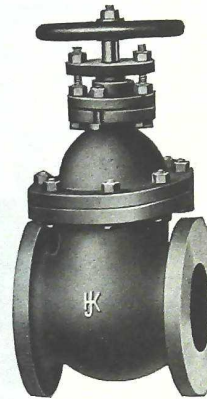


Fig. 468 Non-rising Stem

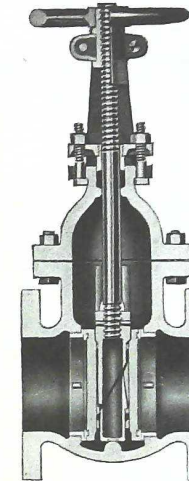


Fig. 469 Outside Screw and Yoke

NON-RISING STEM VALVES

Size..... inches	2	2½	3	4	5	6	8	10	12	14	16
Price, Screwed, (not illus.) each	10.00	11.50	14.00	19.00	27.50	32.50	54.00	90.00	125.00	181.00	260.00
" Flanged..... "	12.00	13.50	16.50	23.00	31.50	38.50	58.00	95.00	133.00	181.00	260.00

OUTSIDE SCREW AND YOKE VALVES

Size..... inches	2	2½	3	4	5	6	8	10	12	14	16
Price, Screwed, (not illus.) each	17.50	19.00	22.00	30.00	42.00	48.00	80.00	122.00	160.00	236.00	325.00
" Flanged..... "	19.50	21.00	24.50	34.00	46.00	52.00	84.00	127.00	168.00	236.00	325.00

Extra for drilling. Dimensions and drilling templates, page 390.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY STRAIGHT-WAY VALVES

For 250 Pounds Steam Working Pressure

IRON BODY BRASS MOUNTED DOUBLE DISC
PARALLEL SEATS OPEN TO THE LEFT

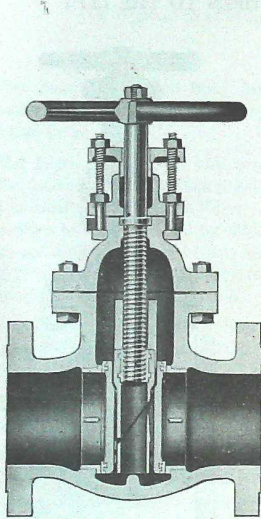


Fig. 469A Non-rising Stem

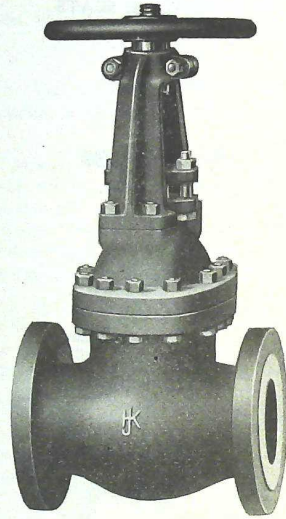


Fig. 469B Outside Screw and Yoke

NON-RISING STEM VALVES

Size..... inches	2	2½	3	4	5	6	8	10	12
Price, Screwed..... each	27.50	33.00	45.00	60.00	85.00	100.00	155.00	250.00	
" Flanged..... "	30.00	35.50	48.00	65.00	90.00	107.00	162.00	258.00	335.00

OUTSIDE SCREW AND YOKE VALVES

Size..... inches	2	2½	3	4	5	6	8	10	12
Price, Screwed..... each	35.50	41.00	54.00	72.00	100.00	115.00	180.00	275.00	
" Flanged..... "	38.00	43.50	57.00	77.00	105.00	122.00	187.00	283.00	390.00

Screwed Valves not illustrated.
Extra for drilling. Dimensions and drilling templates, page 390.
Seats of above Valves are made of hard metal.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STRAIGHT-WAY VALVES

STANDARD OR EXTRA HEAVY IRON BODY BRASS MOUNTED
DOUBLE DISC TAPER SEATS OPEN TO THE LEFT

The same general description on page 386 of Parallel Seat Valves is applicable to this style of Valve, with the exception that the seats are of the tapered construction. Gates are very simple, consisting of only three parts—the two plates and disc carrier or wedge.
The wedge is so constructed that, when the Valve is at the point of closing, the disc plates will readily adjust themselves to their seats, thereby making a positive shut-off.

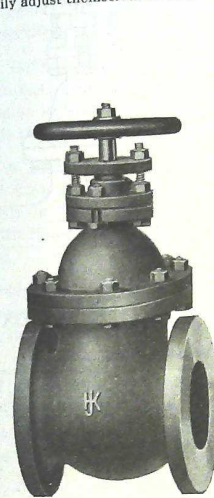


Fig. 469C Non-rising Stem

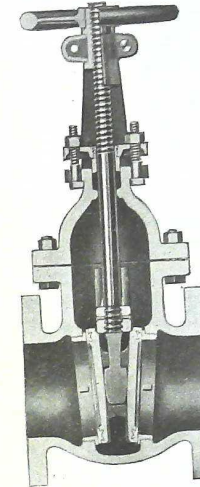


Fig. 469D Outside Screw and Yoke

NON-RISING STEM VALVES

Size..... inches	2	2½	3	4	5	6	8	10	12	14	16
Price, Screwed, Standard, ea.	10.00	11.50	14.00	19.00	27.50	32.50	54.00	90.00	125.00		
" Flanged, .. "	12.00	13.50	16.50	23.00	31.50	36.50	58.00	95.00	133.00	181.00	260.00
" Screwed, Ex. Heavy .. "	27.50	45.00	60.00	85.00	100.00	155.00	250.00				
" Flanged, .. "	30.00	48.00	65.00	90.00	107.00	162.00	258.00	335.00			

OUTSIDE SCREW AND YOKE VALVES

Size..... inches	2	2½	3	4	5	6	8	10	12	14	16
Price, Screwed, Standard, ea.	17.50	19.00	22.00	30.00	42.00	48.00	80.00	122.00	160.00		
" Flanged, .. "	19.50	21.00	24.50	34.00	46.00	52.00	84.00	127.00	168.00	236.00	325.00
" Screwed, Ex. Heavy .. "	35.50	54.00	72.00	100.00	115.00	180.00	275.00				
" Flanged, .. "	38.00	57.00	77.00	105.00	122.00	187.00	283.00	390.00			

Extra for drilling. Dimensions and drilling templates, page 390.

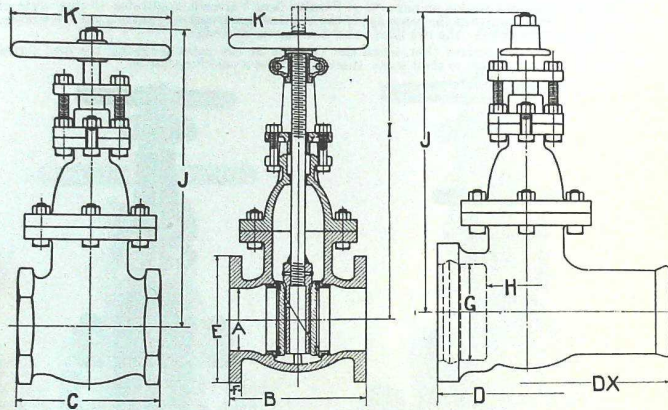
ORDER BY FIGURE NUMBERS

DIMENSIONS OF
STRAIGHT-WAY VALVES

IRON BODY
PARALLEL OR TAPER SEATS

BRASS MOUNTED
OPEN TO THE LEFT

DOUBLE DISC



STANDARD—For 125 Pounds Working Pressure

Size	inches	A	2	2½	3	4	5	6	8	10	12	14	16
Face to Face, Flanged	B	5½	6¼	6¾	8¼	10¾	11¾	11	13¾	14¾	15¾	16	16
End to End, Screwed	C	5½	6¼	7	7¾	11	11¼	12½	13¾	13¾	14	14	14
Length of Spigot End	D	9	9¾	11¼	12¼	13¼	14¼	16	17	17	17	17	17
Length of Flanges	DX	17½	18	20¾	22¾	24¼	26¾	29¼	31¼	31¼	31¼	31¼	31¼
Thickness of Flanges	E	6	7	7¼	9	10	11	13½	16	19	21	23½	23½
Inside Diameter of Hub	F	¾	1¼	1¾	2¼	3	3½	4½	5½	6½	7½	8½	9½
End to End Pipe in Hub	G	3¼	4	4½	5½	6¾	7½	10	12½	14½	16½	18½	19½
Center to Top of Stem O. S. & Y. Open	H	3¼	4	4½	5½	6¾	7½	10	12½	14½	16½	18½	19½
Center to Top of Stem, Non-rising	I	14¼	15¾	18¾	22¾	28¼	32¾	40¾	49¾	57	63	75½	75½
Diameter of Wheel	J	11½	12¼	14	16¾	18¾	20¾	25¾	29¾	33¼	38	46	46
Number of Turns to Open	K	7	8½	10¼	8¾	11	13	17¼	21	26	30	34	34

EXTRA HEAVY—For 250 Pounds Working Pressure

Size	inches	A	2	3	4	5	6	8	10	12
Face to Face, Flanged	B	8½	11¼	12	15	15¾	16¾	18	19¾	19¾
End to End, Screwed	C	8	9¾	10½	12¼	13¼	15¼	17¼	19	19
Diameter of Flanges	E	6¼	8¼	10	11	12½	15	17½	20½	20½
Thickness of Flanges	F	¾	1¼	1¾	2¼	3	3½	4½	5½	6½
Bolt Circle	G	5	6	7¼	9¼	10¾	13	15¼	17¼	17¼
Number of Bolts	H	4	8	8	8	12	12	16	16	16
Size of Bolts	I	¾	¾	¾	¾	¾	¾	¾	¾	¾
Length of Bolts	J	2½	3¼	3¼	3¼	3¼	4¼	5	5¼	5¼
Center to Top of Non-rising Stem	K	12½	15¼	17¼	19¼	22¼	27½	35	39¼	39¼
Center to Top of Stem O. S. & Y. Open	L	15½	19¾	24¼	30¼	33¼	42¾	53¾	60¾	60¾
Diameter of Wheel	M	7½	9	12	14	16	20	22	24	24
Number of Turns to Open	N	7	10	9	11	13	17	21	26	26

ORDER BY FIGURE NUMBERS

Hy-Tech Products

IRON BODY WEDGE PATTERN GATE VALVES
WEDGE GATE

Iron body Wedge Pattern Gate Valves are made in many different designs and for various working pressures.

The construction of these Valves is such that they may be repacked while under pressure, but, in order to do so, the Valve must be wide open.

The Guides on the Discs and Ribs in the Body are so constructed as to insure an easy movement of the Disc and eliminate all possible danger of the Disc coming in contact with the Seat, except at the point of closing. The Discs are made of Iron with Bronze Seat Rings.

LOW PRESSURE WEDGE PATTERN GATE VALVES are made with Flanged Ends in sizes ranging from 12 to 48 inches, with Non-rising Stem or with Outside Screw and Yoke, and with Hub Ends in 4, 6, 8, 10 and 12-inch sizes with Non-rising Stem. We recommend these Valves for 25 pounds working pressure.

STANDARD WEDGE PATTERN GATE VALVES are designed for 125 pounds working pressure, and are made with Screwed Ends in sizes from 2 to 12 inches, inclusive, and with Flanged or Hub Ends in sizes ranging from 2 to 30 inches. These Standard Valves have Non-rising Stems and open by turning to the left.

MEDIUM PRESSURE WEDGE PATTERN GATE VALVES, for 175 pounds working pressure, are made in any size from 2½ to 12 inches, inclusive, with Screwed Ends, and from 2½ to 16 inches, with Flanged Ends. We furnish these Valves with either Non-rising Stem or with Outside Screw and Yoke, as desired.

EXTRA HEAVY WEDGE PATTERN GATE VALVES are recommended for 250 pounds working pressure, and are tested to 800 pounds hydraulic pressure per square inch. These Valves are made with Non-rising Stem, or with Outside Screw and Yoke, in sizes ranging from 1¼ to 24 inches.

EXTRA HEAVY HYDRAULIC WEDGE PATTERN GATE VALVES are made with Non-rising Stem, or with Outside Screw and Yoke, in sizes 1½ to 6 inches, with Screwed Ends, and 1½ to 12 inches, with Flanged Ends. These Valves are tested to 2000 pounds hydraulic pressure per square inch, and are recommended for 800 pounds water working pressure.

ORDER BY FIGURE NUMBERS

LOW PRESSURE STRAIGHT-WAY VALVES

IRON BODY WEDGE GATE
BRASS MOUNTED

For 25 Pounds Working Pressure

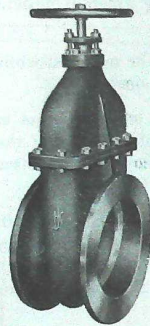


Fig. 473F

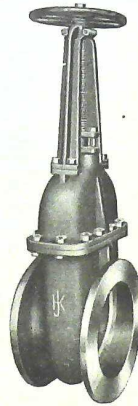


Fig. 473G

LOW PRESSURE STRAIGHT-WAY VALVES—Flanged. Non-rising Stem

Size.....inches	12	14	16	18	20	22	24	26
Price.....each	120.00	165.00	215.00	300.00	345.00	475.00	540.00	740.00
Diameter of Flanges.....inches	19	21	23½	25	27½	29½	32	34½
Size.....inches	28	30	32	34	36	42	48	
Price.....each	875.00	1025.00	1125.00	1200.00	1450.00	1900.00	2800.00	
Diameter of Flanges.....inches	36½	38¾	41¾	43¾	46	53	59½	

LOW PRESSURE STRAIGHT-WAY VALVES—Flanged.

Outside Screw and Yoke

Size.....inches	12	14	16	18	20	22	24	26
Price.....each	150.00	200.00	255.00	340.00	395.00	535.00	610.00	820.00
Diameter of Flanges.....inches	19	21	23½	25	27½	29½	32	34½
Size.....inches	28	30	32	34	36	42	48	
Price.....each	965.00	1125.00	1250.00	1350.00	1650.00	2150.00	3100.00	
Diameter of Flanges.....inches	36½	38¾	41¾	43¾	46	53	59½	

LOW PRESSURE STRAIGHT-WAY VALVES—Hub End. Not Illustrated

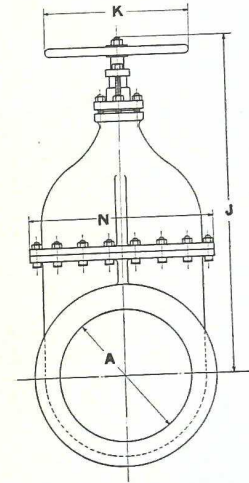
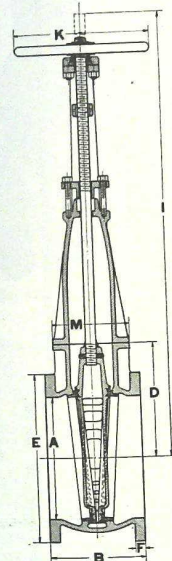
Size.....inches	4	6	8	10	12
Price.....each	18.50	30.50	50.00	82.00	120.00
End to End, Hub End.....inches	8¾	9¾	11	11¾	12½

Fig. 473F. These Valves have non-rising stems, and open to the left.
 Fig. 473G. The stem moving in and out of this style of Valve indicates whether Valve is open, partly open or shut, and opens to the left.
 For dimensions, see following pages. Template for drilling, page 148.

ORDER BY FIGURE NUMBERS
 Hy-Tech Products

DIMENSIONS OF
 LOW PRESSURE STRAIGHT-WAY VALVES

IRON BODY WEDGE GATE
 For 25 Pounds Working Pressure



For dimensions, see following page.

ORDER BY FIGURE NUMBERS

LOW PRESSURE STRAIGHT-WAY VALVES

IRON BODY WEDGE GATE

For 25 Pounds Working Pressure

TABLE OF DIMENSIONS

Size	A	12	14	16	18	20	22	24	26	28	30	32	34	36	42	48
Face to Face	B	11	13½	14	14½	15½	16½	17	18½	20	21	22	23	24	27	30
Center of Run to Top of Body Flange	D	12½	13½	14½	17	18½	20½	22½	24½	26½	28½	30½	32½	34½	38	42
Diameter of Flanges	E	19	21	23½	25	27½	29½	32	34½	36½	38½	41½	43½	46	53	59½
Thickness of Flanges	F	1½	1¾	1¾	1¾	1¾	1¾	1¾	2	2¼	2¼	2¼	2¼	2½	2¾	2¾
Center of Run to Top of Rising Stem, Open	I	55	63½	72½	79½	86½	94½	103½	112	123½	128½	136½	144	151½	178	204
Center of Run to Top of Non-rising Stem	J	32½	36¾	41½	47¾	50½	52½	60½	61½	65¾	68¾	74	78	81½	94	111½
Diameter of Wheel	K	14	16	16	18	22	22	27	27	30	30	30	33	33	36	36
Width of Bonnet Flange	M	9½	10	10½	11½	12½	13½	13½	15½	15½	15½	15½	15½	15½	15½	15½
Length of Bonnet Flange	N	18¾	21¾	23¾	25¾	28¾	30¾	33¾	38¾	38¾	38¾	38¾	38¾	38¾	38¾	38¾
Number of Turns to Open	25	29	33	37	41	45	49	53	57½	62	66	70	74	74	66	75

Template for drilling, page 148.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

STANDARD STRAIGHT-WAY VALVES

For 125 Pounds Working Pressure

Tested to 150 Pounds Hydraulic Pressure per Square Inch with Valve Closed

IRON BODY WEDGE GATE BRASS MOUNTED

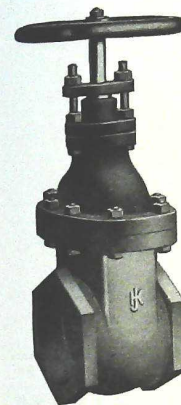


Fig. 472 Screwed

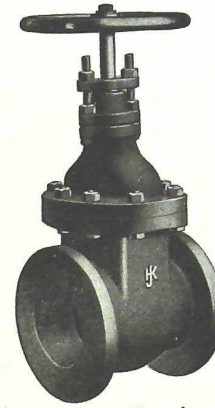


Fig. 473 Flanged

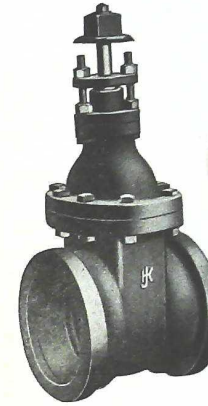


Fig. 475 Hub End

WEDGE GATE VALVES

Size	2	2½	3	3½	4	4½	5	6	7	8
Price, Screwed	10.00	11.50	14.00	17.00	19.00	24.00	27.50	32.50	45.00	54.00
.. Flanged	12.00	13.50	16.50	19.50	23.00	28.00	31.50	36.50	49.00	58.00
.. Hub End	10.00	14.00	19.00	27.50	32.50	45.00	54.00	58.00	54.00	54.00
Diameter of Flanges	6	7	7½	8½	9	9½	10	11	12½	13½
Size	9	10	12	14	16	18	20	22	24	30
Price, Screwed	76.00	90.00	125.00	181.00	260.00	350.00	425.00	530.00	600.00	1100.00
.. Flanged	81.00	95.00	133.00	181.00	260.00	350.00	425.00	530.00	600.00	1100.00
.. Hub End	90.00	125.00	173.00	250.00	340.00	415.00	590.00	590.00	1075.00	1075.00
Diameter of Flanges	15	16	19	21	23½	25	27½	29½	32	38¾

The above Valves are also made with hub and spigot or spigot ends. Prices on application.
NOTE—These Valves have stationary stems, and open to the left.

For dimensions, see page 403. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

STANDARD STRAIGHT-WAY VALVES

WITH OUTSIDE SCREW AND YOKE

IRON BODY WEDGE GATE BRASS MOUNTED

For 125 Pounds Working Pressure

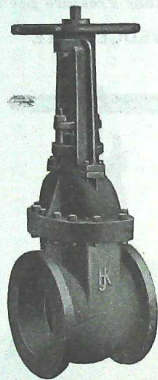


Fig. 474

SCREWED—Not Illustrated

Size..... inches	2	2½	3	3½	4	4½	5
Price, with Steel Stem..... each	17.50	19.00	22.00	25.00	30.00	37.00	42.00
Price, with Brass Stem..... each	19.00	20.50	23.50	27.00	32.50	40.00	45.00
Size..... inches	6	7	8	9	10	12	
Price, with Steel Stem..... each	48.00	64.00	80.00	105.00	122.00	160.00	
Price, with Brass Stem..... each	52.00	69.00	86.00	113.00	131.00	172.00	

FLANGED

Size..... inches	2	2½	3	3½	4	4½	5	6	7	8
Price, with Steel Stem..... each	19.50	21.00	24.50	27.50	34.00	41.00	46.00	52.00	68.00	84.00
Price, with Brass Stem..... each	21.00	22.50	26.00	29.50	36.50	44.00	49.00	56.00	73.00	90.00
Diameter of Flanges..... inches	7	7½	8½	9	9	9½	10	11	12½	13½
Size..... inches	9	10	12	14	16	18	20	22	24	30
Price, with Steel Stem..... each	110.00	127.00	168.00	236.00	325.00	435.00	525.00	650.00	725.00	1300.00
Price, with Brass Stem..... each	118.00	136.00	180.00	255.00	350.00	470.00	565.00	700.00	775.00	1400.00
Diameter of Flanges..... inches	15	16	19	21	23½	25	27½	29½	32	38½

NOTE—The spindle moving in and out of this style of Outside Screw and Yoke Valve indicates whether Valve is open, partly open or shut.
 These Valves are also furnished All Iron. Prices on application.
 For dimensions, see page 403. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

STANDARD STRAIGHT-WAY VALVES

IRON BODY QUICK OPENING WEDGE GATE BRASS MOUNTED

For 125 Pounds Working Pressure

Tested to 150 Pounds Hydraulic Pressure per Square Inch with Valve Closed

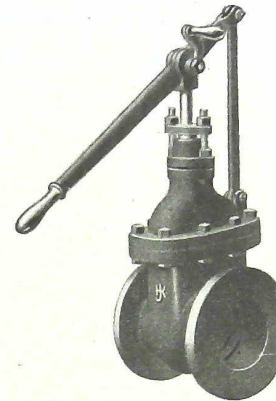


Fig. 474A

SCREWED—Not Illustrated

Size..... inches	2	2½	3	3½	4	4½	5
Price..... each	17.50	19.00	22.00	25.00	30.00	37.00	42.00
Size..... inches	6	7	8	9	10	12	
Price..... each	48.00	64.00	80.00	105.00	122.00	160.00	

FLANGED

Size..... inches	2	2½	3	3½	4	4½	5	6
Price..... each	19.50	21.00	24.50	27.50	34.00	41.00	46.00	52.00
Diameter of Flanges..... inches	6	7	7½	8½	9	9½	10	11
Size..... inches	7	8	9	10	12	14	16	
Price..... each	68.00	84.00	110.00	127.00	168.00	236.00	325.00	
Diameter of Flanges..... inches	12½	13½	15	16	19	21	23½	

These Valves are opened or closed by a movement of the lever, which method of operating makes the Valve desirable for use where quick opening is necessary.
 Quick Opening Valves are generally used for Throttle Valves on Engines. When used for this purpose, another Valve should be in the line between engine and boiler, in case of accident.
 The handle on top of stem locks the disc in any desired position.
 For dimensions, see page 403. Template for drilling, see page 136.

ORDER BY FIGURE NUMBERS

STANDARD STRAIGHT-WAY VALVES

WITH INDICATOR
For 125 Pounds Working Pressure

IRON BODY WEDGE GATE BRASS MOUNTED



Fig. 474B

SCREWED—Not Illustrated

Size.....inches	2	2½	3	3½	4	4½	5
Price.....each	17.50	19.00	22.00	25.00	30.00	37.00	42.00
Size.....inches	6	7	8	9	10	12	
Price.....each	48.00	64.00	80.00	105.00	122.00	160.00	

FLANGED

Size.....inches	2	2½	3	3½	4	4½	5	6
Price.....each	19.50	21.00	24.50	27.50	34.00	41.00	46.00	52.00
Diameter of Flanges.....inches	6	7	7½	8½	9	9½	10	11
Size.....inches	7	8	9	10	12	14	16	
Price.....each	68.00	84.00	110.00	127.00	168.00	236.00	325.00	
Diameter of Flanges.....inches	12½	13½	15	16	19	21	23½	

These Valves have stationary stems, and open to the left. The indicator attachment enables the operator, at a glance, to determine the position of Valves, whether open, partly open or shut. The indicator attachment is a moving shield, cast in one piece. The indicator plate is a fixed one and made of aluminum, black japanned, with top of letters faced off. The indicator can be faced in any quarter by removing the cap screw and changing the plate to the position desired on lugs provided for this purpose. These indicators are also made reversible, so that when the Valve is placed in an up-side-down position, the indicator can be easily detached and turned, so that the lettering of the words "Open" and "Shut" will read correctly. For Dimensions, see page 403. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS
Hy-Tech Products

STANDARD STRAIGHT-WAY VALVES

For 125 Pounds Working Pressure

WITH GEARING

Tested to 150 Pounds Hydraulic Pressure per Square Inch with Valve Closed

IRON BODY WEDGE GATE BRASS MOUNTED

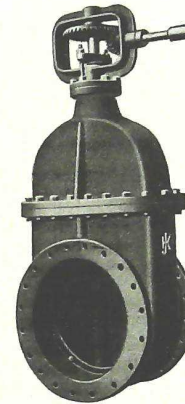


Fig. 476

Size.....inches	16	18	20	22	24	30
Price, with Either Spur or Bevel Gearing, each	360.00	460.00	550.00	675.00	750.00	1400.00
with Gearing and By-pass.....each	425.00	535.00	635.00	775.00	850.00	1550.00
Size of By-pass.....inches	2½	2½	3	3	3	6

These Valves can be furnished with either Spur Gearing (to stand upright) or with Bevel Gearing (to lie on side). These Valves are made all sizes from 6-inch to sizes shown above. Dimensions and prices on application. For dimensions, see page 403. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

STANDARD STRAIGHT-WAY VALVES

For 125 Pounds Working Pressure

ALL IRON OR IRON BODY BRASS MOUNTED WITH SADDLE

SOLID DISC

WEDGE GATE

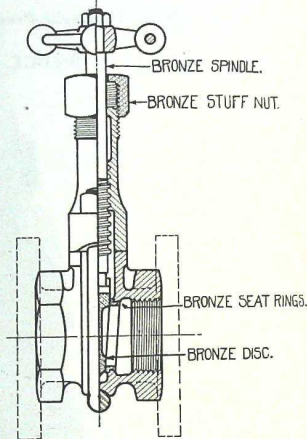
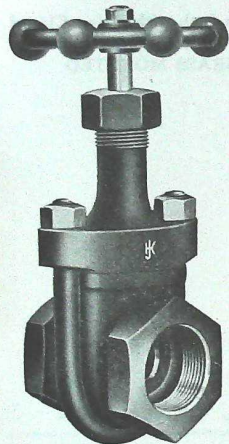


Fig. 476F

Sectional View, Iron Body Brass Mounted

SADDLE GATE VALVES—All Iron or Iron Body Brass Mounted

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Iron Body, Brass Mtd., Screwed, each	2.00	2.35	2.50	3.50	5.00	7.50	12.00	15.00	20.00	22.00	30.00	36.00
Iron Body, Brass Mtd., Flanged, ..				3.00	4.90	6.00	8.50	13.50	16.90	22.00	25.00	34.00
All Iron, Screwed.....	2.00	2.35	2.50	3.50	5.00	7.50	12.00	15.00	18.00	20.00	25.00	30.00
All Iron, Flanged.....				3.00	4.90	6.00	8.50	13.50	16.90	20.30	22.50	28.30
End to End, Screwed.....inches	2	2 1/4	2 1/2	2 3/4	3 1/4	3 3/4	4 1/2	4 3/4	5	5 1/2	6 1/2	7 1/2
Face to Face, Flanged.....				3	3 1/4	3 3/4	4	4 1/2	5 1/4	5 1/2	6 1/4	7 1/4
Center of Valve to Top of Spdl., open ..	5 1/2	6 1/4	7 1/4	8 1/4	9 1/4	12 1/4	16 1/4	18 1/4	23 1/4	23 1/4	28 1/4	33 1/4
Extreme Diam. of Hand Wheel ..	2 1/2	2 1/2	3	3 1/2	3 1/2	3 1/2	4 1/2	6 1/2	8	8	8	8

Can be furnished either Black or Red Japanned, as desired.

This saddle style is a very durable and compact Valve, and economical, owing to the simplicity of construction. The steel saddle around the body of the Valve holds the bonnet securely in place, and can easily be removed, permitting of access to the interior of the Valve for cleaning or repair purposes. Opens to the left and has a rising spindle.

The Solid Disc in this Valve is very narrow and V-shaped at the bottom, and can, therefore, be seated more readily when dirt and sediment is collected between the seats in the Valve.

This Valve, when furnished Iron Body, Brass Mounted, has all parts iron except the disc, stuffing nut and stem, which are high quality brass. The disc in the smaller size Valves is solid brass, and faced with brass rings in the larger sizes.

The All Iron style is recommended very highly for use in connection with cyanide, creosote, etc.

STANDARD STRAIGHT-WAY VALVES

For 125 Pounds Working Pressure

Tested to 150 Pounds Hydraulic Pressure per Square Inch with Valve Closed

ALL IRON

WEDGE GATE

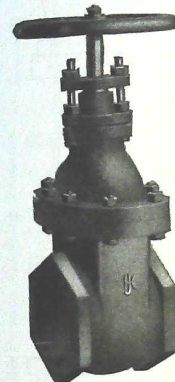


Fig. 476D Screwed

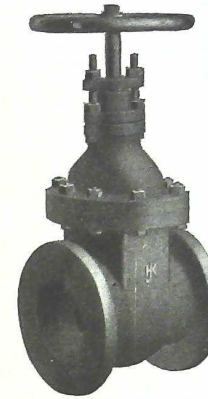


Fig. 476E Flanged

Size.....inches	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8
Price, Screwed.....each	10.00	11.50	14.00	17.00	19.00	24.00	27.50	32.50	45.00	54.00
Flanged.....	12.00	13.50	16.50	19.50	23.00	28.00	31.50	36.50	49.00	58.00
Hub End, not illus. ..	10.00		14.00		19.00		27.50	32.50	45.00	54.00
Diameter of Flanges...inches	6	7	7 1/2	8 1/2	9	9 1/2	10	11	12 1/2	13 1/2

Size.....inches	9	10	12	14	16	18	20	22	24	30
Price, Screwed.....each	76.00	90.00	125.00							
Flanged.....	81.00	95.00	133.00	181.00	260.00	350.00	425.00	530.00	600.00	1100.00
Hub End, not illus. ..		90.00	125.00	173.00	250.00	340.00	415.00	590.00	675.00	1075.00
Diameter of Flanges...inches	15	16	19	21	23 1/2	25	27 1/2	29 1/2	32	38 1/2

All Iron Straight-way Valves are specially adapted for service where the temperature exceeds 325° Fahrenheit, and for handling cyanides, acids and other solutions which are injurious to brass. These Valves are similar in design to the Standard Iron Body Straight-way Valves illustrated on page 395, except that they have All Iron Discs and Seats.

These Valves have non-rising stem and open to the left.
Dimensions of All Iron Valves same as Iron Body, Brass Mounted.
For dimensions, see page 403. Template for drilling, page 136.

ORDER BY FIGURE NUMBERS

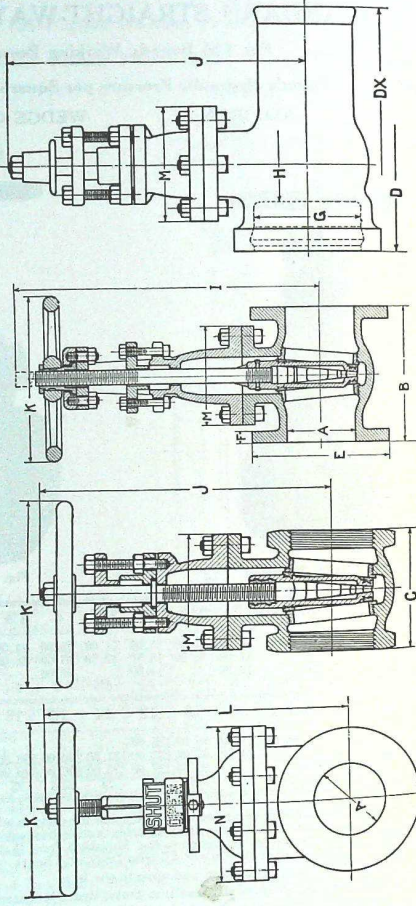
Hy-Tech Products

DIMENSIONS OF
STANDARD STRAIGHT-WAY VALVES

IRON BODY

FLANGED, SCREWED OR HUB END

For 125 Pounds Working Pressure



For dimensions, see following page

Hy-Tech Products
ORDER BY FIGURE NUMBERS

STANDARD STRAIGHT-WAY VALVES

For 125 Pounds Working Pressure

IRON BODY

WEDGE GATE

TABLE OF DIMENSIONS

	Size	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12	14	15	16	18	20	22	24
Face to Face, Flanged	A	7	7 1/2	8	8 1/2	9	9 1/2	10	10 1/2	11	11 1/2	12	13	14	15	16	17	18	19	20	21	22	23	24
End to End, Screwed	B	5 1/2	5 3/4	6	6 1/4	6 1/2	6 3/4	7	7 1/4	7 1/2	7 3/4	8	8 1/4	8 1/2	8 3/4	9	9 1/4	9 1/2	9 3/4	10	10 1/4	10 1/2	10 3/4	11
Length of Hub End	C	8 1/2	9	9 1/2	10	10 1/2	11	11 1/2	12	12 1/2	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Length of Spigot End	DX	6	6 1/2	7	7 1/2	8	8 1/2	9	9 1/2	10	10 1/2	11	12	13	14	15	16	17	18	19	20	21	22	23
Diameter of Flanges	E	8 1/2	9	9 1/2	10	10 1/2	11	11 1/2	12	12 1/2	13	14	15	16	17	18	19	20	21	22	23	24	25	26
Thickness of Flanges	F	3/4	7/8	1	1 1/8	1 1/4	1 1/2	1 3/4	1 7/8	2	2 1/8	2 1/4	2 3/8	2 1/2	2 5/8	2 3/4	2 7/8	3	3 1/8	3 1/4	3 3/8	3 1/2	3 5/8	3 3/4
Inside Diameter of Hub	G	3 1/2	3 3/4	4	4 1/4	4 1/2	4 3/4	5	5 1/4	5 1/2	5 3/4	6	6 1/4	6 1/2	6 3/4	7	7 1/4	7 1/2	7 3/4	8	8 1/4	8 1/2	8 3/4	9
End to End Pipe in Hub	H	14	16	18	20	22	25	27	31	36	40	44	48	57	66	74	84	94	104	114	124	134	144	154
Center to Top of Spindle, O.S.&Y., open	I	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2	17	18 1/2	20 1/2	23 1/2	26 1/2	29 1/2	33 1/2	38 1/2	44 1/2	51 1/2	59 1/2	68 1/2	78 1/2	89 1/2	101 1/2	114 1/2	128 1/2	143 1/2
Center to Top of Non-rising Spindle	J	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2	17	18 1/2	20 1/2	23 1/2	26 1/2	29 1/2	33 1/2	38 1/2	44 1/2	51 1/2	59 1/2	68 1/2	78 1/2	89 1/2	101 1/2	114 1/2	128 1/2	143 1/2
Diameter of Wheel	K	7	8	8 1/2	9	10	10 1/2	11	12	12 1/2	13 1/2	14 1/2	15 1/2	16 1/2	17 1/2	18 1/2	19 1/2	20 1/2	21 1/2	22 1/2	23 1/2	24 1/2	25 1/2	26 1/2
Contr. to Top Spindle, Indicator Valve	L	5 1/2	6 1/4	6 1/2	6 3/4	7 1/4	7 1/2	7 3/4	8 1/4	8 1/2	8 3/4	9 1/4	9 1/2	9 3/4	10 1/4	10 1/2	10 3/4	11 1/4	11 1/2	11 3/4	12 1/4	12 1/2	12 3/4	13 1/4
Width Bonnet Flange	M	5 1/2	6 1/4	6 1/2	6 3/4	7 1/4	7 1/2	7 3/4	8 1/4	8 1/2	8 3/4	9 1/4	9 1/2	9 3/4	10 1/4	10 1/2	10 3/4	11 1/4	11 1/2	11 3/4	12 1/4	12 1/2	12 3/4	13 1/4
Length Bonnet Flange	N	5 1/2	6 1/4	6 1/2	6 3/4	7 1/4	7 1/2	7 3/4	8 1/4	8 1/2	8 3/4	9 1/4	9 1/2	9 3/4	10 1/4	10 1/2	10 3/4	11 1/4	11 1/2	11 3/4	12 1/4	12 1/2	12 3/4	13 1/4
Number of Turns to Open		7 1/4	8 1/4	10	11 1/2	13 1/2	15	17	19 1/2	21 1/2	24 1/2	28	30	32 1/2	35 1/2	38 1/2	42 1/2	46	50	54 1/2	59 1/2	64 1/2	69 1/2	74 1/2

PRICE LIST FOR DRILLING STANDARD AND LOW PRESSURE FLANGED VALVES

Size	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	
Drilling Valves with 2 Flanges except Ang. Val. ea.	.60	.60	.75	.75	.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.50	
Drilling Angle Valves	1.00	1.00	1.25	1.25	1.25	1.50	1.75	2.00	2.00	2.50	3.00	3.50	4.00	4.50	5.00	
Drilling Cross Valves and Cross Safety Valves	1.20	1.20	1.50	1.50	1.50	2.00	2.50	3.00	3.00	3.50	4.00	4.50	5.00	5.00	5.00	
Size	12	14	15	16	18	20	22	24	26	28	30	32	34	36	42	48
Drilling Valves with 2 Flanges except Ang. Val. ea.	3.50	4.00	4.50	5.00	6.00	7.50	9.00	10.00	11.00	12.00	14.00	16.00	18.00	20.00	24.00	30.00
Drilling Angle Valves	5.00	6.00	6.50	7.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	28.00	34.00	42.00
Drilling Cross Valves and Cross Safety Valves	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00

Template for drilling, page 138.

ORDER BY FIGURE NUMBERS

STANDARD STRAIGHT-WAY VALVES

FOR FIRE LINE SERVICE
(Underwriters' Pattern)

IRON BODY

WEDGE GATE

BRONZE MOUNTED

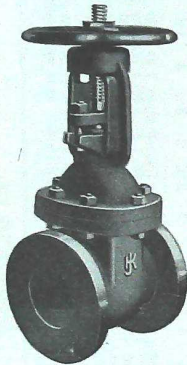


Fig. 480-I

Valves up to and including 4-inch,
Yoke Cast Solid to Bonnet

This is an entirely new line of Iron Body Valves, strong and reliable, and are essential to a reliable fire service, and are designed to compare favorably with all other fire apparatus, in that all working surfaces are non-corrosive, and these Valves will, therefore, operate freely when put into practice. In these Valves, the superior construction of the fastening of the hand wheel to the yoke nut permits of the easy removal of the hand wheel, when so desired.

These Valves will be furnished opening to the left, unless otherwise ordered. The arrow on the hand wheel indicates plainly direction to open. When Valve is open, there is an unobstructed waterway the nominal size of pipe.

Gate and seat rings made of best bronze with machined faces. The bronze stem has a taper collar which engages with a recess at the top of bonnet when Valve is open, thereby making a tight joint, and permits of repacking while the Valve is under pressure.

The yoke nut is made of high quality bronze, and the gland is bronze bushed. The opening through the-bonnet for the stem is bushed with bronze. The gland bolts are made of steel and have bronze nuts. The indicators on Inside Screw Non-rising Gate Valves are made reversible, so that when the Valve is placed in an up-side-down position, the indicator can be easily detached and turned so that the lettering of the words "Open" and "Shut" will read correctly.

Prices of above Valves on application. For dimensions and sizes, see following page.

Screwed or Flanged
with Outside Screw
and Yoke

For 150 Pounds
Water Working
Pressure

Tested to 300 Pounds
Hydraulic Pressure

THESE VALVES HAVE
THE IDENTIFICATION
LETTERS S. V.
CAST ON THE BONNET

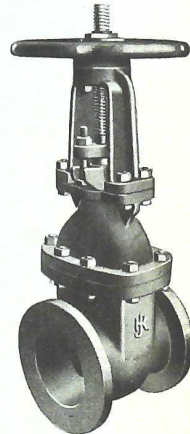


Fig. 480J

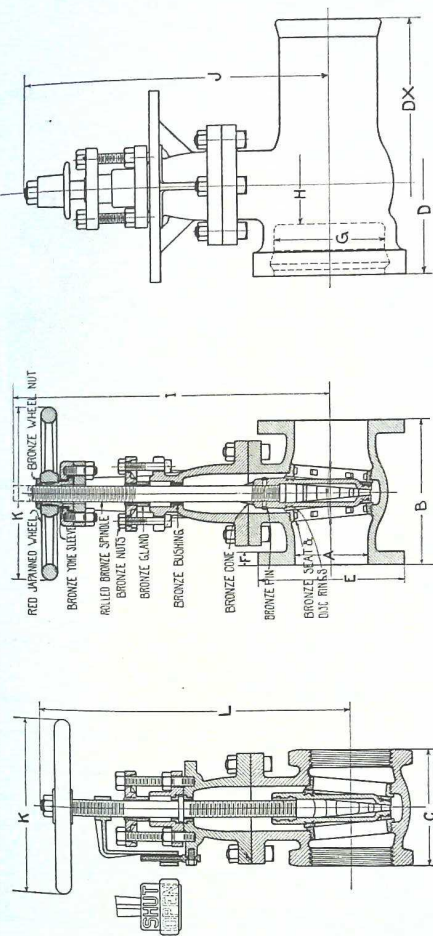
Valves Larger than 4-inch,
Yoke Bolted to Bonnet

Hy-Tech Products

STANDARD STRAIGHT-WAY VALVES

Underwriters' Pattern

Table of Dimensions



Size	A	2 1/2	3	3 1/2	4	5	6	7	8	10	12	14	15
Face to Face, Flanged	7 1/2	8	8 1/2	9	10 1/2	10 1/2	11 1/2	11 1/2	11 1/2	13 1/2	14 1/2	15 1/2	15 1/2
End to End, Screwed	5 1/2	6	6 1/2	7	8 1/2	8 1/2	9 1/2	9 1/2	9 1/2	11 1/2	12 1/2	13 1/2	13 1/2
Length of Hub End	7	7 1/2	8 1/2	9 1/2	10 1/2	10 1/2	11 1/2	11 1/2	11 1/2	13 1/2	14 1/2	15 1/2	15 1/2
Length of Stem End	7	7 1/2	8 1/2	9 1/2	10 1/2	10 1/2	11 1/2	11 1/2	11 1/2	13 1/2	14 1/2	15 1/2	15 1/2
Distance of Flanges	7	7 1/2	8 1/2	9 1/2	10 1/2	10 1/2	11 1/2	11 1/2	11 1/2	13 1/2	14 1/2	15 1/2	15 1/2
Thickness of Flanges	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Diameter Inside of Hub	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
End to End Pipe in Hub	16 1/2	16 1/2	18 1/2	18 1/2	20 1/2	20 1/2	22 1/2	22 1/2	22 1/2	24 1/2	26 1/2	28 1/2	28 1/2
Center to Top of Stem	12 1/2	12 1/2	14 1/2	14 1/2	16 1/2	16 1/2	18 1/2	18 1/2	18 1/2	20 1/2	22 1/2	24 1/2	24 1/2
Center to Top of Non-rising Stem	7	7	8	8	9 1/2	9 1/2	10 1/2	10 1/2	10 1/2	12 1/2	14 1/2	16 1/2	16 1/2
Diameter of Stem	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Diameter of Stem, Indicator Valve	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Number of Turns to Open	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2	8 1/2

ORDER BY FIGURE NUMBERS

STANDARD SWING CHECK VALVES

FOR FIRE LINE SERVICE
(Underwriters' Pattern)

IRON BODY BRONZE MOUNTED SCREWED OR FLANGED

For 125 Pounds Water Working Pressure
Tested to 300 Pounds Hydraulic Pressure



Fig. 480K

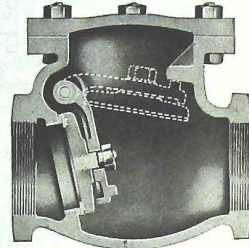


Fig. 480L Sectional View

THESE VALVES HAVE THE IDENTIFICATION LETTERS S. V. CAST ON THE BODY

In these Swing Check Valves the same general description with reference to the bronze to bronze contact points of the Gate Valves on the two preceding pages is applicable.

The disc swings clear out of the waterway, which permits of an absolutely unobstructed passage of the flow.

The side plugs, which act as bearings for the hinge pin, when worn, can easily be replaced, making an entirely new and perfect bearing.

These Check Valves, when open, have an unobstructed waterway the nominal size of pipe.

The body is made amply large in order that the sediment and corrosion lodged in the Valve will not interfere with the free movement of the clapper.

The clapper is secured firmly to its arm by means of a bronze connection.

When wide open, the clapper comes to a definite stop, caused by the clapper arm coming in contact with a lug cast in the body.

The clapper arm is supported by a bronze pin, and the arm is made of malleable iron, bronze bushed where the pin passes through it.

All working parts of these Swing Check Valves are removable through the bonnet opening. These Valves can be furnished with leather disc and also with By-pass, if desired.

Size..... inches	3	3½	4	5	6	7	8	10	12
End to End, Screwed..... inches	11	12	13	15	16	17½	18½	23	25
Face to Face, Flanged..... "	11	12	13	15	16	17½	18½	23	25
Diameter of Flanges..... "	7½	8½	9	10	11	12½	13½	16	19
Thickness of Flanges..... "	¾	1	1¼	1½	1	1¼	1½	1¾	1¾

Prices upon application. Sizes not given above furnished on application.

Hy-Tech Products

STANDARD STRAIGHT-WAY VALVES

WATER GATES

IRON BODY BRASS MOUNTED WEDGE GATE

NON-RISING STEM OPEN TO THE LEFT

For 150 Pounds Water Working Pressure
Tested to 300 Pounds Hydraulic Pressure

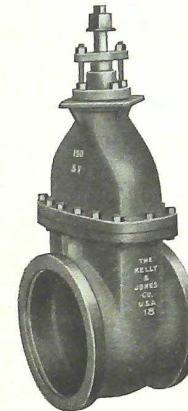


Fig. 475A Hub End

Size..... inches	4	6	8	10	12
Price.....	19.00	32.50	54.00	90.00	125.00
End to End.....	10½	10¾	12	12¾	13½

These Valves are designed according to the Specifications of the NATIONAL FIRE PROTECTION ASSOCIATION.

ORDER BY FIGURE NUMBERS

STRAIGHT-WAY VALVES

HEAVY PATTERN

IRON BODY

WEDGE GATE

BRASS MOUNTED

BABBITT SEAT

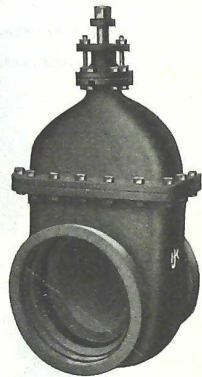


Fig. 476A Water Gate

Size..... inches	14	16
Price, Flanged, (Not Illustrated).....each	118.00	155.00
" Hub End..... "	114.00	147.00
Face to Face of Flanged Valve.....inches	19	19½
Face to Face of Hub End Valve..... "	16½	17¼
Inside Diameter of Bell Socket..... "	16¼	18½
End to End of Pipe When Laid in Bell..... "	10½	10¾
Diameter of Flanges..... "	21	23¼

NOTE—These Valves have stationary stems, and open to the left.

Hy-Tech Products
ORDER BY FIGURE NUMBERS

MEDIUM STRAIGHT-WAY VALVES

IRON BODY

WEDGE GATE

BRASS MOUNTED

For 175 Pounds Working Pressure

Tested to 500 Pounds Hydraulic Pressure per Square Inch

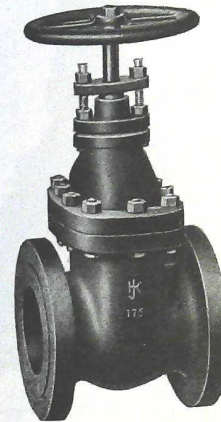


Fig. 473B

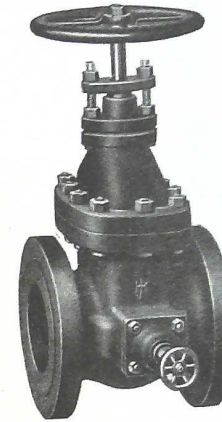


Fig. 473E With By-pass

SCREWED—Not Illustrated

Size..... inches	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
Price..... each	15.00	17.00	20.00	25.00	28.00	35.00	40.00	50.00	75.00	87.00	120.00	145.00	185.00

FLANGED

Size..... inches	2	2½	3	3½	4	4½	5	6
Price..... each	17.50	19.50	23.00	28.00	33.00	40.00	45.00	57.00
Diameter of Flanges..... inches	6½	7½	8¼	9	10	10½	11	12½
Size..... inches	7	8	9	10	12	14	15	16
Price..... each	82.00	94.00	127.00	153.00	195.00	300.00	350.00	400.00
Diameter of Flanges..... inches	14	15	16¼	17¼	20¼	23	24¼	25½

FLANGED—With By-pass

Size..... inches	6	7	8	9	10	12	14	15	16
Price..... each	85.00	110.00	125.00	158.00	185.00	230.00	340.00	390.00	450.00
Diameter of Flanges..... inches	12½	14	15	16¼	17¼	20¼	23	24¼	25½
Size of By-pass..... inches	1¼	1¼	1½	1½	1½	2	2	2	3

These Valves have stationary stems, and open to the left.
For dimensions, see page 412. Template for drilling, page 413.

ORDER BY FIGURE NUMBERS

MEDIUM STRAIGHT-WAY VALVES

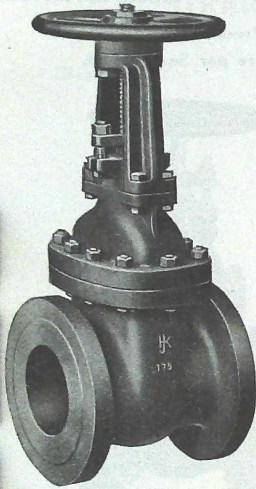


Fig. 473C

WITH OUTSIDE
SCREW
AND YOKE
IRON BODY
WEDGE GATE
BRASS
MOUNTED

For 175 Pounds
Working Pressure

Tested to
500 Pounds
Hydraulic Pressure
per Square Inch

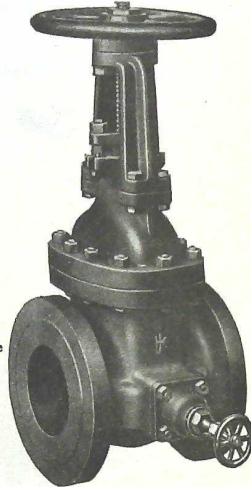


Fig. 473D With By-pass

SCREWED—Not Illustrated

Size.....inches	2	2½	3	3½	4	4½	5	6	7	8	9	10	12
Price.....each	23.00	25.00	29.00	35.00	40.00	50.00	54.00	65.00	90.00	110.00	145.00	170.00	215.00

FLANGED

Size.....inches	2	2½	3	3½	4	4½	5	6
Price.....each	25.50	27.50	32.00	38.00	45.00	55.00	59.00	72.00
Diameter of Flanges.....inches	6½	7½	8¾	9	10	10½	11	12½
Size.....inches	7	8	9	10	12	14	15	16
Price.....each	97.00	117.00	152.00	178.00	225.00	340.00	400.00	450.00
Diameter of Flanges.....inches	14	15	16¼	17½	20½	23	24½	25½

FLANGED—With By-pass

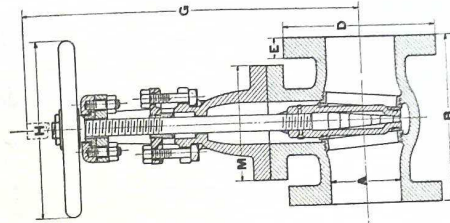
Size.....inches	6	7	8	9	10	12	14	15	16
Price.....each	100.00	125.00	148.00	183.00	210.00	260.00	390.00	450.00	510.00
Size of By-pass.....inches	1½	1¼	1½	1½	1½	2	2	2	3
Diameter of Flanges.....inches	12½	14	15	16¼	17½	20½	23	24½	25½

We would recommend that Valves 8 inches and larger be furnished with By-pass.
These Valves have rising stems, and open to the left.
For dimensions, see page 412. Template for drilling, page 413.

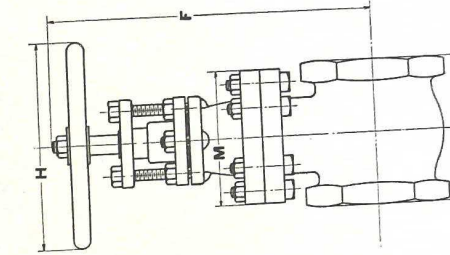
Hy-Tech Products
ORDER BY FIGURE NUMBERS

DIMENSIONS OF
MEDIUM PRESSURE STRAIGHT-WAY VALVES

WEDGE GATE

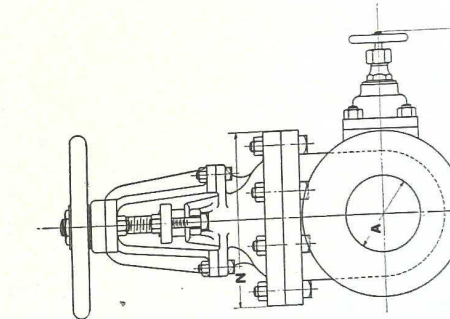


FLANGED OR SCREWED



For 175 Pounds Working Pressure

IRON BODY



For dimensions, see following page.

ORDER BY FIGURE NUMBERS

MEDIUM PRESSURE STRAIGHT-WAY VALVES

IRON BODY WEDGE GATE

For 175 Pounds Working Pressure

TABLE OF DIMENSIONS

Size	2	3	4	5	6	7	8	9	10	12	14	15	16	18
A	2 1/2	3 3/8	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	12 1/2	14 1/2	15 1/2	16 1/2	18 1/2
B	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2	16 1/2	17 1/2	18 1/2	19 1/2	21 1/2
C	5 1/2	6 1/4	7 1/4	8 1/4	9 1/4	10 1/4	11 1/4	12 1/4	13 1/4	14 1/4	15 1/4	16 1/4	17 1/4	18 1/4
D	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2	16 1/2	17 1/2	18 1/2	19 1/2
E	7/8	1 1/8	1 1/4	1 1/2	1 3/4	1 7/8	2 1/8	2 1/4	2 1/2	2 3/4	2 7/8	3 1/8	3 1/4	3 1/2
F	11 1/4	12 1/8	13 1/4	14 1/8	15 1/4	16 1/8	17 1/4	18 1/8	19 1/4	20 1/8	21 1/4	22 1/8	23 1/4	24 1/8
G	14	16 1/2	18 1/2	20 1/2	22 1/2	25 1/2	27 1/2	31	33 1/2	40 1/2	44 1/2	48	57 1/2	63 1/2
H	7	7	8	10	12	12	14	14	16	18	22	22	27	27
I	14 1/2	15 1/2	16 1/2	17 1/2	18 1/2	19 1/2	20 1/2	21 1/2	22 1/2	23 1/2	24 1/2	25 1/2	26 1/2	27 1/2
M	6 1/4	6 1/4	7	7 1/4	7 1/2	8 1/4	8 1/2	9	9 1/4	10 1/4	10 1/2	11 1/2	11 1/2	12 1/2
N	7 1/4	8 1/4	9	9 1/2	10 1/2	11 1/2	12 1/2	14 1/2	14 1/2	17 1/2	20 1/2	2 1/2	2 1/2	3 1/2
Number of Turns to Open	7	8 1/2	10 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2	16 1/2	17 1/2	18 1/2

Template for drilling, following page.

Hy-Tech Products

ORDER BY FIGURE NUMBER

DIAMETER OF FLANGES AND TEMPLATE FOR DRILLING
MEDIUM
FLANGED VALVES AND FLANGED FITTINGS

For 175 Pounds Working Pressure

Size Inches	Diameter of Flanges Inches	Thickness of Flanges Inches	Bolt Circle Inches	Number of Bolts	Size of Bolts Inches	Length of Bolts Inches
1	4 1/2	1 1/2	3 3/4	4	1/2	2
1 1/4	5	3/4	3 3/4	4	3/4	2 1/4
1 1/2	6	1 1/2	4 1/2	4	3/4	2 1/2
2	6 1/2	3/4	5	4	3/4	2 1/2
2 1/4	7 1/2	1	5 1/2	4	3/4	3
3	8 1/4	1 1/4	6 1/2	8	3/4	3 1/4
3 1/2	9	1 1/2	7 1/4	8	3/4	3 1/4
4	10	1 1/4	7 1/2	8	3/4	3 1/2
4 1/2	10 1/2	1 1/2	8 1/2	8	3/4	3 1/2
5	11	1 3/4	9 1/4	8	3/4	3 3/4
6	12 1/2	1 7/8	10 1/2	12	3/4	3 3/4
7	14	1 1/2	11 1/2	12	3/4	4
8	15	1 3/4	13	12	1	4 1/4
9	16 1/4	1 3/4	14	12	1	5
10	17 1/2	1 3/4	15 1/4	16	1 1/4	5 1/2
12	20 1/4	2	17 3/4	16	1 1/4	5 3/4
14	23	2 1/4	20 1/4	20	1 1/4	6
15	24 1/2	2 1/2	21 1/2	20	1 1/4	6
16	25 1/2	2 1/4	22 1/2	20	1 1/4	6 1/4
18	28	2 3/4	24 3/4	24	1 1/4	6 1/4
20	30 1/2	2 1/2	27	24	1 1/2	7
22	33	2 5/8	29 1/4	24	1 1/2	7 1/2
24	36	2 3/4	32	24	1 1/2	7 1/2

These drilling templates are in multiples of four, so that Fittings may be made to face in any quarter and bolt holes straddle the center line.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY STRAIGHT-WAY VALVES

IRON BODY WEDGE GATE BRASS MOUNTED

For 250 Pounds Working Pressure
Tested to 800 Pounds Hydraulic Pressure per Square Inch

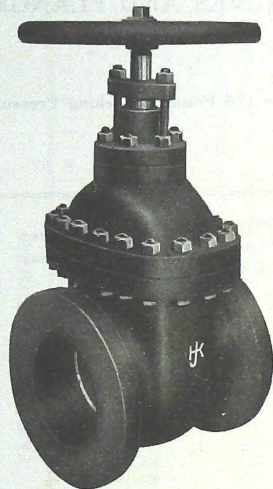


Fig. 480B

SCREWED—Not Illustrated

Size.....inches	1½	2	2½	3	3½	4
Price.....each	24.00	27.50	33.00	45.00	57.00	60.00
Size.....inches	4½	5	6	7	8	9
Price.....each	77.00	85.00	100.00	125.00	155.00	250.00

FLANGED

Size.....inches	1½	2	2½	3	3½	4	4½	5
Price.....each	26.50	30.00	35.50	48.00	60.00	65.00	82.00	90.00
Diameter of Flanges.....inches	5	6	7½	8½	9	10	10½	11
Size.....inches	6	7	8	9	10	12	14	15
Price.....each	107.00	132.00	162.00	232.00	258.00	335.00	440.00	540.00
Diameter of Flanges.....inches	12½	14	15	16½	17½	20½	23	24½

We would recommend that Valves 6 inches and larger be furnished with By-pass.
These Valves have stationary stems, and open to the left.
For dimensions, see page 419. Template for drilling, page 169.

Hy-Tech Products
ORDER BY FIGURE NUMBERS

EXTRA HEAVY STRAIGHT-WAY VALVES

IRON BODY WEDGE GATE BRASS MOUNTED
WITH BY-PASS

For 250 Pounds Working Pressure
Tested to 800 Pounds Hydraulic Pressure per Square Inch

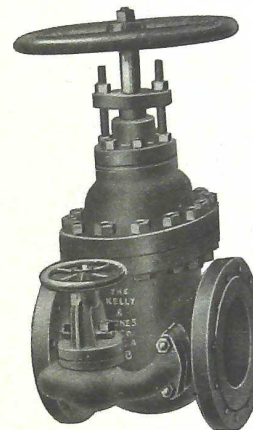


Fig. 480E

FLANGED—with By-pass

Size.....inches	6	7	8	10	12
Price.....each	155.00	180.00	215.00	310.00	400.00
Diameter of Flanges.....inches	12½	14	15	17½	20½
Size of By-pass....."	1½	1½	1½	1½	2

We would recommend that Valves 6 inches and larger be furnished with By-pass.
These Valves have stationary stems, and open to the left.
For dimensions, see page 419. Template for drilling, page 169.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY STRAIGHT-WAY VALVES

IRON BODY WEDGE GATE BRASS MOUNTED
WITH OUTSIDE SCREW AND YOKE

For 250 Pounds Working Pressure
Tested to 800 Pounds Hydraulic Pressure per Square Inch

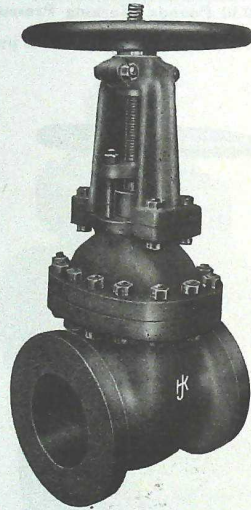


Fig. 480C

SCREWED—Not Illustrated

Size.....inches	1¼	1½	2	2½	3	3½	4	4½	5	6	7	8	9	10
Price.....each	32.00	33.00	35.50	41.00	54.00	67.00	72.00	92.00	100.00	115.00	140.00	180.00	250.00	275.00

FLANGED

Size.....inches	1¼	1½	2	2½	3	3½	4	4½	5	
Price.....each	34.50	35.50	38.00	43.50	57.00	70.00	77.00	97.00	105.00	
Diameter of Flanges.....inches	5	6	6½	7½	8½	9	10	10½	11	
Size.....inches	6	7	8	9	10	12	14	15	16	18
Price.....each	122.00	147.00	187.00	257.00	283.00	390.00	510.00	610.00	750.00	975.00
Diameter of Flanges.....inches	12½	14	15	16½	17½	20½	23	24½	25½	28

We would recommend that Valves 6 inches and larger be furnished with By-pass.
For dimensions, see page 419.

Hy-Tech Products

ORDER BY FIGURE NUMBERS

EXTRA HEAVY STRAIGHT-WAY VALVES

IRON BODY WEDGE GATE BRASS MOUNTED WITH BY-PASS
WITH OUTSIDE SCREW AND YOKE

For 250 Pounds Working Pressure
Tested to 800 Pounds Hydraulic Pressure per Square Inch

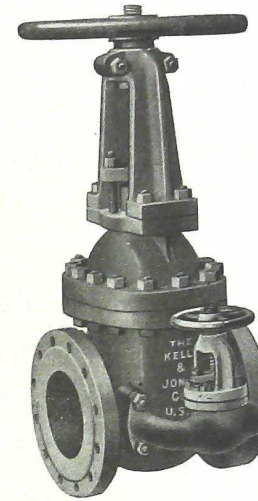


Fig. 480D

Size.....inches	6	7	8	9	10
Price.....each	170.00	195.00	240.00	310.00	335.00
Diameter of Flanges.....inches	12½	14	15	16½	17½
Size of By-pass.....inches	1¼	1¼	1½	1½	1½
Size.....inches	12	14	15	16	18
Price.....each	455.00	580.00	680.00	825.00	1050.00
Diameter of Flanges.....inches	20½	23	24½	25½	28
Size of By-pass.....inches	2	2	2	3	3

We would recommend that Valves 6 inches and larger be furnished with By-pass.
The spindle moving in and out of this style of Outside Screw and Yoke Valve indicates whether Valve is open, partly open or shut.
For dimensions, see page 419. Template for drilling, page 169.

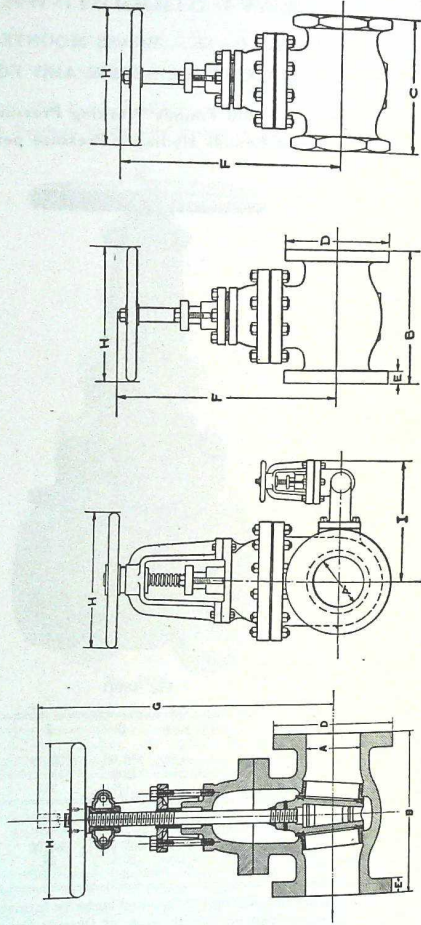
ORDER BY FIGURE NUMBERS

DIMENSIONS OF
EXTRA HEAVY STRAIGHT-WAY VALVES, FLANGED OR SCREWED WEDGE GATE

IRON BODY

WEDGE GATE

For 250 Pounds Working Pressure



For dimensions, see following page.

Hy-Tech Products
 ORDER BY FIGURE NUMBERS

EXTRA HEAVY STRAIGHT-WAY VALVES

IRON BODY

WEDGE GATE

For 250 Pounds Working Pressure

TABLE OF DIMENSIONS

Size	A	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6	7	8	9	10	12	14	15	16	18	20	22	24		
Face to Face of Flanged End	ins.	6 1/2	7 1/2	8 1/2	9 1/2	11 1/2	11 1/2	13 1/4	15	15 1/2	16 1/4	16 1/2	17	18	19 1/2	22 1/2	24	26	28	29 1/2	31			
Length of Screwed End	"	5 1/2	6 1/4	7	8	9	10	11	12 1/4	13 1/2	15 1/2	16 1/4	16 1/2	17	18									
Diameter of Flanges	"	5	6	6 1/2	7 1/2	8 1/4	9	10	10 1/2	11	12 1/2	14	15	16 1/4	17 1/2	20 1/2	23	24 1/2	25 1/2	28	30 1/4	33	36	
Thickness of Flanges	"	3/4	1	1 1/4	1 1/2	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4	1 3/4
Center to Top of Non-rising Stem	"	8 1/4	9 1/4	10 1/4	12 1/4	14 1/4	15 1/4	17 1/4	18 1/4	20 1/4	23	24 1/4	27	29 1/4	34 1/4	38	42 1/4	47	52 1/4	60				
C. to T. of Stem, O. S. & Y., Open	"	10 1/2	12 1/2	13 1/2	16	19 1/2	22	24 1/2	27	29 1/2	34 1/2	38	42 1/2	47	52 1/2	60								
Diameter of Wheel	"	5	5 1/2	6 1/4	7 1/4	9	10	12	14	16	18	20	22	24	24	24	24	24	24	24	24	24	24	24
Ctr. of Run to Outside of By-pass	"																							
Size of By-pass	"																							
Number of Turns to Open		12	11	14	15	14	16	18	21	23	28	30	34	40	39	46								

Template for drilling, page 169.

ORDER BY FIGURE NUMBERS

PRICE LIST FOR DRILLING

MEDIUM AND EXTRA HEAVY FLANGED VALVES

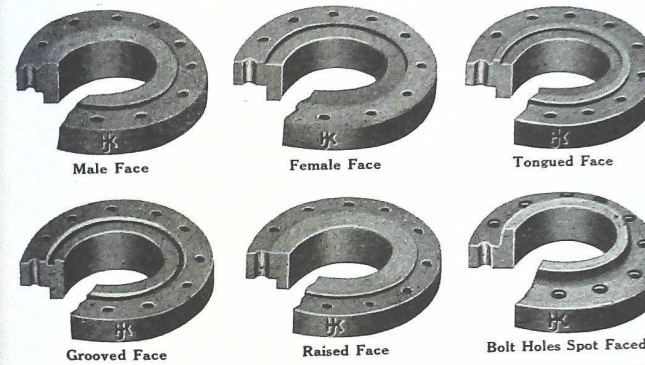
Size Inches	Drilling Valves with Two Flanges Except Angle Valves Each	Drilling Angle Valves Each	Drilling Cross Valves Each
1	.60	1.00	.....
1¼	.60	1.00	.....
1½	.60	1.00	.....
2	.75	1.25	1.50
2½	.75	1.25	1.50
3	.75	1.25	1.50
3½	1.00	1.50	2.00
4	1.25	1.75	2.50
4½	1.50	2.00	3.00
5	1.50	2.00	3.00
6	1.75	2.50	3.50
7	2.25	3.00	4.50
8	2.25	3.00	4.50
9	2.50	3.50	5.00
10	2.50	3.50	5.00
12	3.50	5.00	7.00
14	4.00	6.00	8.00
15	4.00	6.00	8.00
16	5.00	7.00	.....
18	6.00	.....	.....
20	7.50	.....	.....
22	9.00	.....	.....
24	10.00	.....	.....
30	12.00	.....	.....

Templates for drilling, see pages 169 and 413.

Hy-Tech Products
ORDER BY FIGURE NUMBERS

NET PRICE LIST
FOR
FACING FLANGES OF MEDIUM AND EXTRA
HEAVY VALVES

WITH MALE, FEMALE, TONGUED, GROOVED OR RAISED FACES



Size..... inches	1	1¼	1½	2	2½	3	3½	4
For Male, Female, Tongued, Grooved or Raised Faces.	1.00	1.00	1.00	1.25	1.25	1.25	1.25	1.25
Add Net per Valve with 2 Flanges.....	.20	.20	.20	.20	.20	.20	.20	.20
For Male, Female, Tongued, Grooved or Raised Faces.	1.25	1.25	1.25	1.75	1.75	1.75	1.75	1.75
Add Net per Valve with 3 Flanges.....	.40	.40	.40	.60	.60	.60	.60	.80
For Spot Facing, Add Net per Flange.....	.20	.20	.20	.20	.20	.40	.40	.40
Size..... inches	4½	5	6	7	8	9	10	12
For Male, Female, Tongued, Grooved or Raised Faces.	1.25	1.25	1.50	1.50	2.00	2.00	2.00	2.50
Add Net per Valve with 2 Flanges.....	.40	.40	.60	.60	.60	.60	.60	.80
For Male, Female, Tongued, Grooved or Raised Faces.	1.75	1.75	2.00	2.00	2.50	2.50	2.50	3.00
Add Net per Valve with 3 Flanges.....	.40	.40	.60	.60	.60	.60	.80	.80
For Spot Facing, Add Net per Flange.....	.40	.40	.60	.60	.60	.60	.80	.80
Size..... inches	14	15	16	18	20	22	24	
For Male, Female, Tongued, Grooved or Raised Faces.	3.25	3.25	4.00	5.00	6.00	8.00	10.00	.....
Add Net per Valve with 2 Flanges.....	1.00	1.00	1.00	1.20	1.20	1.40	1.40	.....
For Male, Female, Tongued, Grooved or Raised Faces.	4.00	4.00	5.00	6.25	7.50	10.00	12.50	.....
Add Net per Valve with 3 Flanges.....	1.00	1.00	1.00	1.20	1.20	1.40	1.40	.....
For Spot Facing, Add Net per Flange.....	1.00	1.00	1.00	1.20	1.20	1.40	1.40	.....

Unless otherwise specified, all Flanges of Medium and Extra Heavy Valves will be furnished with 1/8-inch raised face, for which no extra charge is made.
For dimensions, see page 173.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY HYDRAULIC STRAIGHT-WAY VALVES

SEMI-STEEL WEDGE GATE BRASS MOUNTED

For 800 Pounds Water Working Pressure
Tested to 2000 Pounds Hydraulic Pressure per Square Inch

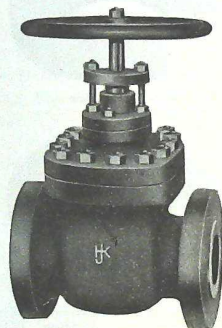


Fig. 480F

EXTRA HEAVY HYDRAULIC STRAIGHT-WAY VALVES

Size..... inches	1½	2	2½	3	4	5	6	7	8	10	12
Price, Screwed, (not illus.) each	18.00	22.50	34.00	48.00	65.00	90.00	115.00	170.00	180.00	300.00	400.00
" Flanged..... each	20.00	25.50	39.00	53.00	70.00	98.00	125.00	195.00	210.00	330.00	430.00
" Flanged, with By-pass..... each	80	1.00	1.10	1.20	1.30	2.25	3.00	5.00	6.00	8.00	9.00
Price, Drilling Hyd. Valves ..	80	1.00	1.10	1.20	1.30	2.25	3.00	5.00	6.00	8.00	9.00
Diameter of Flanges..... inches	6½	7½	8¾	10	11½	13½	15	16	17	21	23½
Size of By-pass.....						1¼	1¼	1¼	1¼	1½	2

NOTE—We would recommend that Valves 6 inches and larger be furnished with By-pass.
Flanged Valves will always be furnished with male face.
Companion Flanges, when ordered with Valves, will be furnished with female face.
These Valves have stationary stems.

For dimensions, see page 425. Template for drilling, page 178

Hy-Tech Products

ORDER BY FIGURE NUMBERS

EXTRA HEAVY HYDRAULIC STRAIGHT-WAY VALVES

WITH OUTSIDE SCREW AND YOKE

SEMI-STEEL WEDGE GATE BRASS MOUNTED

For 800 Pounds Water Working Pressure
Tested to 2000 Pounds Hydraulic Pressure per Square Inch

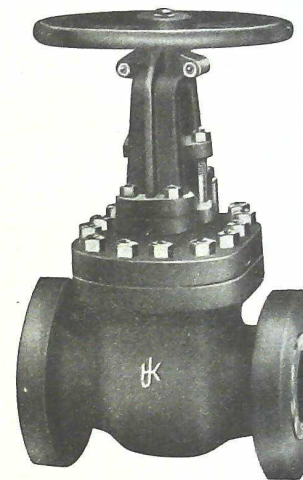


Fig. 480G

EXTRA HEAVY HYDRAULIC STRAIGHT-WAY VALVES

Size..... inches	1½	2	2½	3	4	5	6	7	8	10	12
Price, Screwed, (not illus.) each	20.00	27.00	40.00	54.00	75.00	100.00	130.00	195.00	210.00	330.00	430.00
" Flanged..... each	22.00	30.00	45.00	59.00	80.00	108.00	140.00	220.00	235.00	360.00	460.00
" Flanged, with By-pass..... each	80	1.00	1.10	1.20	1.30	2.25	3.00	5.00	6.00	8.00	9.00
Price, Drilling Hyd. Valves ..	80	1.00	1.10	1.20	1.30	2.25	3.00	5.00	6.00	8.00	9.00
Diameter of Flanges..... inches	6½	7½	8¾	10	11½	13½	15	16	17	21	23½
Size of By-pass.....						1¼	1¼	1¼	1¼	1½	2

NOTE—The spindle moving in and out of this style of Outside Screw and Yoke Valve indicates whether Valve is open, partly open or shut.
We would recommend that Valves 6 inches and larger be furnished with By-pass.
Flanged Valves will always be furnished with male face. Companion Flanges, when ordered with Valves, will be furnished with female face.

For dimensions, see page 425. Template for drilling, page 178.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY HYDRAULIC STRAIGHT-WAY VALVES

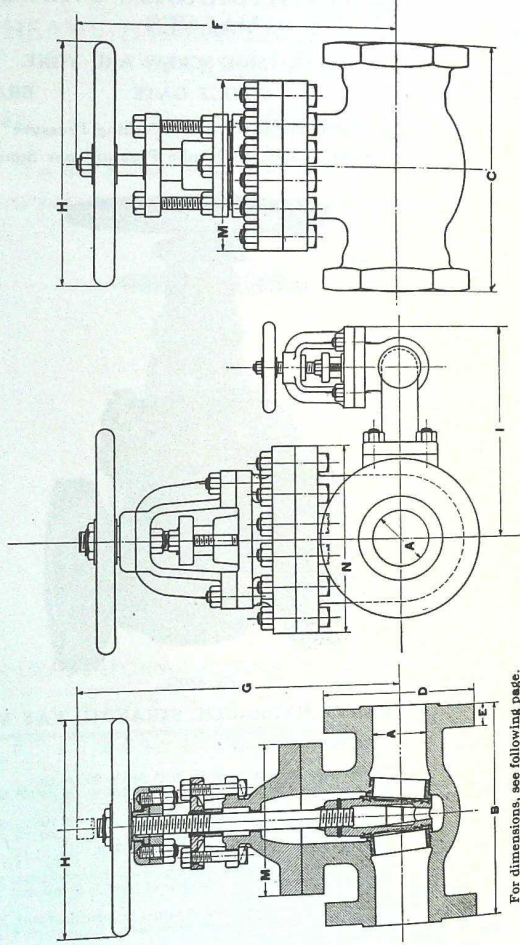
SEMI-STEEL

BRASS MOUNTED

DIMENSIONS OF

WEDGE GATE

For 800 Pounds Water Working Pressure



For dimensions, see following page.

Hy-Tech Products

ORDER BY FIGURE NUMBERS

EXTRA HEAVY HYDRAULIC STRAIGHT-WAY VALVES

SEMI-STEEL

WEDGE GATE

BRASS MOUNTED

HARD METAL SEATS

For 800 Pounds Water Working Pressure

TABLE OF DIMENSIONS

Size	1	2	3	4	5	6	7	8	10	12
Face to Face of Flanges	10	11 1/2	13 1/2	14 1/2	16 1/2	18 1/2	20	21 1/2	23	28 1/2
Length of Screwed	10	11 1/2	13 1/2	14 1/2	16 1/2	18 1/2	20	21 1/2	23	28 1/2
Diameter of Flanges	C	D	E	F	G	H	I			
Thickness of Flanges	6 1/2	7 1/2	8 3/4	10	11 1/2	13 1/2	15	16	17	21
Center of Run to Top of Non-rising Stem	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2 1/2
Center of Run to Top of Rising Stem, O. S. and Y., Open	12 1/2	14 1/2	16	18 1/2	20 1/2	23 1/2	26 1/2	29 1/2	33	38 1/2
Diameter of Wheel	8	10	12	14	16	20	24	27 1/2	33	43 1/2
Center of Run to Outside of By-pass	8	10	12	14	16	20	24	27 1/2	33	43 1/2
Size of By-pass	8	9 1/2	12	14	18	23	28 1/2	30 1/2	37 1/2	45 1/2
Number of Turns to Open	M	N								
Width of Bonnet Flange	8 1/2	7 1/2	8 1/2	10 1/2	11 1/2	12	14 1/2	15 1/2	16 1/2	18 1/2
Length of Bonnet Flange			8 3/4	9 1/4	10 1/2	15	17	18 1/2	20 1/2	23 1/2

ORDER BY FIGURE NUMBERS

Template for drilling, page 178.

Cast Steel Valves

Owing to the increased demand for Steel Valves and to the lack of uniformity and quality in Castings purchased from Steel Foundries making a miscellaneous product, we have installed our own Steel Foundry, in order to make prompt deliveries and to maintain the high degree of excellence that has, at all times, been characteristic of the K. & J. product.

We can safely recommend our Steel Valves under normal conditions. The quality, strength, elasticity, elongation, reduction and bending are in accordance with the strictest specifications. The Castings are free from sand holes and shrink holes.

None but the best grade raw material enters into the manufacture of our Steel Valves, as our Chemical Laboratory is fully equipped for determining the quality of the raw material used.

The Seats of the Valves are Monel Metal, which will not corrode, and will contract and expand correspondingly with the Steel in the body of the Valve.

We recommend our Cast Steel Valves for all High Pressure. Saturated and Superheated Steam Lines and Extreme Hydraulic Service.

Send us your Specifications and Drawings for Special Steel Castings. Cast Steel Fittings Illustrated Page 180-212.

The following pages list and illustrate a Standard Line of Cast Steel Valves, but any other goods not shown can be made in Steel if desired at prices that will be furnished upon application.

Hy-Tech Products

EXTRA HEAVY CAST STEEL STRAIGHT-WAY VALVES, FLANGED

OUTSIDE SCREW AND YOKE OPEN TO THE LEFT WEDGE GATE

For Superheated Steam up to 350 Pounds Working Pressure and a Total Temperature of 800 Degrees.

SUITABLE FOR HIGH PRESSURE WATER LINES, FROM 500 TO 1000 POUNDS WORKING PRESSURE

Construction A—Cast Steel Body, Bonnet, Yoke and Disc (sizes above 2", Disc Monel Faced; 2" and smaller, solid Monel Disc) Monel Seats and Stems for steam working pressures up to 350 lbs., and for superheat temperature up to a total of 800 degrees.

Construction B—Same as above except Rolled Steel Stem instead of Monel Stem.

Construction C—Cast Steel Body and Disc, Semi-steel Bonnet and Yoke (sizes above 2" Disc Monel Faced; 2" and smaller, solid Monel Disc) Monel Seats and Rolled Steel Stem for steam working pressures up to 250 lbs., and for superheat temperature up to a total of 550 degrees.

Construction D—Cast Steel Body, Bonnet, Yoke and Disc (sizes above 2", Disc Hard Metal Faced; 2" and smaller, solid Hard Metal Disc) Hard Metal Seats and Rolled Steel Stem, suitable for water working pressures from 500 to 1,000 lbs., according to size of valve—4" and smaller 1,000 lbs.; 4½ to 8", 800 lbs.; 9 to 16", 500 lbs.

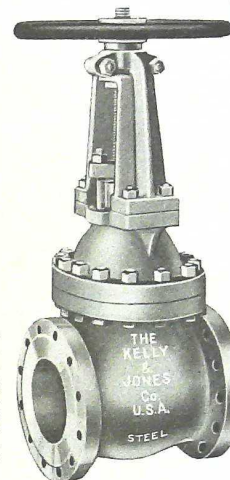


Fig. 1200 Steel Gate Valve

The Specifications of Engineers differ as to the Metal Requirements of Valves for varying temperatures of superheated steam, and, to conform to these specifications, we list these Valves made up in different Combinations.

The temperatures given are recommended for satisfactory service.

Valves for high pressure water lines have Male Face on Flanges, for which an extra price is charged.

See page 207.

We recommend that Valves 8" and larger should have a By-pass.

The outside Screw and Yoke indicates whether the Valve is open, partly open or closed.

Size	inches	1¼	1½	2	2½	3	3½	4	4½	5
Construction A—As above	each	50.00	52.50	57.50	70.00	85.00	100.00	115.00	130.00	145.00
Construction B—As above	"	45.00	47.50	50.00	62.50	75.00	90.00	105.00	120.00	135.00
Construction C—As above	"	40.00	42.50	45.00	56.50	69.00	78.00	90.00	105.00	120.00
Construction D—As above	"	45.00	47.50	51.50	62.50	77.00	92.00	105.00	120.00	130.00
Face to Face	inches	8½	7½	8½	9½	11½	11½	12	13¼	15
Diameter of Flanges	"	5	6	6½	7½	8¼	9	10	10½	11
Size	inches	6	7	8	9	10	12	14	15	16
Construction A—As above	each	170.00	210.00	245.00	310.00	375.00	475.00	625.00	625.00	800.00
Construction B—As above	"	155.00	190.00	225.00	285.00	340.00	435.00	560.00	560.00	720.00
Construction C—As above	"	137.00	170.00	200.00	250.00	300.00	375.00	500.00	500.00	650.00
Construction D—As above	"	150.00	185.00	215.00	265.00	330.00	400.00	530.00	530.00	665.00
Face to Face	inches	15½	16¼	16½	17	18	19¼	22½	22½	24
Diameter of Flanges	"	12½	14	15	16¼	17½	20¼	23	24¼	25½

In Ordering, Specify the Construction Desired; also give Figure Number.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL STRAIGHT-WAY VALVES, FLANGED

**OUTSIDE SCREW AND YOKE WITH BY-PASS
WEDGE GATE OPEN TO THE LEFT**

For Superheated Steam up to 350 Pounds Working Pressure, and a Total Temperature of 800 Degrees.

SUITABLE FOR HIGH PRESSURE WATER LINES FROM 500 TO 800 POUNDS WORKING PRESSURE.

Construction A—Cast Steel Body, Bonnet, Yoke and Disc. (Disc Monel Faced) Monel Seats and Stem for steam working pressures up to 350 lbs., and for superheat temperature up to a total of 800 degrees.

Construction B—Same as above except Rolled Steel Stem instead of Monel Stem.
Construction C—Cast Steel Body and Disc, Semi-steel Bonnet and Yoke (Disc Monel Faced) Monel Seats and Rolled Steel Stem for steam working pressures up to 250 lbs., and for superheat temperature up to a total of 550 degrees.

Construction D—Cast Steel Body, Bonnet, Yoke and Disc (Disc Hard Metal Faced) Hard Metal Seats and Rolled Steel Stem, suitable for water working pressures from 500 to 800 lbs., according to size of valve: 6 to 8", 800 lbs.; 9 to 24", 500 lbs.

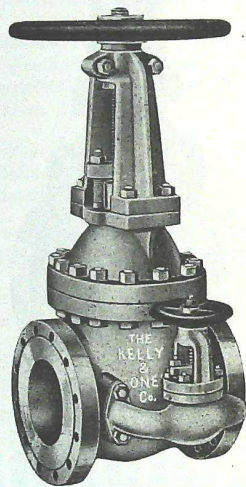


Fig. 1201 Steel

The Specifications of Engineers differ as to the metal requirements of Valves for varying temperatures of superheated steam, and to conform to these Specifications, we list these Valves made up in different combinations.

The temperatures given are recommended for satisfactory service.

Valves for high pressure water lines have Male Face on Flanges, for which an extra price is charged.

See page 207.

The By-Pass Valve has exactly the same Construction as the Large Valve to which it is attached.

The Outside Screw and Yoke indicates whether Valve is open, partly open or closed.

Size inches	6	7	8	9	10	12	14	15	16	18	20	22	24
Construction A— each	\$225	\$265	\$300	\$365	\$440	\$560	\$710	\$710	\$885	\$1200	\$1500	\$2000	2250
Construction B— ..	205	240	275	335	400	515	640	640	800	1100	1350	1825	2050
Construction C— ..	160	215	245	300	350	440	565	565	715	1000	1225	1675	1850
Construction D— ..	200	235	265	320	385	470	600	600	735	1000	1250	1700	1900
Face to Face . . . inches	15 1/2	16 1/4	16 1/2	17	18	19 1/4	22 1/2	22 1/2	24	26	28	29 1/4	31
Diameter of Flanges . inches	12 1/2	14	15	16 1/4	17 1/2	20 1/2	23	24 1/2	25 1/2	28	30 1/4	33	36
Size of By-Pass . inches	1 1/4	1 1/4	1 1/2	1 1/2	1 1/2	2	2	2	3	3	4	4	4

In Ordering, Specify the Construction desired; also give Figure Number.

Hy-Tech Products

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL STRAIGHT-WAY VALVES, FLANGED

**NON-RISING BRASS STEM WEDGE GATE
OPEN TO THE LEFT**

FOR HIGH PRESSURE WATER LINES

Valves 1 1/4 to 4", up to 1000 lbs. Working Pressure
" 4 1/2 to 8" " 800 " " "
" 9 to 12" " 500 " " "

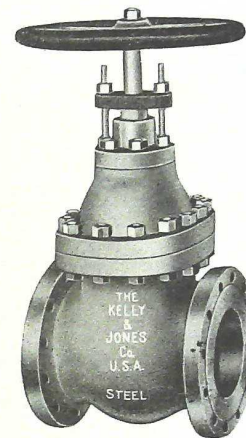


Fig. 1202 Steel

CONSTRUCTION

Cast Steel Body and Bonnet, Hard Metal Seats, Brass Stem.

Sizes above 2", Steel Disc, Hard Metal Faced.

Sizes 2" and smaller Disc, solid Hard Metal.

These Valves for High Pressure Water Lines Have Male Face on Flanges, for which an Extra Price is Charged.

See page 207.

We recommend that Valves 8" and larger should have a By-Pass.

Size inches	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2
Price each	42.50	45.00	49.00	60.00	74.00	88.00	100.00	115.00
Face to Face . . . inches	6 1/2	7 1/4	8 1/2	9 1/2	11 1/4	11 1/4	12	13 1/4
Diameter of Flanges . inches	5	6	6 1/2	7 1/2	8 1/4	9	10	10 1/4
Size inches	5	6	7	8	9	10	12	
Price each	125.00	145.00	175.00	205.00	255.00	315.00	380.00	
Face to Face . . . inches	15	15 1/2	16 1/4	16 1/2	17	18	19 1/4	
Diameter of Flanges . inches	11	12 1/4	14	15	16 1/4	17 1/2	20 1/4	

For General Dimensions, see page 431.
Templates for Drilling, see page 205.
Price List for Drilling, see page 206.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL STRAIGHT-WAY VALVES, FLANGED

NON-RISING BRASS STEM WITH BY-PASS
WEDGE GATE OPEN TO THE LEFT

FOR HIGH PRESSURE WATER LINES

Valves, 6" and 8", up to 800 lbs. Working Pressure
" 10" and 12", " " 500 " " " "

CONSTRUCTION

Cast Steel Body, Bonnet and Disc. Disc, Hard Metal Faced, Brass Stem, Hard Metal Seats.

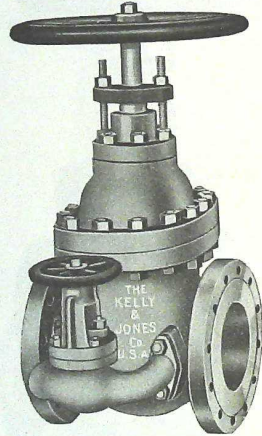


Fig. 1203 Steel

Size	6	8	10	12
Price	190.00	250.00	365.00	445.00
Face to Face	15 7/8	16 1/2	18	19 1/2
Diameter of Flanges	12 1/2	15	17 1/2	20 1/2

For General Dimensions, see page 431.
Templates for Drilling, page 205.
Price List for Drilling, page 206.

Hy-Tech Products

ORDER BY FIGURE NUMBERS

These Valves for High Pressure Water Lines have Male Face on Flanges, for which an Extra Price is charged.

See page 207.
We recommend that Valves 8" and larger should have a By-Pass.

DIMENSIONS OF EXTRA HEAVY CAST STEEL VALVES

STRAIGHT-WAY VALVES

Size	1 1/2	1 1/2	2	2 1/2	3	3 3/4	4	4 1/2	5	6	7	8	9	10	12	14	15	16	18	20	22	24	
Face to Face, Flanged	6 1/4	7 1/4	8 1/2	9 1/2	11 1/4	11 1/4	12	13 1/4	15	15 1/2	16 1/4	17	18	19 1/4	22 1/4	24 1/4	25 1/4	26 1/4	28 1/4	30 1/4	32 1/4	34 1/4	
Diameter of Flanges	5	6	6 1/2	7 1/4	8 1/4	9	10	10 1/4	11	12 1/4	14	15	16 1/4	17 1/4	20 1/4	22 1/4	24 1/4	25 1/4	28 1/4	30 1/4	32 1/4	34 1/4	
Thickness of Flanges	3/4	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	
Center to Top of Non-Rising Stem	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2	16 1/2	17 1/2	18 1/2	19 1/2	20 1/2	21 1/2	24 1/2	26 1/2	27 1/2	28 1/2	30 1/2	32 1/2	34 1/2	36 1/2	
Center to Top of Stem, O. S. & Y. Open	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2	16 1/2	17 1/2	18 1/2	19 1/2	20 1/2	21 1/2	24 1/2	26 1/2	27 1/2	28 1/2	30 1/2	32 1/2	34 1/2	36 1/2	
Center to Top of Stem, O. S. & Y. Open	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14 1/2	15 1/2	16 1/2	17 1/2	18 1/2	19 1/2	20 1/2	21 1/2	24 1/2	26 1/2	27 1/2	28 1/2	30 1/2	32 1/2	34 1/2	36 1/2	
Size of By-Pass	5	5	6 1/2	6 1/2	7 1/4	7 1/4	8 1/4	8 1/4	9	9	10	10	11 1/4	11 1/4	12 1/4	12 1/4	13 1/4	13 1/4	14 1/4	14 1/4	15 1/4	15 1/4	
Center to Outside of By-Pass	12	11	14	15	14	16	18	18	21	23	28	30	34	40	48	46	46	46	46	46	46	46	46
Number of Turns to Open	12	11	14	15	14	16	18	18	21	23	28	30	34	40	48	46	46	46	46	46	46	46	46

Templates for Drilling, page 205. Price List for Drilling, page 206.
Price List for Special Facing, page 207. For Extra Prices, Bolting on Companion Flanges, Etc., page 186.

GLOBE, ANGLE AND CHECK VALVES.

Size	2	2 1/2	3	3 1/4	4	4 1/2	5	6	7	8	10	12	14	15
Face to Face, Flanged	16 1/2	17 1/2	19 1/2	20 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30 1/2	32 1/2	36 1/2	40 1/2	44 1/2	48 1/2
Center to Face of Inlet or Outlet, Flanged	15 1/2	16 1/2	18 1/2	19 1/2	21 1/2	23 1/2	25 1/2	27 1/2	29 1/2	31 1/2	35 1/2	39 1/2	43 1/2	47 1/2
Diameter of Flanges	14 1/2	15 1/2	17 1/2	18 1/2	20 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30 1/2	34 1/2	38 1/2	42 1/2	46 1/2
Center to Top of Stem, O. S. & Y. open	13 1/2	14 1/2	16 1/2	17 1/2	19 1/2	21 1/2	23 1/2	25 1/2	27 1/2	29 1/2	33 1/2	37 1/2	41 1/2	45 1/2
Diameter of Wheel	7 1/2	9	10	10 1/4	11 1/4	12 1/4	13 1/4	14 1/4	15 1/4	16 1/4	18 1/4	20 1/4	22 1/4	24 1/4
Size of By-Pass	5	5	6 1/2	6 1/2	7 1/4	7 1/4	8 1/4	8 1/4	9	9	10 1/4	10 1/4	11 1/4	11 1/4
Center to outside of By-Pass	12	11	14	15	14	16	18	18	21	23	28	30	34	40

Templates for Drilling, page 205. Price List for Drilling, page 206.
Special Facing Dimensions, page 204. Price List for Special Facing, page 207.
For Extra Prices, Bolting on Companion Flanges, Etc., see page 186.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL GLOBE AND ANGLE VALVES

FLANGED WITH YOKE

For Superheated Steam up to 350 Pounds Working Pressure and a Total Temperature of 800 Degrees

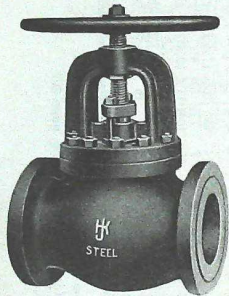


Fig. 1204 Steel

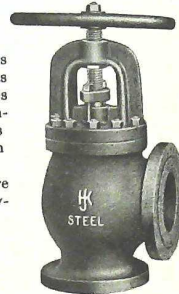


Fig. 1205 Steel

The Specifications of Engineers differ as to the metal requirements of Valves for varying temperatures of Superheated Steam, and to conform to these specifications, we list these Valves made up in different combinations.

The temperatures given are recommended for satisfactory service.

Construction A—Cast Steel Body, Yoke and Swivel Disc (sizes above 3 1/2" Disc Monel Faced; 3 1/2" and smaller, solid Monel Disc) Monel Seats and Stem; for Steam Working Pressures up to 350 Pounds, and for Superheat Temperature up to a total of 800 degrees.
 Construction B—Cast Steel Body, Yoke and Swivel Disc (sizes above 3 1/2", Disc Monel Faced; 3 1/2" and smaller, solid Monel Disc) Monel Seats and Rolled Steel Stem; for Steam Working Pressures up to 350 Pounds, and for Superheat Temperatures up to a total of 800 degrees.
 Construction C—Cast Steel Body and Swivel Disc, Semi-Steel Yoke (sizes above 3 1/2" Disc Monel Faced; 3 1/2" and smaller, solid Monel Disc) Monel Seats and Rolled Steel Stem; for Steam Working Pressure up to 250 Pounds, and for Superheat Temperature up to a total of 550 degrees.

GLOBE OR ANGLE

Size.....inches	2	2 1/2	3	3 1/2	4	4 1/2	5
Construction A.....each	57.50	70.00	85.00	100.00	115.00	130.00	145.00
Construction B....."	52.50	62.50	75.00	90.00	100.00	115.00	125.00
Construction C....."	47.50	52.50	65.00	77.50	87.50	102.50	110.00
Construction D....."	52.50	62.50	75.00	90.00	100.00	115.00	125.00
Face to Face.....inches	10 1/2	11 1/2	12 1/2	13 1/2	14	15	15 1/2
Center to Face of Inlet or Outlet....."	5 1/4	5 3/4	6 1/4	6 3/4	7	7 1/2	7 3/4
Diameter of Flanges....."	6 1/2	7 1/2	8 1/2	9	10	10 1/2	11
Size.....inches	6	7	8	10	12	14	15
Construction A.....each	170.00	210.00	245.00	375.00			
Construction B....."	145.00	180.00	210.00	325.00			
Construction C....."	127.50	160.00	185.00	290.00			
Construction D....."	145.00	180.00	210.00	325.00			
Face to Face.....inches	17 1/2	19 1/4	21	24 1/2			
Center to Face of Inlet or Outlet....."	8 3/4	9 5/8	10 1/2	12 1/2			
Diameter of Flanges....."	12 1/2	14	15	17 1/2			
With By-Pass—Construction A.....each			290.00	425.00			
With By-Pass—Construction B....."			250.00	375.00			
With By-Pass—Construction C....."			230.00	340.00			
With By-Pass—Construction D....."			1 1/2	1 1/2			

We recommend that Valves 8" and larger should have a By-Pass. The By-Pass Valve has exactly the same construction as the large Valve to which it is attached. The By-Pass on the end of the Angle Valve is located on the right hand side (looking at the end with the passage under the Disc) and on the Globe Valve it is located on the back opposite the outlet.
 For general dimensions, see page 431. Templates for drilling, page 205.
 Price List for Drilling, page 206. For Construction desired and the Figure Number.
 In Ordering, state with or without By-Pass, give the Construction desired and the Figure Number.

ORDER BY FIGURE NUMBERS

Hy-Tec Products

EXTRA HEAVY CAST STEEL SWING CHECK VALVES

HARD METAL SEATS

For Water Lines from 500 to 1000 Pounds Working Pressure According to Size

2 to 4 INCH, UP TO 1000 POUNDS
 4 1/2 to 8 INCH, UP TO 800 POUNDS
 10 to 15 INCH, UP TO 500 POUNDS

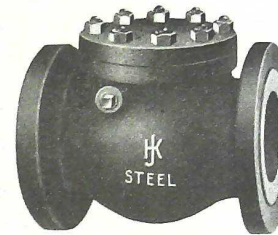


Fig. 1206 Steel

Can be used either Horizontally or Vertically

Size.....inches	2	2 1/2	3	3 1/2	4	4 1/2	5
Price.....each	45.00	55.00	62.50	72.50	85.00	95.00	100.00
Face to Face, Flanged.....inches	10 1/2	11 1/2	12 1/2	13 1/4	14	15	15 3/4
Diameter of Flanges....."	6 1/2	7 1/2	8 1/4	9	10	10 1/2	11
Size.....inches	6	7	8	10	12		
Price.....each	120.00	145.00	160.00	275.00	325.00		
Face to Face, Flanged.....inches	17 1/2	19 1/4	21	24 1/2	28		
Diameter of Flanges....."	12 1/2	14	15	17 1/2	20 1/2		

Valves for High Pressure Water Lines have Male Face on Flanges, for which an extra price is charged. See page 207.

For Dimensions of Flanges, see page 204.

For General Dimensions, see page 431.

Templates for Drilling, see page 205.

Price List for Drilling, see page 206.

Extra Heavy Cast Steel Hydraulic Swing Check Valves for extreme pressures, see page 439.

ORDER BY FIGURE NUMBERS

EXTRA HEAVY CAST STEEL AUTOMATIC STOP CHECK VALVES

GLOBE OR ANGLE FLANGED
 CAST STEEL BODY AND YOKE MONEL DISC AND PISTON
 MONEL SEAT ROLLED STEEL STEM

For Superheated Steam up to 350 lbs. Working Pressure
 and a total Temperature of 800 Degrees

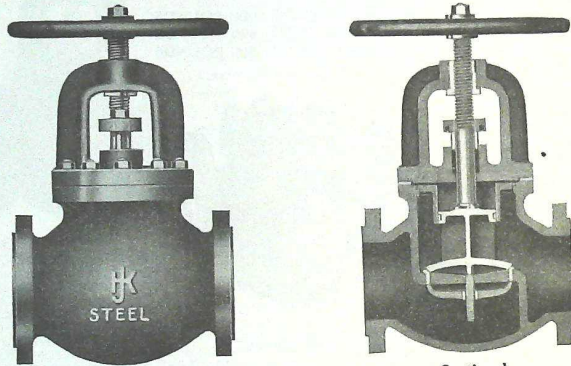


Fig. 1207 Steel

GLOBE OR ANGLE

Size.....inches	2	2½	3	3½	4	4½	5
Price, Globe or Angle.....each	80.00	90.00	110.00	130.00	145.00	160.00	175.00
Face to Face, Globe.....inches	10½	11½	12½	13¼	14	15	15¾
Diameter of Flanges....."	6½	7½	8¼	9	10	10½	11
Center to Face, Angle....."	5¼	5¾	6¼	6¾	7	7½	7¾

Size.....inches	6	7	8	10	12	14	15
Price, Globe or Angle.....each	220.00	265.00	340.00	525.00	700.00	1000.00	1000.00
Face to Face, Globe.....inches	17½	19¼	21	24½	28	33	33
Diameter of Flanges....."	12½	14	15	17½	20½	23	24¼
Center to Face, Angle....."	8¾	9¾	10¼	12¼	14	16½	16½

For General Dimensions see page 431. Templates for Drilling, page 205.
 Price List for Drilling page 206.

NOTE—An Automatic Stop-Check Valve should be included in the equipment of every steam plant having more than one boiler. It should be placed in the piping from each boiler to the main steam line. These valves close automatically and instantly, cutting out the boiler to which they are connected, and in case a tube blows out or a joint in the boiler bursts, the valve will act immediately as a non-return valve, and will prevent the back flow of steam from the main line.

This valve also prevents steam entering or backing into a cold boiler while work is being done, and in this way acts as a safety-stop valve. These valves open automatically and promptly when the boilers to which they are connected reach the full pressure in the main, but it will remain closed against a higher pressure in the main. This closing against a higher main pressure in a means toward detecting a leakage in the boiler, and the firing should then be given attention. To obtain the greatest efficiency these valves should be placed with wheel up and in such a manner as to allow the boiler pressure to come into the disc.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY HYDRAULIC CAST STEEL STRAIGHT-WAY VALVES

Tested under 3000 Pounds Hydraulic Pressure
 For Cold Water Working Pressures up to 3000 Pounds

CONSTRUCTION

The body, bonnet, yoke and disc of these Valves are made of Cast Steel, sizes above 2 inch, the disc is hard metal faced; size 2 inch, the disc is solid hard metal.

The stem of the inside Screw Non-rising Valve is made of Brass. The stem in the outside Screw and Yoke Valve is made of Rolled Steel.

Unless otherwise specified, Cast Steel Flanged Valves when ordered faced and drilled are always furnished with Spot Faced Bolt Holes, which is included in the list price for drilling, page 440.

Unless otherwise specified, Flanged Valves will always be furnished with Male Face; in which case, Companion Flanges, when ordered with Valves, will be furnished with Female Face.

EXTRA HEAVY HYDRAULIC CAST STEEL
STRAIGHT-WAY VALVES

Tested to 3000 Pounds Hydraulic Pressure
For 3000 Pounds Cold Water Working Pressure

OUTSIDE SCREW AND YOKE

WEDGE GATE

HARD METAL SEATS

OPEN TO LEFT

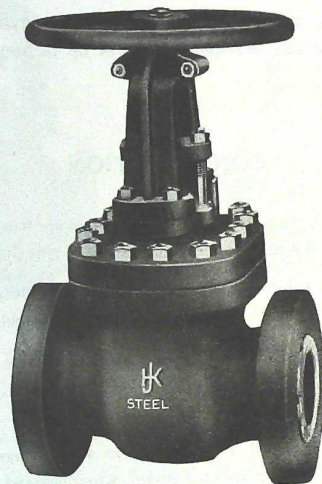


Fig. 1275 Steel

Size..... inches	2	2½	3	4	5	6
Price, Screwed..... each	95.00	115.00	135.00	160.00	200.00	285.00
Price, Flanged..... "	100.00	120.00	145.00	170.00	210.00	300.00
End to End, Screwed..... inches	11	13	14	16	18	21
Face to Face, Flanged..... "	11½	13½	14½	16½	18½	21½
Diameter of Flanges..... "	7½	8¾	10	11½	13½	15
Inside Diameter of Port..... "	1½	2	2½	3	4	5

For dimensions and Templates for drilling, see page 433.
Price List for drilling, page 440.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY HYDRAULIC CAST STEEL
STRAIGHT-WAY VALVES

Tested to 3000 Pounds Hydraulic Pressure
For 3000 Pounds Cold Water Working Pressure

INSIDE SCREW

NON-RISING STEM

WEDGE GATE

HARD METAL SEATS

OPEN TO THE LEFT

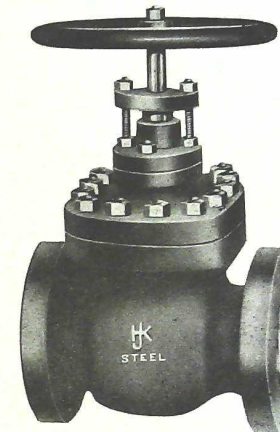


Fig. 1276 Steel

Size..... inches	2	2½	3	4	5	6
Price, Screwed..... each	90.00	110.00	130.00	150.00	190.00	270.00
Price, Flanged..... "	95.00	115.00	140.00	160.00	200.00	285.00
End to End, Screwed..... inches	11	13	14	16	18	21
Face to Face, Flanged..... "	11½	13½	14½	16½	18½	21½
Diameter of Flanges..... "	7½	8¾	10	11½	13½	15

For Dimensions and Template for drilling, see following page.
Price List for drilling, page 440.

ORDER BY FIGURE NUMBERS

**DIMENSIONS OF EXTRA HEAVY HYDRAULIC CAST STEEL
STRAIGHT-WAY VALVES**

Size..... inches	2	2½	3	4	5	6
Face to Face, Flanged.....	11½	13¾	14¾	16½	18½	21½
Diameter of Flanges.....	7½	8¾	10	11½	13½	15
Thickness of Flanges.....	1	1½	1¾	1¾	1¾	1¾
End to End, Screwed.....	11	13	14	16	18	21
Center to Top of Non-Rising Stem.....	12¼	14½	16½	18¾	20¾	23¾
Center to Top of Rising Stem, O. S. & Y., open.	15½	18¾	20¾	23¾	27¾	32¾
Diameter of Wheel.....	10	12	14	16	20	20
Number of Turns to Open.....	8	9½	12	14	18	23
Diameter of Male.....	2¾	3½	3½	5	6½	7¾
Height of Male.....	¾	¾	¾	¾	¾	¾
Diameter of Female.....	2½	3¾	4	5½	6¾	7½
Dept. of Female.....	¾	¾	¾	¾	¾	¾
Inside Diameter of Port.....	1½	2	2½	3	4	5

The Length, Center to Face, and Face to Face of Male, Female, Tongued or Grooved, Extra Heavy Hydraulic Flanged Valves and Fittings are the same as Plain Faces, the measurements being from Face of Flange, and not from Tongue or Recess.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

**EXTRA HEAVY HYDRAULIC CAST STEEL
SWING CHECK VALVES**

**Tested to 3000 Pounds Hydraulic Pressure
For 3000 Pounds Cold Water Working Pressure**

HARD METAL SEATS



Fig. 1277 Steel

Can be used in either a Horizontal or Vertical Position

Size..... inches	2½	3	4	5	6
Price, Screwed.....each	85.00	105.00	120.00	160.00	210.00
Price, Flanged..... "	90.00	115.00	130.00	170.00	225.00
End to End, Screwed..... inches	12	13	14	16	18
Face to Face, Flanged..... "	12½	14	16	18	20
Diameter of Flanges..... "	8¾	10	11½	13½	15
Inside Diameter of Port.....	2	2½	3	4	5

Unless otherwise specified, Flanged Valves will always be furnished with Male Face and Companion Flanges. When ordered with Valves, will be furnished Female Face.

For General Dimensions and Templates for drilling, see page 438.

Price List for drilling, page 440.

ORDER BY FIGURE NUMBERS

PRICE LIST FOR DRILLING
AND
SPOT FACING

EXTRA HEAVY HYDRAULIC CAST STEEL
FLANGED VALVES

Size Inches	Price Each
2	4.00
2½	5.00
3	5.00
4	6.00
5	9.00
6	10.00

Templates for Drilling and Special Facing Dimensions, see page 438.
Extra Prices for Special Facing, Spot Facing, Bolt Holes and Bolting on, page 195.

Hy-Tech Products
ORDER BY FIGURE NUMBERS

INDICATOR POSTS

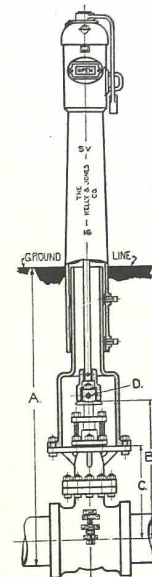


Fig. 481A Indicator Post

Price, Indicator Post only	each	40.00
“ Wrenches for Top Nut	“	1.00

This Post indicates whether the Valve in the main is open or shut, and can be used in connection with any make of Valve.
The wrench attached to top serves as a lock and prevents tampering with the Post when the Valve has been opened or closed to the position desired, and provision has been made on this Indicator Post for sealing.
In ordering Indicator Posts for The Kelly & Jones make of Valves, the only information we require is the A dimension or bury of Valve. In ordering Indicator Posts for Valves other than our make, it is important that we have the following information: The size of the Valves the Posts are to cover, whether the Valves open to the right or the left, and the number of turns required to open the Valve. Also furnish dimensions for the following: A—Bury of Valve. B—Center of Valve to bottom of square. C—Center of Valve to bottom of Post. D—Size of square on spindle or top nut.
The Indicator is adjustable, and is provided with removable metal frames which carry extra thick glass. The letters are aluminum on a black background.
The price of Indicator Posts does not include the Valve.
The above Indicator Post has been especially designed to meet the specifications and requirements of the Underwriters.

ORDER BY FIGURE NUMBERS

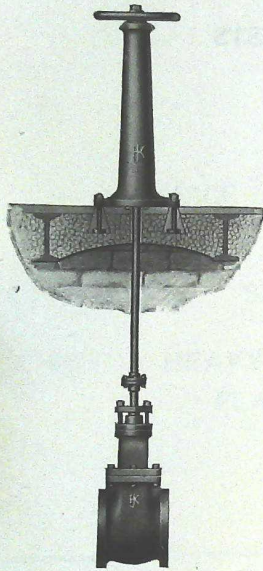


Fig. 481C Without Indicator

FLOOR STANDS

WITH OR WITHOUT INDICATOR ATTACHMENT

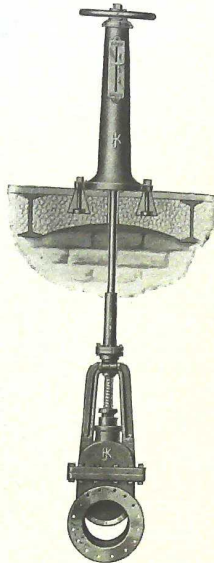


Fig. 481D With Indicator

FLOOR STANDS—Without Indicator

No. 1	Price, Painted Column, Japanned Wheel.....	each	20" High	32" High
No. 2	" Finished Column, Japanned Wheel.....	"	15.00	20.00
No. 3	" Finished Column, Rim and Hub of Wheel Fin., Jap. Spokes..	"	28.00	35.00
			40.00	48.00

FLOOR STANDS—With Indicator

No. 4	Price, Painted Column, Japanned Wheel.....	each	20" High	32" High
No. 5	" Finished Column, Japanned Wheel.....	"	22.00	27.00
No. 6	" Finished Column, Rim and Hub of Wheel Fin., Jap. Spokes..	"	35.00	42.00
			47.00	55.00

Stem is charged at an extra price, according to length of stem and size and style of Valve.
 Floor Stands are generally furnished with a hand wheel to correspond to the size of Valve which they operate; but we can furnish, when required, Geared Stands with single or double hand wheels or crank handles, or Stands for Valves which are placed in an inverted or horizontal position.

When ordering Floor Stands, be particular to give the following information:
 Use numbers for style and finish of Stands.
 When Stand is to be used in connection with Kelly & Jones' Valves, state Catalog No. and size of Valve.

If Indicator is required, give number of turns to right or left to open Valve.
 If an Extension Stem is required, give distance from center of Valve to floor.
 When Stand is to be used in connection with Valves other than our make, give name of Manufacturer, Catalog No., size of Valve, distance from center of Valve to floor level; when Extension Stem is required, distance from center of Valve to top of hand wheel, whether rising or non-rising stem, and number of turns to open, right or left, when required with Indicator.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STANDARD IRON FOOT VALVES
 LEATHER DISC, WITH STRAINERS



Fig. 464 Iron Foot Valve, Screwed, Basket Pattern



Fig. 465 Iron Foot Valve Flanged, Basket Pattern



Fig. 464A Western Pattern Style Sizes 7-inch to 16-inch Style Sizes ¼ to 6-inch Not Illustrated

IRON FOOT VALVES WITH STRAINERS										
Size..... inches	¼	1	1 ¼	1 ½	2	2 ½	3	3 ½	4	4 ½
Price, Screwed, Painted... each	.42	.44	.52	.65	.90	1.30	1.85	2.60	2.80	4.00
" Screwed, Galvanized ..	.60	.60	.75	1.00	1.45	2.00	2.70	3.90	4.25	6.00
" Flanged, Painted ..					1.50	2.10	2.50	3.25	3.60	4.75
" Flanged, Galvanized ..					2.25	3.00	3.50	4.50	5.50	7.25
Diameter of Flanges..... inches					6	7	7 ½	8 ½	9	9 ½

IRON FOOT VALVES—Western Pattern										
Size..... inches	5	6	7	8	10	12	14	15	16	
Price, Screwed, Painted... each	4.25	7.00	16.00	16.00	29.00	58.00	118.00	132.00		
" Screwed, Galvanized ..	6.50	10.00	30.00	30.00	50.00	90.00	150.00	160.00		
" Flanged, Painted ..	5.00	8.00	17.00	17.00	30.00	60.00	120.00	135.00	145.00	
" Flanged, Galvanized ..	7.50	12.00	32.00	32.00	52.00	95.00	155.00	165.00	180.00	
Diameter of Flanges..... inches	10	11	12 ½	13 ½	16	19	21	22 ½	23 ½	

Fig. 464A IRON FOOT VALVES—Western Pattern

Size.. inches	¼	1	1 ¼	1 ½	2	2 ½	3	3 ½	4	4 ½	5	6	7	8	10	12
Price, Sed. Ptd. ea.	1.15	1.30	1.40	1.90	2.40	3.30	3.90	5.60	7.30	10.50	11.25	14.75	35.00	41.00	64.00	100.00
" Sed. Galv. ea.	1.75	2.00	2.10	2.85	3.60	5.00	5.75	8.50	11.00	15.75	16.75	22.00	53.00	62.00	110.00	155.00
" Fig. Ptd. ea.				3.50	4.50	5.75	7.50	9.50	13.00	14.00	17.50	38.00	45.00	70.00	112.00	
" Fig. Galv. ea.				5.50	7.00	9.00	12.00	15.00	20.00	22.00	29.00	62.00	72.00	120.00	170.00	

RETENTION VALVES

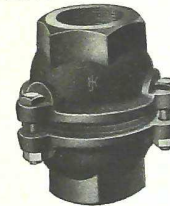


Fig. 465D

Size.. inches	¼	1	1 ¼	1 ½	2	2 ½	3	3 ½	4	4 ½	5	6	7	8	10	12
Price, Sed. Ptd. ea.	.70	.70	.75	1.00	1.30	1.85	2.60	3.80	4.20	6.10	6.60	9.00	24.00	24.00	43.50	87.00
" Sed. Galv. ea.	1.10	1.10	1.15	1.60	2.20	3.00	4.10	5.80	6.38	9.00	9.80	16.00	45.00	45.00	75.00	135.00
" Figd., Ptd. ea.				2.50	3.15	3.40	4.60	5.50	7.20	7.60	12.20	24.80	24.80	45.00	92.00	
" Galv. ea.				3.40	4.20	4.35	6.80	8.30	10.95	11.40	18.50	49.60	49.60	78.00	144.00	

Sizes not listed above furnished at special prices.
 Brass Foot Valves furnished from Cast Iron Patterns, when so desired, at special net prices.
 Fig. 464 and Fig. 465—7 inch and up furnished with brass disc and brass seat at special prices.

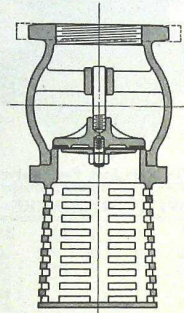
ORDER BY FIGURE NUMBERS

FOOT VALVES AND STRAINERS

LEATHER DISC LONG PATTERN



Fig. 465A
Iron Body Foot Valve



Sectional View



Fig. 465C
Brass Foot Valve

IRON BODY FOOT VALVES—Screwed. With Strainers

Size.....inches	¾	1	1¼	1½	2	2½	3	3½
Price, Painted.....each	1.15	1.30	1.40	1.90	2.40	3.30	3.90	5.60
Galvanized.....each	1.75	1.95	2.10	2.85	3.60	4.95	5.85	8.40

Size.....inches	4	4½	5	6	7	8	10
Price, Painted.....each	7.30	10.50	11.25	14.75	35.00	41.00	64.00
Galvanized.....each	10.95	15.75	16.90	22.15	52.50	61.50	96.00

IRON BODY FOOT VALVES—Flanged. With Strainers. Not Illustrated

Size.....inches	2	2½	3	3½	4	4½	5	6	7	8	10
Price, Painted.....each	3.50	4.50	5.75	7.50	9.50	13.00	14.00	17.50	39.00	45.00	70.00
Galvanized.....each	5.25	6.75	8.65	11.25	14.25	19.50	21.00	26.25	58.00	67.50	105.00
Diameter of Flanges...in.	6	7	7½	8½	9	9¼	10	11	12½	13½	16

BRASS FOOT VALVES—Screwed. With Strainers

Size...inches	½	¾	1	1¼	1½	2	2½	3	3½	4
Price.....each	1.50	1.50	2.00	2.75	3.75	5.50	12.00	16.00	30.00	35.00

CAST IRON STRAINERS—Screwed
Male or Female Thread

Size.....inches	¾	1	1¼	1½	2	2½	3
Price, Painted.....each	.30	.40	.50	.75	1.00	1.50	2.00
Galvanized.....each	.40	.50	.75	1.00	1.50	2.00	3.00

Size.....inches	3½	4	4½	5	6	8
Price, Painted.....each	3.00	3.75	4.75	4.75	6.50	15.00
Galvanized.....each	4.50	6.00	7.00	7.00	10.00	20.00



Fig. 465B
Iron Strainer
Male or Female Thread

Fig. 465-B furnished with brass disc at special prices.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

IRON BODY ENGINE VALVES



Fig. 466A Engine Valve
Brass Mounted



Fig. 466B Engine Valve
With Yoke

IRON BODY ENGINE VALVES

Size.....inches	2	2½	3	3½	4	4½	5	6
Price, Brass Mounted.....each	7.00	9.00	12.50	15.00	18.50	22.50	31.00	42.00
with Yoke.....each	2½	3½	4½	4½	5	5½	6	6½
Center to Side Opening.....inches	3½	4½	4½	5½	5½	6½	6	7
Center to Face of Flange....."	6	7	7½	8½	9	9½	10	11
Diameter of Flanges....."								

SPECIAL WROUGHT IRON YOKE VALVES

JENKINS OR BRASS DISCS

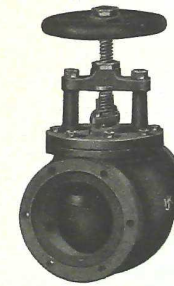


Fig. 466C

Prices on application.

ORDER BY FIGURE NUMBERS

BRASS BUTTERFLY VALVES

For 125 Pounds Working Pressure

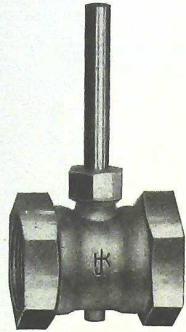


Fig. 316 Brass Butterfly Valve

BRASS BUTTERFLY VALVES

Size.....inches	¾	1	1¼	1½	2	2½	3
Price.....each	3.10	4.40	5.65	6.75	10.00	13.75	21.00

These Valves have steel stems, brass stuffing boxes and discs. They are not guaranteed steam tight.

BRASS THROTTLE VALVES

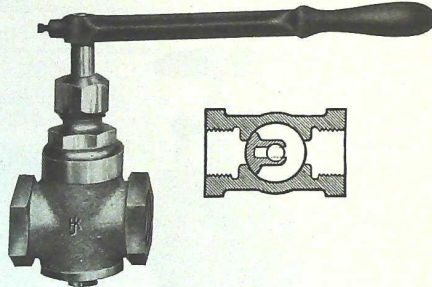


Fig. 315 Brass Throttle Valve

BRASS THROTTLE VALVES

Size.....inches	¾	1	1¼	1½	2	2½
Price.....each	10.00	11.50	14.00	20.00	25.00	35.00

These valves are generally used as throttles for hoisting and traction engines, saw mills, etc.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

IRON BODY BUTTERFLY VALVES

For 125 Pounds Working Pressure

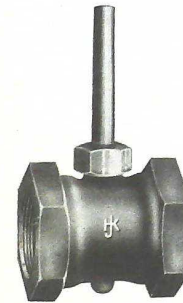


Fig. 463 Iron Body Butterfly Valve

IRON BODY BUTTERFLY VALVES

Size.....inches	2	2½	3	3½	4	5	6	8	10	12	14	16
Price, Screwed.....each	8.00	9.50	12.00	16.00	18.50	28.50	42.50					
Price, Flanged....."	9.50	11.50	15.00	19.00	22.00	32.00	47.00	90.00	125.00	160.00	275.00	350.00

These Valves have steel stems, brass stuffing boxes and discs. They are not guaranteed steam tight.

IRON BODY THROTTLE VALVES



Fig. 462 Iron Body Throttle Valve

IRON BODY THROTTLE VALVES

Size.....inches	2	2½	3	3½	4	4½	5	6
Price, Screwed.....each	22.50	30.00	40.00	50.00	60.00	88.00	106.00	120.00
Price, Flanged....."	24.00	32.00	42.50	53.00	64.00	91.00	110.00	125.00

These Valves are generally used as throttles for hoisting and traction engines and saw mills

ORDER BY FIGURE NUMBERS

IRON BODY BLOW-OFF VALVES

It is well known and acknowledged by Engineers and steam users, generally, that the decay, leakage and, in some cases, the entire destruction of Steam Boilers, are caused by defects from corrosion and incrustation; it is also conceded that a considerable portion of the fuel used in generating steam is lost or wasted by reason of the formation of scale by the deposition of sediment. It is, therefore, very important that the deposit of foreign matter should be removed as soon as it is separated from the water by evaporation, and while it is in a soft state, before it has had time to adhere to the boiler. The advantage in a frequent blowing-off also removes the risk and danger of burning the boilers, and also in a more rapid generation of steam and a consequent saving of fuel and the preservation of the boiler; all this is well known to all who have had any experience with steam boilers. The difficulty attending the use of the old style Blow-off Valve is so great that, in many scores of cases, the Engineer never attempts to use it, except when he desires to blow off the entire contents of his boilers and, in cases where they are in use, they are a great annoyance by reason of their becoming choked up with scale and other matter, that it has been found almost impossible to keep them from leaking.

A Simple, Safe and Efficient Blow-off Valve

In order to obviate this risk, loss and annoyance, and to meet the requirements of the progress made in feeding and operating steam boilers, we offer a simple, safe and efficient Blow-off Valve, which can be used as often as may be required, it being impossible to choke or clog it up by reason of its construction, and will, under all conditions, seat itself true and tightly.

To accomplish this, we so construct the Valve that it fits somewhat loosely in chamber, and provide it intermediately with a groove or channel around its central portion opposite the inlet opening. It is, however, requisite that the disc shall fit sufficiently close to prevent pieces of thin scale from entering between it and the inner sides of the casing, but, at the same time, permit the passage of water for the purpose of washing away any solid matter that may have lodged on the seat, so that the disc will seat perfectly. In case a piece of scale should be caught under the disc while passing the inlet opening, and project into the chamber, it will be sheared off between the edge of the descending disc, and will be washed out, as before stated, through the discharge opening, and again, the cylindrical chamber serving as a guide to the loosely fitting disc, we are able to dispense with the usual bridge or guide piece and the lower stem of the Valve.

To secure the passage of a sufficient amount of water while the Valve is closing, we provide it with the aforesaid circumferential groove or channel at a point opposite the inlet orifice. This groove permits the water to pass around the Valve and thus escape downward in equal volumes or with equal force on all sides of the disc.

The Disc Operates with Little Friction

In the construction of this Valve, we not only provide for guiding the disc in its chamber and preventing passage of scale while the Valve is closing, but, at the same time, cause the valve seat to be washed by a descending current, so that the Valve will be properly seated. The disc, likewise, operates with little friction, owing to its being loosely fitted, while it is guided with such accuracy as to cause it to be seated absolutely true. The Valve is properly provided with a shouldered slot to adapt it for attachment to the inverted T-shaped end of the stem.

It is so simple in construction that it can be taken apart in from five to ten seconds. Another important feature is that it never needs "grinding in".

These Blow-off Valves are regularly furnished with Babbit Discs; but, for extremely high pressure, we recommend the Copper Disc.

Hy-Tech Products

IRON BODY BLOW-OFF VALVES

FOR STEAM BOILERS

The accompanying sectional cut gives a clear idea of the construction of these Valves, and the principle upon which they work. The pressure of the water in the boiler always comes upon the top of the Valve, which is a piston fitted to slide within the body and, when it is opened to blow off the boiler, it is impossible for muddy water carrying scale to pass out between the Valve and its seat until it is far enough away from the seat to prevent the cutting of the latter by the grit in the water.

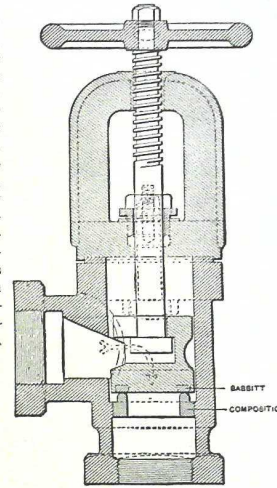


Fig. 467

This is the most satisfactory Valve that has ever been designed for this purpose; and we caution the trade against so-called Blow-off Valves on the market which are nothing but common Angle Valves, and possess none of the features which make our Valve the most popular one ever offered to the trade.

They are designed for the highest boiler pressures.

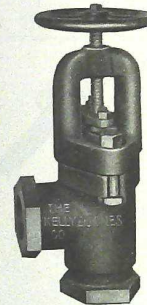


Fig. 467C Angle Blow-off Valve Screwed

ANGLE BLOW-OFF VALVES

Suitable for Boiler Pressures Up to 250 Pounds



Fig. 467D Angle Blow-off Valve Flanged

ANGLE BLOW-OFF VALVES

Size..... inches	1¼	1½	2	2½	3
Price, Screwed or Flanged..... each	12.00	12.00	15.00	20.00	30.00
Center to Inlet or Outlet, Screwed..... inches	3¼	3¼	4½	5¼	6
Center to Inlet or Outlet, Flanged..... "	3½	3½	4½	5¼	6
Diameter of Flanges..... "	5	6	6½	7½	8¼
Extra Discs with White Metal Disc Rings..... each	1.75	1.75	2.15	2.50	3.00
Extra White Metal Disc Rings..... "	.40	.40	.60	.80	1.00
Extra Copper Disc Rings..... "	.50	.50	.75	1.00	1.25

ORDER BY FIGURE NUMBERS

IRON BODY BLOW-OFF VALVES

GLOBE

Suitable for
Boiler Pressures
Up to
250 Pounds

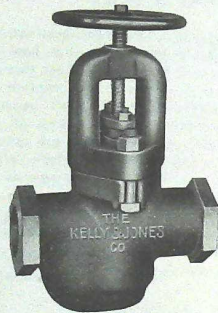


Fig. 467F Screwed

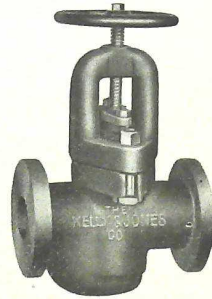


Fig. 467B Flanged

GLOBE BLOW-OFF VALVES

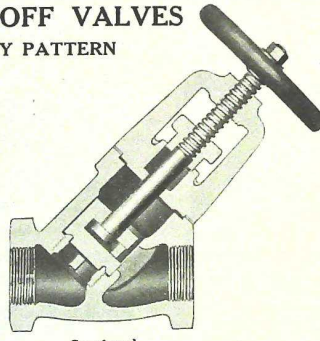
Size..... inches	2	2½	3
Price, Screwed or Flanged..... each	15.00	20.00	30.00
End to End, Screwed..... inches	9¾	11½	13¾
Face to Face, Flanged..... "	9¾	11½	13¾
Diameter of Flanges..... "	6½	7½	8¾

GLOBE BLOW-OFF VALVES

Y PATTERN



Fig. 467A Globe Blow-off Valve



Sectional

GLOBE BLOW-OFF VALVES—Y Pattern

Size..... inches	2	2½	3
Price, Screwed or Flanged..... each	15.00	20.00	30.00
End to End, Screwed..... inches	8	9¾	10½
Face to Face, Flanged..... "	11	12½	13¾
Diameter of Flanges..... "	6½	7½	8¾

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EMPIRE PRESSURE REGULATING VALVES

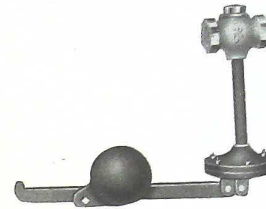


Fig. 467E Brass

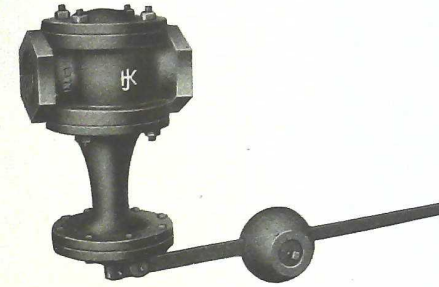


Fig. 925 Iron Body

EMPIRE PRESSURE REGULATING VALVES

Size..... inches	1	1¼	1½	2	2½	3	4
Price, Brass, Screwed..... each	22.00	28.00	35.00	44.00	57.00	72.00	100.00
Iron Body, Scrd. or Flanged..... "	.....	.....	.....	.....	8½	9¼	12¼
End to End, Screwed..... inches	4	4¾	4¾	5¾	8½	9¼	12¼
Face to Face, Flanged..... "	.....	.....	.....	.....	8½	9¼	12¼
Diameter of Flanges..... "	.....	.....	.....	.....	7	7½	9
Size..... inches	5	6	7	8	9	10	12
Price, Iron Body, Scrd. or Flanged, each	135.00	180.00	225.00	275.00	350.00	350.00	470.00
End to End, Screwed..... inches	13	14	14½	15½	17	17½	20
Face to Face, Flanged..... "	13	14	14½	15½	17	17½	20
Diameter of Flanges..... "	10	11	12½	13½	15	16	19

This Valve, as will be observed by the above illustrations, shows a Valve controlled by a lever and weight, and has balanced Valves and a rubber diaphragm attached below the run of pipe. The design of the Valve makes it very sensitive and quick to respond to the slightest changes in the pressures made on the low pressure side. The Valve is entirely void of friction and, with the weight and lever, insures perfect action. These Valves are recommended for reducing steam, air or gas pressures from the initial or high pressure carried—which may be as high as 125 pounds per square inch—down to any pressure on the reduced side less than 15 pounds, and from this point down to 1 pound.

ORDER BY FIGURE NUMBERS

EMPIRE CHRONOMETER GOVERNOR VALVES

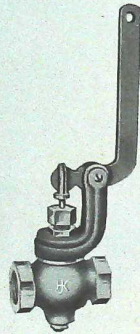


Fig. 923 Brass

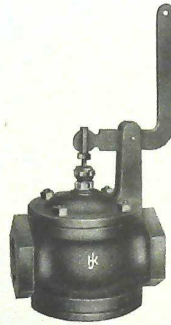


Fig. 923A Iron Body

EMPIRE CHRONOMETER GOVERNOR VALVES

Size.....inches	1	1¼	1½	2	2½	3	4	6
Price, Brass, Screwed.....each	8.00	11.00	15.00	20.00				
Iron Body, Screwed or Flanged.....each					25.00	35.00	60.00	120.00
Face to Face, Screwed.....inches	4	4¾	4¾	5¾	9¾	9¾	12¼	14
Face to Face, Flanged.....inches					9¾	9¾	12¼	14
Diameter of Flanges.....inches					7	7½	9	11

IRON BODY TRANSFER VALVES

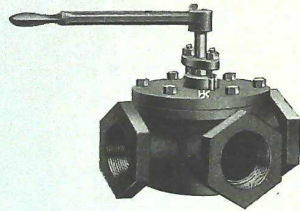


Fig. 461 Iron Body Transfer Valve

IRON BODY TRANSFER VALVES

Size.....inches	1½	2	2½	3	4	5	6	7	8	10	12
Price, Screwed.....each	9.00	11.00	14.00	19.00	30.00	40.50	53.00	63.00	90.00	135.00	
Flanged.....each	11.75	14.00	17.75	24.00	35.50	48.00	60.00	72.00	100.00	150.00	

Template for drilling, see page 136

ORDER BY FIGURE NUMBERS

Hy-Tech Products

VACUUM PRESSURE REGULATING VALVES

IRON BODY

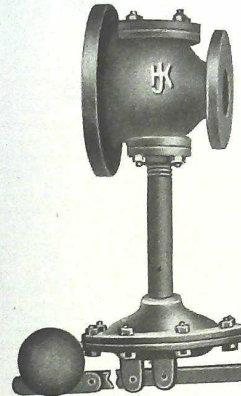


Fig. 461A Vacuum Pressure Regulating Valve Flanged

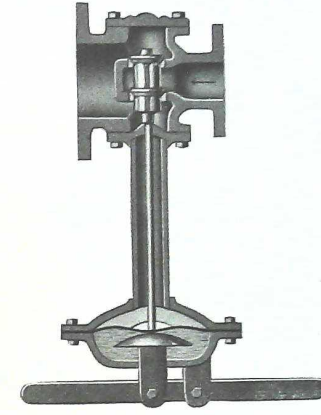


Fig. 461B Sectional Cut

VACUUM PRESSURE REGULATING VALVES

Size.....inches	1½x3	2x4	2½x5	3x6	4x8	5x10	6x12	8x14
Price.....each	35.00	44.00	57.00	72.00	100.00	135.00	180.00	275.00
Face to Face.....inches	6¼	6¾	8¾	8¾	10½	14¼	17	19½

This Valve is especially designed for vacuum systems of heating; for reducing pressures from that carried on boilers to atmosphere or below. The most sensitive and only successful Valve for this purpose on the market.

Unlike other reducing Valves, the controlling pressure does not pass back through the Valve; but the pressure from the low pressure main heating pipe is connected to the independent diaphragm by a small pipe, thus governing the reducing Valve by the low pressure on the system, and making the action of the reducing Valve very sensitive and quick to respond to the varying demands made on the heating system.

When ordering, state size of Valve wanted and service required.

Template for drilling, see page 136.

ORDER BY FIGURE NUMBERS

LOW PRESSURE DAMPER REGULATORS

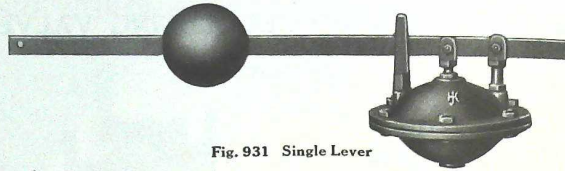


Fig. 931 Single Lever

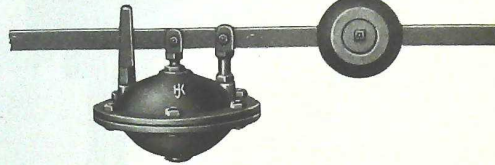


Fig. 931A Double Lever

Price, Single Lever.....each	4.50	Price, Double Lever.....each	5.00
Extra Rubber Diaphragm.....each			.75

CLARK'S HIGH PRESSURE DAMPER REGULATORS

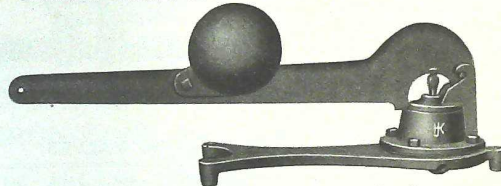


Fig. 932 Clark's High Pressure Damper Regulators

Number	1	2	3
Price.....each	10.00	15.00	25.00
Diaphragms for Clark's Damper Regulator.....NET	.85	.85	1.45

WATER FEEDERS



Fig. 929 Water Feeder

Price.....each	20.00
----------------	-------

For automatically controlling the water level of low pressure heating boilers.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STEAM TRAPS

The Steam Trap we manufacture was invented many years ago by the late Joseph Nason, a distinguished Engineer of New York City.

Among the many useful inventions made by this gentleman, in connection with steam engineering, perhaps none will prove to be a more enduring monument to his genius than this. It was designed to remove from steam pipes, and discharge at atmospheric pressure, the water of condensation, and this it does in a most satisfactory manner. For simplicity, durability and efficiency, it has never been equalled; and it is no exaggeration to say that there are now in use more of them than of all other kinds combined.

GREAT CARE IS EXERCISED IN THEIR MANUFACTURE

We are aware of the fact that attempts are being made to manufacture these Traps by parties who are not in possession of adequate facilities, and are without the experience and knowledge which are necessary to insure first-class workmanship, and for this reason we place upon the cover of every Trap we make our name—The Kelly & Jones Co.—together with our monogram, **KJ** as a guarantee of the following facts: The castings are made in our Foundries, under the supervision of expert Superintendents, from irons selected by chemical analysis for tensile strength; and the finishing is done by expert workmen with tools and machinery designed for the purpose. Every Trap is carefully tested under actual working conditions before leaving our Factory. We invite a comparison with others of the weights and dimensions of our Traps, the cold pressed hexagon nuts of uniform size to fit a common wrench, and their general appearance and finish.

NO WASTE OF STEAM AND NO WIRE DRAWING

In action, the valve of this Trap is held against its seat by the buoyancy of a float to which it is attached, and nothing can pass through until a sufficient quantity of water has accumulated in the float to sink it; then the valve is opened rapidly to its full capacity, and the water is discharged by the pressure of steam upon it, after which, it closes quickly, preventing the escape of steam; and this action is repeated as often as the necessary amount of water accumulates in the float.

It will be seen that this rapid intermittent action not only prevents the waste of steam, but also preserves the valve from the effects of "wire drawing", which occurs in those Traps that depend for their action on the expansion of metals, which is necessarily slow, and soon results in the destruction of the valve.

ABOUT WORKING PRESSURES

We make the bodies of these Traps sufficiently strong for safety under a working pressure of 150 pounds; but when it is desired to use them for pressures exceeding 100 pounds, it is necessary to make a slight change in the valve and, for this reason, we must know when Traps are ordered for pressures higher than this.

CAPACITY

The capacity given in the table is ample for all ordinary conditions; but when pipes are exposed to very unusual drafts of cold air, the condensation is so much more rapid that larger sizes must be employed. The following directions accompany each Trap sent out:

DIRECTIONS FOR SETTING UP AND OPERATING

Set the Trap perfectly level at the lowest point on the system of pipe it is intended to drain. See that the water of condensation enters the Trap at the end marked "inlet", having the opposite end piped to the open air, or into a sewer, where it can discharge the water free from back pressure. See that the valve in the center of the cover is always kept closed, except when it becomes necessary to open it for a few seconds to blow out any sediment which may be lodged in the valve seat. Steam pipes should always be blown out before the Trap is connected, thus removing rust and scales to prevent their passing through the Trap and injuring the valve. If, after long usage, the Trap should leak, the seat can be reground by removing the cover and bucket without disturbing pipe connections. The cover should occasionally be removed and the sediment and dirt, which has lodged inside, cleaned out.

ORDER BY FIGURE NUMBERS

STEAM TRAPS

"NASON" PATTERN



Fig. 933

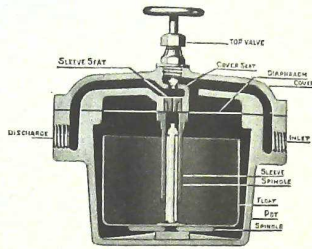


Fig. 933A Sectional View

STEAM TRAPS

Number of Steam Trap.....	1	2	3	4	5
Size of Pipe Connection.....inches	¾	¾	1	1¼	1½
Square Feet of Surface Each Will Drain.....	350	900	1400	2000	3500
Lineal Feet of 1-inch Pipe Will Drain.....	1050	2700	4200	6000	10500
Height to Top of Valve.....inches	11	14	15	18½	22
Diameter Outside of Flanges....."	11	14	15½	18½	24
Weight.....pounds	46	85	115	185	356
Price.....each	16.00	20.00	27.50	42.50	70.00

Nos. 1, 2 and 3 Steam Traps with plain cover, suitable for 100 pounds working pressure.
 Nos. 4 and 5 Steam Traps with hand hole cover, suitable for 150 pounds working pressure.

Hy-Tech Products

ORDER BY FIGURE NUMBERS

IRON COCKS

For 125 Pounds Working Pressure



Fig. 488 Square Head, Screwed



Fig. 488A Flat Head, Screwed



Fig. 488B Square Head, Flanged



Fig. 488C Flat Head, Flanged

IRON COCKS—Screwed

Size.....inches	¾	¾	¾	1	1¼	1½	2	2½	3	3½	4	5	6	8
Price, All Iron.....each	.85	.90	1.05	1.30	1.60	1.95	2.70	4.40	6.75	12.00	15.50	32.00	45.00	100.00
" Iron, Brass Washer.....	.95	1.00	1.20	1.55	1.95	2.35	3.20	5.15	7.75	14.00	19.00	38.00	53.00	110.00
" Iron, Brass Plug.....	1.25	1.30	1.60	1.90	2.65	3.75	5.25	8.75	13.00	27.50	36.50	67.00	94.00	200.00
" Iron, Br. Plg. & Wsr.....	1.35	1.40	1.75	2.15	3.00	4.15	5.75	9.50	14.00	29.50	40.00	73.00	102.00	210.00
End to End.....inches	2¼	2½	3¼	3¾	4¾	5¾	6¾	8¾	8¾	10	11½	13	16¾	

IRON COCKS—Flanged

Size.....inches	¾	¾	1	1¼	1½	2	2½	3	3½	4	5	6	8
Price, All Iron.....each	1.85	2.00	2.25	2.75	3.25	4.25	6.25	9.50	15.00	19.00	36.00	50.00	110.00
" Iron with Br. Wshr.....	1.95	2.15	2.50	3.10	3.65	4.75	7.00	10.50	17.00	22.50	42.00	58.00	120.00
" Iron with Brs. Plug.....	2.25	2.65	3.00	3.75	5.00	7.00	10.50	15.75	30.00	40.00	70.00	100.00	210.00
" Iron with Br. Plg. & Wsr.....	2.35	2.75	3.25	4.10	5.40	7.50	11.25	16.75	32.00	43.50	76.00	108.00	220.00
Face to Face.....inches	3¾	3¾	4	4¼	5	6¼	7¾	8¾	10	11	12½	13¾	17¾
Diameter of Flanges....."	3	3¾	4	4¾	5	6	7	7½	8½	9	10	11	13½

EXTRA HEAVY IRON COCKS—Screwed. Not Illustrated

Size.....inches	¾	¾	1	1¼	1½	2	2½	3	3½	4	5	6
Price, All Iron.....each	1.15	1.25	1.75	2.10	2.80	3.65	6.50	9.00	16.75	22.50	45.00	62.00
" Iron, Brass Washer.....	1.25	1.40	2.00	2.45	3.20	4.15	7.25	10.00	18.75	25.00	51.00	70.00
" Iron, Brass Plug.....	1.70	2.25	2.80	3.85	5.60	7.00	13.25	19.00	42.00	56.00	98.00	133.00
" Iron, Brass Plg. & Wshr.....	1.80	2.40	3.05	4.20	6.00	7.50	14.00	20.00	44.00	59.50	104.00	141.00

Galvanized Iron Cocks, add 50 per cent. to Standard list.
 Iron Cocks, when used for water or steam, should have brass plugs.
 Standard template for drilling, page 136. Extra Heavy template, page 169

ORDER BY FIGURE NUMBERS



Fig. 489 Square Head, Screwed

**THREE-WAY
IRON COCKS**

For 125 Pounds
Working Pressure



Fig. 489A Flat Head, Screwed

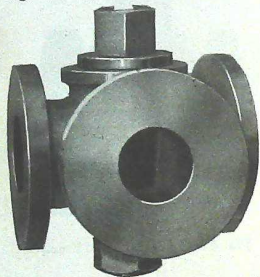


Fig. 489B Square Head, Flanged

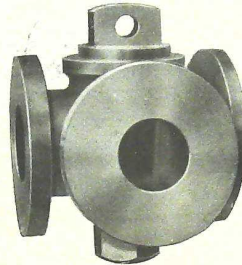


Fig. 489C Flat Head, Flanged

THREE-WAY IRON COCKS—Screwed

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8	
Price, All Iron.....each	1.50	1.65	1.80	2.05	2.25	2.65	3.65	5.35	7.50	14.00	19.00	36.50	52.00	110.00
" Iron, Brass Washer....."	1.60	1.80	2.05	2.40	3.05	4.15	6.10	8.50	16.00	22.50	42.50	60.00	120.00	
" Iron, Brass Plug....."	1.90	2.20	2.40	3.10	4.50	6.25	9.75	13.75	30.00	40.00	71.50	100.00	210.00	
" Iron, Br. Plug & War....."	2.00	2.35	2.65	3.45	4.90	6.75	10.50	14.75	32.00	43.50	77.50	108.00	220.00	
End to End.....inches	2 1/2	3 1/4	3 3/4	4 1/2	4 3/4	5 1/2	6 1/2	8 1/2	8 1/2	10	11 1/2	13	16 1/2	
Center to End of Outlet.....inches	1 1/4	1 1/2	1 1/2	1 1/2	1 1/2	2 1/4	2 3/4	3	3 1/2	3 3/4	4 1/4	4 1/2	6 1/2	

THREE-WAY IRON COCKS—Flanged

Size.....inches	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6	8
Price, All Iron.....each	3.30	3.50	3.75	4.25	5.25	7.00	9.00	12.75	20.00	26.00	44.00	60.00	125.00
" Iron, Brass Washer....."	3.40	3.65	4.00	4.60	5.65	7.50	9.75	13.75	22.00	29.50	50.00	68.00	135.00
" Iron, Brass Plug....."	3.70	4.05	4.50	5.25	7.00	9.50	13.25	19.00	36.00	47.00	80.00	108.00	225.00
" Iron, Br. Plug & War....."	3.80	4.20	4.75	5.60	7.40	10.00	14.00	20.00	38.00	50.50	86.00	116.00	235.00
Face to Face.....inches	4 1/4	4 1/2	5 1/2	6	6 1/2	7 1/2	9	9 1/2	10 3/4	11 1/2	12 1/2	13 1/2	17 1/2
Center to Face of Outlet.....inches	2 1/2	2 3/4	2 3/4	3	3 1/4	3 1/2	4 1/2	4 1/2	5 1/2	5 1/2	6 1/2	6 1/2	8 1/2
Diameter of Flanges....."	3	3 1/2	4	4 1/2	5	6	7	7 1/2	8 1/2	9	10	11	13 1/2

EXTRA HEAVY THREE-WAY IRON COCKS—Screwed. Not Illustrated

Size.....inches	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Price, All Iron.....each	1.90	2.50	2.80	3.90	5.60	8.40	12.00	21.00	28.00	56.00	77.00
" Iron, Brass Washer....."	1.95	2.75	3.15	4.30	6.10	9.15	13.00	23.00	31.50	62.00	85.00
" Iron, Brass Plug....."	2.80	3.50	4.50	6.75	9.25	15.50	22.00	46.00	62.00	107.00	146.00
" Iron, Brass Plug & Washer....."	2.95	3.75	4.85	7.15	9.75	16.25	23.00	48.00	65.00	113.00	154.00

Standard template for drilling, page 36. Extra heavy template, page 169.

ORDER BY FIGURE NUMBERS

SPECIAL MINE COCKS

FOR COMPRESSED AIR LINES

IRON BODY

STEEL SPRING

BRASS PLUG

For 125 Pounds Steam or Air Pressure

— OR —

For 175 Pounds Cold Water Pressure

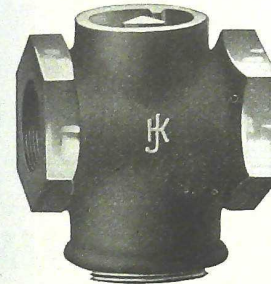


Fig. 321D
Lock Shield, Triangular Head

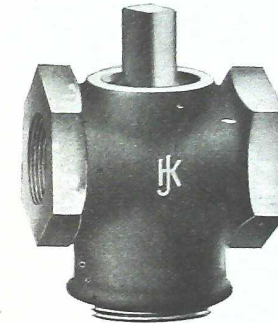


Fig. 321H
Exposed Square Head

SPECIAL MINE COCKS

Size.....inches	3/4	1	1 1/4	1 1/2	2
Price, Lock Shield, Triangular Head Cock.....each	2.40	2.40	2.65	4.00	6.65
" Exposed Square Head Cock....."	2.40	2.40	2.65	4.00	6.65
" Key Wrench, Either Triangular or Square....."	.20	.20	.25	.40	.65

The triangular shape of the head of the key in the Lock Shield style Cock is a safeguard against tampering with the air when the pressure is on the line; and it will be found a very convenient Cock for use in mines under high pressure service.

The spring automatically takes up wear and thereby makes a tight Cock at all times.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

IRON COCKS

WITH SPECIAL SPRING PLUG
For 100 Pounds Working Pressure



Fig. 489D

IRON COCKS—SPECIAL SPRING PLUG

Size..... inches	½	¾	1	1¼	1½	2	2½	3
Price, Iron Body, Brass Plug and Spring, Without Handle..... each	1.40	1.95	2.45	3.75	6.65	10.55	23.00	36.50
Price, Iron Body, Brass Plug and Spring, with Handle Riveted on..... each	1.65	2.25	2.85	4.40	7.55	11.65	25.00	38.00
Price, All Iron, Without Handle.....	.80	1.20	1.95	2.65	4.85	7.15	15.00	22.35
Price, All Iron, Handle Riveted on.....	1.05	1.50	2.40	3.30	5.85	8.25	16.00	23.85
.. All Brass, Without Handle.....	..	..	..	3.00	6.35	..	..	..
.. All Brass, with Handle Riveted on.....	..	..	..	3.30	6.75	..	..	..
Handles.....	.07	.09	.14	.25	.44	.56	.80	1.00

This style Cock is equipped with an inverted plug with a spring at the bottom. The spring presses against the plug and insures a perfect seat at all times.
These Cocks are designed for use in connection with Compressed Air, Steam, Water and Alkaline Service; for the latter, we would recommend the All Iron Cocks.
Unless otherwise ordered, we furnish these Cocks with handle riveted on.

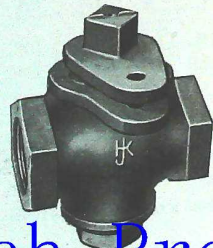


Fig. 489E

IRON COCKS

WITH LOCK

Any style of our regular Iron Cocks, Screwed or Flanged, can be furnished with Lock, if desired.

Prices on application.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

IRON BODY EXPANSION JOINTS

BRASS SLEEVE

For 125 Pounds Working Pressure

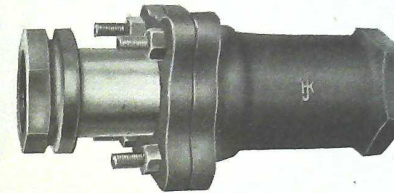


Fig. 459 Iron Body Expansion Joint, Screwed

EASTERN (6-INCH) TRAVERSE—Screwed

Size..... inches	2	2½	3	3½	4	4½	5
Price..... each	11.00	13.00	17.50	25.00	30.00	40.00	45.00
End to End when Closed..... inches	12½	13%	14	14%	14½	15%	15%

Size..... inches	6	7	8	9	10	12
Price..... each	55.00	70.00	100.00	110.00	160.00	225.00
End to End when Closed..... inches	16%	17%	18%	19%	20%	21%

WESTERN TRAVERSE—Screwed

Size..... inches	2	2½	3	3½	4	4½	5
Price..... each	7.00	8.00	10.00	14.00	18.00	30.00	38.00
Traverse..... inches	2½	2½	2¾	3	3¼	3½	4
End to End when Closed.....	9½	9%	10¾	11%	12%	12%	13%

Size..... inches	6	7	8	9	10	12
Price..... each	45.00	70.00	100.00	110.00	160.00	225.00
Traverse..... inches	5	6	7	7	8	8
End to End when Closed.....	15%	17%	19%	20%	21%	23%

SPECIAL TRAVERSE—Screwed

Traverse	Size.. inches	2	2½	3	3½	4	5	6	7	8
10 inches.....	Price..... each	16.00	19.00	25.00	35.00	42.00	62.00	80.00	100.00	140.00
12	18.50	22.00	29.00	40.00	48.00	70.00	92.50	115.00	160.00
14	21.00	25.00	33.00	45.00	54.00	78.00	105.00	130.00	180.00
16	23.50	28.00	37.00	50.00	60.00	86.00	117.50	145.00	200.00
18	26.00	31.00	41.00	55.00	66.00	94.00	130.00	160.00	220.00

The expansion will average about 1 inch in 50 feet of pipe

ORDER BY FIGURE NUMBERS

IRON BODY EXPANSION JOINTS

BRASS SLEEVE

For 125 Pounds Working Pressure



Fig. 460 Iron Body Expansion Joint, Flanged
EASTERN (6-INCH) TRAVERSE—Flanged

Size.....inches	2	2½	3	3½	4	4½	5	6	7	8
Face to Face when Closed.....inches	12¾	12½	13¾	13½	14¾	14½	15¾	15½	16¾	17½
Diameter of Flanges.....inches	6	7	7½	8½	9	9½	10	11	12½	13¾
Price.....each	18.00	20.00	25.00	35.00	40.00	50.00	55.00	65.00	80.00	110.00

Size.....inches	9	10	12	14	16	18	20	24	30
Face to Face when Closed.....inches	18¾	19	20¾	21½	23¾	24	26¾	32¼	35
Diameter of Flanges.....inches	15	16	19	21	23½	25	27½	32	38¾
Price.....each	120.00	175.00	250.00	385.00	450.00	550.00	700.00	1000.00	1600.00

WESTERN TRAVERSE—Flanged

Size.....inches	2	2½	3	3½	4	4½	5	6
Traverse.....inches	2½	2½	2¾	3	3¼	3½	4	5
Face to Face when Closed.....inches	8¾	9¾	9½	10½	11½	12	12¾	14¾
Diameter of Flanges.....inches	6	7	7½	8½	9	9½	10	11
Price.....each	15.00	16.00	18.50	25.00	30.00	40.00	48.00	55.00

Size.....inches	7	8	9	10	12	14	15	16
Traverse.....inches	6	7	7	7	8	10	10	10
Face to Face when Closed.....inches	16¾	18¾	19¾	20	22¾	25¾	27¾	27¾
Diameter of Flanges.....inches	12½	13½	15	16	19	21	22½	23½
Price.....each	80.00	110.00	120.00	175.00	250.00	500.00	550.00	600.00

SPECIAL TRAVERSE—Flanged

Traverse	Size..inches	2	2½	3	3½	4	5	6	7	8
10 inches	Price.....each	23.00	26.00	32.50	45.00	52.00	72.00	90.00	112.00	150.00
12 "	"	25.50	29.00	36.50	50.00	58.00	80.00	102.50	127.00	170.00
14 "	"	28.00	32.00	40.50	55.00	64.00	88.00	115.00	142.00	190.00
16 "	"	30.50	35.00	44.50	60.00	70.00	96.00	127.50	157.00	210.00
18 "	"	33.00	38.00	48.50	65.00	76.00	104.00	140.00	172.00	230.00

Traverse	Size..inches	10	12	14	16	18	20	24	30
10 inches	Price.....each	225.00	300.00	500.00	600.00	750.00	925.00	1300.00	2100.00
12 "	"	253.00	345.00	560.00	675.00	850.00	1050.00	1475.00	2350.00
14 "	"	285.00	390.00	620.00	750.00	950.00	1175.00	1650.00	2600.00
16 "	"	315.00	435.00	680.00	825.00	1050.00	1300.00	1825.00	2850.00
18 "	"	350.00	480.00	740.00	900.00	1150.00	1425.00	2000.00	3100.00

The expansion will average about 1 inch in 10 feet of pipe.
For further particulars as to dimensions and temple, see page 136.

ORDER BY FIGURE NUMBERS

DOUBLE EXPANSION JOINTS

IRON BODY

BRASS SLEEVE

For 125 Pounds Working Pressure



Fig. 460D

Anchorage Saddle Base, Screwed or Flanged
Furnished With or Without Lateral Service Branch

Size.....inches	2	2½	3	3½	4	4½	5	6
Price, Scrd. or Flgd. without Service Br., each	32.50	37.50	42.50	55.00	70.00	85.00	100.00	120.00
Scrd. or Flgd. with Service Branch "	35.00	40.00	45.00	60.00	75.00	90.00	105.00	130.00
Traverse on each Sleeve.....inches	4	4	4	4	4	4	4	4
Service Opening.....inches	2	2	2	2	2½	2½	3	3
End to End, Open, Screwed....."	28	28½	29½	30¾	31¾	32	32½	34
Face to Face, Open, Flanged....."	28	28½	29½	30¾	31¾	32	32½	34
Diameter of Flanges.....inches	6	7	7½	8½	9	9½	10	11

Size.....inches	7	8	9	10	12	14	15	16
Price, Scrd. or Flgd. without Service Br., each	155.00	190.00	240.00	290.00	390.00	575.00	675.00	775.00
Scrd. or Flgd. with Service Branch "	165.00	200.00	250.00	300.00	400.00	600.00	700.00	800.00
Traverse on each Sleeve.....inches	4	4	4	4	4½	4½	5	5
Service Opening.....inches	4	4	4	4	4½	4½	5	5
End to End, Open, Screwed....."	36¼	37¾	39¾	39¾	43	45	46¼	48¼
Face to Face, Open, Flanged....."	36¼	37¾	39¾	39¾	43	45	46¼	48¼
Diameter of Flanges.....inches	12½	13½	15	16	19	21	22¼	23½

These Double Expansion Joints are suitable for most any purpose where a lengthy Traverse is desired; but are designed especially for underground work. Are made of the same general proportions as the Standard Expansion Joints shown on preceding pages.

The Lateral Service Branch is located as far as possible above the center line, which construction permits dry steam to be taken from the main.

In ordering, be particular to state whether Screwed or Flanged Ends, Regular or Special Traverse is desired.

We have patterns for above sizes with 6-inch Traverse on each sleeve. Prices on application.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY EXPANSION JOINTS

IRON BODY BRASS SLEEVE WITH TIE RODS

For 250 Pounds Working Pressure

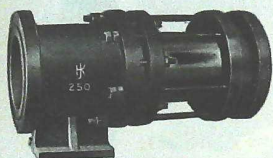


Fig. 460A With Anchor Base



Fig. 460A

SCREWED—Not Illustrated

Size.....inches	2	2½	3	3½	4	5	6	7	8	9	10	12
Traverse.....inches	2½	2½	2¾	3	3¼	4	5	6	7	7	7	8
Price.....each	30.00	40.00	50.00	60.00	70.00	80.00	100.00	120.00	145.00	190.00	240.00	290.00
End to End, Closed, inches	12¾	13¾	14¾	15	15½	17½	19½	21½	23¾	24¾	25¾	26½

FLANGED

Size.....inches	2	2½	3	3½	4	5	6	7
Traverse.....inches	2½	2½	2¾	3	3¼	4	5	6
Diameter of Flanges.....	6½	7½	8¼	9	10	11	12½	14
Price.....each	35.00	45.00	55.00	65.00	75.00	85.00	105.00	125.00
End to End, Closed.....inches	13	13½	14¾	15½	16¾	18¾	20¾	22½
Size.....inches	8	9	10	12	14	15	16	18
Traverse.....inches	7	7	7	8	10	10	10	10
Diameter of Flanges.....	15	16¼	17½	20¼	23	24½	25½	28
Price.....each	150.00	200.00	250.00	300.00	500.00	500.00	750.00	1000.00
End to End, Closed.....inches	24¼	24¾	26¾	29½	33	33½	35	36¾

The expansion will average about 1 inch in 50 feet of pipe.

Template for drilling, page 169.

Prices of Expansion Joints with Anchor Base furnished on Application.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

EXTRA HEAVY CAST STEEL EXPANSION JOINTS

WITH TIE RODS

For Superheated Steam up to 350 Pounds Working Pressure, and a Total Temperature of 800 Degrees

FOR HIGH PRESSURE WATER LINES FROM 500 TO 1000 POUNDS WORKING PRESSURE

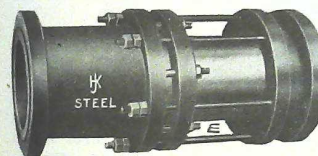


Fig. 1208

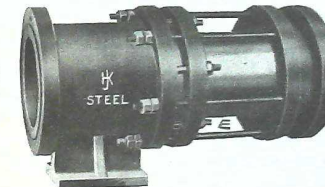


Fig. 1208A

Size.....inches	4	5	6	8	10	12
Construction A—Cast Steel Body, Gland, Spool and Sleeve, Body Bushed with Monel, for Steam Working Pressures up to 350 Pounds, and for Superheat Temperature up to a total of 800 degrees.....	150.00	175.00	200.00	250.00	325.00	400.00
Construction B—Cast Steel Body, Gland and Spool, special Brass Sleeve, suitable for Water Working Pressures from 500 to 1000 lbs., according to size: 4", 1000 lbs.; 6 to 8", 800 lbs.; 10 & 12", 500 lbs.....	90.00	110.00	135.00	200.00	275.00	325.00
Traverse.....inches	3¼	4	5	7	7	8
Face to Face, Flanged, opened.....	19½	22¾	25¾	31½	33¾	37½
Diameter of Flanges.....	10	11	12½	15	17½	20½

Expansion Joints for High Pressure Water Lines have Male Face on Flanges, for which an extra price is charged. See page 207. For Dimensions of Flanges, see page 204.

Special price charged for these Expansion Joints made with longer Traverse than above.

Templates for Drilling, page 205. Price List for Drilling, page 206.

Price of Expansion Joints with Anchor Base furnished on Application.

ORDER BY FIGURE NUMBERS

THE SIMPLEX EXPANSION JOINT

(PATENT APPLIED FOR)

The Simplex Expansion Joint is all that its name implies, and enables the Jobber, by carrying a variety of sizes in stock, to furnish an Expansion Joint of any desired length traverse, by simply cutting pipe and tubing the length required.

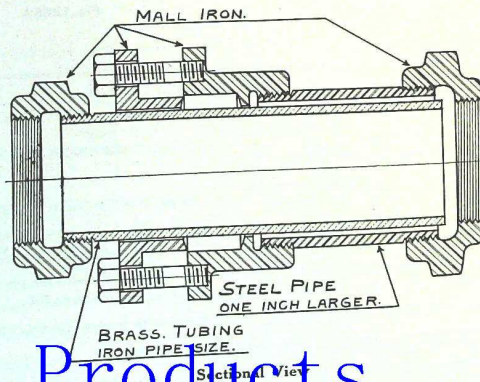
The Body is Steel Pipe. The Sleeve is Brass Tubing, iron pipe size, and the Heads and Packing Glands are made of Malleable Iron.

The steel pipe for the body, in all cases, is 1 inch larger than the size of Expansion Joint, with the exception of the 4½-inch size, for which the steel pipe is 1½ inches larger.

An advantage of great importance over the old style Expansion Joint is the simple manner by which any traverse Expansion Joint can be made by unscrewing the heads and cutting pipe and tubing any desired length.

The malleable heads are easily removed, and are made in sizes from 2 inches to 8 inches, inclusive.

When a Flanged Expansion Joint is desired, remove the screwed heads and substitute, on the brass sleeve, a regular Cast Iron Companion Flange, and on the body end, a Special Flange with standard drilling. A variety of sizes of this Special Flange should be carried in stock in connection with the Simplex Expansion Joint.



ORDER BY FIGURE NUMBERS

“SIMPLEX” EXPANSION JOINTS

WROUGHT IRON

BRASS SLEEVE

6-INCH TRAVERSE

For 150 Pounds Working Pressure

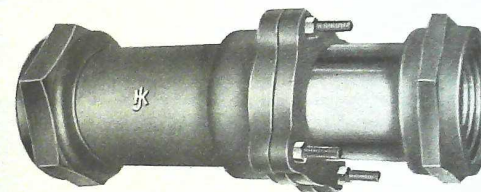


Fig. 460B

“SIMPLEX” EXPANSION JOINTS—Screwed

Size..... inches	2	2½	3	3½	4	4½	5	6	7	8
Price..... each	11.00	13.00	17.50	25.00	30.00	40.00	45.00	55.00	70.00	100.00
End to End when Closed, inches	16½	16½	17½	17½	17½	18½	19½	20½	20½	

“SIMPLEX” EXPANSION JOINTS—Flanged. Not Illustrated

Size..... inches	2	2½	3	3½	4	4½	5	6	7	8
Price..... each	18.00	20.00	25.00	35.00	40.00	50.00	55.00	65.00	80.00	110.00
Face to Face, Closed..... inches	13½	13½	14	14½	14½	14½	15½	15½	15½	15½
Diameter of Flanges.....	6	7	7½	8½	9	9½	10	11	12½	13½

The expansion will average about 1 inch in 50 feet of pipe.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

On the following pages we present a line of

ENGINE AND BOILER TRIMMINGS

Perfect of detail and correct in design.

In the manufacture of this material, absolute accuracy has been our object and, in order to attain this, all raw material used has been rigorously inspected, and the making, from foundries to finishing rooms, has been handled by experts working with "up-to-the-minute" equipment.

We call your special attention to the new style Tee and Lever Handles used on our Air, Cylinder and Steam Gauge Cocks and Water Gauges.

These handles were designed for attractiveness, and we feel confident that they will meet with the approval of the trade.

Our stock of all the Engineering Specialties illustrated is very complete, and prices are in keeping with the quality of the product.

Hy-Tech Products

AIR COCKS

No. 1

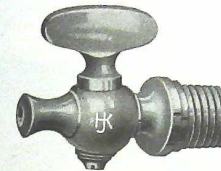


Fig. 273 Single Thread, Tee Handle

No. 2

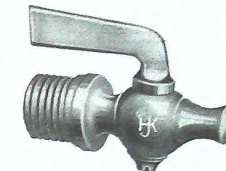


Fig. 275 Single Thread, Lever Handle

Single Thread Air Cocks, sizes 1/4-inch and 1/2-inch, are made with round shoulder. Sizes 3/8-inch and 1/2-inch have the hexagon shoulder.

No. 3

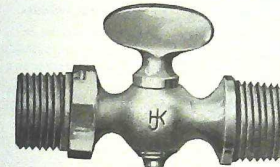


Fig. 274 Double Thread, Tee Handle

No. 4

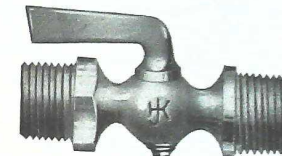


Fig. 276 Double Thread, Lever Handle

No. 5

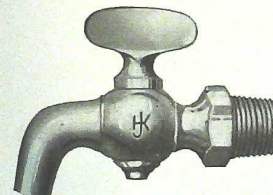


Fig. 277 Bibb Air Cock, Tee Handle

No. 6

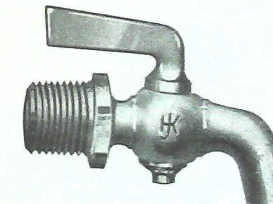


Fig. 278 Bibb Air Cock, Lever Handle

TEE AND LEVER HANDLE AIR COCKS

Size	inches	1/8	1/4	3/8	1/2
No. 1—Price, Tee Handle, Single Thread	each	.40	.45	.50	.60
No. 2 " " Lever Handle, Single Thread	"	.55	.60	.65	.75
No. 3 " " Tee Handle, Double Thread, Male	"	.55	.65	.75	.90
No. 4 " " Lever Handle, Double Thread, Male	"	.70	.80	.90	1.05
No. 5 " " Tee Handle, Bibb Nozzle	"	.70	.80	.90	1.00
No. 6 " " Lever Handle, Bibb Nozzle	"	.85	.95	1.05	1.15

ORDER BY FIGURE NUMBERS

CYLINDER COCKS

DOUBLE THREAD

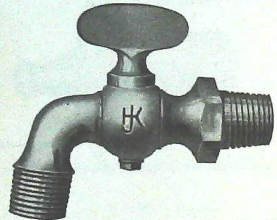


Fig. 278A Double Thread, Tee Handle

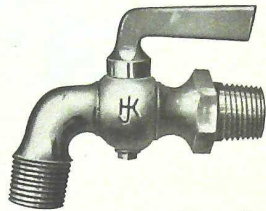


Fig. 278B Double Thread, Lever Handle

CYLINDER COCKS

Size..... inches	3/8	1/2	3/4	1
Price, Tee Handle.....each	.80	1.00	1.10	1.35
Price, Lever Handle.....each	.95	1.15	1.25	1.50

STEAM GAUGE COCKS

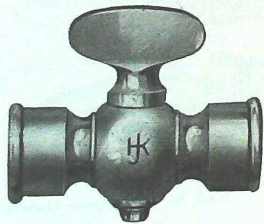


Fig. 279 Female

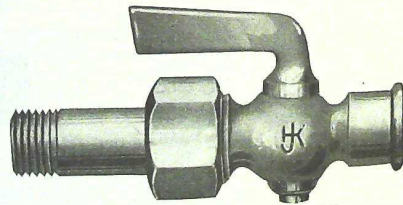


Fig. 279A Lever Handle, with Union

STEAM GAUGE COCKS

Size..... inches	1/4
Price, Female.....each	.75
Price, Lever Handle, with Union.....each	1.90

ORDER BY FIGURE NUMBERS

Hy-Tech Products

COMPRESSION GAUGE COCKS

WOOD WHEELS

No. 1

No. 2

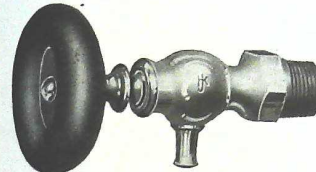


Fig. 280 Without Stuffing Box

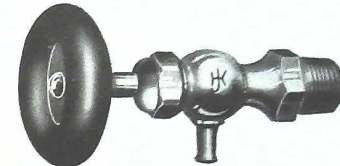


Fig. 281 With Stuffing Box

COMPRESSION GAUGE COCKS

Size..... inches	3/8	1/2	3/4
No. 1—Price, Without Stuffing Box.....each	.95	1.00	1.25
No. 2—Price, With Stuffing Box.....each	1.20	1.30	1.45

WEIGHTED GAUGE COCKS

“REGISTER” PATTERN

For 100 Pounds Working Pressure



Fig. 285 Weighted Gauge Cock

WEIGHTED GAUGE COCKS

Size..... inches	3/8	1/2	3/4
Price, with Iron Ball.....each	1.00	1.00	1.00
Price, with Brass Ball.....each	1.75	1.75	1.75

ORDER BY FIGURE NUMBERS

LUBRICATORS



Fig. 294 Plain Lubricator

PLAIN LUBRICATORS

Diameter of Body..... inches	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	3
Threaded for Iron Pipe..... inches	3/8	3/8	3/8	1/2	1/2	1/2	1/2	3/4
Price..... each	2.00	2.20	2.40	2.60	2.90	3.25	3.75	4.75



Fig. 291 Plain Pattern

OIL CUPS

PLAIN AND LOCOMOTIVE PATTERNS

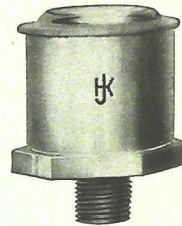


Fig. 292 Locomotive Pattern

PLAIN OIL CUPS

Diameter of Body..... inches	3/8	3/4	7/8	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3
Threaded for Iron Pipe..... inches	1/8	1/8	1/8	1/4	1/4	1/4	3/8	3/8	1/2	1/2	3/4	3/4
Price..... each	.25	.30	.35	.40	.50	.60	.90	1.25	1.75	2.25	2.75	3.50

LOCOMOTIVE OIL CUPS

Diameter of Body..... inches	1	1 1/4	1 1/2	2
Threaded for Iron Pipe..... inches	1/2	3/4	3/4	1
Price..... each	.60	.95	1.25	2.50

ORDER BY FIGURE NUMBERS

Hy-Tech Products

THE "WESTMORELAND" SIGHT FEED LUBRICATOR

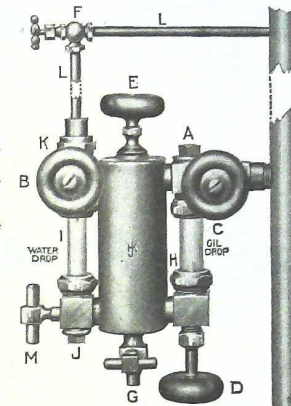


Fig. 304 "Westmoreland"

- A—Plug for inserting and cleaning glass.
- B—Valve regulating Water Drop.
- C—Steam Valve.
- D—Valve to regulate Oil Feed.
- E—Filling Plug.
- F—Condenser Valve.

- G—Drain Cock.
- H—Sight Feed Glass.
- I—Oil Gauge Glass, also the Water Drop Feed.
- J—Plug for Inserter Glass.
- K—Connecting Union.
- L—Condensing Pipe, 1/4-inch.
- M—Drain Cock.

INSTRUCTIONS FOR ATTACHING AND OPERATING

Drill and tap steam pipe above the throttle valve to receive oil discharge pipe. Then drill and tap the pipe further up to make proper connection for the 1/4-inch condenser pipe, placing the angle valve as shown in illustration. Then connect condenser pipe to cup by union K. TO FILL—First close valves B, C and D, take out plug A over glass H and fill with pure water and replace, screwing up tight. Then open valve F and let condenser pipe L fill with water, which will gradually become cool. While condenser pipe is filling, take out plug E and fill cup full of oil; open valve B a very little and let drops of water into indicator glass I, and when the cup is perfectly full, it will stop feeding. Then open valve C wide to permit oil to pass into the steam pipe. After observing the instructions referring to valves F, B and C, a close regulation is obtained by manipulating valve D, bearing in mind that a drop of water must pass through F and B for every drop of oil that passes through D. TO REFILL—Close valves B and D. Open drain cock G. Remove filler and, when empty, refill with oil and proceed as before. After valve C is once set correctly, do not disturb it. The cup will use any oil. If cup becomes clogged by using dirty oil, steam can be blown through all its parts by simply opening valves, cleaning it and stopping only long enough for cup to cool.

TO PREVENT FREEZING IN WINTER

Where these lubricators are exposed to danger of freezing while not in use, the water can be drawn out by closing the valve F and opening the cocks M and G. This makes it impossible for the cup to freeze and break in any kind of weather.

Size	Brass Finished	Nickel Plated	Condensing Tube and Valve	Size Engines Adapted to	Proper Amount of Oil to Use
1/2 Pint.....	22.00	25.00	Iron Pipe, 50c net	8 to 10 cylinder	2 to 3 Drops
1 Pint.....	30.00	35.00	Brass Pipe, 90c net	10 to 18 "	5 to 6 "
1 Quart....	45.00	50.00	N. P. Pipe, 1.10 net	18 to 30 "	8 to 10 "
2 Quart....	60.00	65.00		30 to 40 "	12 to 25 "

ORDER BY FIGURE NUMBERS

WATER GAUGES

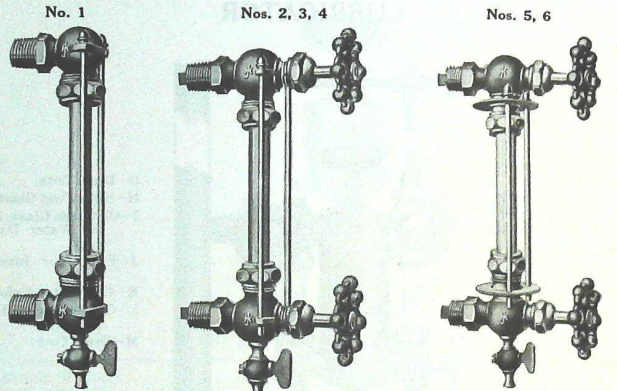


Fig. 286 For Expansion Tank
 Fig. 287 Rough Body, Iron Wheel
 Fig. 287A Finished Body, Iron Wheel

WATER GAUGES

Figure	Number	Wheel	Rods	Size	Style	Glass	Price, each
286	1	.....	2	1/2"	For Expansion Tank	3/4 x 12	2.60
287	2	Iron	2	3/4"	Round, Rough	3/4 x 10	2.75
287	3	Iron	2	3/4"	Round, Rough	3/4 x 12	3.00
287	4	Iron	2	3/4"	Round, Rough	3/4 x 16	4.50
287A	5	Iron	2	1/2"	Round, Finished	3/4 x 12	3.75
287A	6	Iron	2	3/4"	Round, Finished	3/4 x 16	4.75

RUBBER GAUGE GLASS WASHERS

Price.....	Per Dozen	Net 12¢
------------	-----------	---------

EXTRA BRASS GUARDS—For Water Gauges

Length.....	inches	12	14	16	18	20
Price.....	each, Net	.07	.08	.12	.15	.20

Longer Guards to order.

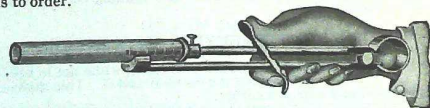


Fig. 287B

PATENTED GLASS TUBE CUTTERS

Price, Tube Cutter, Complete.....	each, Net	2.00
" Extra Cutter Wheels.....	"	.15

ORDER BY FIGURE NUMBERS

WATER GAUGES

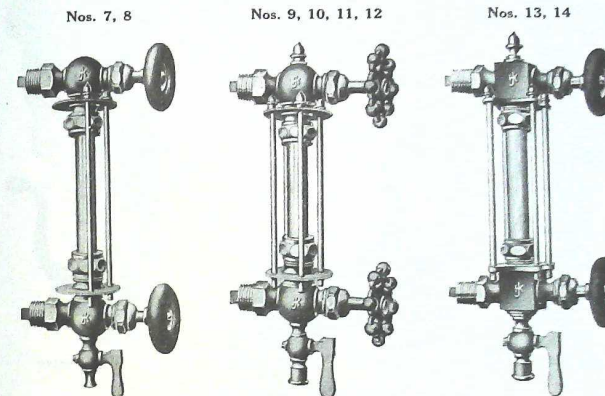


Fig. 287C Finished Body, Wood Wheel
 Fig. 288 Finished Body, Iron Wheel
 Fig. 289 Finished Body, Wood Wheel

WATER GAUGES

Figure	Number	Wheel	Rods	Size	Style	Glass	Price, each
287C	7	Wood	2	1/2"	Round, Finished	3/4 x 12	4.25
287C	8	Wood	2	3/4"	Round, Finished	3/4 x 16	5.50
288	9	Iron	4	1/2"	Round, Finished	3/4 x 12	4.50
288	10	Wood	4	1/2"	Round, Finished	3/4 x 12	5.00
288	11	Iron	4	3/4"	Round, Finished	3/4 x 16	5.50
288	12	Wood	4	3/4"	Round, Finished	3/4 x 16	6.25
289	13	Wood	4	1/2"	Square, Finished	3/4 x 12	6.00
289	14	Wood	4	3/4"	Square, Finished	3/4 x 16	8.00



Fig. 290

SCOTCH GLASS TUBES—For Water Gauges

Length....	inches	8	10	11	12	13	14	15	16	17	18	19	20	22	24
1/4 inch....	per dozen	3.00	3.00	3.24	3.60	3.84	4.20	4.44	4.80	5.04	5.40	5.64	6.00	6.60	7.20
3/8 "	"	3.00	3.00	3.24	3.60	3.84	4.20	4.44	4.80	5.04	5.40	5.64	6.00	6.60	7.20
1/2 "	"	3.60	3.60	3.96	4.32	4.80	5.16	5.52	5.88	6.24	6.60	7.08	7.44	8.16	8.88
3/4 "	"	5.04	5.04	5.64	6.12	6.60	7.08	7.56	8.16	8.64	9.12	9.60	10.20	11.16	12.12
1 "	"	6.12	6.12	6.72	7.32	7.92	8.52	9.12	9.72	10.32	10.92	11.52	12.12	13.44	14.64

RED REFLECTING GAUGE GLASS

Showing through the water a broad line of rich red color, thus rendering it very distinct.
 List price same as Regular Scotch Gauge Glasses.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STEAM WHISTLES

BRASS



Fig. 309 Plain

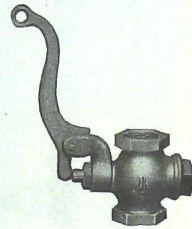


Fig. 311 Whistle Valve

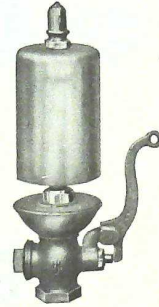


Fig. 310 With Valve

PLAIN WHISTLES—Without Valve

Diameter of Bell..... inches	1	1¼	1½	2	2½	3	3½	4	5	6	8
Size of Pipe..... inches	2¼	¾	¾	¾	¾	¾	1	1	1¼	1½	2
Length of "Short" Bell..... inches	2	2½	3	3½	4	5	5½	6	7	9½	12
Price..... each	2.20	2.75	3.00	4.35	5.25	7.25	9.50	12.00	19.00	24.00	70.00

Diameter of Bell..... inches	1	1¼	1½	2	2½	3	3½	4	5	6	8
Size of Pipe..... inches	¾	¾	¾	¾	¾	1	1	1¼	1½	2	2½
Length of "Long" Bell..... inches	3	3½	4	4¾	5½	6	7	8	11	13½	16½
Price..... each	2.50	3.25	3.50	4.85	6.00	8.00	10.25	13.00	20.00	25.50	75.00

WHISTLES WITH VALVE—Adjustable Lever

Diameter of Bell..... inches	1	1¼	1½	2	2½	3	3½	4	5	6	8
Size of Pipe..... inches	2¼	¾	¾	¾	¾	¾	1	1	1¼	1½	2
Length of "Short" Bell..... inches	2	2½	3	3½	4	5	5½	6	7	9½	12
Price..... each	3.10	3.75	4.00	5.50	6.50	8.50	11.50	15.00	22.50	33.00	95.00

Diameter of Bell..... inches	1	1¼	1½	2	2½	3	3½	4	5	6	8
Size of Pipe..... inches	¾	¾	¾	¾	¾	1	1	1¼	1½	2	2½
Length of "Long" Bell..... inches	3	3½	4	4¾	5½	6	7	8	11	13½	16½
Price..... each	3.50	4.25	4.50	6.00	7.25	9.25	12.25	16.00	23.50	34.50	100.00

WHISTLE VALVES—Brass

For 125 Pounds Working Pressure

Size..... inches	¼	¾	¾	¾	1	1¼	1½	2	2½	3
Price..... each	2.00	2.00	2.50	3.00	3.50	5.00	6.00	9.00	18.00	27.00

ORDER BY FIGURE NUMBERS

Hy-Tech Products

FUSIBLE PLUGS



Fig. 334D For Outside Insertion



Fig. 334E For Inside Insertion

PRESSURE SIDE

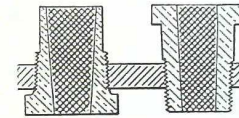


Fig. 334D Outside Type

Fig. 334E Inside Type

FIRE SIDE

Size..... inches	¼	¾	1	1¼	1½	2
Fusible Plugs, Inside or Outside Type..... each	1.20	1.50	2.00	3.00	4.00	6.00

These Fusible Plugs are filled with Banca Tin, and fulfill the Steamboat Inspection Service and U. S. Government requirements; also various State and City Laws.

Fig. 334D is made for outside insertion only, and has an extension one inch beyond the thread. Fig. 334E is made extra long and for inside insertion.

For proper installation of these Plugs, the small end of the tapered Banca Tin should be exposed to the fire.

Where the Plug is to be inserted from the pressure side, use Fig. 334E; and where Plugs are to be inserted from the fire side, use Fig. 334D.

SYPHONS



Fig. 409

STEAM GAUGE SYPHONS

Size, ¼-inch, iron Pipe..... each	.50	Size, ¼-inch Brass Pipe..... each	1.00
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ORDER BY FIGURE NUMBERS

COMBINATION WATER COLUMNS

Nos. 1, 2, 3

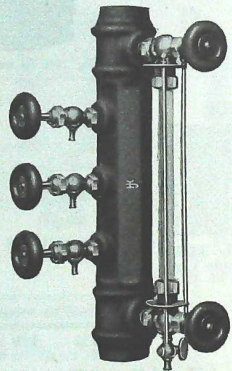


Fig. 429

Nos. 1, 2, 3, 4

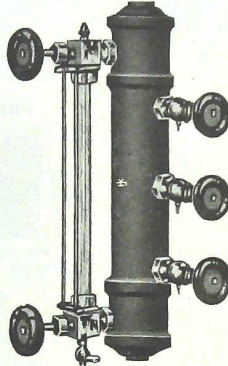


Fig. 429B

WATER GAUGE COLUMNS—Without Trimmings

Figure	No.	Length	Ctr. to Ctr. Water Gauge Connections	Size Water Gauge Connections	Size of Boiler Connections	Size of Gauge Cock Holes	Price Each
429	1	16½ inches	12 inches	½ inch	¾ inch	½ inch	4.00
429	2	22	14	½ "	1 "	½ "	7.00
429	3	29	21	¾ "	1½ "	¾ "	10.00
429	3	29	21	¾ "	1½ "	¾ "	2.75
429B	1	13¾	10	½ "	¾ "	½ "	4.00
429B	2	16¾	12½	½ "	¾ "	½ "	6.00
429B	3	18¾	14	¾ "	1 "	¾ "	8.00
429B	4	23¾	18	¾ "	1½ "	¾ "	

FINISHED BRASS WATER GAUGE COLUMNS—Same as Fig. 429B

Price, Finished Brass, Without Trimming.....each	No. 1—30.00	No. 2—45.00
Price, Finished, Without Trimming.....each	No. 1—35.00	No. 2—50.00


ORDER BY FIGURE NUMBERS

Hy-Tech Products

On the following pages we present a line of

WATER WORK AND HOSE GOODS

All of which material, as listed and illustrated, is of our own manufacture.

Great care has been exercised in the manufacture of this material, knowing that the trade demands absolutely the best in this line, and we do not hesitate to state that the Stops and Compression Bibbs bearing the trade mark  will give the user entire satisfaction, and prove a dependable line for the Jobber to handle.

"UNIVERSAL" STOP AND STOP AND WASTE COCKS

TEE AND LEVER HANDLE—FOR IRON PIPE

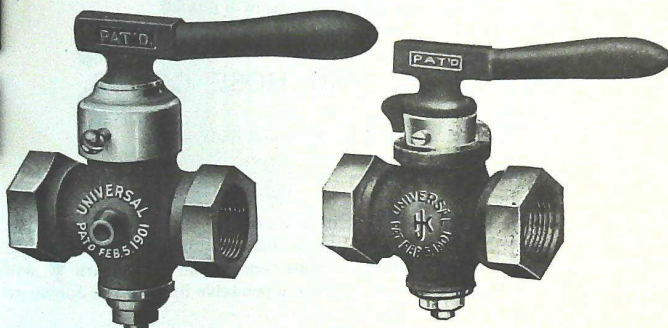


Fig. 334B Cap Pattern

Fig. 334A

"UNIVERSAL" STOP AND STOP AND WASTE COCKS

Size..... inches	½	¾	1	1¼	1½	2	
Price, Stop, Either Style..... per dozen	21.00	29.40	36.00	52.80	89.40	149.40	258.00
Stop and Waste, Either Style.....	21.60	30.00	36.60	54.00	91.20	152.40	264.00

The "Universal" Stop and Stop and Waste Cock is so constructed that it can be instantly changed from right to left, and vice versa, by simply reversing position of handle when Cock is open.

The combination Tee and Lever Handle is cast in one piece. When Tee Handle is desired, the lever can be easily broken off by a slight blow from a hammer.

ORDER BY FIGURE NUMBERS

ROUGH STOPS

TEE AND LEVER HANDLE—For Iron Pipe

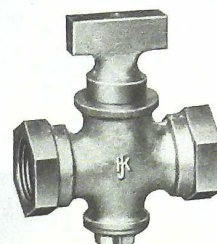


Fig. 335 With Tee Handle

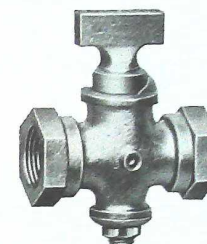


Fig. 336 With Tee Handle and Waste

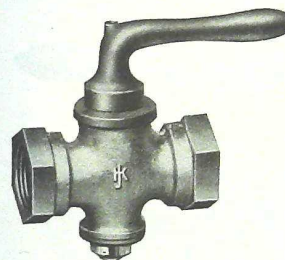


Fig. 337 With Lever Handle

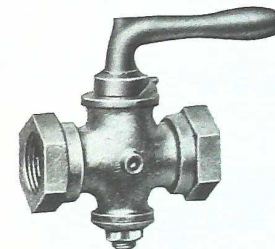


Fig. 338 With Lever Handle and Waste

TEE OR LEVER HANDLE STOP AND STOP AND WASTE COCKS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	
Rough Stop..... per doz.	19.80	20.40	21.00	29.40	36.00	52.80	89.40	149.40	258.00	408.00	540.00
Finished Stop.....	24.60	25.20	25.80	35.40	45.00	64.80	107.40	179.40	300.00	468.00	624.00
Nickel Plated Stop.....	29.40	30.00	30.60	41.40	54.00	76.80	125.40	209.40	342.00	528.00	708.00
Rough Stop and Waste.....	20.40	21.00	21.60	30.00	36.60	54.00	91.20	152.40	264.00	420.00	558.00
Finished Stop & Waste.....	25.20	25.80	26.40	36.00	45.60	66.00	109.20	182.40	306.00	480.00	642.00
N. P. Stop and Waste.....	30.00	30.60	31.20	42.00	54.60	78.00	127.20	212.40	348.00	540.00	726.00

ORDER BY FIGURE NUMBERS

ROUGH STOPS

TEE AND LEVER HANDLE—For Lead Pipe

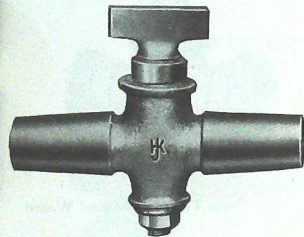


Fig. 338A With Tee Handle

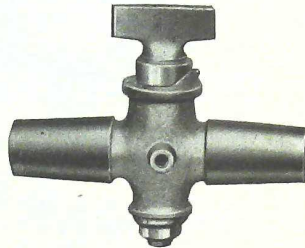


Fig. 338B With Tee Handle and Waste

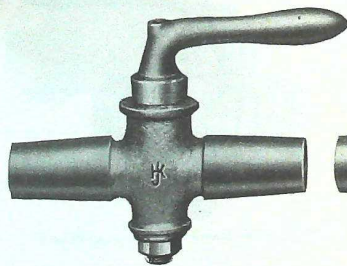


Fig. 338C With Lever Handle

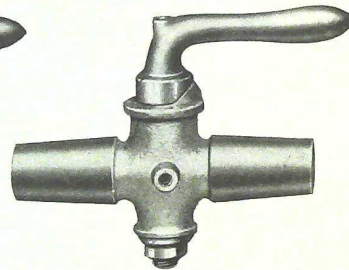


Fig. 338D With Lever Handle and Waste

TEE OR LEVER HANDLE STOP AND STOP AND WASTE COCKS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	
Rough Stop..... per doz.	22.20	22.80	23.40	33.00	40.80	60.00	100.20	167.40	288.00	468.00	630.00
Finished Stop..... "	27.00	27.60	28.20	39.00	49.80	72.00	118.20	197.40	330.00	528.00	714.00
Nickel Plated Stop..... "	31.80	32.40	33.00	45.00	58.80	84.00	136.20	227.40	372.00	588.00	798.00
Rough Stop and Waste..... "	22.80	23.40	24.00	33.60	41.40	61.20	102.00	170.40	294.00	480.00	648.00
Finished Stop & Waste..... "	27.60	28.20	28.80	39.60	50.40	73.20	120.00	200.40	336.00	540.00	732.00
N. P. Stop and Waste..... "	32.40	33.00	33.60	45.60	57.60	85.20	138.00	230.40	378.00	600.00	816.00

ORDER BY FIGURE NUMBERS

ROUGH STOPS

TEE AND LEVER HANDLE—For Lead and Iron Pipe

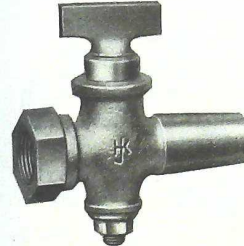


Fig. 338E With Tee Handle

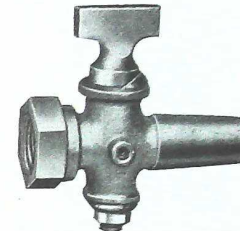


Fig. 338F With Tee Handle and Waste

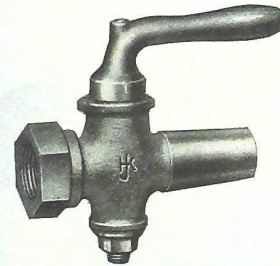


Fig. 338G With Lever Handle

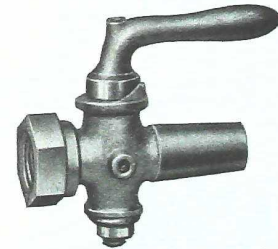


Fig. 338H With Lever Handle and Waste

TEE OR LEVER HANDLE STOP AND STOP AND WASTE COCKS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	
Rough Stop..... per doz.	22.20	22.80	23.40	33.00	40.80	60.00	100.20	167.40	288.00	468.00	630.00
Finished Stop..... "	27.00	27.60	28.20	39.00	49.80	72.00	118.20	197.40	330.00	528.00	714.00
Nickel Plated Stop..... "	31.80	32.40	33.00	45.00	58.80	84.00	136.20	227.40	372.00	588.00	798.00
Rough Stop and Waste..... "	22.80	23.40	24.00	33.60	41.40	61.20	102.00	170.40	294.00	480.00	648.00
Finished Stop & Waste..... "	27.60	28.20	28.80	39.60	50.40	73.20	120.00	200.40	336.00	540.00	732.00
N. P. Stop and Waste..... "	32.40	33.00	33.60	45.60	57.60	85.20	138.00	230.40	378.00	600.00	816.00

ORDER BY FIGURE NUMBERS

Hy-Tech Products

ROUGH STOPS

TEE AND LEVER HANDLE—For Iron Pipe

Male and Female



Fig. 338-I With Tee Handle

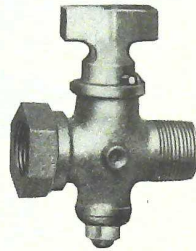


Fig. 338J With Tee Handle and Waste

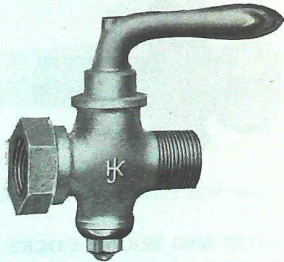


Fig. 338K With Lever Handle

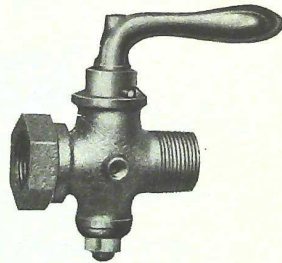


Fig. 338L With Lever Handle and Waste

TEE OR LEVER HANDLE STOP AND STOP AND WASTE COCKS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	2½	3	
Rough Stop..... per doz.	3.40	24.00	24.60	31.20	40.80	58.80	98.40	164.40	282.00	444.00	588.00
Rough Stop and Waste..... "	24.00	24.60	26.00	31.50	41.40	60.00	100.20	174.40	288.00	456.00	606.00

ORDER BY FIGURE NUMBERS

ROUGH ROUND-WAY STOPS

TEE AND LEVER HANDLE—For Iron Pipe



Fig. 339 With Tee Handle

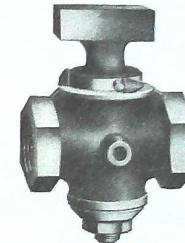


Fig. 340 With Tee Handle and Waste

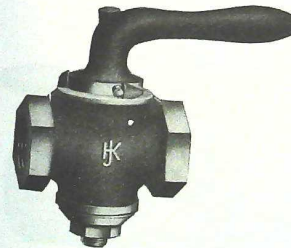


Fig. 341 With Lever Handle

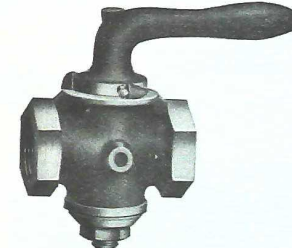


Fig. 342 With Lever Handle and Waste

TEE OR LEVER HANDLE STOP AND STOP AND WASTE COCKS

Size..... inches	¼	⅜	½	¾	1	1¼	1½	2	
Price, Rough Stop..... per doz.	24.00	25.20	26.40	36.00	46.20	73.80	120.60	197.40	342.00
" Finished Stop..... "	28.80	30.00	31.20	42.00	55.20	85.80	138.60	227.40	384.00
" Nickel Plated Stop..... "	33.60	34.80	36.00	48.00	64.20	97.80	156.60	257.40	426.00
" Rough Stop and Waste.... "	24.60	25.80	27.00	36.60	46.80	75.00	122.40	200.40	348.00
" Finished Stop and Waste... "	29.40	30.60	31.80	42.60	55.80	87.00	140.40	230.40	390.00
" Nkl. Plat'd Stop & Waste... "	34.20	35.40	36.60	48.60	64.80	99.00	158.40	260.40	432.00

ORDER BY FIGURE NUMBERS

Hy-Tech Products

ROUGH ROUND-WAY STOPS

TEE AND LEVER HANDLE—For Lead Pipe

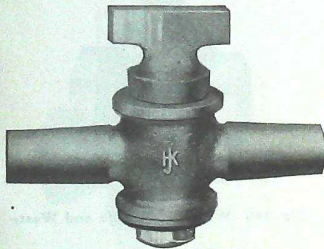


Fig. 342A With Tee Handle

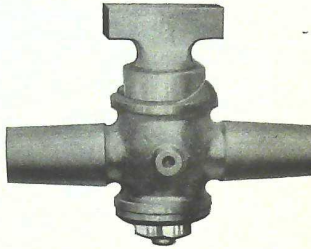


Fig. 342B With Tee Handle and Waste

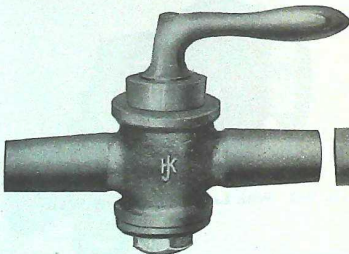


Fig. 342C With Lever Handle

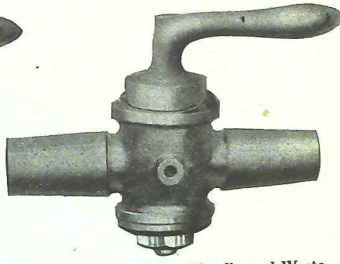


Fig. 342D With Lever Handle and Waste

TEE OR LEVER HANDLE STOP AND STOP AND WASTE COCKS
For Lead Pipe

Size.....	inches	¼	⅜	½	¾	1	1¼	1½	2	
Price, Rough Stop.....	per doz.	26.40	27.60	28.80	30.00	51.00	81.00	131.40	215.40	372.00
Rough Stop and Waste ..	"	27.00	28.20	29.40	30.60	51.60	82.20	133.20	218.40	378.00

ORDER BY FIGURE NUMBERS

ROUGH ROUND-WAY STOPS

TEE AND LEVER HANDLE—For Lead and Iron Pipe

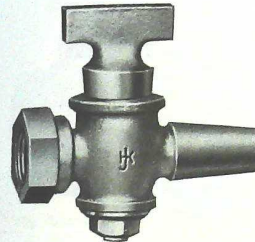


Fig. 342E With Tee Handle

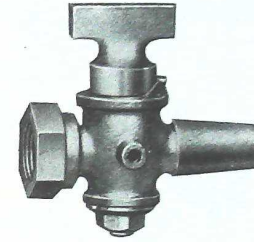


Fig. 342F With Tee Handle and Waste

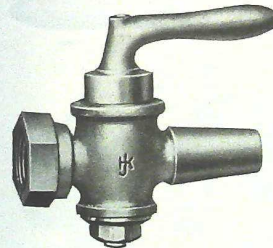


Fig. 342G With Lever Handle

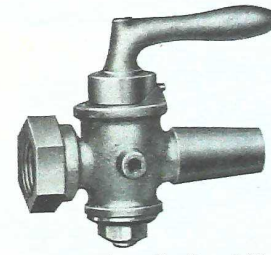


Fig. 342H With Lever Handle and Waste

TEE OR LEVER HANDLE STOP AND STOP AND WASTE COCKS

Size.....	inches	¼	⅜	½	¾	1	1¼	1½	2	
Price, Rough Stop.....	per doz.	26.40	27.60	28.80	30.00	51.00	81.00	131.40	215.40	372.00
Rough Stop and Waste ..	"	27.00	28.20	29.40	30.60	51.60	82.20	133.20	218.40	378.00

ORDER BY FIGURE NUMBERS

Hy-Tech Products

ROUGH ROUND-WAY STOPS

TEE AND LEVER HANDLE—For Iron Pipe

Male and Female

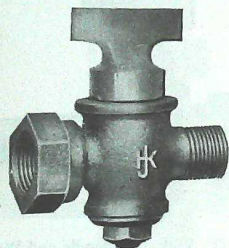


Fig. 342-I With Tee Handle

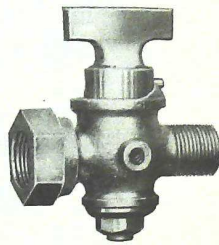


Fig. 342J With Tee Handle and Waste

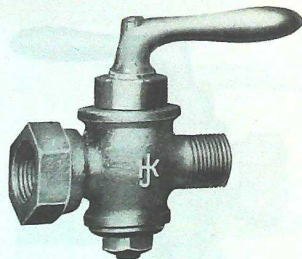


Fig. 342K With Lever Handle

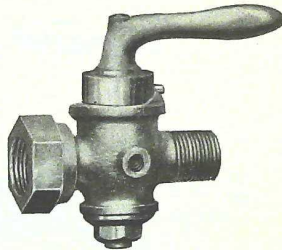


Fig. 342L With Lever Handle and Waste

TEE OR LEVER HANDLE STOP AND STOP AND WASTE COCKS

Size..... inches	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price, Rough Stop..... per doz.	26.40	27.60	28.80	39.60	51.00	81.00	131.40	215.40
" " Rough Stop and Waste .. "	27.00	28.20	29.40	40.20	51.60	82.20	133.20	218.40

Hy-Tech Products

ORDER BY FIGURE NUMBERS

ROUGH ROUND-WAY STOPS

TEE AND LEVER HANDLE

Newport Pattern

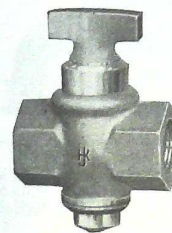


Fig. 343 Tee Handle

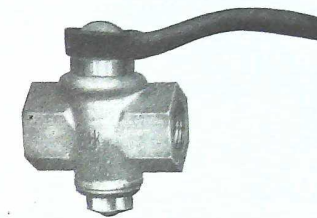


Fig. 343A Lever Handle

TEE AND LEVER HANDLE STOP COCKS

Newport Pattern—For Iron Pipe

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
Price, Stop..... per doz.	28.80	49.80	68.40	88.80	1.40	233.40

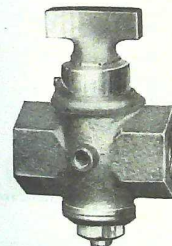


Fig. 344 Tee Handle



Fig. 344A Lever Handle

TEE AND LEVER HANDLE STOP AND WASTE COCKS

Newport Pattern—For Iron Pipe

Size..... inches	1/2	3/4	1	1 1/4	1 1/2	2
Price, Stop and Waste..... per doz.	29.40	50.40	69.00	90.00	163.20	236.40

ORDER BY FIGURE NUMBERS

COMPRESSION PLAIN BIBBS



Fig. 344F For Lead Pipe



Fig. 345 For Iron Pipe, with Shoulder

COMPRESSION PLAIN BIBBS—For Lead Pipe

Size..... inches	¼	⅜	½	⅝	¾	1	1¼	1½	2
Price, Rough..... per doz.	17.40	18.00	18.60	24.60	33.00	57.60	112.20	148.20	237.00
" Finished..... "	19.20	19.80	21.00	27.00	35.40	63.60	119.40	159.00	315.00
" Nickel Plated..... "	22.80	23.40	24.60	30.60	39.00	69.60	130.20	174.00	345.00

COMPRESSION PLAIN BIBBS—For Iron Pipe

Size..... inches	¼	⅜	½	⅝	¾	1	1¼	1½	2
Price, Rough..... per doz.	16.20	16.80	17.40	22.80	30.60	54.00	106.80	139.20	282.00
" Finished..... "	18.00	18.60	19.80	25.20	33.00	60.00	114.00	150.00	300.00
" Nickel Plated..... "	21.60	22.20	23.40	28.80	37.20	66.00	124.80	165.00	330.00

COMPRESSION HOSE BIBBS

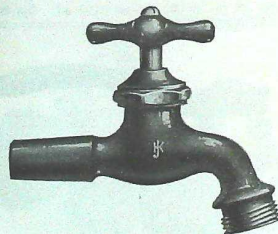


Fig. 345A For Lead Pipe

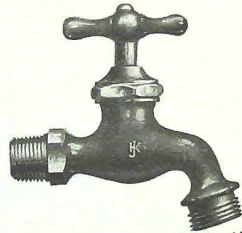


Fig. 346 For Iron Pipe, with Shoulder

COMPRESSION HOSE BIBBS—For Lead Pipe

Size..... inches	⅝	¾	1	1¼	1½	2
Price, Rough..... per doz.	21.00	21.60	27.60	36.00	64.80	123.00
" Finished..... "	22.80	24.00	30.00	38.40	70.80	130.20
" Nickel Plated..... "	26.40	27.60	33.60	42.60	76.80	141.00

COMPRESSION HOSE BIBBS—For Iron Pipe

Size..... inches	⅝	¾	1	1¼	1½	2
Price, Rough..... per doz.	19.80	20.40	25.80	33.60	61.20	117.60
" Finished..... "	21.60	22.80	28.20	36.00	67.20	124.80
" Nickel Plated..... "	25.20	26.40	31.80	40.20	72.00	135.60

ORDER BY FIGURE NUMBERS

Hy-Tech Products

COMPRESSION PLAIN BIBBS

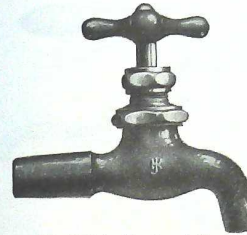


Fig. 346A For Lead Pipe

WITH STUFFING BOX

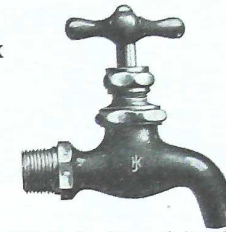


Fig. 346B For Iron Pipe with Shoulder

COMPRESSION PLAIN BIBBS—For Lead Pipe

Size..... inches	⅝	¾	1
Price, Rough..... per doz.	22.20	23.40	30.00
" Finished..... "	24.00	25.80	32.40
" Nickel Plated..... "	27.60	29.40	36.00

COMPRESSION PLAIN BIBBS—For Iron Pipe

Size..... inches	⅝	¾	1
Price, Rough..... per doz.	21.00	22.20	28.20
" Finished..... "	22.80	24.60	30.60
" Nickel Plated..... "	26.40	28.20	34.20

COMPRESSION HOSE BIBBS

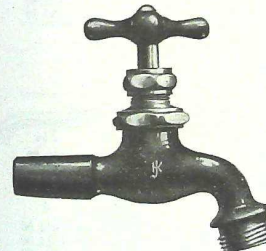


Fig. 346C For Lead Pipe

WITH STUFFING BOX

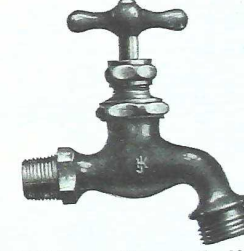


Fig. 346D For Iron Pipe, with Shoulder

COMPRESSION HOSE BIBBS—For Lead Pipe

Size..... inches	⅝	¾	1
Price, Rough..... per doz.	25.20	26.40	33.00
" Finished..... "	27.00	28.80	35.40
" Nickel Plated..... "	30.60	32.40	39.00

COMPRESSION HOSE BIBBS—For Iron Pipe

Size..... inches	⅝	¾	1
Price, Rough..... per doz.	24.00	25.20	31.20
" Finished..... "	25.80	27.60	33.60
" Nickel Plated..... "	29.40	31.20	37.20

ORDER BY FIGURE NUMBERS

GROUND BIBB COCKS—For Lead or Iron Pipe

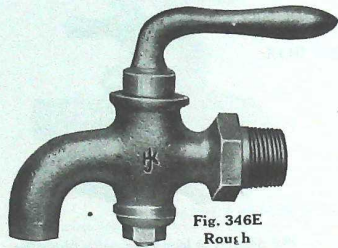


Fig. 346E
Rough

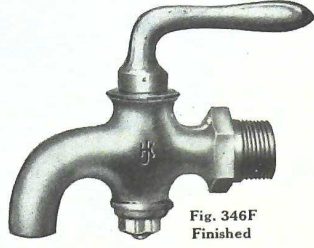


Fig. 346F
Finished

LEVER HANDLE PLAIN BIBBS—For Iron Pipe

Size.....inches	¼	⅜	½	¾	1	1 ¼
Price, Rough.....per doz.	19.80	20.40	21.00	29.40	36.00	89.40
" Finished....."	24.60	25.20	25.80	35.40	45.00	107.40
" Nickel Plated....."	29.40	30.00	30.60	41.40	54.00	125.40

Size.....inches	1 ½	2	2 ½	3	3 ½	4
Price, Rough.....per doz.	149.40	258.00	408.00	540.00	960.00	1200.00
" Finished....."	179.40	300.00	468.00	624.00	1080.00	1380.00
" Nickel Plated....."	209.40	342.00	528.00	708.00	1200.00	1560.00

LEVER HANDLE PLAIN BIBBS—For Lead Pipe. Not Illustrated

Size.....inches	¼	⅜	½	¾	1	1 ¼
Price, Rough.....per doz.	21.00	21.60	22.20	31.20	38.40	94.80
" Finished....."	25.80	26.40	27.00	37.20	47.40	112.80
" Nickel Plated....."	30.60	31.20	31.80	43.20	56.40	130.80

Size.....inches	1 ½	2	2 ½	3	3 ½	4
Price, Rough.....per doz.	158.40	273.00	438.00	585.00	1020.00	1290.00
" Finished....."	188.40	315.00	498.00	669.00	1140.00	1470.00
" Nickel Plated....."	218.40	357.00	558.00	753.00	1260.00	1650.00

LEVER HANDLE HOSE BIBBS—For Iron Pipe. Not Illustrated

Size.....inches	¾	1	1 ¼	1 ½	2	2 ½
Price, Rough.....per doz.	23.40	24.00	32.40	39.00	60.00	100.20
" Finished....."	28.20	28.80	38.40	48.00	72.00	118.20
" Nickel Plated....."	33.00	33.60	44.40	57.00	84.00	136.20

Size.....inches	1 ½	2	2 ½	3	3 ½	4
Price, Rough.....per doz.	164.40	280.20	447.00	594.00	1056.00	1344.00
" Finished....."	194.40	322.20	507.00	678.00	1176.00	1524.00
" Nickel Plated....."	224.40	364.20	567.00	762.00	1296.00	1704.00

LEVER HANDLE HOSE BIBBS—For Lead Pipe. Not Illustrated

Size.....inches	¾	1	1 ¼	1 ½	2	2 ½
Price, Rough.....per doz.	24.60	25.20	34.20	41.40	63.60	105.60
" Finished....."	29.40	30.00	40.20	50.40	75.60	123.60
" Nickel Plated....."	34.20	34.80	46.20	59.40	87.60	141.60

Size.....inches	1 ½	2	2 ½	3	3 ½	4
Price, Rough.....per doz.	173.40	295.20	477.00	639.00	1116.00	1434.00
" Finished....."	203.40	337.20	537.00	723.00	1236.00	1614.00
" Nickel Plated....."	233.40	379.20	597.00	807.00	1356.00	1794.00

Sizes not listed above furnished to order at special net prices.

ORDER BY FIGURE NUMBERS

COMPRESSION BASIN COCKS



Fig. 346H 2-Arm



Fig. 346I 4-Arm

BASIN COCKS

Price, 2-Arm, Finished or Nickel Plated, 2 ¼-inch Shank.....per doz.	24.60
" 2-Arm, Finished or Nickel Plated, 3-inch Shank....."	27.00
" 4-Arm, Finished or Nickel Plated, 2 ¼-inch Shank....."	27.60
" 4-Arm, Finished or Nickel Plated, 3-inch Shank....."	30.00



Fig. 346J 2-Arm



Fig. 346K 4-Arm

BASIN COCKS—With Stuffing Box

Price, 2-Arm, Finished or Nickel Plated, 2 ¼-inch Shank.....per doz.	28.80
" 2-Arm, Finished or Nickel Plated, 3-inch Shank....."	31.20
" 4-Arm, Finished or Nickel Plated, 2 ¼-inch Shank....."	31.80
" 4-Arm, Finished or Nickel Plated, 3-inch Shank....."	34.20

ORDER BY FIGURE NUMBERS

Hy-Tech Products

BRASS SOLDERING NIPPLES

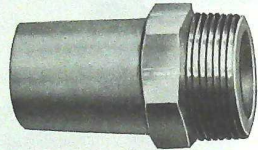


Fig. 507H Soldering Nipple, Male

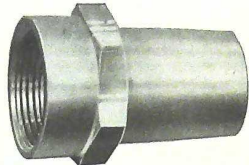


Fig. 507-I Soldering Nipple, Female

SOLDERING NIPPLES

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Price, Male or Female, per doz.	3.60	3.60	3.60	4.20	6.00	8.40	10.80	15.00	21.00	36.00	48.00	84.00

BRASS SOLDERING UNIONS

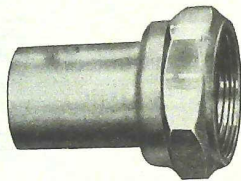


Fig. 507J Soldering Union, Female

SOLDERING UNIONS

Size..... inches	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Price..... per doz.	4.20	4.20	4.80	6.00	7.80	10.20	13.20	15.00	21.00

UNIVERSAL SINK BRACKETS

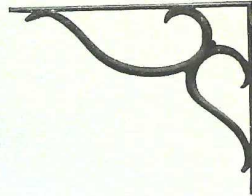


Fig. 507K Sink Bracket

UNIVERSAL SINK BRACKETS

No. 1 For Sinks 14 to 18 ins. wide, Plain, ea.	.40	No. 2 For Sinks 18 to 22 ins. wide, Plain, ea.	.50
No. 1 For Sinks 14 to 18 ins. wide, Galv., ea.	.45	No. 2 For Sinks 18 to 22 ins. wide, Galv., ea.	.55

Can be applied to any form of Sink.

ORDER BY FIGURE NUMBERS

HOSE NOZZLES AND COUPLINGS—Brass



Fig. 390 S. S. S. Nozzle, Solid Stream



Fig. 389 S. S. S. Nozzle, Spray



Fig. 391 Hose Coupling

S. S. S. BRASS HOSE NOZZLES

Price, Size 1/4-inch..... per doz.	10.00
------------------------------------	-------

The S. S. S. Nozzle is indispensable when used in the treatment of lawns or plants. The fine mist or spray prevents injury to the plants, while a solid stream is so forceful and destructive. These S. S. S. Hose Nozzles are adjustable for throwing a solid stream or spray.

BRASS HOSE COUPLINGS

Size, Standard Gauge..... inches	1/2	3/4	1
Price..... per doz.	2.40	2.40	4.40

MALLEABLE HOSE NOZZLES



Fig. 391A Malleable Hoze Nozzle

Size..... inches	1 1/4x12	1 1/2x12	2x12	2 1/2x12	2 1/2x15
Price..... each	1.00	1.20	1.80	2.90	4.00

Malleable Iron Hose Nozzles are practically unbreakable, and are less likely to be stolen than the Brass Nozzles. Carried either Hose or Iron Pipe Thread. Specify which thread desired.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

STEAMER CONNECTIONS

DOUBLE CONNECTION

Sizes 4 x 2½ and 4 x 3 Have Brass Body

Larger Sizes Have Iron Body



Fig. 392
Straight Steamer Connection

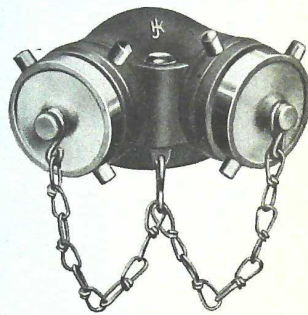


Fig. 392A
90° Steamer Connection

STEAMER CONNECTIONS—Fig. 392

Size, 4x2½, Brass Body.....	Price, each	25.00
Size, 4x3, Brass Body.....	" "	25.00
Size, 6x3½, Iron Body, for Fire Boat Connection.....	" "	35.00

STEAMER CONNECTIONS—Fig. 392A

Size, 4x2½, Brass Body.....	Price, each	25.00
Size, 6x2½, Iron Body.....	" "	35.00
Size, 6x3, Iron Body.....	" "	35.00
Size, 6x3½, Iron Body.....	" "	35.00

These Fittings are designed especially for use in connection with Automatic Sprinkler Systems and Stand Pipes. They have a Swinging Brass Clapper, making it possible to use one nozzle while the other is uncovered or being coupled. Cap and chain are galvanized iron. Can be furnished with brass cap and chain at a special price.

Hy-Tech Products

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MISCELLANEOUS GOODS

OIL WELL SUPPLIES

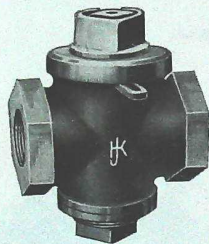


Fig. 491 Essex Lock Iron Cock Extra Heavy Pattern

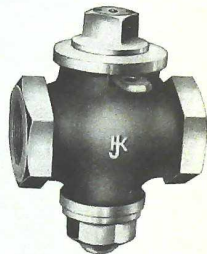


Fig. 490C Essex Lock Iron Coc Light Pattern

Size..... inches	2	3	4
Price, Essex Lock Iron Cock with Iron Nut and Brass Washer, Light Pat'n, each	4.00	8.00	14.00
" Essex Lock Iron Cock with Iron Nut and Brass Washer, Extra Heavy	5.00	10.00	17.50

Above prices do not include Lock.

In Fig. 490C, the threaded end of key has large oval end projecting beyond nut which allows key to be loosened up with a blow of a hammer or wrench without damaging thread.



Fig. 490A Oil Country Pattern Flange Union

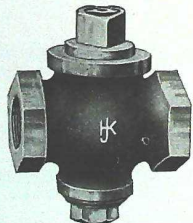


Fig. 490 Oil Country Pattern Iron Cock, Brass Washer Ex. Hvy. for 200 Pounds Working Pressure

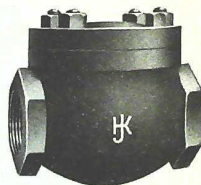


Fig. 490B Swing Check Valve

Size..... inches	1	1 1/4	1 1/2	2	2 1/2	3
Price, Flange Union, Bolts..... each	1.00	1.50	2.00	3.50	5.00	7.50
" Flange Union, Bolts.....	1.20	1.75	2.25	4.00	5.50	8.00
" Flange Union, 3 Bolts.....	1.50	2.00	2.50	4.50	6.00	8.50
" Flange Union, 6 Bolts.....	2.00	2.45	3.20	4.50	7.25	10.00
" Iron Cock, Brass Washer.....	2.00	2.45	3.20	4.50	7.25	10.00
" Swing Check Valve, Standard.....	10.00	15.00				
" Swing Check Valve, Extra Heavy.....						

ORDER BY FIGURE NUMBERS

OIL WELL SUPPLIES
WORKING BARREL VALVES



Fig. 1031 Upper Valve



Fig. 1032 Lower Valve



Fig. 1035A Valve Ball



Fig. 1035 Leather Cup



Fig. 1035B Steel Seat

WORKING BARREL VALVES AND VALVE PARTS

Size of Tubing..... inches	2
Size, Working Barrel, Inside Diameter..... inches	1 1/2
Price, Upper Valves..... per set	5.00
" Lower Valves..... each	2.90
" Crowns, Brass.....	2.10
" Barrel Upper Valve.....	.85
" Barrel Lower Valve.....	1.10
" Lower Part Upper Valve.....	.75
" Valve Balls, Brass.....	.40
" Set Brass Rings, (3).....	.90
" Set Leather Valve Cups.....	.75
" Steel Seats.....	.20
	.30

STUFFING BOXES



Fig. 1014 No. 1, Brass, Common



Fig. 1015 No. 2, Brass, Hexagon Head



Fig. 1016 Cast Iron

STUFFING BOXES

Size of Tubing..... inches	2
Size for Polished Rod..... inches	1 1/2
Price, Nos. 1 and 2, Brass..... each	2.00
" Upper Part for 2-inch Pipe.....	1.00
" Lower Part for 2-inch Pipe.....	1.00
" Followers.....	.25
" Cast Iron for 1 1/4 or 1 1/2 Polished Rod and 2-inch Tubing.....	2.75
" Cast Iron for 1 1/4 or 1 1/2 Polished Rod and 2 1/2-inch Tubing.....	3.25
" Cast Iron for 1 1/4 or 1 1/2 Polished Rod and 3-inch Tubing.....	3.75

ORDER BY FIGURE NUMBERS

Hy-Tech Products

OIL WELL SUPPLIES

CASING HEADS



Fig. 1023 Two-way One-hole Top



Fig. 1024 Two-way Two-hole Top



Fig. 1024A Four-way One-hole Top

CASING HEADS AND PARTS

Size..... inches	4¼	5	5½	6¼
Price, Two-way One-hole Top..... each	2.50	3.00	3.00	3.40
" Two-way Two-hole Top..... "	3.00	3.50	3.50	3.90
" Four-way One-hole Top..... "	4.25	4.25	4.25	5.00
" Four-way Two-hole Top..... "	4.75	4.75	4.75	5.50
" Casing Head Tops..... "	.75	.75	.75	1.00
" Tubing Rings..... "	.30	.30	.30	.30
" Set Screws..... "	.15	.15	.15	.15

TWO-HOLE CASING BUSHINGS AND CAPS

TAPPED FOR 2-INCH PIPE



Fig. 1024B Two-hole Casing Bushing



Fig. 1024C Two-hole Casing Cap

TWO-HOLE CASING BUSHINGS AND CAPS

Size..... inches	5	5½	5¾	6¼	6½	7	7¾	8¼	8½	9
Price Bushings..... each	3.25	3.50	3.75	5.75	6.00	6.50	8.50	9.00	10.50	
" Caps..... each	3.25	3.50	3.75	5.75	6.00	6.50	8.50	9.00	10.50	

Add 25 per cent. if tapped for 3-inch pipe.

ORDER BY FIGURE NUMBERS

Hy-Tech Products

MACHINE BOLTS



Fig. 753 Square Head Bolt



Fig. 754 Hexagon Head Bolt

Manufacturers' Standard List with Square Head and Nut. In Effect August 1, 1912

PRICE PER HUNDRED

Length Inches	¼	⅜	½	¾	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4	1 7/8	2
1/4 to 1/2	1.70	2.00	2.40	2.80	3.60	5.20	7.70	10.50	15.10	22.50	30.00		
2	1.78	2.12	2.56	3.00	3.86	5.58	8.25	11.20	16.00	23.70	31.50		
2 1/2	1.86	2.24	2.72	3.20	4.12	5.96	8.80	11.90	16.90	24.90	33.00		
3	1.94	2.36	2.88	3.40	4.38	6.34	9.35	12.60	17.80	26.10	34.50		
3 1/2	2.02	2.48	3.04	3.60	4.64	6.72	9.90	13.30	18.70	27.30	36.00		
4	2.10	2.60	3.20	3.80	4.90	7.10	10.45	14.00	19.60	28.50	37.50		
4 1/2	2.18	2.72	3.36	4.00	5.16	7.48	11.00	14.70	20.50	29.70	39.00		
5	2.26	2.84	3.52	4.20	5.42	7.86	11.55	15.40	21.40	30.90	40.50		
5 1/2	2.34	2.96	3.68	4.40	5.68	8.24	12.10	16.10	22.30	32.10	42.00		
6	2.42	3.08	3.84	4.60	5.94	8.62	12.65	16.80	23.20	33.30	43.50		
6 1/2	2.50	3.20	4.00	4.80	6.20	9.00	13.20	17.50	24.10	34.50	45.00		
7	2.58	3.32	4.16	5.00	6.46	9.38	13.75	18.20	25.00	35.70	46.50		
7 1/2	2.66	3.44	4.32	5.20	6.72	9.76	14.30	18.90	25.90	36.90	48.00		
8	2.74	3.56	4.48	5.40	6.98	10.14	14.85	19.60	26.80	38.10	49.50		
9	2.90	3.80	4.80	5.80	7.50	10.90	15.95	21.00	28.60	40.50	52.50		
10	3.06	4.04	5.12	6.20	8.02	11.66	17.05	22.40	30.40	42.90	55.50		
11	3.22	4.28	5.44	6.60	8.54	12.42	18.15	23.80	32.20	45.30	58.50		
12	3.38	4.52	5.76	7.00	9.06	13.18	19.25	25.20	34.00	47.70	61.50		
13	3.54	4.76	6.08	7.40	9.58	13.94	20.35	26.60	35.80	50.10	64.50		
14	3.70	5.00	6.40	7.80	10.10	14.70	21.45	28.00	37.60	52.50	67.50		
15	3.86	5.24	6.72	8.20	10.62	15.46	22.55	29.40	39.40	54.90	70.50		
16	4.02	5.48	7.04	8.60	11.14	16.22	23.65	30.80	41.20	57.30	73.50		
17	4.18	5.72	7.36	9.00	11.66	16.98	24.75	32.20	43.00	59.70	76.50		
18	4.34	5.96	7.68	9.40	12.18	17.74	25.85	33.60	44.80	62.10	79.50		
19	4.50	6.20	8.00	9.80	12.70	18.50	26.95	35.00	46.60	64.50	82.50		
20	4.66	6.44	8.32	10.20	13.22	19.26	28.05	36.40	48.40	66.90	85.50		
21							29.15	37.80	50.20	69.30	88.50		
22							30.25	39.20	52.00	71.70	91.50		
23							31.35	40.60	53.80	74.10	94.50		
24							32.45	42.00	55.60	76.50	97.50		
25							33.55	43.40	57.40	78.90	100.50		
26							34.65	44.80	59.20	81.30	103.50		
27							35.75	46.20	61.00	83.70	106.50		
28							36.85	47.60	62.80	86.10	109.50		
29							37.95	49.00	64.60	88.50	112.50		
30							39.05	50.40	66.40	90.90	115.50		

The Following Extras Are to be Understood as a Part of this List:

- Bolts with hexagon heads or hexagon nuts, 10 per cent. extra.
- If both hexagon heads and hexagon nuts, 20 per cent. extra.
- Joint Bolts with oblong nuts, 10 per cent. extra.
- Bolts with tee heads, askew heads and eccentric heads, 20 per cent. extra.
- Key Bolts, 20 per cent. extra.
- Bolts with cotter holes, 25 per cent. extra.
- Bolts with U. S. Standard Square Nuts, 5 per cent. extra.
- Bolts with U. S. Standard Hexagon Nuts, 15 per cent. extra.
- Special Bolts with irregular threads and unusual dimensions of heads or nuts will be charged extra, at the discretion of the manufacturer.

ORDER BY FIGURE NUMBERS

LAG SCREWS



Fig. 756 Lag Screw with Square Head

Manufacturers' Standard List. In Effect November 12, 1908

PRICE PER HUNDRED

Length Inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$
1½	2.25	2.70	3.15	3.75				
2	2.45	2.96	3.47	4.11	6.00			
2½	2.65	3.22	3.79	4.47	6.50	9.20		
3	2.85	3.48	4.11	4.83	7.00	9.90	15.00	
3½	3.05	3.74	4.43	5.19	7.50	10.60	16.00	22.00
4	3.25	4.00	4.75	5.55	8.00	11.30	17.00	23.30
4½	3.45	4.26	5.07	5.91	8.50	12.00	18.00	24.60
5	3.65	4.52	5.39	6.27	9.00	12.70	19.00	25.90
5½	3.85	4.78	5.71	6.63	9.50	13.40	20.00	27.20
6	4.05	5.04	6.03	6.99	10.00	14.10	21.00	28.50
6½			6.35	7.35	10.50	14.80	22.00	29.80
7			6.67	7.71	11.00	15.50	23.00	31.10
7½			6.99	8.07	11.50	16.20	24.00	32.40
8			7.31	8.43	12.00	16.90	25.00	33.70
9			7.95	9.15	13.00	18.30	27.00	36.30
10			9.87	14.00	19.70	29.00	38.90	
11			10.59	15.00	21.10	31.00	41.50	
12			11.31	16.00	22.50	33.00	44.10	

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Lag Screws with Hexagon Heads, 10 per cent. extra.

ORDER BY FIGURE NUMBERS

STUD BOLTS



Fig. 761

PRICE PER HUNDRED

Diam., Inches	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$
Threads to In.	16	14	13	12	11	10	9	8
Length, 1½	4.00	5.10	5.50					
" 1¾	4.10	5.25	5.65					
" 2	4.20	5.40	5.80	8.50	8.50	12.40		
" 2¼	4.30	5.55	5.95	8.75	8.75	12.70		
" 2½	4.40	5.70	6.10	9.00	9.00	13.00	18.00	
" 2¾	4.50	5.85	6.25	9.25	9.25	13.30	18.50	
" 3	4.60	6.00	6.40	9.50	9.50	13.60	19.00	27.80
" 3¼	4.70	6.15	6.55	9.75	9.75	13.90	19.50	28.40
" 3½	4.80	6.30	6.70	10.00	10.00	14.20	20.00	29.00
" 3¾	4.90	6.45	6.85	10.25	10.25	14.50	20.50	29.60
" 4	5.00	6.60	7.00	10.50	10.50	14.80	21.00	30.20
" 4½	5.25	6.90	7.30	11.00	11.00	15.40	22.00	31.40
" 5	6.00	7.60	7.50	11.50	11.50	16.00	23.00	32.60
" 5½	7.25	8.00	8.00	12.00	12.00	16.60	24.00	33.80
" 6	8.00	8.45	8.45	12.50	12.50	17.20	25.00	35.00
" 7				13.60	13.60	18.60	27.00	37.50
" 8				14.80	14.80	20.10	29.10	40.10
" 9						21.60	31.20	42.60
" 10						23.20	33.40	45.50
" 11								48.00
" 12								50.50

In ordering, give the length over all, the length of thread on the nut end, the length of thread on the tap end, and state whether tap end requires to be steam tight or not.

HANGER BOLTS



Fig. 757

PRICE PER HUNDRED. In Effect June 15, 1902

Length Over All Inches	$\frac{1}{4}$ & $\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2
2	3.00	3.60	4.24	5.06	6.19			
2½	3.19	3.83	4.54	5.44	6.75	9.90		
3	3.38	4.05	4.84	5.81	7.31	10.73		
3½	3.57	4.28	5.14	6.19	7.88	11.55	15.00	
4	3.75	4.50	5.44	6.56	8.44	12.38	16.00	
4½	3.94	4.73	5.74	6.94	9.00	13.20	17.00	
5	4.13	4.95	6.04	7.31	9.55	14.03	18.00	26.25
5½	4.32	5.18	6.34	7.69	10.13	14.85	19.00	27.50
6	4.50	5.40	6.64	8.06	10.69	15.68	20.00	28.75
6½		5.62	6.94	8.43	11.25	16.50	21.00	30.00
7		5.84	7.24	8.80	11.82	17.33	22.50	31.25
7½		6.06	7.54	9.17	12.38	18.15	23.44	32.50
8		6.28	7.84	9.55	12.95	19.03	24.37	33.75
9			8.14	9.92	13.51	19.85	26.25	35.62
10				10.30	14.08	20.68	27.50	37.50
11					14.64	21.50	28.75	39.38
12					15.21	22.32	30.00	41.25

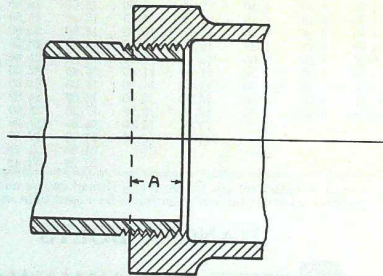
Hexagon Nuts, 10 per cent. extra. We can furnish Hanger Bolts with either gimlet or cone points.

ORDER BY FIGURE NUMBERS

THE FOLLOWING TABLE GIVES APPROXIMATELY THE
LENGTH OF THREAD ON PIPE

THAT WILL MAKE A TIGHT JOINT
WHEN SCREWED INTO VALVES AND FITTINGS

THREADED TO BRIGGS STANDARD



Size, Inches	Dimension A Inches	Size, Inches	Dimension, A Inches
$\frac{1}{8}$	$\frac{1}{4}$	$3\frac{1}{2}$	$\frac{7}{8}$
$\frac{1}{4}$	$\frac{1}{2}$	4	1
$\frac{3}{8}$	$\frac{3}{8}$	$4\frac{1}{2}$	1
$\frac{1}{2}$	$\frac{3}{4}$	5	$1\frac{1}{8}$
$\frac{3}{4}$	$\frac{7}{8}$	6	$1\frac{1}{4}$
1	$\frac{1}{2}$	7	$1\frac{1}{4}$
$1\frac{1}{4}$	$\frac{1}{2}$	8	$1\frac{3}{8}$
$1\frac{1}{2}$	$\frac{3}{4}$	9	$1\frac{3}{8}$
2	$\frac{1}{2}$	10	$1\frac{1}{2}$
$2\frac{1}{4}$	$\frac{3}{4}$	12	$1\frac{1}{2}$
3	$\frac{3}{4}$		$1\frac{3}{4}$

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ORDER BY FIGURE NUMBERS

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