JIANZHI

JIANZHI

SINCE 1982

CONTACT US

HEBEI JIANZHI CASTING GROUP CO., LTD.

ADD: Yutian, Hebei Province, China.
Zip Code: 064100
Tel No.: +86 022 8848 8866
Phone No.: +86 186 9802 7872
Email: sales1@jianzhi-fitting.com

Global Official Website >> www.malleableiron-pipefitting.com
Jianzhi Malleable Iron Pipe Fittings >> www.jianzhipipefitting.com
Jianzhi Grooved Pipe Fittings >> www.jianzhifittings.com

THE GUIDE TO JIANZHI PRODUCTS

A well-known trademark of malleable iron pipe fittings in China
Hebei Jianzhi Casting Group Co., Ltd.

JIANZHI

Quality Pipe Fittings Since 1982.
Safer. No Leak.

Making Pipe Fittings Durable FOREVER

WHO IS JIANZHI?

Founded in 1982, Jianzhi is a leading manufacturer and supplier of cast iron pipe fittings. Till now, Jianzhi has about 4,500 employees and more than 350 technical engineers with distributors covering over 100 countries around the world.

Jianzhi is committed to building a safer world by bringing premium cast iron pipe fittings to every household and building.

4,500
employees

90%
Reorder rate

BUSINESS MODEL OF JIANZHI:

Cooperating with distributors all over the world and working to make the list grow is the business model of Jianzhi. Helping all partners to unleash their untapped potential and make profits is the service philosophy of Jianzhi.

On the manufacturing side, Jianzhi strictly controls the cost to ensure a stable supply of high-quality products and fast delivery. On the marketing side, Jianzhi helps the customers to formulate their marketing strategies.

The over 90% reorder rate shows the recognition from every customer.

SOCIAL CONTRIBUTIONS OF JIANZHI:

Higher revenue for all partners;
Continuously innovative and strict quality control to ensure the safety of every pipeline system;

Driving forces for the stable development of the foundry industry as a standing member of China Foundry Association;

Eco-friendly manufacturing procedures to promote sustainable development;
More job opportunities.

99.96%
Qualified rate

1 in 440000
return rate

JIANZHI Predecessor

1982 - Established and named "Yutian first plumbing plant" .
1993 - Renamed as "TangShan malleable water plumbing industries LTD"
1994 - Invent "Chain Link Type Quality Control"
1996 - "JIANZHI" was awarded as a famous brand product in Hebei Province of China
2000 - Renamed as " TangShan JIANZHI Malleable Ltd"
2002 - Passed international quality management system certification
2005 - PRenamed as "Hebei JIANZHI Casting Group Ltd"
2007 - JIANZHI's first generation hydraulic testing machine was developed successfully
2008 - Passed UL, Took part in the building project for the 2008 Beijing Olympic Games
2010 - Passed CE
2011 - Built a new factory in Chifeng
2013 - JIANZHI pipe fitting has been named the "Chinese Malleable Pipe Fitting Famous Brand"
2013 - Passed Turkey TSE
2014 - Completed two factories and a galvanizing plant in Chifeng
Brand "JIANZHI" has been named the "China Famous Brand"
Passed ISO 9001, ISO 14001 and ISO 18000
2015 - Passed Brazil ABNT
Passed American FM
Grooved fitting passed CCC certification
2017 - JIANZHI introduced the world's most advanced DISA line.
2019 - JIANZHI cooperates with the Foundry College of The Open University of China,become the Teaching practice base of the college and solve our demand for technological talents.
2020 - Gold Award for high quality castings
2021 - Single champion product of manufacturing industry
2022 - CEO-Ren Jiuhong was awarded the lifetime achievement award from the China Foundry Association
2023 - Put into use Automatic Storage & Retrieval System

COMPANY HISTORY

7 ADVANTAGES

PART1
Safer. No Leak.

One by one, 0.6 MPa air pressure is applied before packaging, which ensures that the pipe fittings are airtight.

PART 2
The service life of 50 years.

There is an average thickness of 70 μm of zinc layer, which is moisture-proof and rust-proof. As long as proper maintenance is performed, the service life can be as long as 50 years.

PART 3
Easy For Installation;
Reduce Assembly Time.

High precision thread, 40% higher than the BS standard. It is easier for workers to install, thus saving them time, labor, and labor costs.

PART 4
Fast Delivery; Guarantee On Time.

"Approximately 25,000 tons of conventional products are kept in stock, with an average delivery time of 10-15 days.

An annual maximum capacity of 400,000 tons of non-spot products can be produced, with an average delivery time of 25-30 days."

PART 5
Easy For Sale.

Develop a more comprehensive cooperative business proposal so that cooperators can sell without concerns.

PART 6
The Highest Bonus Is 200 USD.

A $200 reward will be awarded each time a Jianzhi brand grey malleable iron pipe fitting is discovered by global end users.

PART 7
40 Years Of Professional Casting.

Over the past 40 years, the Jianzhi group has been deeply involved in the foundry industry. Product qualification rates exceed 99.96%.

A BRIEF INTRODUCTION TO SOME OF JIANZHI'S BUSINESS PARTNERS.

CHINA GAS is one of the largest trans-regional energy service enterprises in China.

China State Construction Engineering is the largest construction company in the world by revenue and the 8th largest general contractor in terms of overseas sales, as of 2020. In the 2022 Fortune Global 500, CSCEC was ranked as the ninth-largest public company in the world.

CHINA WATER is one of the largest integrated water affairs operators providing raw water, tap water, sewage treatment and related value-added services.

China Railway Construction Corporation Limited (abbreviated CRCC) is a listed construction enterprise based in Beijing, China, that was the second largest construction and engineering company in the world by revenue in 2014.

KunLun, is directly affiliated with China National Petroleum Corporation. CNPC was ranked fourth in the 2022 Fortune Global 500, a global ranking of the largest corporations by revenue.

WANDA GROUP is a Chinese multinational conglomerate founded in Dalian, Liaoning and headquartered in Beijing. It is a private property developer and owner of Wanda Cinemas and the Hoyts Group. Wanda Group ranks 28th on the 2020 China Top 500 Private Enterprises List.

Vanke is a large residential real estate developer in China. Vanke was also ranked 96th in the Forbes Global 2000 in 2020.

XINFANGSHENG GROUP is one of China's leading industrial product service platforms. The company focuses on platform creation, all-category sales of industrial products, and international trade.

ADVANCED PRODUCTION EQUIPMENT

High precision equipment is quality assurance. All production workshops of JIANZHI are equipped with advanced production and testing equipment. Including the DISA vertical molding line imported from Denmark, the horizontal automatic molding line imported from Japan, and the FONDARC sand mixer imported from France Independent CNC numerical control center for mold processing. At the same time, there is also self-developed laboratory testing equipment and so on.

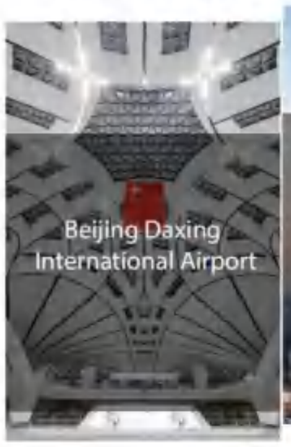
OVERVIEW

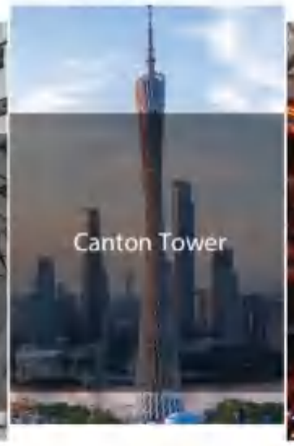
Material:	EN1562 Or ISO5922
Design & Dimensions:	EN10242 Or ISO49
Threads:	EN10226 OrISO7-1
Tensile Strength:	350 MPA
Elongation:	10%
Zinc Coating:	70μum
Working Pressure:	363 PSI
Size Available	1/8"-6"
Types	Heavy Duty Banded, Medium Duty Banded, Light Duty Beaded
Surface Treatment	Hot-dip Galvanized, Electrogalvanization, Black

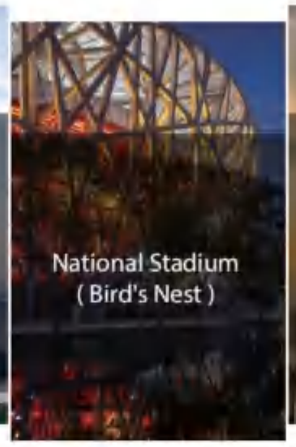
Pressure /Temperature Ratings

Temp F°	PSI
-20 to 150	363
200	265
250	225
300	185
350	150
366	150
400	110
450	75

FAMOUS CASES



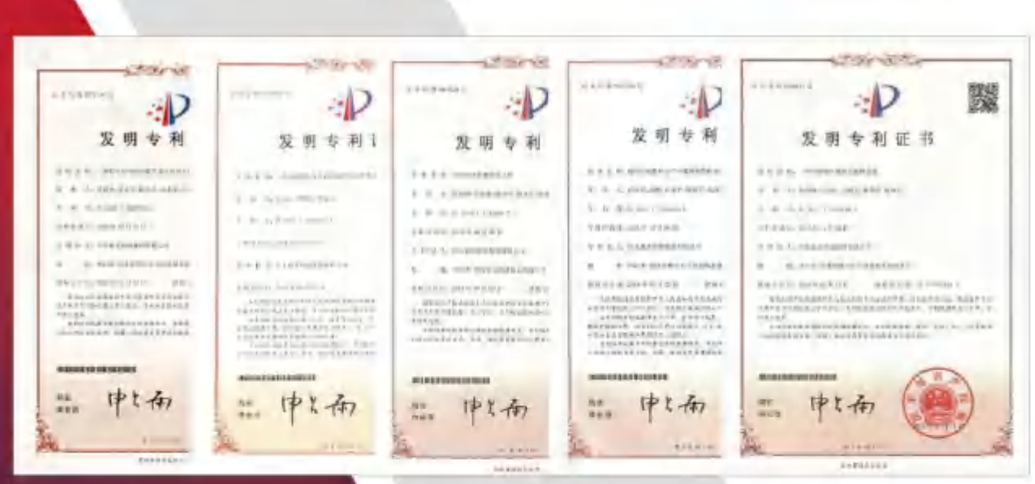


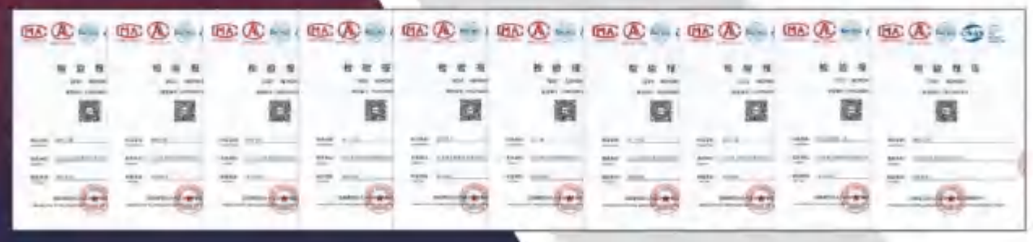


APPLICATION

- Gas
- Fire Pipes
- Water supply pipeline
- Heating pipe
- Oil pipeline
- System water pipeline
- Building gas pipeline
- Water treatment

CERTIFICATES





STANDARD REFERENCES

In this brochure, Jianzhi brand threaded pipe fittings in malleable cast iron conform to the international IOS49 and the European EN 10242 standards.
The connecting threads conform to the international ISO 7-1 and to the European EN 10226.
The material used is high quality blackheart malleable cast iron in accordance with the requirements of EN 1562: EN-GJMB-350-10 (ISO5922).
These products are primarily used in installations connected to water, gas, oil, and other fluid systems. The main function of these fittings is to connect pipes or to change the direction of fluid flow.

1. REQUIRED CHARACTERISTICS

1.1 Permissible working pressure and temperature
Fittings of all sizes are required to be suitable for maximum permissible working pressures within the temperature ranges specified in Table 1. Intermediate pressure ratings at temperatures between 120°C and 300°C shall be obtained by linear interpolation. The lowest service temperature for fittings is -20 degrees Celsius in normal applications.
It is recommended to consult the manufacturer for special applications at temperatures below -20°C.

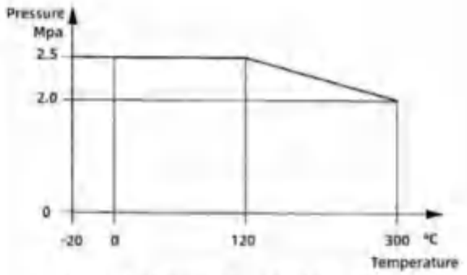


Figure1 - Pressure/temperature ratings

1.2 Design strength
Pressure-containing fittings including the component parts of unions shall be designed to withstand the design test pressures given in Table 2. Each size of the fitting shall be type tested in accordance with Table 2.

TABLE 1 - PRESSURE/TEMPERATURE RATINGS

Service temperature °C	Maximum permissible working pressure Mpa
-20 to 120	2.5
120 to 300	Interpolated values
300	2.0

TABLE 2 - DESIGN TEST PRESSURES

Hydrostatic design test pressure (gauge)	
Sizes 1/8 to 4	Sizes 5 and 6
10 Mpa	6.4 Mpa

2.SURFACE LAYER

Black or galvanized (hot dip zinc coating) fittings are available. And the zinc coating meet the following requirements. If the customer need a special protective layer to protect against superficial rust, the requests is also applied.

2.SURFACE LAYER

2.1Chemical composition of the zinc coating
The content by mass of the accompanying elements in the finish zinc coating does not exceed the following maximum values:

Aluminium (Al)	0.1%
Antimony (Sb)	0.01%
Arsenic (As)	0.02%
Bismuth (Bi)	0.01%
Cadmium (Cd)	0.01%
Copper (Cu)	0.1%
Lead (Pb)	1.6%, in individual cases 1.8%
Tin (Sn)	0.1%

2.2Coating mass per surface unit
The surface related mass of the zinc coating does not less than 500 g/㎡, as an average of 5 fittings. This corresponds to a medium layer thickness of 70 μm.It does not less than 450 g/㎡（63μm）when it is measured on an individual sample.

$$\overline{S} = \frac{m_A}{7.2}$$

$\overline{S}$ is the medium layer thickness of the zinc coating in μm.

m_A is the surface related mass of the zinc coating in g/㎡.

2.3Surface condition of the zinc coating
The zinc coating on the internal surface of the fitting is continuous, with the exception of machined black surfaces.In the special case of larger material cross-sections the iron-zinc alloy phases may grow through. The internal zinc coating are free from zinc blisters, zinc burrs, non-metallic remainders.

3.DIMENSIONS AND TOLERANCES

The main dimensions of the pipe fittings are given in the product specification and dimension table on the following pages. If the size is not specified, the manufacturer shall negotiate with the purchaser. Where maximum or minimum dimensions are not specified, the tolerances for face-to-face and face-to-centre dimensions of pipe fittings are as given in Table 3.

TABLE 3 - TOLERANCE ON LENGTH

Dimension	≤30	>30~≤50	>50~≤75	>75~≤100	>100~≤150	>150~≤200	>200
Tolerance	±1.5	±2.0	±2.5	±3.0	±3.5	±4.0	±5.0

NOTE:
1.Fittings sizes shown in brackets are optional sizes and which may have a limited availability.
2.The face-to-face and face-to-centre dimensions of unions may not always comply with the tolerance given due to the compound effect of piece tolerances and design upon the final assembly.

Laying lengths are given for assistance and guidance during installation. Their accuracy is dependent upon the tolerances given in 7.1 and on the tolerance of the threads specified in ISO 7-1 (or EN10226).

4.THREADS

4.1 Choice of thread
4.1.1 Jointing thread
Fittings shall be threaded in accordance with ISO7-1 (Or EN10226).
4.1.2 Fastening threads
The threads of backnuts, union nuts and their mating threads shall be in accordance with ISO 228-1 (Or ENISO228).
4.2 Alignment of threads
The axes of the screw threads are accurate within ±0.3°of the specified angle.
4.3 Chamfering
The outlets of the fittings shall have a chamfer.
On internal threads, the chamfer has a minimum included angle of 90°, and the diameter at the face exceeds the major diameter of the thread.
On external threads, the chamfer should be a minimum included angle of 60° and the diameter at the face not exceed the minor diameter of the thread at that face.
4.4 Taper thread
The basic form of the taper pipe thread is as shown in figure 2. The taper is 1 to 16, measured on the diameter. The angle between the flanks, measured in an axial plane section, is 55°, the flanks making equal angles with the axis.
The thread profiles are rounded off equally at crests and roots by circular arcs blending tangentially with the flanks in such a manner as to give the same thread height h as for parallel threads.

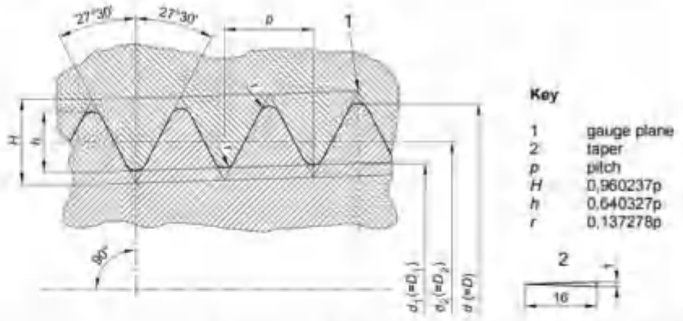
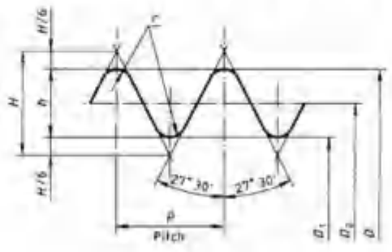


Figure 2 – Taper thread

4.5 Parallel thread
The basic form of the parallel pipe thread is as shown in figure 3. The angle between the flanks, measured in an axial plane section, is 55°. The thread profiles are rounded equally at crests and roots by circular arcs blending tangentially with the flanks.



$H = 0{,}960\,491\ P$
$h = 0{,}640\,327\ P$
$r = 0{,}137\,329\ P$

Figure 3 – Parallel thread

4.6 Thread lengths
4.6.1 External thread
The terms relating to the external taper pipe thread are given in figure 4.
The length of the useful thread, allowable in practice, is the sum of the lengths of the complete and incomplete threads, excluding the washout thread. The minimum length of the useful thread must be not less than the minimum gauge length plus the fitting allowance.
4.6.2 Internal thread
The design of internally threaded parts are such that they can receive external threads up to the lengths given in column 16 of table 4. The minimum lengths Lmin of useful thread in the case of internal threads with free run-out shall be not less than 80 % of the values given in column 17 of table 4. (See figure 5.)

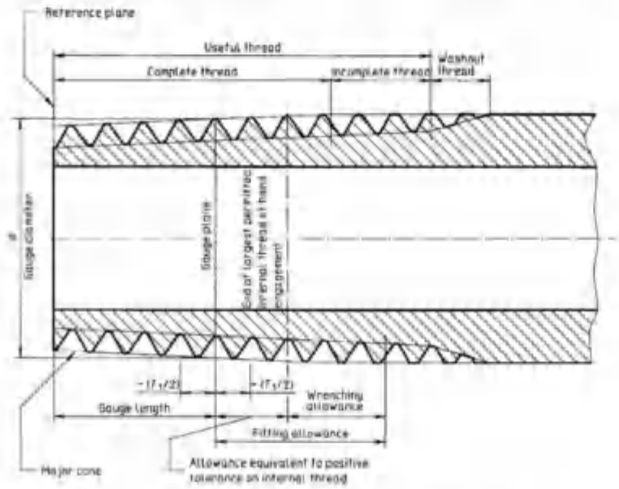


Figure 4 – Terms relating to external threads

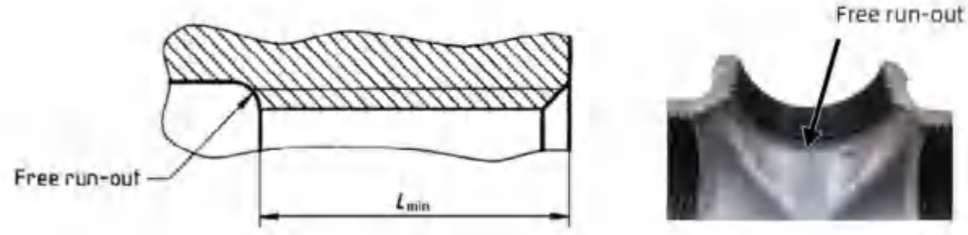


Figure 5 – Internal threads with free run-out

Dimensions in millimetres

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Designation of thread size	Number of threads in 25.4mm	Pitch	Height of thread	Diameters at gauge plane			Gauge length (external thread)					Tolerance on position of gauge plane on internal thread		Length of useful external thread not less than			Fitting allowance		Diametral tolerance 1) on parallel internal threads
				Major (gauge diameter)	Pitch	Minor	Nominal	Tolerance ±T1/2		max.	min.	Tolerance ±T2/2		For nominal gauge length	For maximum gauge length	For minimum gauge length	2)	Turns of thread	
		P	h	d	d2	d1		2)	Turns of thread			2)	Turns of thread						
1/16	28	0.907	0.581	7.723	7.142	6.561	4	0.9	1	4.9	3.1	1.1	1 1/4	6.5	7.4	5.6	2.5	2 3/4	±0.071
1/8	28	0.907	0.581	9.728	9.147	8.566	4	0.9	1	4.9	3.1	1.1	1 1/4	6.5	7.4	5.6	2.5	2 3/4	±0.071
1/4	19	1.337	0.856	13.157	12.301	11.445	6	1.3	1	7.3	4.7	1.7	1 1/4	9.7	11	8.4	3.7	2 3/4	±0.104
3/8	19	1.337	0.856	16.662	15.806	14.950	6.4	1.3	1	7.7	5.1	1.7	1 1/4	10.1	11.4	8.8	3.7	2 3/4	±0.104
1/2	14	1.814	1.162	20.955	19.793	18.631	8.2	1.8	1	10.0	6.4	2.3	1 1/4	13.2	15	11.4	5.0	2 3/4	±0.142
3/4	14	1.814	1.162	26.441	25.279	24.117	9.5	1.8	1	11.3	7.7	2.3	1 1/4	14.5	16.3	12.7	5.0	2 3/4	±0.142
1	11	2.309	1.479	33.249	31.770	30.291	10.4	2.3	1	12.7	8.1	2.9	1 1/4	16.8	19.1	14.5	6.4	2 3/4	±0.180
1 1/4	11	2.309	1.479	41.910	40.431	38.952	12.7	2.3	1	15.0	10.4	2.9	1 1/4	19.1	21.4	16.8	6.4	2 3/4	±0.180
1 1/2	11	2.309	1.479	47.803	46.324	44.845	12.7	2.3	1	15.0	10.4	2.9	1 1/4	19.1	21.4	16.8	6.4	2 3/4	±0.180
2	11	2.309	1.479	59.614	58.135	56.656	15.9	2.3	1	18.2	13.6	2.9	1 1/4	23.4	25.7	21.1	7.5	3 1/4	±0.180
2 1/2	11	2.309	1.479	75.184	73.705	72.226	17.5	3.5	1 1/2	21.0	14.0	3.5	1 1/2	26.7	30.2	23.2	9.2	4	±0.216
3	11	2.309	1.479	87.884	86.405	84.926	20.6	3.5	1 1/2	24.1	17.1	3.5	1 1/2	29.8	33.3	26.3	9.2	4	±0.216
4	11	2.309	1.479	113.030	111.551	110.072	25.4	3.5	1 1/2	28.9	21.9	3.5	1 1/2	35.8	39.3	32.3	10.4	4 1/2	±0.216
5	11	2.309	1.479	138.430	136.951	135.472	28.6	3.5	1 1/2	32.1	25.1	3.5	1 1/2	40.1	43.6	36.6	11.5	5	±0.216
6	11	2.309	1.479	163.600	162.351	160.872	28.6	3.5	1 1/2	32.1	25.1	3.5	1 1/2	40.1	43.6	36.6	11.5	5	±0.216

NOTE—The main dimensions were converted into mill metres on the bases of 1 inch=25.4mm,beginning with the number of threads per inch,which determines the pitch P the formula h(the height of thread)=0.640327P and the major diameter at the gauge plane.Pitch diameter and minor diameter were then compiled by subtracting once or twice respectively the height of thread h from the major diameter.

The nominal gauge length,the tolerances and the fitting allowance were directly computed.The remaining lengths given in table 1 were obtained by subtracting or adding the tolerances or fitting allowance respectively to the nominal gauge length.Tolerances and fitting allowance are expressed in millimetres and in number of turns of thread.

1) For parallel internally threaded parts the diametral tolerances are derived from the tolerances in column 14 by multiplying with the corresponding pitch in column 3 and with 1/6.the amount of taper.

2) Informative tolerances,in millimetres,are obtained from the maindatory values in turns of thread by multiplying with the corresponding pitch in column 3 and rounding to the nearest 0.1mm.

TABLE 4 - THREAD DIMENSIONS

5.LEAK TIGHTNESS TEST

One of the following methods will be used for testing all pressure containing fittings (after they have been machinized, but before they are protected by any other protective coating other than zinc coating). As a result of this testing, each fitting must not show any signs of leakage. To ensure the authenticity of the test results, all test equipment is equipped with a qualified monitoring pressure gauge:

a)by the application of an internal hydrostatic pressure of not less than 2 MPa, test requirements are refer to table 5;

TABLE 5 - TEST REQUIREMENTS

Pipe fittings dimensions （inch）	Test time (s)	Test result
1/8~2	≥15	Each fitting must not show any
2½~6	≥60	signs of leakage or damage

b) by the application of an internal pneumatic pressure of not less than 0.5 MPa, whilst the fitting is completely immersed in water or light oil;

c) by other tests which ensure an equivalent quality.

All Jianzhi brand fittings are satisfy an internal pneumatic pressure tightness test of 0.6 MPa, without any signs of leakage.

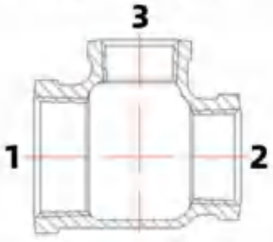
6.GUIDE/INTRODUCTION

1.GB=Heavy Banded
2.QB=Medium Beaded
3.YB=Beaded
4.BLK=Black
5.GAL=Hot dip galvanized
6.EAL=Electrogalvanized
7.9006=The code and the size of the pipe fittings

7.DESIGNATION OF SIZE

Example:

Reducing tee, 1 for 1-1/2" and 2 for 1-1/4"pipe and 3 for 1" pipe fittings
As shown in the figure:



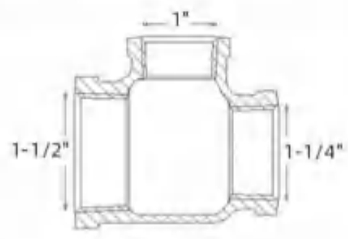



Fig.1 Fig.40 Fig.41 Fig.85 Fig.90 Fig.90R Fig.90U


Fig.92 Fig.92R Fig.95 Fig.96 Fig.97 Fig.98 Fig.120


Fig.130 Fig.130R Fig.131R Fig.165 Fig.180 Fig.180R Fig.220


Fig.240 Fig.241 Fig.245 Fig.246 Fig.270 Fig.280 Fig.290


Fig.291 Fig.300 Fig.301 Fig.310 Fig.321 Fig.329 Fig.330


Fig.331 Fig.340 Fig.341 Fig.343 Fig.471 Fig.529a Fig.1221


Fig.LCC Fig.SCC Fig.OEM


Fig.1 Fig.2 Fig.90 Fig.90R Fig.92 Fig.92R Fig.120


Fig.130 Fig.130R Fig.131R Fig.180 Fig.220 Fig.240 Fig.241

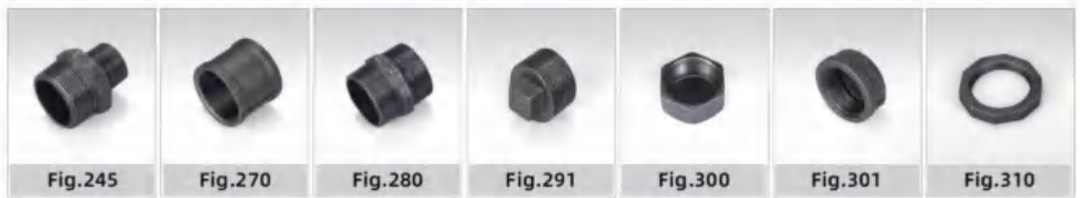


Fig.245 Fig.270 Fig.280 Fig.291 Fig.300 Fig.301 Fig.310


Fig.321 Fig.330 Fig.331 Fig.340 Fig.341 Fig.471 Fig.529a


Fig.1221

Fig.90

90° Elbow, Equal

Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ9006	1/8"	6	18	30.38	31	600
JZ9008	1/4"	8	20	42.14	43	600
JZ9010	3/8"	10	24	60.76	62	500
JZ9015	1/2"	15	27	96.04	98	400
JZ9020	3/4"	20	32	139.16	142	210
JZ9025	1"	25	37	213.64	218	120
JZ9032	1-1/4"	32	44.5	340.06	347	64
JZ9040	1-1/2"	40	48.5	423.36	432	48
JZ9050	2"	50	57	674.24	688	32
JZ9065	2-1/2"	65	68.5	1068.2	1090	16
JZ9080	3"	80	77.5	1489.6	1520	10
JZ90100	4"	100	96.5	2700.88	2756	6
JZ90150	6"	150	129	6089.72	6214	2

Fig.92

90° M&F Elbow, Equal

Code	Size		A	B	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ9208	1/4"	8	20	28	37.24	38	600
JZ9210	3/8"	10	25	33	54.88	56	500
JZ9215	1/2"	15	28	38	87.22	89	300
JZ9220	3/4"	20	33	44	132.3	135	180
JZ9225	1"	25	38	52	204.82	209	104
JZ9232	1-1/4"	32	45	60	339.08	346	60
JZ9240	1-1/2"	40	50	65	434.14	443	52
JZ9250	2"	50	58	74	701.68	716	26
JZ9265	2-1/2"	65	69	90	1125.04	1148	12
JZ9280	3"	80	77.5	100	1547.42	1579	10
JZ92100	4"	100	96.5	120	2703.82	2759	6

Fig.90R

90 Degree Elbow, Reducing

Code	Size		A	B	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ90R1510	1/2" x 3/8"	15×10	25	25	74.48	76	270
JZ90R2015	3/4" x 1/2"	20×15	29	30	122.5	125	270
JZ90R2510	1 "x 3/8"	25×10	29	31	143.08	146	160
JZ90R2515	1 "x 1/2"	25×15	31	33	161.7	165	160
JZ90R2520	1 "x 3/4"	25×20	34	35	184.24	188	160
JZ90R3210	1-1/4" x 3/8"	32×10	31	36	213.64	218	100
JZ90R3215	1-1/4" x 1/2"	32×15	34	37	227.36	232	100
JZ90R3220	1-1/4" x 3/4"	32×20	36	40	252.84	258	100
JZ90R3225	1-1/4" x 1"	32×25	40	41	285.18	291	90
JZ90R4015	1-1/2" x 1/2"	40×15	35	41	266.56	272	90
JZ90R4020	1-1/2" x 3/4"	40×20	37	43	302.82	309	90
JZ90R4025	1-1/2" x 1"	40×25	41	45	342.02	349	70
JZ90R4032	1-1/2" x 1-1/4"	40×32	45	47	400.82	409	56
JZ90R5015	2 "x 1/2"	50×15	37	47	398.86	407	68
JZ90R5020	2 "x 3/4"	50×20	40	49	423.36	432	52
JZ90R5025	2"x 1"	50×25	43	51	476.28	486	50
JZ90R5032	2 "x 1-1/4"	50×32	47	53	552.72	564	40
JZ90R5040	2 "x 1-1/2"	50×40	51	54	588	600	30
JZ90R6515	2-1/2" x 1/2"	65×15	40.5	56	579.18	591	46
JZ90R6520	2-1/2" x 3/4"	65×20	43.5	57	613.48	626	40
JZ90R6525	2-1/2" x 1"	65×25	47.5	59	686	700	34
JZ90R6532	2-1/2 "x 1-1/4"	65×32	51.5	61	732.06	747	30
JZ90R6540	2-1/2 "x 1-1/2"	65×40	54.5	61	772.24	788	26
JZ90R6550	2-1/2" x 2"	65×50	59.5	64	904.54	923	24
JZ90R8015	3 "x 1/2"	80×15	42.5	64	735.98	751	36
JZ90R8020	3 "x 3/4"	80×20	45.5	65	770.28	786	30
JZ90R8025	3 "x 1"	80×25	49.5	67	830.06	847	20
JZ90R8032	3 "x 1-1/4"	80×32	54.5	69	931.98	951	20
JZ90R8040	3 "x 1-1/2"	80×40	57.5	71	952.56	972	20
JZ90R8050	3 "x 2"	80×50	61.5	71	1166.2	1190	12
JZ90R8065	3 "x 2-1/2"	80×65	71.5	74	1319.08	1346	12
JZ90R10015	4 "x 1/2"	100×15	49.5	78	1311.24	1338	14
JZ90R10020	4 "x3/4"	100×20	53.5	79	1326.92	1354	14
JZ90R10025	4 "x 1"	100×25	56.5	82	1405.32	1434	14
JZ90R10032	4 "x 1-1/4"	100×32	60.5	85	1550.36	1582	14
JZ90R10040	4 "x 1-1/2"	100×40	62.5	85	1621.9	1655	10
JZ90R10050	4 "x 2"	100×50	68.5	86	1711.08	1746	10
JZ90R10065	4 "x 2-1/2"	100×65	77.5	89	1957.06	1997	8
JZ90R10080	4 "x 3"	100×80	82.5	90	2164.82	2209	8

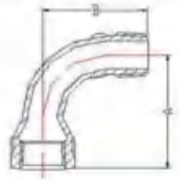
Fig.120

45°Elbow

Code	Size		A	B	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ9208	1/4"	8	20	28	37.24	38	600
JZ9210	3/8"	10	25	33	54.88	56	500
JZ9215	1/2"	15	28	38	87.22	89	300
JZ9220	3/4"	20	33	44	132.3	135	180
JZ9225	1"	25	38	52	204.82	209	104
JZ9232	1-1/4"	32	45	60	339.08	346	60
JZ9240	1-1/2"	40	50	65	434.14	443	52
JZ9250	2"	50	58	74	701.68	716	26
JZ9265	2-1/2"	65	69	90	1125.04	1148	12
JZ9280	3"	80	77.5	100	1547.42	1579	10
JZ92100	4"	100	96.5	120	2703.82	2759	6

Fig.1

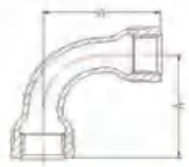
90 Degree M&F Long Sweep Bends



Code	Size		A	B	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ110	3/8"	10	48	42	71.54	73	400
JZ115	1/2"	15	55	48	115.64	118	280
JZ120	3/4"	20	69	60	187.18	191	150
JZ125	1"	25	85	75	304.78	311	80
JZ132	1-1/4"	32	105	95	519.4	530	50
JZ140	1-1/2"	40	116	105	665.42	679	24
JZ150	2"	50	140	130	1123.08	1146	12
JZ165	2-1/2"	65	176	165	2067.8	2110	8
JZ180	3"	80	205	190	2955.68	3016	6
JZ1100	4"	100	260	245	5396.86	5507	2

Fig.2

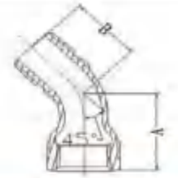
90 Degree Female Long Sweep Bends



Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ210	3/8"	10	48	87.22	89	400
JZ215	1/2"	15	55	142.1	145	220
JZ220	3/4"	20	69	223.44	228	120
JZ225	1"	25	85	372.4	380	70
JZ232	1-1/4"	32	105	607.6	620	40
JZ240	1-1/2"	40	116	807.52	824	20
JZ250	2"	50	140	1268.12	1294	12
JZ265	2-1/2"	65	176	2243.22	2289	8
JZ280	3"	80	205	3234	3300	6
JZ2100	4"	100	260	6056.4	6180	2

Fig.40

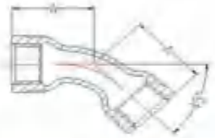
45 Degree M&F Long Sweep Bends



Code	Size		A	B	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm		g	g	Pcs/ctn
JZ4015	1/2"	15	36	30	87	88	180
JZ4020	3/4"	20	43	36	88	144	160
JZ4025	1"	25	51	42	89	224	80
JZ4032	1-1/4"	32	64	54	90	362	50
JZ4040	1-1/2"	40	68	58	91	450	24
JZ4050	2"	50	81	70	92	752	12
JZ4065	2-1/2"	65	99	86	93	1344	8
JZ4080	3"	80	113	100	94	1963	6
JZ40100	4"	100	142	126			2

Fig.41

45 Degree Female Long Sweep Bends



Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ4115	1/2"	15	36	119.56	122	180
JZ4120	3/4"	20	43	180.32	184	160
JZ4125	1"	25	51	286.16	292	80
JZ4132	1-1/4"	32	64	461.58	471	50
JZ4140	1-1/2"	40	68			24
JZ4150	2"	50	81			12
JZ4165	2-1/2"	65	99			8
JZ4180	3"	80	113			6
JZ41100	4"	100	142			2

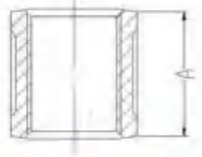
Fig.220

Part Thread Sockets

Code	Size		L	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ22006	1/8"	6	23.5	/	/	/
JZ22008	1/4"	8	26	36.26	37	800
JZ22010	3/8"	10	29	46.06	47	700
JZ22015	1/2"	15	35	80.36	82	450
JZ22020	3/4"	20	38	113.68	116	300
JZ22025	1"	25	44	176.4	180	180
JZ22032	1-1/4"	32	49	264.6	270	120
JZ22040	1-1/2"	40	53	319.48	326	72
JZ22050	2"	50	63	543.9	555	48
JZ22065	2-1/2"	65	72	825.16	842	32
JZ22080	3"	80	77.5	1003.52	1024	24
JZ220100	4"	100	91.5	1702.26	1737	10
JZ220150	6"	150	118	3776.92	3854	4

Fig.270

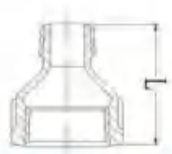
Entire Thread Sockets



Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ27008	1/4"	8	26	38.22	39	800
JZ27010	3/8"	10	29	48.02	49	700
JZ27015	1/2"	15	35	82.32	84	450
JZ27020	3/4"	20	38	115.64	118	300
JZ27025	1"	25	44	178.36	182	180
JZ27032	1-1/4"	32	49	263.62	269	120
JZ27040	1-1/2"	40	53	338.1	345	72
JZ27050	2"	50	63	583.1	595	48
JZ27065	2-1/2"	65	72	822.22	839	32
JZ27080	3"	80	77.5	1065.26	1087	24
JZ270100	4"	100	91.5	1774.78	1811	10
JZ270150	6"	150	118	3789.66	3867	4

Fig.246

Socket Reducing，M&F



Code	Size		L	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ2462015	3/4 "x 1/2"	20X15	47	93.1	95	380
JZ2462515	1" x 1/2"	25X15	54	132.3	135	180
JZ2462520	1 "x 3/4"	25X20	54	143.08	146	180
JZ2463220	1-1/4" x 3/4"	32X20	59	202.86	207	120
JZ2463225	1-1/4" x 1"	32X25	59	213.64	218	120
JZ2464020	1-1/2" × 3/4"	40X20	62	252.84	258	80
JZ2464025	1-1/2" x 1"	40X25	62	266.56	272	80
JZ2464032	1-1/2" x 1-1/4"	40X32	62	288.12	294	80
JZ2465025	2 "x 1"	50X25	69	397.88	406	48
JZ2465032	2 "× 1-1/4"	50X32	69	425.32	434	48
JZ2465040	2" x 1-1/2"	50X40	69	429.24	438	48

Fig.240

Sockets, Reducing

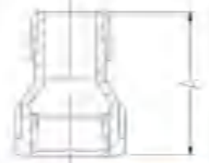


Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ240108	3/8" x 1/4"	10×8	29	42	43	500
JZ240158	1/2" × 1/4"	15×8	35	66	67	500
JZ2401510	1/2" x 3/8"	15×10	36	69	70	500
JZ240208	3/4 "x 1/4"	20×8	38	86	88	360
JZ2402010	3/4 "x 3/8"	20×10	38	91	93	360
JZ2402015	3/4 "x 1/2"	20×15	38	105	107	360
JZ240258	1" × 1/4"	25×8	44	132	135	200
JZ2402510	1" × 3/8"	25×10	44	128	131	200
JZ2402515	1" x 1/2"	25×15	44	142	145	200
JZ2402520	1 "x 3/4"	25×20	44	150	153	200
JZ2403215	1-1/4" x 1/2"	32×15	49	203	207	144
JZ2403220	1-1/4" x 3/4"	32×20	49	214	218	144
JZ2403225	1-1/4" x 1"	32×25	49	225	230	120
JZ2404015	1-1/2" x 1/2"	40×15	53	247	252	140
JZ2404020	1-1/2" x 3/4"	40×20	53	254	259	140
JZ2404025	1-1/2" x 1"	40×25	53	277	283	120
JZ2404032	1-1/2" x 1-1/4"	40×32	53	312	318	100
JZ2405015	2 "x 1/2"	50×15	63	392	400	80
JZ2405020	2 "x 3/4"	50×20	63	406	414	80
JZ2405025	2 "x 1"	50×25	63	414	422	72
JZ2405032	2 "x 1-1/4"	50×32	63	435	444	72
JZ2405040	2" x 1-1/2"	50×40	63	475	485	48
JZ2406515	2-1/2" x 1/2"	65×15	72	568	580	60
JZ2406520	2-1/2" x 3/4"	65×20	72	578	590	60
JZ2406525	2-1/2" x 1"	65×25	72	594	606	60
JZ2406532	2-1/2" x 1-1/4"	65×32	72	614	627	60
JZ2406540	2-1/2" x 1-1/2"	65×40	72	634	647	60
JZ2406550	2-1/2" x 2"	65×50	72	713	728	40
JZ2408015	3 "x 1/2"	80×15	77.5	699	713	40
JZ2408020	3 "x 3/4"	80×20	77.5	735	750	40
JZ2408025	3 "x 1"	80×25	77.5	747	762	40
JZ2408032	3 "x 1-1/4"	80×32	77.5	764	780	40
JZ2408040	3 "x 1-1/2"	80×40	77.5	785	801	40
JZ2408050	3 "x 2"	80×50	77.5	839	856	36
JZ2408065	3 "x 2-1/2"	80×65	77.5	860	878	24
JZ24010015	4 "x 1/2"	100×15	91.5	1139	1162	20
JZ24010020	4 "x 3/4"	100×20	91.5	1223	1248	20
JZ24010025	4 "x 1"	100×25	91.5	1233	1258	20
JZ24010032	4"x 1-1/4"	100×32	91.5	1279	1305	20
JZ24010040	4 "x 1-1/2"	100×40	91.5	1294	1320	20
JZ24010050	4 "x 2"	100×50	91.5	1326	1353	16
JZ24010065	4" x 2-1/2"	100×65	91.5	1378	1406	14
JZ24010080	4 "x 3"	100×80	91.5	1438	1467	12
JZ24015080	6"x4"	150×80	118			

Fig.529a

Socket M&F



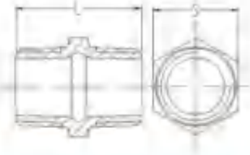


Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ529A15	1/2"	15	44	56.84	58	600
JZ529A20	3/4"	20	45	89.18	91	380
JZ529A25	1"	25	52	137.2	140	180
JZ529A32	1-1/4"	32	57	197.96	202	120
JZ529A40	1-1/2"	40	60	249.9	255	80
JZ529A50	2"	50	66	384.16	392	48

Fig.280

Hexagon Nipples





Code	Size		L	S	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ2808	1/4"	8	36	16.7	29.4	30	1000
JZ28010	3/8"	10	36	19.8	30.38	31	1000
JZ28015	1/2"	15	44	23.6	55.86	57	600
JZ28020	3/4"	20	47	29.2	84.28	86	300
JZ28025	1"	25	53	36	134.26	137	200
JZ28032	1-1/4"	32	56	45	186.2	190	140
JZ28040	1-1/2"	40	58	51	227.36	232	104
JZ28050	2"	50	68	63	365.54	373	56
JZ28065	2-1/2"	65	73	79.4	543.9	555	36
JZ28080	3"	80	81	91.6	768.32	784	24
JZ280100	4"	100	95	117	1237.74	1263	12
JZ280150	6"	150	107	170			

Fig.245

Nipples, Reducing

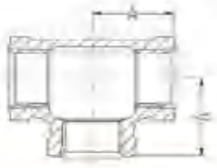


Code	Size		L	S	Unit Weight Black	Unit Weight Galv.	PCS/ CTN.
	BSPT	DN	mm	mm	g	g	
JZ245158	1/2" x 1/4"	15×8	44	22	47.04	48	600
JZ2451510	1/2" x 3/8"	15×10	44	22	59.78	61	600
JZ2452015	3/4 "x 1/2"	20×15	47	29.9	91.14	93	400
JZ2452515	1" x 1/2"	25×15	53	35.8	115.64	118	260
JZ2452520	1 "x 3/4"	25×20	53	35.8	137.2	140	240
JZ2453215	1-1/4" x 1/2"	32×15	57	45.6	177.38	181	160
JZ2453220	1-1/4" x 3/4"	32×20	57	45.6	181.3	185	140
JZ2453225	1-1/4" x 1"	32×25	57	45.6	192.08	196	140
JZ2454015	1-1/2" x 1/2"	40×15	59	50.5	202.86	207	130
JZ2454020	1-1/2" x 3/4"	40×20	59	50.5	207.76	212	130
JZ2454025	1-1/2" x 1"	40×25	59	50.5	225.4	230	120
JZ2454032	1-1/2" x 1-1/4"	40×32	59	50.5	235.2	240	100
JZ2455015	2 "x 1/2"	50×15	68	63.5	323.4	330	75
JZ2455020	2 "x 3/4"	50×20	68	63.5	334.18	341	72
JZ2455025	2 "x 1"	50×25	68	63.5	343	350	72
JZ2455032	2 "x 1-1/4"	50×32	68	63.5	352.8	360	72
JZ2455040	2" x 1-1/2"	50×40	68	63.5	366.52	374	60
JZ2456550	2-1/2" "x 2"	65×50	73	79.4			
JZ2458050	3 "x 2"	80×50	81	91.6	749.7	765	24
JZ2458065	3"×2-1/2"	80×65	81	91.6			
JZ24510050	4"×2"	100×50	95	117			
JZ24510065	4"×2-1/2"	100×65	95	117			
JZ24510080	4"×3"	100×80	95	117			

Fig.130

Tee, Equal





Code	Size		A	Unit Weight Black	Unit Weight Galv.	Packing Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ1306	1/8"	6	18	44.1	45	400
JZ1308	1/4"	8	20	53.7	65	400
JZ13010	3/8"	10	24	88.2	90	300
JZ13015	1/2"	15	27	137.2	140	240
JZ13020	3/4"	20	32	198.94	203	140
JZ13025	1"	25	37	308.7	315	90
JZ13032	1-1/4"	32	44.5	479.22	489	56
JZ13040	1-1/2"	40	48.5	600.74	613	40
JZ13050	2"	50	57	977.06	997	20
JZ13065	2-1/2"	65	68.5	1520.96	1552	12
JZ13080	3"	80	77.5	2045.26	2087	10
JZ130100	4"	100	96.5	3589.74	3663	4
JZ130150	6"	150	129	8157.52	8324	2

Fig.130R

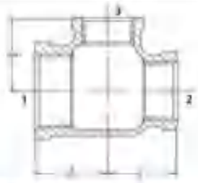
Tee, Reducing



Code	Size		A	B	Unit Weight Black	Unit Weight Galv.	Packing Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ130R2015	3/4 "x 1/2"	20×15	29	30	180.32	184	150
JZ130R2510	1 "x 3/8"	25×10	29	31	225.4	230	100
JZ130R2515	1" x 1/2"	25×15	31	33	238.14	243	100
JZ130R2520	1 "x 3/4"	25×20	34	35	261.66	267	100
JZ130R3210	1-1/4" x 3/8"	32×10	31	36	309.68	316	64
JZ130R3215	1-1/4" x 1/2"	32×15	34	37	341.04	348	64
JZ130R3220	1-1/4" x 3/4"	32×20	36	40	371.42	379	64
JZ130R3225	1-1/4" x 1"	32×25	40	41	407.68	416	64
JZ130R4015	1-1/2" x 1/2"	40×15	35	41	406.7	415	52
JZ130R4020	1-1/2" x 3/4"	40×20	37	43	427.28	436	52
JZ130R4025	1-1/2" x 1"	40×25	41	45	481.18	491	42
JZ130R4032	1-1/2" x 1-1/4"	40×32	45	47	557.62	569	42
JZ130R5015	2 "x 1/2"	50×15	37	47	589.96	602	40
JZ130R5020	2 "x 3/4"	50×20	40	49	642.88	656	40
JZ130R5025	2 "x 1"	50×25	43	51	687.96	702	30
JZ130R5032	2 "x 1-1/4"	50×32	47	53	750.68	766	30
JZ130R5040	2" x 1-1/2"	50×40	51	54	826.14	843	24
JZ130R6515	2-1/2" x 1/2"	65×15	40.5	56	887.88	906	24
JZ130R6520	2-1/2" x 3/4"	65×20	43.5	57	919.24	938	24
JZ130R6525	2-1/2" x 1"	65×25	47.5	59	1017.24	1038	20
JZ130R6532	2-1/2" x 1-1/4"	65×32	51.5	61	1075.06	1097	16
JZ130R6540	2-1/2" x 1-1/2"	65×40	54.5	61	1145.62	1169	16
JZ130R6550	2-1/2" x 2"	65×50	59.5	64	1294.58	1321	16
JZ130R8015	3 "x 1/2"	80×15	42.5	64	1114.26	1137	12
JZ130R8020	3 "x 3/4"	80×20	45.5	65	1174.04	1198	12
JZ130R8025	3 "x 1"	80×25	49.5	67	1267.14	1293	12
JZ130R8032	3 "x 1-1/4"	80×32	54.5	69	1342.6	1370	12
JZ130R8040	3 "x 1-1/2"	80×40	57.5	71	1440.6	1470	12
JZ130R8050	3 "x 2"	80×50	61.5	71	1589.56	1622	10
JZ130R8065	3 "x 2-1/2"	80×65	71.5	74	1862	1900	10
JZ130R10015	4 "x 1/2"	100×15	49.5	78	1915.9	1955	8
JZ130R10020	4 "x 3/4"	100×20	53.5	79	2038.4	2080	8
JZ130R10025	4 "x 1"	100×25	56.5	82	2100.14	2143	8
JZ130R10032	4 "x 1-1/4"	100×32	60.5	85	2214.8	2260	6
JZ130R10040	4 "x 1-1/2"	100×40	62.5	85	2303.98	2351	6
JZ130R10050	4 "x 2"	100×50	68.5	86	2558.78	2611	6
JZ130R10065	4" x 2-1/2"	100×65	77.5	89	2799.86	2857	6
JZ130R10080	4 "x 3"	100×80	82.5	90	3138.94	3203	6

Fig.131R

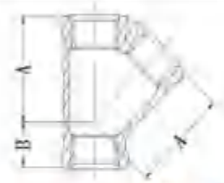
Tees Reducing



Code	Size		A	B	C	Unit Weight		Packing
						Black	Galv.	Carton
	BSPT	DN	mm	mm	mm	g	g	Pcs/ctn
JZ131R201515	3/4"×1/2"×1/2"	20×15×15	29	30	27	159.74	163	120
JZ131R251520	1"×1/2"×3/4"	25×15×20	31	33	29	191.1	195	120
JZ131R252020	1"×3/4"×3/4"	25×20×20	34	35	32	157.78	161	120
JZ131R321525	1-1/4"×1/2"×1"	32×15×25	33	37	31	234.22	239	80
JZ131R322025	1-1/4"×3/4"×1"	32×20×25	36	40	34	287.14	293	60
JZ131R322525	1-1/4"×1"×1"	32×25×25	39	40	36	355.74	363	60
JZ131R323225	1-1/4"×1-1/4"×1"	32×32×25	44.5	44.5	41	406.7	415	40
JZ131R401532	1-1/2"×1/2"×1-1/4"	40×15×32	35	41	33	539.98	551	32
JZ131R402032	1-1/2"×3/4"×1-1/4"	40×20×32	37	43	36	514.5	525	36
JZ131R402525	1-1/2"×1"×1"	40×25×25	40	44	36	641.9	655	28
JZ131R402532	1-1/2"×1"×1-1/4"	40×25×32	41	45	40	711.48	726	20
JZ131R403225	1-1/2"×1-1/4"×1"	40×32×25	45	47	41	879.06	897	16
JZ131R403232	1-1/2"×1-1/4"×1-1/4"	40×32×32	45	47	44.5	1056.44	1078	12
JZ131R404025	1-1/2"×1-1/2"×1"	40×40×25	48.5	48.5	45	1025.08	1046	16
JZ131R405032	1-1/2"×2"×1-1/4"	40×50×32	54	51	53	1336.72	1364	10
JZ131R501540	2"×1/2"×1-1/2"	50×15×40	37	47	35	1622.88	1656	10
JZ131R502040	2"×3/4"×1-1/2"	50×20×40	40	49	37	2530.36	2582	6
JZ131R502532	2"×1"×1-1/4"	50×25×32	43	51	40	299.88	306	64
JZ131R502540	2"×1"×1-1/2"	50×25×40	42	49	40	344.96	352	88
JZ131R503232	2"×1-1/4"×1-1/4"	50×32×32	47	53	44.5	392	400	60
JZ131R503240	2"×1-1/4"×1-1/2"	50×32×40	47	53	45	491.96	502	40
JZ131R504025	2"×1-1/2"×1"	50×40×25	51	54	45	377.3	385	42
JZ131R504040	2"×1-1/2"×1-1/2"	50×40×40	51	54	48.5	406.7	415	40
JZ131R505025	2"×2"×1"	50×50×25	57	57	51	451.78	461	40
JZ131R651550	2-1/2"×1/2"×2"	65×15×50	40.5	56	37	534.1	545	36
JZ131R652050	2-1/2"×3/4"×2"	65×20×50	43.5	57	40	620.34	633	30
JZ131R652550	2-1/2"×1"×2"	65×25×50	45	58	42	702.66	717	24
JZ131R653240	2-1/2"×1-1/4"×1-1/2"	65×32×40	51.5	61	45	599.76	612	30
JZ131R653250	2-1/2"×1-1/4"×2"	65×32×50	51.5	61	47	673.26	687	30
JZ131R654050	2-1/2"×1-1/2"×2"	65×40×50	54.5	62	51	525.28	536	36
JZ131R655050	2-1/2"×2"×2"	65×50×50	59.5	64	57	525.28	536	36
JZ131R802565	3"×1"×2-1/2"	80×25×65	49.5	67	47.5	525.28	536	36
JZ131R803265	3"×1-1/4"×2-1/2"	80×32×65	54.5	69	51.5	552.72	564	24
JZ131R804065	3"×1-1/2"×2-1/2"	80×40×65	57.5	71	54.5	562.52	574	24
JZ131R805065	3"×2"×2-1/2"	80×50×65	61.5	71	59.5	705.6	720	16
JZ131R806565	3"×2-1/2"×2-1/2"	80×65×65	71.5	74	68.5	754.6	770	16

Fig.165

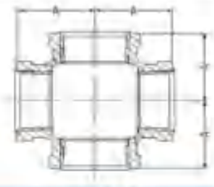
Lateral Y Branch 45° Tee



Code	Size		A	B	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ16515	1/2"	15	42	18	161.7	165	240
JZ16520	3/4"	20	51.5	18.5	244.02	249	100
JZ16525	1"	25	62	23	375.34	383	80
JZ16532	1-1/4"	32	75	28	595.84	608	40
JZ16540	1-1/2"	40	82	30	743.82	759	30
JZ16550	2"	50	100.5	32.5	1189.72	1214	16
JZ16565	2-1/2"	65	125	39	1935.5	1975	10
JZ16580	3"	80	140	45	2651.88	2706	8
JZ165100	4"	100	180	55	4817.68	4916	2

Fig.180

Cross Female

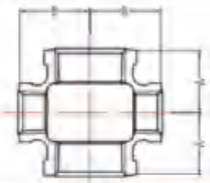


Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ18015	1/2"	15	27	167	170	180
JZ18020	3/4"	20	32	246	251	96
JZ18025	1"	25	37	380	388	72
JZ18032	1-1/4"	32	44.5	576	588	36
JZ18040	1-1/2"	40	48.5	712	727	30
JZ18050	2"	50	57	1147	1170	12
JZ18065	2-1/2"	65	68.5	1740	1776	10
JZ18080	3"	80	77.5	2478	2529	6
JZ180100	4"	100	96.5	4211	4297	2

Fig.180R

Cross,Female,Reducing



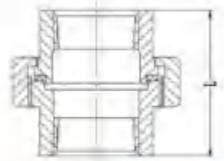


Code	Size		A	B	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ180R2015	3/4 "x 1/2"	20×15	29	30	199	203	120
JZ180R2515	1" x 1/2"	25×15	31	33	261	266	96
JZ180R2520	1 "x 3/4"	25×20	34	35	310	316	80
JZ180R3215	1-1/4" x 1/2"	32×15	34	37	365	372	64
JZ180R3220	1-1/4" x 3/4"	32×20	36	40	407	415	60
JZ180R3225	1-1/4" x 1"	32×25	40	41	460	469	56
JZ180R4015	1-1/2" x 1/2"	40×15	35	41	414	422	52
JZ180R4020	1-1/2" x 3/4"	40×20	37	43	473	483	52
JZ180R4025	1-1/2" x 1"	40×25	41	45	522	533	42
JZ180R4032	1-1/2" x 1-1/4"	40×32	45	47	646	659	34
JZ180R5015	2 "x 1/2"	50×15	37	47	616	629	36
JZ180R5020	2 "x 3/4"	50×20	40	49	674	688	36
JZ180R5025	2 "x 1"	50×25	43	51	743	758	28
JZ180R5032	2 "x 1-1/4"	50×32	47	53	832	849	28
JZ180R5040	2" x 1-1/2"	50×40	51	54	901	919	20
JZ180R6515	2-1/2" x 1/2"	65×15	40.5	56	878	896	20
JZ180R6520	2-1/2" x 3/4"	65×20	43.5	57	950	969	20
JZ180R6525	2-1/2" x 1"	65×25	47.5	59	1035	1056	18
JZ180R6532	2-1/2" x 1-1/4"	65×32	51.5	61	1174	1198	16
JZ180R6540	2-1/2" x 1-1/2"	65×40	54.5	61	1201	1225	14
JZ180R6550	2-1/2" x 2"	65×50	59.5	64	1438	1467	10
JZ180R8015	3 "x 1/2"	80×15	42.5	64	1107	1130	12
JZ180R8020	3 "x3/4"	80×20	45.5	65	1155	1179	12
JZ180R8025	3 "x 1"	80×25	49.5	67	1290	1316	12
JZ180R8032	3 "x 1-1/4"	80×32	54.5	69	1438	1467	12
JZ180R8040	3 "x 1-1/2"	80×40	57.5	71	1560	1592	10
JZ180R8050	3 "x 2"	80×50	61.5	71	1695	1730	10
JZ180R8065	3 "x 2-1/2"	80×65	71.5	74	1981	2021	8
JZ180R10015	4 "x 1/2"	100×15	49.5	78	1826	1863	6
JZ180R10020	4 "x 3/4"	100×20	53.5	79	1886	1924	6
JZ180R10025	4 "x 1"	100×25	56.5	82	2025	2066	6
JZ180R10032	4 "x 1-1/4"	100×32	60.5	85	2264	2310	6
JZ180R10040	4 "x 1-1/2"	100×40	62.5	85	2288	2335	4
JZ180R10050	4 "x 2"	100×50	68.5	86	2529	2581	4
JZ180R10065	4" x 2-1/2"	100×65	77.5	89	2819	2877	4
JZ180R10080	4 "x 3"	100×80	82.5	90	3177	3242	4

Fig.330

Union, Flat Seat



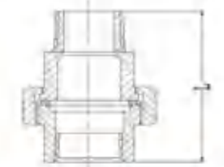


Code	Size		L	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ33010	3/8"	10	39	156.8	160	280
JZ33015	1/2"	15	46	200.9	205	180
JZ33020	3/4"	20	50	265.58	271	120
JZ33025	1"	25	56	392	400	88
JZ33032	1-1/4"	32	63	583.1	595	56
JZ33040	1-1/2"	40	68	733.04	748	36
JZ33050	2"	50	76	1056.44	1078	28
JZ33065	2-1/2"	65	83	1675.8	1710	12
JZ33080	3"	80	93	2175.6	2220	10
JZ330100	4"	100	113.5	3724	3800	6

Fig.331

Union, Flat Seat, M&F





Code	Size		L	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ33115	1/2"	15	64	219.52	224	140
JZ33120	3/4"	20	70	275.38	281	120
JZ33125	1"	25	78	423.36	432	80
JZ33132	1-1/4"	32	88	661.5	675	40
JZ33140	1-1/2"	40	93	784	800	32
JZ33150	2"	50	104	1200.5	1225	20

Fig.340

Union, Taper Seat

Code	Size		L	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ3408	1/4"	8	42	103.88	106	200
JZ34010	3/8"	10	45	152.88	156	200
JZ34015	1/2"	15	47	164.64	168	180
JZ34020	3/4"	20	51.5	251.86	257	120
JZ34025	1"	25	57	330.26	337	88
JZ34032	1-1/4"	32	65	560.56	572	56
JZ34040	1-1/2"	40	71	703.64	718	36
JZ34050	2"	50	79	1023.12	1044	28
JZ34065	2-1/2"	65	85.5	1615.04	1648	12
JZ34080	3"	80	94.5	2242.24	2288	10
JZ340100	4"	100	110.5	3615.22	3689	6

Fig.341

Union, Taper Seat, M&F

Code	Size		L	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ34115	1/2"	15	65	196	200	140
JZ34120	3/4"	20	71.5	289.1	295	120
JZ34125	1"	25	79	392	400	80
JZ34132	1-1/4"	32	90	635.04	648	40
JZ34140	1-1/2"	40	96	801.64	818	32
JZ34150	2"	50	107	1149.54	1173	20

Fig.342

Brass Unions, Taper Seat

Code	Size		L	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ3428	1/4"	8	42	104.86	107	200
JZ34210	3/8"	10	45	143.08	146	200
JZ34215	1/2"	15	47	168.56	172	180
JZ34220	3/4"	20	51	256.76	262	120
JZ34225	1"	25	56.5	333.2	340	88
JZ34232	1-1/4"	32	64	583.1	595	56
JZ34240	1-1/2"	40	70	731.08	746	36
JZ34250	2"	50	78.5	1058.4	1080	28
JZ34265	2-1/2"	65	84.5	1804.18	1841	12
JZ34280	3"	80	94	2314.76	2362	10
JZ342100	4"	100	110	3731.84	3808	6

Fig.343

Union, Flat Seat, M&F

Code	Size		L	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ34315	1/2"	15	65	191.1	195	140
JZ34320	3/4"	20	71	286.16	292	120
JZ34325	1"	25	78.5	378.28	386	80
JZ34332	1-1/4"	32	89	637	650	40
JZ34340	1-1/2"	40	95	800.66	817	32
JZ34350	2"	50	106.5	1205.4	1230	20

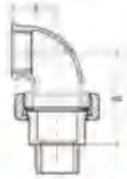
Fig.95

Union Elbow Flat Seat Female

Code	Size		A	B	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ9515	1/2"	15	24.5	54	194.04	198	60
JZ9520	3/4"	20	29	60	303.8	310	40
JZ9525	1"	25	35	68	471.38	481	30
JZ9532	1-1/4"	32	42	80	703.64	718	20
JZ9540	1-1/2"	40	45.5	86	873.18	891	18
JZ9550	2"	50	53.5	97	1327.9	1355	10

Fig.97

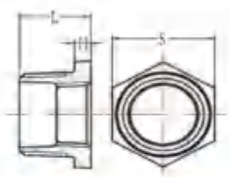
Union, Taper Seat, M&F



Code	Size		A	B	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ9715	1/2"	15	24.5	72	220.5	225	60
JZ9720	3/4"	20	29	80	328.3	335	40
JZ9725	1"	25	35	90	517.44	528	30
JZ9732	1-1/4"	32	42	105	770.28	786	20
JZ9740	1-1/2"	40	45.5	111	969.22	989	16
JZ9750	2"	50	53.5	125	1473.92	1504	10

Fig.241

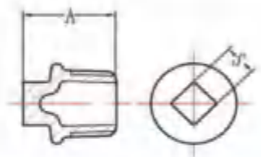
Bushings



Code	Size		L	S	H	Unit Weight		Packing
						Black	Galv.	Carton
	BSPT	DN	mm	mm	mm	g	g	Pcs/ctn
JZ24186	1/4"×1/8"	8×6	18.5	16.8	6	14.7	15	1800
JZ241106	3/8" x 1/8"	10×6	18	20	6	22.54	23	1500
JZ241108	3/8" x 1/4"	10×8	18.5	18.4	6	18.62	19	1800
JZ241158	1/2 "x 1/4"	15×8	22.5	22	6	61.74	63	500
JZ2411510	1/2 "x 3/8"	15×10	22.5	22	6	66.64	68	600
JZ241208	3/4" x 1/4"	20×8	24.5	29.6	6	32.34	33	960
JZ2412010	3/4" x 3/8"	20×10	24.5	29.6	6	38.22	39	900
JZ2412015	3/4 "x 1/2"	20×15	24.5	29.6	6	50.96	52	600
JZ241258	1 "x 1/4"	25×8	28	37.4	6.5	105.84	108	300
JZ2412510	1 "x 3/8"	25×10	28	37.4	6.5	111.72	114	300
JZ2412515	1" x 1/2"	25×15	28	37.4	6.5	97.02	99	300
JZ2412520	1 "x 3/4"	25×20	28	37.4	6.5	81.34	83	300
JZ2413215	1-1/4" x 1/2"	32×15	30	45.6	7	167.58	171	200
JZ2413220	1-1/4" x 3/4"	32×20	30	45.6	7	151.9	155	200
JZ2413225	1-1/4" x 1"	32×25	30	45.6	7	126.42	129	200
JZ2414015	1-1/2" x 1/2"	40×15	30	50	7.5	197.96	202	160
JZ2414020	1-1/2" x 3/4"	40×20	30	50	7.5	207.76	212	160
JZ2414025	1-1/2" x 1"	40×25	30	50	7.5	182.28	186	160
JZ2414032	1-1/2" x 1-1/4"	40×32	30	50	7.5	123.48	126	160
JZ2415015	2 "x 1/2"	50×15	33	64.1	8.5	289.1	295	96
JZ2415020	2 "x 3/4"	50×20	33	64.1	8.5	298.9	305	96
JZ2415025	2 "x 1"	50×25	33	64.1	8.5	342.02	349	96
JZ2415032	2 "x 1-1/4"	50×32	33	64.1	8.5	302.82	309	96
JZ2415040	2" x 1-1/2"	50×40	33	64.1	8.5	255.78	261	96
JZ2416515	2-1/2" x 1/2"	65×15	39	79.6	9	441	450	68
JZ2416520	2-1/2" x 3/4"	65×20	39	79.6	9	456.68	466	68
JZ2416525	2-1/2" x 1"	65×25	39	79.6	9	448.84	458	68
JZ2416532	2-1/2" x 1-1/4"	65×32	39	79.6	9	512.54	523	68
JZ2416540	2-1/2" x 1-1/2"	65×40	39	79.6	9	519.4	530	68
JZ2416550	2-1/2" x 2"	65×50	39	79.6	9	446.88	456	68
JZ2418015	3 "x 1/2"	80×15	42	93	10	633.08	646	36
JZ2418020	3 "x 3/4"	80×20	42	93	10	632.1	645	36
JZ2418025	3 "x 1"	80×25	42	93	10	650.72	664	36
JZ2418032	3 "x 1-1/4"	80×32	42	93	10	637.98	651	36
JZ2418040	3 "x 1-1/2"	80×40	42	93	10	694.82	709	36
JZ2418050	3 "x 2"	80×50	42	93	10	773.22	789	36
JZ2418065	3 "x 2-1/2"	80×65	42	93	10	556.64	568	36
JZ24110015	4 "x 1/2"	100×15	49	118.4	11	1070.16	1092	18
JZ24110020	4 "x 3/4"	100×20	49	118.4	11	1085.84	1108	18
JZ24110025	4 "x 1"	100×25	49	118.4	11	1078.98	1101	18
JZ24110032	4"x 1-1/4"	100×32	49	118.4	11	1126.02	1149	18
JZ24110040	4 "x 1-1/2"	100×40	49	118.4	11	1097.6	1120	18
JZ24110050	4 "x 2"	100×50	49	118.4	11	1121.12	1144	18
JZ24110065	4" x 2-1/2"	100×65	49	118.4	11	1350.44	1378	18
JZ24110080	4 "x 3"	100×80	49	118.4	11	1203.44	1228	18
JZ24115080	6" x 3"	150×80	60	170.8	13			
JZ241150100	6" x 4"	150×100	60	170.8	13			

Fig.290

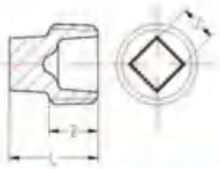
Beaded Plug



Code	Size		A	S	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ2908	1/4"	8	22.5	6	17.64	18	2000
JZ29010	3/8"	10	25	7	29.4	30	1300
JZ29015	1/2"	15	28	10	35.28	36	900
JZ29020	3/4"	20	32	12	55.86	57	600
JZ29025	1"	25	36	16	93.1	95	300
JZ29032	1-1/4"	32	38.5	20	148.96	152	220
JZ29040	1-1/4"	40	41	22	177.38	181	150
JZ29050	2"	50	47	28	293.02	299	80
JZ29065	2-1/2"	65	53	30	512.54	523	64
JZ29080	3"	80	58	34	748.72	764	36
JZ290100	4"	100	72	44	1097.6	1120	28

Fig.291

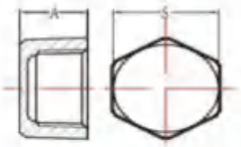
Plain Plug



Code	Size		L	B	S	Unit Weight		Packing
						Black	Galv.	Carton
	BSPT	DN	mm	mm	mm	g	g	Pcs/ctn
JZ2918	1/4"	8	15.5	10	6	8.82	9	2400
JZ29110	3/8"	10	17	10	7	15.68	16	2200
JZ29115	1/2"	15	22.5	13	10	24.5	25	1400
JZ29120	3/4"	20	24	14	12	36.26	37	800
JZ29125	1"	25	27	16.5	15	57.82	59	500
JZ29132	1-1/4"	32	30	20	18	103.88	106	300
JZ29140	1-1/2"	40	31	21	22	140.14	143	200
JZ29150	2"	50	36	25	26	230.3	235	120
JZ29165	2-1/2"	65	40.5	27	30	348.88	356	72
JZ29180	3"	80	45.5	29.5	34	512.54	523	64
JZ291100	4"	100	58.5	38	44	978.04	998	36
JZ291150	6"	150	65	42	65			

Fig.300

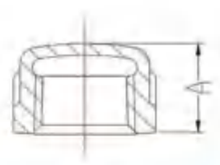
Caps



Code	Size		A	S	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ30010	3/8"	10	17	20.6	29.4	30	1200
JZ30015	1/2"	15	19	24.6	44.1	45	700
JZ30020	3/4"	20	22	30.4	68.6	70	500
JZ30025	1"	25	24	37.2	106.82	109	360
JZ30032	1-1/4"	32	27	47	180.32	184	220
JZ30040	1-1/2"	40	28	53	223.44	228	160
JZ30050	2"	50	32	65	349.86	357	100

Fig.301

Round Caps



Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ3018	1/4"	8	16	24.5	25	1200
JZ30110	3/8"	10	17	29.4	30	1200
JZ30115	1/2"	15	19	47.04	48	700
JZ30120	3/4"	20	22	68.6	70	500
JZ30125	1"	25	24	106.82	109	360
JZ30132	1-1/4"	32	27	162.68	166	220
JZ30140	1-1/2"	40	27.5	203.84	208	160
JZ30150	2"	50	32	319.48	326	100
JZ30165	2-1/2"	65	36	432.18	441	60
JZ30180	3"	80	39	610.54	623	38
JZ301100	4"	100	46	1078.98	1101	20
JZ301150	6"	150	56			

Fig.321

Round Flange
Without Bolt Hole

Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ3018	1/4"	8	16	24.5	25	1200
JZ30110	3/8"	10	17	29.4	30	1200
JZ30115	1/2"	15	19	47.04	48	700
JZ30120	3/4"	20	22	68.6	70	500
JZ30125	1"	25	24	106.82	109	360
JZ30132	1-1/4"	32	27	162.68	166	220
JZ30140	1-1/2"	40	27.5	203.84	208	160
JZ30150	2"	50	32	319.48	326	100
JZ30165	2-1/2"	65	36	432.18	441	60
JZ30180	3"	80	39	610.54	623	38
JZ301100	4"	100	46	1078.98	1101	20
JZ301150	6"	150	56			

Fig.321P

Round Flange
with 4 holes

Code	Size		A	B	C	D		Unit Weight		Pack Cart
								Black	Galv	
	BSPT	DN	mm	mm	mm	mm		g	g	Pcs/
JZ321P15	1/2"	15	15	5	67	94.5	4×Ø14	1431.78	1461	20
JZ321P20	3/4"	20	16	5	73	99.5	4×Ø14	1684.62	1719	20
JZ321P25	1"	25	19	6	83	114.3	4×Ø14	2223.62	2269	16
JZ321P32	1-1/4"	32	21	6	87	119.2	4×Ø14	3087	3150	12
JZ321P40	1-1/2"	40	21	7	98	134	4×Ø14	3543.68	3616	8
JZ321P50	2"	50	26	8	115	150	4×Ø18	4154.22	4239	8
JZ321P65	2-1/2"	65	30	9	127	164	4×Ø18	7644	7800	4
JZ321P80	3"	80	33	10	146	184	4×Ø18			
JZ321P100	4"	100	39	11	178	214	4×Ø18			
JZ321P150	6"	150	40	13	235	279	8×Ø18			

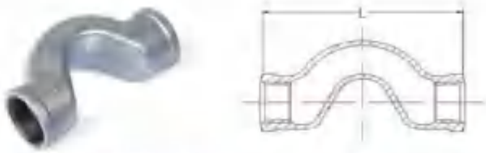
Fig.329

Round Flange

Code	Size		A	B	N-C	Unit Weight		Packing
						Black	Galv.	Carton
	BSPT	DN	mm	mm	mm	g	g	Pcs/ctn
JZ32932	1-1/4"	32	24	105	4-18	1431.78	1461	20
JZ32940	1-1/2"	40	26	115	4-18	1684.62	1719	20
JZ32950	2"	50	29	125	4-18	2223.62	2269	16
JZ32965	2-1/2"	65	33	145	4-18	3087	3150	12
JZ32980	3"	80	34	160	8-18	3543.68	3616	8
JZ329100	4"	100	39	180	8-18	4154.22	4239	8
JZ329150	6"	150	42	240	8-22	7644	7800	4

Fig.85

Crossover



Code	Size		L	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ8515	1/2"	15	90	184.24	188	150
JZ8520	3/4"	20	104	281.26	287	90
JZ8525	1"	25	120	436.1	445	50
JZ8532	1-1/4"	32	149	698.74	713	32
JZ8540	1-1/2"	40	160	871.22	889	26
JZ8550	2"	50	194	1511.16	1542	12

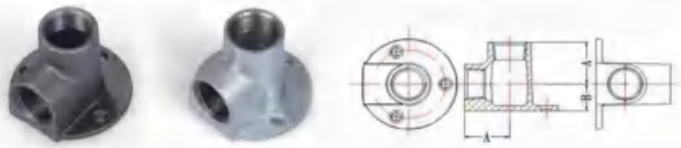
Fig.310

Backnut

Code	Size		A	S	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ31015	1/2"	15	9	29	28.42	29	700
JZ31020	3/4"	20	10	36	44.1	45	500
JZ31025	1"	25	11	45	75.46	77	400
JZ31032	1-1/4"	32	11	56	99.96	102	300
JZ31040	1-1/2"	40	12	63	135.24	138	240
JZ31050	2"	50	13	77	205.8	210	160
JZ31065	2-1/2"	65	15	93	298.9	305	60
JZ31080	3"	80	18	109	495.88	506	50
JZ310100	4"	100	21	137	841.82	859	40

Fig.471

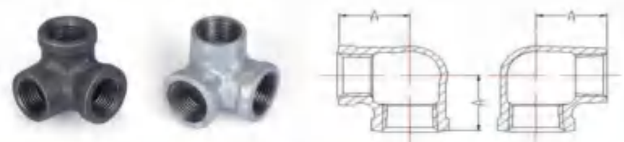
Wall Elbow



Code	Size		A	B	Unit Weight		Packing
					Black	Galv.	Carton
	BSPT	DN	mm	mm	g	g	Pcs/ctn
JZ47115	1/2"	15	28	18	181.3	185	150
JZ47120	3/4"	20	33	20	259.7	265	100

Fig.1221

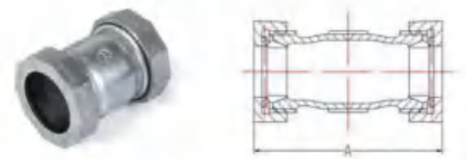
Side Outlet Elbow



Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZ122115	1/2"	15	27	125.4	128	240
JZ122120	3/4"	20	32	196.0	200	140
JZ122125	1"	25	37			

Fig.SCC

Short Compression Coupling



Code	Size		A	Unit Weight		Packing
				Black	Galv.	Carton
	BSPT	DN	mm	g	g	Pcs/ctn
JZSCC15	1/2"	15	71	292.0	298	140
JZSCC20	3/4"	20	77	370.4	378	120
JZSCC25	1"	25	84	558.6	570	80
JZSCC32	1-1/4"	32	92	711.5	726	40
JZSCC40	1-1/2"	40	97	818.3	835	32
JZSCC50	2"	50	108	1076.0	1098	20

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唐山基地-唐山正元管業公司外景

Appearance of Tangshan Zhengyuan Steel Pipe Co., Ltd in Tangshan Base

邯鄲基地-邯鄲友發鋼管公司外景

Appearance of Handan Youfa Steel Pipe Co., Ltd in Handan Base

Profile of the Group

Tianjin YouFa Steel Pipe Group Co., Ltd. was founded on July 1st, 2000, with the headquarters located at the largest steel pipe production base in China-Daqiuzhuang Village, Tianjin City, and it is the largest steel pipe manufacturing enterprise producing many kinds of steel pipes, including ERW steel pipe, hot dipped galvanized steel pipe(Round, Square / Rectangular, Spiral), square and rectangular steel pipe, steel pipe of lining plastic, plastic-coated steel pipe, spiral steel pipe, highway materials and processing "Youfa" and " Zhengjinyuan" brands. Now it has formed three production bases in Tianjin, Tangshan and Handan, owns 9 steel pipe enterprises with a total of 152 production lines, 1 highway protecting plate factory, 1 waste acid and wastewater processing plant, nearly 10,000 employees, 2 approved national level laboratories and the only one industry-university-research R&D institution in the industry-"Tianjin Welded Steel Pipe Technology Engineering Center".Products produced by three production bases are sold to 100 countries and regions. It produced over 12 million tons of various steel pipes in 2016. In case of head-to-tail connection of steel pipes produced by Youfa every week, they will make a circuit of the earth. Youfa's production and sales volume have ranked No. 1 for consecutive 10 years in China. And it has ranked among top 500 enterprises in China and top 500 enterprises in China's manufacturing industry.

Quality is the life of the enterprise. Youfa strictly controls product quality by virtue of 5 links-raw material link, equipment link, technology link, management link and inspection link. Youfa brand steel pipes have been successfully applied to Three Gorges Project, Pudong International Airport, Capital International Airport, Beijing Olympic Stadium, Shanghai World Expo Exhibition Hall, Jiaozhou Bay Cross-sea Bridge, the tallest building in China-117 Building in Tianjin, Beijing-Zhangjiakou Olympic Winter Games stadium, Beijing Z15 Tower, Tian'anmen Parade Reviewing Stand, Shanghai Disneyland Park and other national priority projects. It has been recognized as No. 1 brand in the industry.

We Youfa are always taking "Going beyond ourselves, Making partners succeed, Realizing hundred years of Youfa and Creating harmony together" as vocation, and always holding fast the core value of "Honesty, Mutuality, Virtue and Partnership" . Based on the cooperation with our partners, we will unswervingly keep building Tianjin Youfa to be a respected and happy enterprise!

Youfa Steel Pipe, selling to and supporting the whole world!

Tianjin Youfa International Trade Co., Ltd

Tianjin Youfa International Trade Co., Ltd, was founded in March, 2010, as the foreign trade window of Youfa Steel Pipe Group. The company is located in 7-8th Floor, Guotou Building, Dafeng Road, Hongqiao District, Tianjin City. The office covers an area of 1000㎡. There are about 80 staffs; among them more than 50 have CET-6 certificates and some even better. Our annual sales of steel products are nearly 300,000.00 tons.

Through several years of hard work, we have established export business relationship with many big Transnational Enterprises. Based on the high quality and the considerate service, our products have set up a prominent brand image at home and abroad. Our sales markets mainly are: Middle & South America, the Southeast Asia, Middle East and Africa and so on, nearly covering 125 countries and regions, obtaining a well-deserved reputation. We have built a long-term cooperation with many clients, and have received word of praise from customers all over the world.

Carbon steel pipes meet the following standards: API 5L, ASTM A53/A500, ASTM A795, EN10219/10255, BS1387, BS1139, EN39, ISO65, DIN2440, JIS G3444/3466, etc. and are approved by the Third Party. They are widely used in oil and natural gas, low pressure liquid and mineral powder delivery, and for industrial and civil construction fields and for piles field. Paying attention to the quality of products and services,

possessing normative QAS, we have acquired certificates of API5L, ISO9001, ISO14000, ISO18000, FPC, UL quality system.

In order to provide customers a more personalized serv
jin Youfa Hongtuo Steel Pipe Manufacture Co., Ltd as processing factory, specially designed for foreign trade service. It covers an area of 20000 square meters. There are about 200 employees, 10 lathes, 7 cutting machines, 2 sets of grooving machine, 2 sets of automatic paint or oil production line. We are committed to meet customer' s various after-processing requirements.

Pursuing the "Customer first, Integrity first" principle, we are sincerely expecting to cooperate with you!

Organizational Structure

Chairman of
Youfa Steel Pipe Group: Li Maojin

CEO of
Youfa Steel Pipe Group: Yin Jiuxiang

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Group Co., Ltd.

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  - Tianjin Youfa Steel Pipe Group Co., Ltd – No. 2 Branch Company
  - Tianjin Youfa Pipeline Technology Co., Ltd
  - Tianjin Youfa Dezhong Steel Pipe Co., Ltd
  - Tewoo & Youfa Industry Development Co., Ltd
  - Tianjin Youfa Steel Pipe Sales Co., Ltd
  - Tianjin Xindesheng Investment Co.,Ltd
  - Tianjin Youfa International Trade Co., Ltd
  - Tianjin Youfa Hongtuo Steel Pipe Manufacture Co., Ltd
  - Tianjin Youfa Ruida Traffic Facilities Co., Ltd
- Tangshan Base
  - Tangshan Zhengyuan Steel Pipe Co., Ltd
  - Tangshan Youfa Steel Pipe Manufacture Co., Ltd
  - Tangshan Youfa Xinlida Steel Pipe Co.,Ltd
- Handan Base
  - Handan Youfa Steel Pipe Co., Ltd

TOP 500 ENTERPRISES OF CHINA

TEN MILLION TONS PRODUCTION CHINESE STEEL PIPE MANUFACTURER

TOP 500 ENTERPRISES OF CHINA' S MANUFACTURING INDUSTRY

INDUSTRY PREFERRED BRAND

Electrical Resistance Weld Pipe - ERW

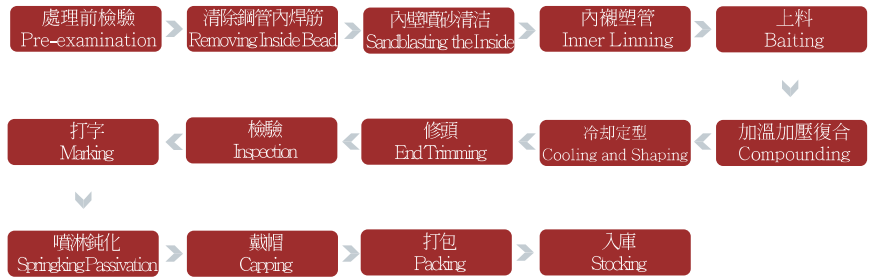
Manufacture Procedures

Hot-Dipped Galvanized Steel Pipe

Manufacture Procedures

Galvanized Steel Pipe of Lining Plastic

Manufacture Procedures



ERW Steel Pipe Production Line

ERW Steel Pipe Yard

ERW Steel Pipe

Size: DN15-600mm
Usage:low pressure liquid delivery such as water, gas, air, oil and steam and for machine structural purposes

Hot Dipped Galvanized Steel Pipe

Round Pipe:DN15-200mm
Square Pipe: 20x20-200x200mm
Rectangular Pipe: 20x40-100x200mm
Spiral Pipe:219-1420mm

Usage: delivery of low pressure liquid such as water, gas, air, steam for heating and for machine stuctural purposes

Tangshan Zhengyuan Hot Dipped Galvanized Steel Pipe Yard

Hot Dipped Galvanized Square Pipe

Hot Dipped Galvanized Spiral Welded Steel Pipe

Hot Dipped Galvanized ERW Steel Pipe

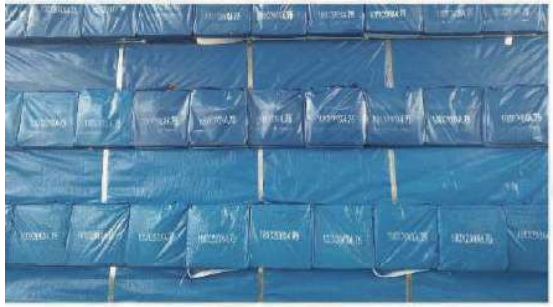
Processing Factory

Tianjin Youfa Hongtuo Steel Pipe Manufacture Co., Ltd

Grooved with Caps

Cut in Short Length

PVC Wrapped



Oiled and PVC Wrapped

Threaded with Coupling

Painted

Youfa Laboratory and Quality Control

直讀光譜儀
Direct reading spectrometer

沿錘衝擊試驗機
Drop hammer impact test machine

快速智能定硫儀
Fast intelligent sulfur determination instrument

電子萬能試驗機
Electronic universal testing machine

維氏硬度計
Vivtorinox hardness tester

鹽霧試驗箱
Salt spray test box

Honor & Certificates

Steel Pipe Standards

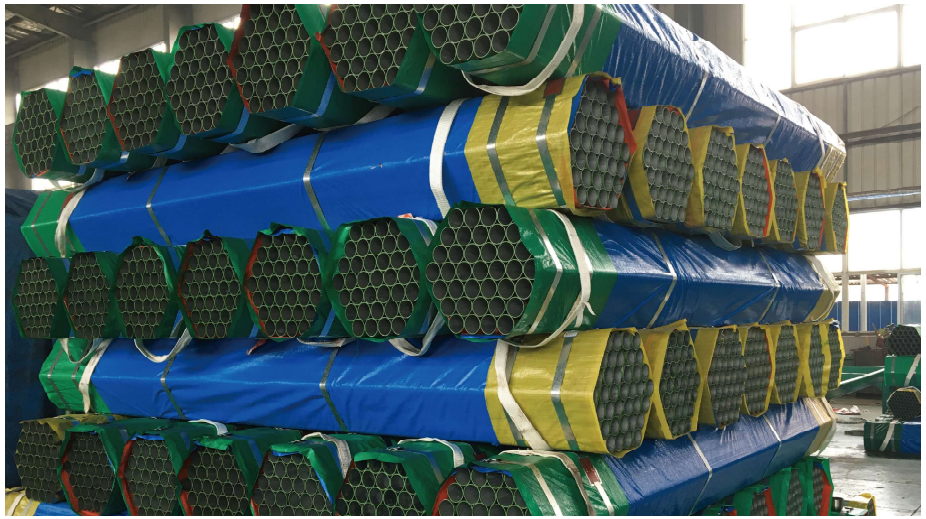
Specifications		Application	Chemical Requirement(%)						Physical Requirement		Elongation Min(%)		Flattening Test	Bend Test	Hydrostatic & NDT	Others
			C (Max)	Si (Max)	Mn (Max)	P (Max)	S (Max)	Others	Tensile Strength Min Mpa (Psi)	Yield Strength Min Mpa (Psi)	Longitudinal Direction	Transverse Direction				
BS EN39	S235GT	Scaffolding tube	0.2	a,b	1.4	0.04	0.045	0.020(Al)	340/520	235	24	-	at 0℃ or 90℃ to the direction of flattening	-	-	-
BS EN10255	L	Carbon Steel pipes for ordinary piping	0.2	-	1.4	0.035	0.03	-	320-520MPa	196MPa	20	-	Larger thanDN50 Weld portion :H=0.75D The other side of weld portion:H=0.6D	DN 50 and Smaller D 21 27 34 42 48 60 r 65 85 100 150 170 220	50Bar or NDT	*Copper sulfate test: 4 times(1 minute)
	M							-								
	H							-								
BS EN10219	S235JRH	Colded formed hollow section	0.17	-	1.4	0.045	0.045	0.009(N)	360-510Mpa (<3mm) 340-470Mpa (≥3 ≤ 40mm)	235Mpa (≤16mm) 225Mpa (>16≤ 40mm)	24 ≤40mm)	20 (℃)	-	-	-	-
	S275JOH		0.2	-	1.5	0.04	0.04	0.009(N)	430-580Mpa (<3mm) 410-560Mpa (≥3 ≤ 40mm)	275Mpa (≤16mm) 265Mpa (>16≤40mm)	20 ≤40mm)	0				
	S275J2H		0.2	-	1.5	0.035	0.035	-				-20				
	S355JOH		0.2	0.55	1.6	0.04	0.04	0.009(N)	510-680Mpa (<3mm) 490-630Mpa (≥3 ≤ 40mm)	355Mpa (≤16mm) 345Mpa (>16≤ 40mm)	20 ≤40mm)	0				
	S355J2H		0.2	0.55	1.6	0.035	0.035	-				-20				
BS1387	CLASS A	Carbon steel pipe	0.2	-	1.2	0.045	0.045	-	320-460Mpa	195Mpa	20	-	≤DN50 without showing either crack or flaw	≤DN50 withstand the test without showing any signs of fracture or failure	50Bar or NDT	hot dip galvanized steel pipe,Threaded if need
	CLASS B															
	CLASS C															
BS3059	320	For Boiler	0.16	0.35	0.30-0.70	0.04	0.04	-	320-460Mpa	195Mpa	25		H=(1+C)l/(C+1/D) ; C:0.10	-	P=20Sa/D Or NDT P:Test Pressure(bar) D:Outside Diameter(mm) a:Specified Thickness(mm) S:80% of the specified minimum yield strength (N/m m²)	*Drift expanding test *Full body Normalizing
BS3601	320	Pipes for Pressure Service	0.16	-	0.30-0.70	0.04	0.04	-	320-460Mpa	195Mpa	25		H=(1+C)l/(C+1/D) ; *C: Constant Gr: 320 Weld Portion: 0.029 Other: 0.1 300 0.020 0.08 430 0.023 0.08	-	P=20Sa/D Or NDT	*Heat treatment on the weld seam area
	360		0.17	0.35	0.40-0.80			-	360-500Mpa	235Mpa	25					
	430		0.21		0.40-1.20			-	430-570Mpa	275Mpa	22					
BS6323 Part 5 Type KM	ERW 1	Carbon Steel pipes for Mechanical Structural Purposes and General Structural Purposes	0.13	-	0.6	0.05	0.05	-	300Mpa	200Mpa	10	D/t≤20	H=0.66D	-	50 Bars or P=20Sa/D P: Test Pressure(bar) D: Outside Diameter(mm) a: Specified Thickness(mm) S:60% of the specified minimum yield strength(N/mm²) or NDT	*Minimum expansion drift
	ERW 2		0.16	-	0.7			-	340Mpa	250Mpa	8		H=0.75D			*Type GKM,GZF
	ERW 3		0.2	0.35	0.9			-	400Mpa	300Mpa	7		H=0.85D			annealing
	ERW 4		0.25		1.2			-	450Mpa	350Mpa	6		H=0.85D			*Type NKM,NZF:
	ERW 5		0.33	0.5	1.6			-	500Mpa	420Mpa	6		H=0.85D			Normalizing
ISO65	L II	Carbon steel tubes for screwing	0.2	-	1.4	0.035	0.03	-	320-520MPa	195MPa	20	-	-	-	50Bar	-
	L I															
	M															
	H															

BS EN 10255 Steel Tubes and Tubular Suitable for Screwing to BS EN 10226 Pipe Threads

Series	Nominal Size		Outside Diameter				Wall Thickness		Mass of Black Tube					
			Max		Min				Plain End			Screwed and Socketed		
	-	DN	in	mm	in	mm	in	mm	lb/ft	kg/ft	kg/m	lb/ft	kg/ft	kg/m
L	1/2	15	0.854	21.7	0.827	21.0	0.091	2.3	0.726	0.329	1.08	0.732	0.332	1.09
	3/4	20	1.067	27.1	1.039	26.4	0.091	2.3	0.941	0.427	1.4	0.947	0.430	1.41
	1	25	1.339	34.0	1.307	33.2	0.114	2.9	1.478	0.671	2.2	1.492	0.677	2.22
	1 1/4	32	1.681	42.7	1.650	41.9	0.114	2.9	1.895	0.860	2.82	1.915	0.869	2.85
	1 1/2	40	1.913	48.6	1.882	47.8	0.114	2.9	2.184	0.991	3.25	2.211	1.003	3.29
	2	50	2.390	60.7	2.346	59.6	0.126	3.2	3.031	1.375	4.51	3.078	1.396	4.58
	2 1/2	65	2.992	76.0	2.961	75.2	0.126	3.2	3.864	1.753	5.75	3.944	1.789	5.87
	3	80	3.492	88.7	3.461	87.9	0.126	3.2	4.543	2.060	6.76	4.657	2.112	6.93
	3 1/2	90	3.984	101.2	3.949	100.3	0.142	3.6	5.846	2.652	8.7	5.967	2.707	8.88
	4	100	4.484	113.9	4.449	113.0	0.142	3.6	6.605	2.996	9.83	6.787	3.078	10.1
	5	125	5.543	140.8	5.453	138.5	0.117	4.5	10.080	4.572	15	10.416	4.724	15.5
	6	150	6.555	166.5	6.453	163.9	0.117	4.5	11.961	5.425	17.8	12.364	5.608	18.4
L1	1/2	15	0.854	21.7	0.827	21.0	0.091	2.3	0.726	0.329	1.08	0.732	0.332	1.09
	3/4	20	1.067	27.1	1.039	26.4	0.091	2.3	0.934	0.424	1.39	0.941	0.427	1.4
	1	25	1.339	34.0	1.307	33.2	0.114	2.9	1.478	0.671	2.2	1.492	0.677	2.22
	1 1/4	32	1.681	42.7	1.650	41.9	0.114	2.9	1.895	0.860	2.82	1.915	0.869	2.85
	1 1/2	40	1.913	48.6	1.882	47.8	0.114	2.9	2.177	0.988	3.24	2.204	1.000	3.28
	2	50	2.390	60.7	2.346	59.6	0.126	3.2	3.017	1.369	4.49	3.064	1.390	4.56
	2 1/2	65	3.004	76.3	2.961	75.2	0.126	3.2	3.850	1.747	5.73	3.931	1.783	5.85
	3	80	3.520	89.4	3.461	87.9	0.142	3.6	5.073	2.301	7.55	5.188	2.353	7.72
	4	100	4.524	114.9	4.449	113.0	0.157	4.0	7.257	3.292	10.8	7.459	3.383	11.1
L2	1/2	15	0.843	21.4	0.827	21.0	0.079	2.0	0.636	0.289	0.947	0.642	0.291	0.956
	3/4	20	1.059	26.9	1.039	26.4	0.091	2.3	0.927	0.421	1.38	0.934	0.424	1.39
	1	25	1.331	33.8	1.307	33.2	0.102	2.6	1.331	0.604	1.98	1.344	0.610	2
	1 1/4	32	1.673	42.5	1.650	41.9	0.102	2.6	1.707	0.774	2.54	1.727	0.783	2.57
	1 1/2	40	1.906	48.4	1.882	47.8	0.114	2.9	2.170	0.985	3.23	2.197	0.997	3.27
	2	50	2.370	60.2	2.346	59.6	0.114	2.9	2.742	1.244	4.08	2.789	1.265	4.15
	2 1/2	65	2.992	76.0	2.961	75.2	0.126	3.2	3.837	1.740	5.71	3.918	1.777	5.83
	3	80	3.492	88.7	3.461	87.9	0.126	3.2	4.516	2.048	6.72	4.630	2.100	6.89
	4	100	4.484	113.9	4.449	113.0	0.142	3.6	6.552	2.972	9.75	6.720	3.048	10
H	1/2	15	0.858	21.8	0.827	21.0	0.126	3.2	0.968	0.439	1.44	0.974	0.442	1.45
	3/4	20	1.075	27.3	1.043	26.5	0.126	3.2	1.257	0.570	1.87	1.263	0.573	1.88
	1	25	1.346	34.2	1.311	33.3	0.157	4.0	1.969	0.893	2.93	1.982	0.899	2.95
	1 1/4	32	1.689	42.9	1.654	42.0	0.157	4.0	2.547	1.155	3.79	2.567	1.164	3.82
	1 1/2	40	1.921	48.8	1.886	47.9	0.157	4.0	2.937	1.332	4.37	2.963	1.344	4.41
	2	50	2.394	60.8	2.350	59.7	0.177	4.5	4.159	1.887	6.19	4.207	1.908	6.26
	2 1/2	65	3.016	76.6	2.965	75.3	0.177	4.5	5.329	2.417	7.93	5.409	2.454	8.05
	3	80	3.524	89.5	3.465	88.0	0.197	5.0	6.921	3.139	10.3	7.056	3.200	10.5
	4	100	4.528	115.0	4.453	113.1	0.213	5.4	9.744	4.420	14.5	9.945	4.511	14.8
	5	125	5.543	140.8	5.453	138.5	0.213	5.4	12.028	5.456	17.9	12.364	5.608	18.4
	6	150	6.555	166.5	6.453	163.9	0.213	5.4	14.313	6.492	21.3	14.716	6.675	21.9
M	1/2	15	0.858	21.8	0.827	21.0	0.102	2.6	0.813	0.369	1.21	0.820	0.372	1.22
	3/4	20	1.075	27.3	1.043	26.5	0.102	2.6	1.048	0.475	1.56	1.055	0.479	1.57
	1	25	1.346	34.2	1.311	33.3	0.126	3.2	1.619	0.735	2.41	1.633	0.741	2.43
	1 1/4	32	1.689	42.9	1.654	42.0	0.126	3.2	2.083	0.945	3.1	2.103	0.954	3.13
	1 1/2	40	1.921	48.8	1.886	47.9	0.126	3.2	2.392	1.085	3.56	2.419	1.097	3.6
	2	50	2.394	60.8	2.350	59.7	0.142	3.6	3.380	1.533	5.03	3.427	1.554	5.1
	2 1/2	65	3.016	76.6	2.965	75.3	0.142	3.6	4.314	1.957	6.42	4.395	1.993	6.54
	3	80	3.524	89.5	3.465	88.0	0.157	4.0	5.618	2.548	8.36	5.732	2.600	8.53
	4	100	4.528	115.0	4.453	113.1	0.177	4.5	8.198	3.179	12.2	8.400	3.810	12.5
	5	125	5.543	140.8	5.453	138.5	0.197	5.0	11.155	5.060	16.6	11.491	5.212	17.1
	6	150	6.555	166.5	6.453	163.9	0.197	5.0	13.305	6.035	19.8	13.703	6.218	20.4

BS 1387/85 Steel Tubes and Tubulars Stuitable for Screwing to BS 21 Pipe Threads

Series	Nominal Size		Outside Diameter				Wall Thickness		Mass of Black Tube					
			Max		Min				Plain End			Screwed and Socketed		
	-	DN	in	mm	in	mm	in	mm	lb/ft	kg/ft	kg/m	lb/ft	kg/ft	kg/m
Light	1/2	15	0.841	21.4	0.825	21.0	0.080	2.0	0.636	0.289	0.947	0.646	0.293	0.956
	3/4	20	1.059	26.9	1.041	26.4	0.090	2.3	0.927	0.421	1.38	0.954	0.433	1.39
	1	25	1.328	33.8	1.309	33.2	0.104	2.6	1.330	0.604	1.98	1.360	0.617	2
	1 1/4	32	1.670	42.5	1.650	41.9	0.104	2.6	1.710	0.774	2.54	1.750	0.794	2.57
	1 1/2	40	1.903	48.4	1.882	47.8	0.116	2.9	2.170	0.985	3.23	2.220	1.010	3.27
	2	50	2.370	60.2	2.347	59.6	0.116	2.9	2.740	1.240	4.08	2.810	1.270	4.15
	2 1/2	65	2.991	76.0	2.960	75.2	0.126	3.2	3.840	1.740	5.71	3.980	1.810	5.83
	3	80	3.491	88.7	3.460	87.9	0.126	3.2	4.520	2.050	6.72	4.490	2.130	6.89
	4	100	4.481	113.9	4.450	113.0	0.142	3.6	6.550	2.970	9.75	6.840	3.100	10
Medium	1/2	15	0.586	21.7	0.831	21.1	0.104	2.6	0.813	0.369	1.21	0.828	0.376	1.22
	3/4	20	1.072	27.2	1.047	26.6	0.104	2.6	1.050	0.475	1.56	1.070	0.485	1.57
	1	25	1.346	34.2	1.316	33.4	0.126	3.2	1.620	0.735	2.41	1.650	0.748	2.43
	1 1/4	32	1.687	42.9	1.657	42.1	0.126	3.2	2.080	0.945	3.1	2.130	0.966	3.13
	1 1/2	40	1.919	48.8	1.889	48.0	0.126	3.2	2.400	1.090	3.57	2.460	1.120	3.61
	2	50	2.394	60.8	2.354	59.8	0.142	3.6	3.380	1.530	5.03	3.470	1.570	5.1
	2 1/2	65	3.014	76.6	2.969	75.4	0.142	3.6	4.320	1.960	6.43	4.460	2.020	6.55
	3	80	3.524	89.5	3.469	88.1	0.157	4.0	5.620	2.550	8.37	5.800	2.630	8.54
	4	100	4.524	114.9	4.459	113.3	0.177	4.5	8.200	3.720	12.2	8.340	3.780	12.5
	5	125	5.534	140.6	5.549	138.7	0.196	5.0	11.15	5.060	16.6	11.20	5.080	17.1
	6	150	6.539	166.1	6.459	164.1	0.196	5.0	13.24	6.000	19.7	13.30	6.030	20.3
Heavy	1/2	15	0.856	21.7	0.831	21.1	0.126	3.2	0.968	0.439	1.44	0.983	0.446	1.45
	3/4	20	1.072	27.2	1.047	26.6	0.126	3.2	1.260	0.570	1.87	1.280	0.581	1.88
	1	25	1.346	34.2	1.136	33.4	0.157	4.0	1.980	0.896	2.94	2.010	0.912	2.96
	1 1/4	32	1.687	42.9	1.657	42.1	0.157	4.0	2.550	1.160	3.8	2.600	1.180	3.83
	1 1/2	40	1.919	48.8	1.889	48.0	0.157	4.0	2.940	1.340	4.38	3.010	1.370	4.42
	2	50	2.394	60.8	2.354	59.8	0.177	4.5	4.160	1.890	6.19	4.190	1.900	6.26
	2 1/2	65	3.014	76.6	2.969	75.4	0.177	4.5	5.330	2.420	7.93	5.390	2.440	8.05
	3	80	3.524	89.5	3.469	88.1	0.196	5.0	6.920	3.140	10.3	6.870	3.120	10.5
	4	100	4.524	114.9	4.459	113.3	0.212	5.4	9.740	4.420	14.5	9.910	4.500	14.8
	5	125	5.534	140.6	5.459	138.7	0.212	5.4	12.30	5.460	17.9	12.30	5.580	18.4
	6	150	6.539	166.1	6.459	164.1	0.212	5.4	14.31	6.490	21.3	14.70	6.670	21.9



BS EN10217-1 Available Size (Dimension in mm)

Nominal Size (DN)	Outside Diameter (OD)	2.0	2.3	2.6	2.9	3.2	3.6	4.0	4.5	5.0	5.4	5.6	5.9	6.3	7.1	8.0	8.8	10.0	11.0	12.5	14.2	16.0	17.5	20.0	22.2	25.0
50	60.3	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
65	76.1	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
80	88.9		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
100	114.3		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
125	139.7					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
150	168.3					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
200	219.1					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
250	273.0							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
300	323.9								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
350	355.6									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
400	406.4									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
450	457.0									■	■	■	■	■	■	■	■	■	■	■	■	■	■			
500	508.0									■	■	■	■	■	■	■	■	■	■	■	■	■	■			
550	559.0													■	■	■	■	■	■	■	■	■				
600	610.0													■	■	■	■	■	■	■	■	■	■			
650	660.0													■	■	■	■	■	■	■	■	■	■			
700	711.0													■	■	■	■	■	■	■	■	■	■			
750	762.0													■	■	■	■	■	■	■	■	■	■			
800	813.0													■	■	■	■	■	■	■	■	■	■	■		
850	864.0													■	■	■	■	■	■	■	■	■	■	■		
900	914.0													■	■	■	■	■	■	■	■	■	■	■		
1000	1016.0													■	■	■	■	■	■	■	■	■	■	■	■	
1200	1220.0													■	■	■	■	■	■	■	■	■	■	■	■	■
1400	1420.0													■	■	■	■	■	■	■	■	■	■	■	■	■
1600	1620.0														■	■	■	■	■	■	■	■	■	■	■	■
1800	1820.0															■	■	■	■	■	■	■	■	■	■	■
2000	2020.0																■	■	■	■	■	■	■	■	■	■

EN10255
Chemical composition(cast analysis)and mechanical properties

Chemical composition %				Mechanical properties		
C max.	Mn max.	P max.	S max.	Upper yield strength R_{eH} min. (Mpa)	Tensile strength R_m (Mpa)	Elongation A min. %
0.20	1.40	0.035	0.030	195	320 - 520	20

EN10217-1
Chemical composition(cast analysis) in % by mass

Steel grades		C max.	Si max.	Mn max.	P max.	S max.	Cr max.	Mo max.	Ni max.	Al max.	Cu max.	Nb max.	Ti max.	V max.	Cr+Cu+ Mo+Ni max.
Steel name	Steel number														
P195TR1	1.0107	0.13	0.35	0.70	0.025	0.02	0.30	0.08	0.30	-	0.30	0.01	0.04	0.02	0.70
P195TR2	1.0108	0.13	0.35	0.70	0.025	0.02	0.30	0.08	0.30	0.02	0.30	0.01	0.04	0.02	0.70
P235TR1	1.0254	0.16	0.35	1.20	0.025	0.02	0.30	0.08	0.30	-	0.30	0.01	0.04	0.02	0.70
P235TR2	1.0255	0.16	0.35	1.20	0.025	0.02	0.30	0.08	0.30	0.02	0.30	0.01	0.04	0.02	0.70
P265TR1	1.0258	0.20	0.40	1.40	0.025	0.02	0.30	0.08	0.30	-	0.30	0.01	0.04	0.02	0.70
P265TR2	1.0259	0.20	0.40	1.40	0.025	0.02	0.30	0.08	0.30	0.02	0.30	0.01	0.04	0.02	0.70

Mechanical properties

Steel grades		Tensile properties				
Steel name	Steel number	Upper yield strength R_{eH} min. for T mm (Mpa)		Tensile Strength R_m (Mpa)	Elongation A min. %	
		T≤16	16<T≤40		l	t
P195TR1	1.0107	195	185	320-440	27	25
P195TR2	1.0108	195	185	320-440	27	25
P235TR1	1.0254	235	225	360-500	25	23
P235TR2	1.0255	235	225	360-500	25	23
P265TR1	1.0258	265	255	410-570	21	19
P265TR2	1.0259	265	255	410-570	21	19

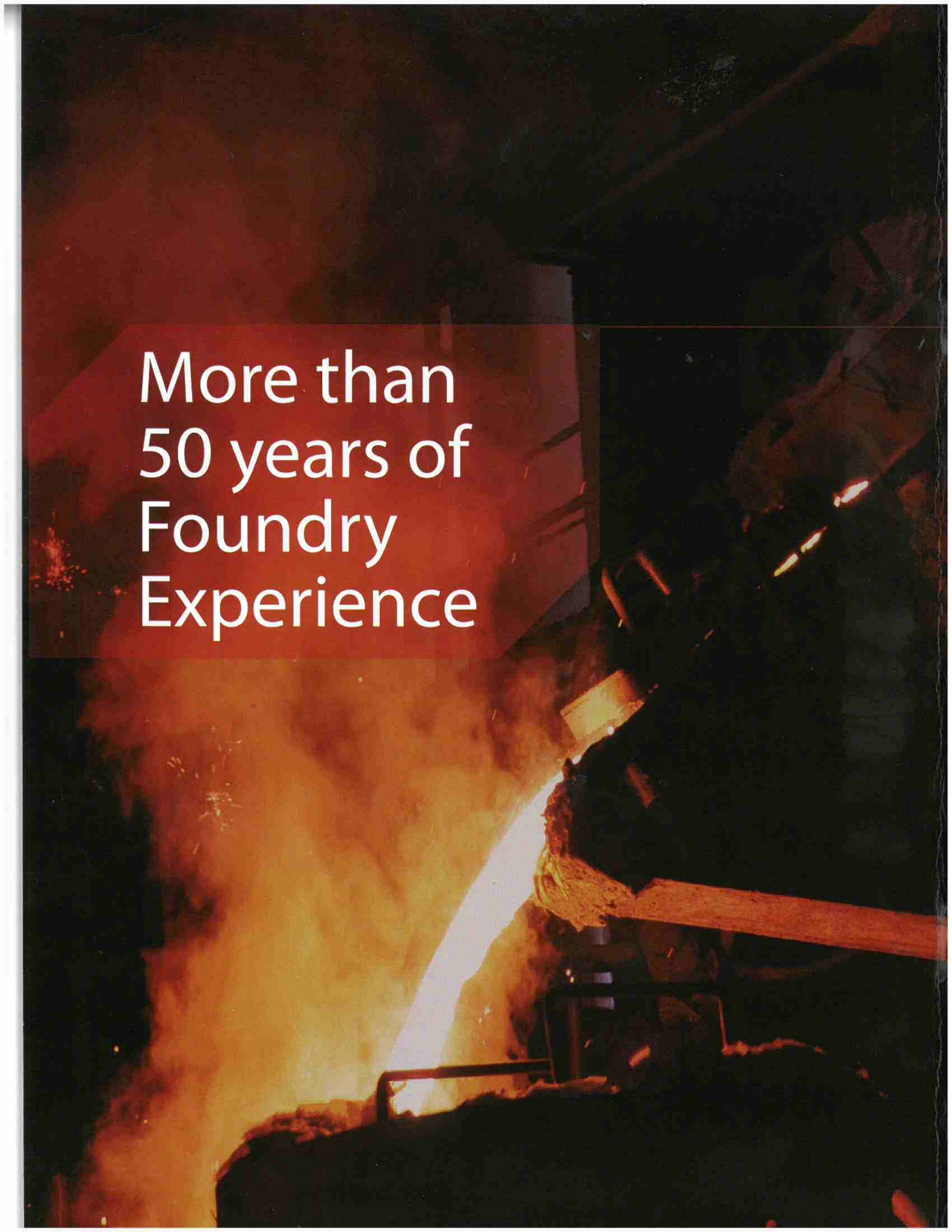
Malleable Iron Pipe Fittings

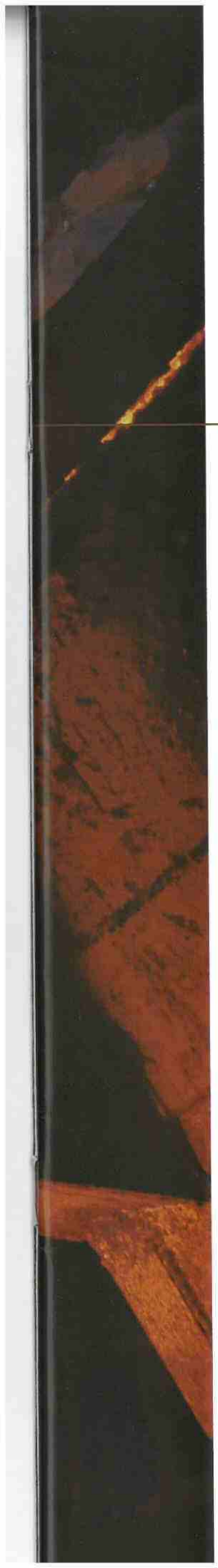
BS Standard

*To Provide **Safe & Reliable** Products and **Smart & Complete** Solutions for Clients in Fluid Conveying Industry Across the Globe.*

玫德集团
MEIDE GROUP

MECH


More than
50 years of
Foundry
Experience



Company Profile

Jinan Meide Casting Co. Ltd. was established in 1961. In the past decades, Jinan Meide has seized each opportunity to consolidate its strength, and has finally developed into what it is today, a large-scale enterprise group with advanced technology, equipment and strong comprehensive strength, known for its complete range of products, large producing capacity, high quality and strong R&D strength. The company owns altogether one main factory, three branch factories, two independent accounting steel pipe companys, and a science & technology park.

The company is the well-known manufacturer in the fitting industry with the most complete range of products, supplying malleable iron fittings, grooved fittings, grooved couplings, valves, cast iron fittings, ductile iron fittings, steel pipe nipples and couplings, stainless steel nipples, brass pipe nipples, cast bronze fittings, steel pipes, pipe hangers and supports, electric fittings, etc.

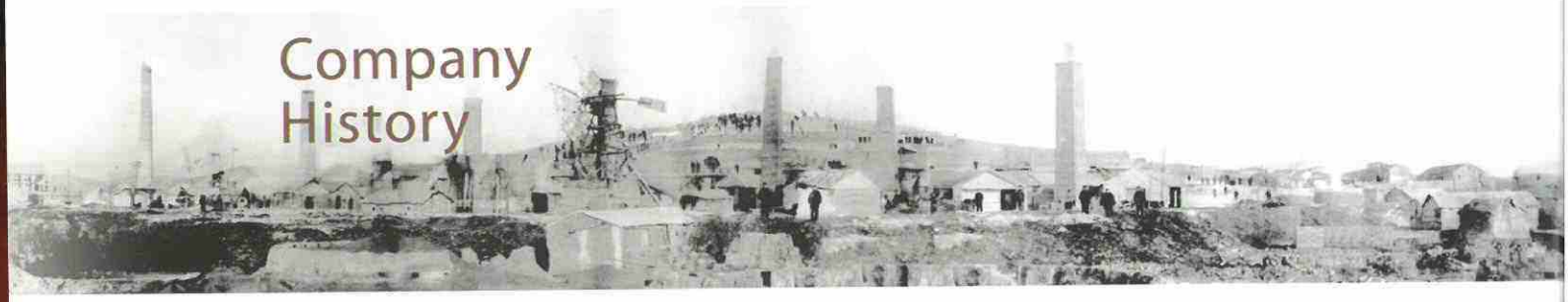
Over 50 years, Jinan Meide has been a trusted name in piping solutions by offering high-quality products, service and support to the PVF industry continuously. We provide expertise and product solutions for a wide range of applications, plumbing, mechanical, industrial, air-conditioning and refrigeration, mining, oil, gas, fire protection, equipment and power system. Many of the company's application technology are advanced in the world, with more than 20 patents registered each year, and the company has presided over and participated in the drafting of many important national standards of the industry.

We organize the whole production process in accordance with ISO 9001 and ISO 14001. It has also the most complete certificates in the PVF industry, including UL/FM/NSF of US, CRN/cUL of Canada, DVGW/TUV/CE/VdS of Germany, BSI/LPCB of UK, SII of Israel, JIS of Japan, ABNT of Brazil, GOST-R of Russia, CNBOP of Poland, KS of South Korea, TSE of Turkey, PSB of Singapore, SIRIM of Malaysia, SABS of South Africa etc. The products are well distributed in more than 130 countries and regions.

As an industry leader and key high-tech enterprise of the national torch plan, the company attaches great importance to environmental protection, energy-saving and emission-reduction. US-EEC recognizes MECH brand malleable iron pipe fittings as "the product to promote for the technology exchange of environmental protection". Protecting the environment is the duty of the company.

Customer satisfaction has always been the company's top objective, and we constantly stick to the principle: to provide customers with a value-added solution rather than simply delivering products.

Company History



1961 Business Started from Grey Iron Pot

1970 Malleable Iron Pipe Fittings

1987 Export, Main Market: Southeast Asia

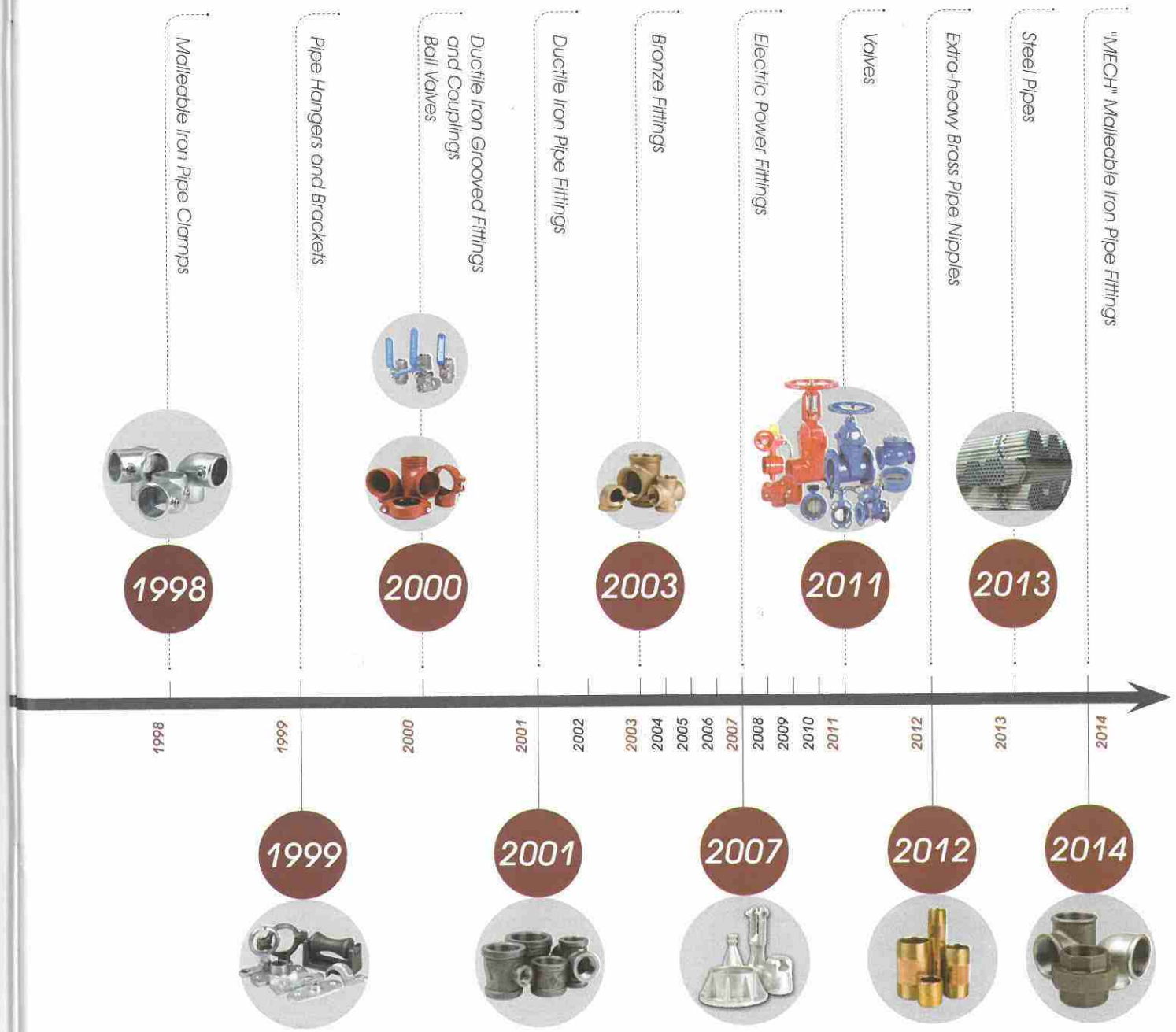
1990 Conduit Body

1993 Self Export, Developed US and European Market

1995 Cast Iron Fittings

1997 Steel Pipe Nipples
Red Brass Pipe Nipples

1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997


Malleable Iron Pipe Clamps
1998
Pipe Hangers and Brackets
1999
Ductile Iron Grooved Fittings and Couplings Ball Valves
2000
Ductile Iron Pipe Fittings
2001
Bronze Fittings
2003
Electric Power Fittings
2007
Valves
2011
Extra-heavy Brass Pipe Nipples
2012
Steel Pipes
2013
"MECH" Malleable Iron Pipe Fittings
2014
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014

State of the Art Equipment

High precision equipment is quality assurance. Jinan Meide's 8 factories are all equipped with the most advanced facilities and equipment in the industry. The main production facilities include Sinto automatic molding line, Tokyu automatic molding line, Chinese 416 automatic vertical molding line, automatic molding sand mixers, cupola furnaces, electric furnaces, water-cooled longevous cupola furnaces, CNC vertical machining centers, CNC machines, NC vertical lathes, radial drills, Jinan Meide proprietary automatic machines, hot-dipped galvanization line, automatic box sealing line, stereoscopic warehouse and so on.

Pattern

Tokyu AMF-111055

Pouring

Core Making

Sand Mulling

Melting

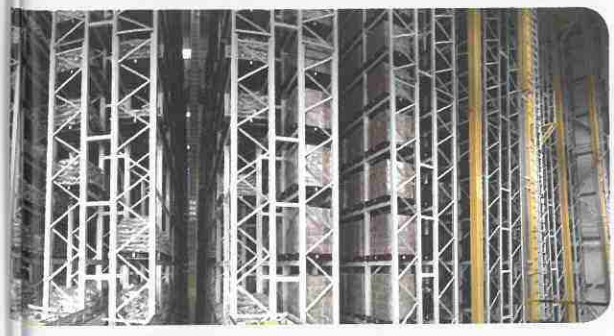
Sinto FCMX

DISA

Annealing

End Grinding Line

Threading, Air Pressure Test, and Anti-rust Treatment



Warehouse

Reliable Quality Assurance

Jinan Meide is honored as the National enterprise technical center and is capable and qualified to conduct full series of tests and inspections including chemical checking, etc.

Inspection facilities include: spectrometer, carbon sulfur analyzer, metallurgical microscope, tensile strength testing equipment, pressure testing equipment, adhesive force testing equipment, CMM, hardness tester, etc.

From incoming inspection to finished product, quality is checked and monitored in the whole process. Each step of the manufacturing process is carefully documented, regularly reviewed for revision control and updating standard. Quality procedures are constantly monitored and updated to assure that only the highest and most consistent quality products are supplied to our valued customers.

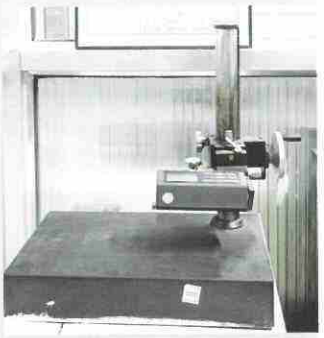
Metallurgical Microscope

Spectrometer

CMM

Projector

The Length of The Test Instrument



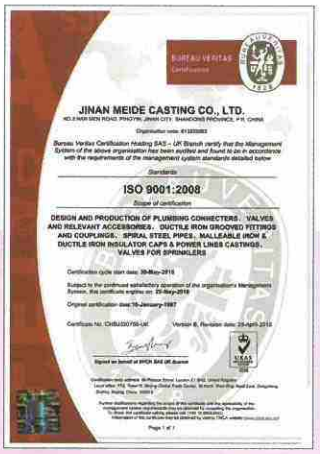
Roughness Tester

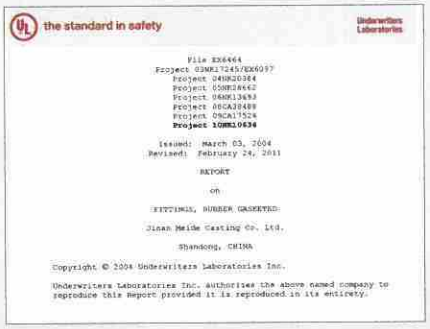
Carbon Sulfur Analyzer

Tensile Strength Testing Equipment

Sand Testing Instrument

Certificates




the standard in safety
Underwriters Laboratories
File EX6464
Issued: March 03, 2004
Revised: February 24, 2011
REPORT
on
FITTINGS, RUBBER GASKETED
Jinan Meide Casting Co. Ltd.
Shandong, CHINA
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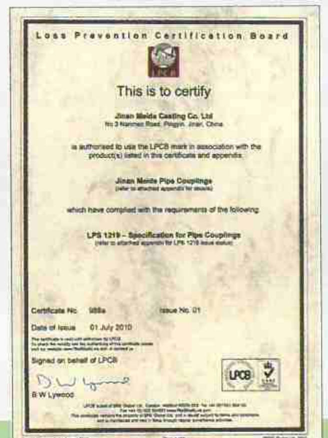
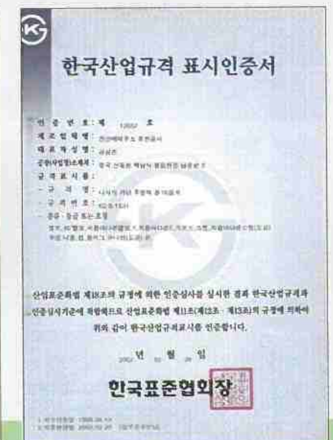
FM APPROVED
Certificate of Compliance
FM Approvals


FM APPROVED
Certificate of Compliance
FM Approvals


Zertifikat Certificate
Anerkennung
Approval
VdS


Loss Prevention Certification Board
This is to certify
Jinan Meide Casting Co. Ltd
LPS 1219 – Specification for Pipe Couplings
Certificate No. 988a
Issue No. 01
Date of Issue 01 July 2010
Signed on behalf of LPCB


한국산업규격 표시인증서
한국표준협회장


KITEMARK
LICENCE
No. KM 67015
Jinan Meide Casting Co., Ltd.
BSI

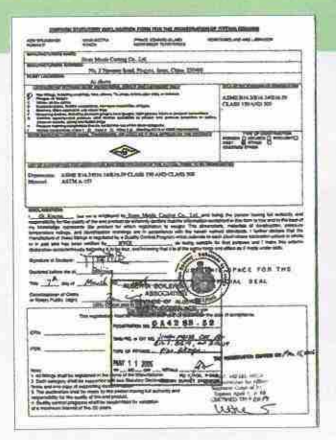

IAPMO RESEARCH AND TESTING, INC.
NSF / ANSI 61
CERTIFICATE OF LISTING


CERTIFICADO DE CONFORMIDADE
Nº 143.002/09
Jinan Meide Casting Co., Ltd
ABNT NBR 6943:2000


JIS MARK CERTIFICATE
Jinan Meide Casting Co., Ltd.
KOREAN STANDARDS ASSOCIATION


DVGW
DIN-DVGW-Baumusterprüfzertifikat
DIN-DVGW type examination certificate


СИСТЕМА СЕРТИФИКАЦИИ ГОСТ Р
СЕРТИФИКАТ СООТВЕТСТВИЯ




TÜRK STANDARDLARI ENSTITÜSÜ
TÜRK STANDARDLARINA UYGUNLUK BELGESİ
TURKISH STANDARDS INSTITUTION
CERTIFICATE OF CONFORMITY TO TURKISH STANDARDS

Malleable Iron Pipe Fittings

BS Standard


1#
Bend 90°, M/F


1#F
Bend 90°, M/F


1A
Short Bend 90°, M/F


1AF
Short Bend 90°, M/F


2#
Bend 90°, female


2A
Short Bend 90°, female


2AF
Short Bend 90°, female


3#
Bend 90°, male


40
Bend 45°, M/F


40F
Bend 45°, M/F


41
Bend 45°, female


85
Crossover


90
Elbow, 90°


90R
Reducing Elbow, 90°


92
Street Elbow, 90°


92R
Reducing Street Elbow, 90°


95
Union Elbow F/F


96
Union Elbow F/F


97
Union Elbow M/F


98
Union Elbow M/F


120
Elbow, 45°


121
Street Elbow, 45°


130
Tee


130R
Reducing Tee


130R
Reducing Tee


130R
Reducing Tee


130R
Reducing Tee


130R
Reducing Tee


131
Pitcher Tee


131R
Reducing Pitcher Tee


134
Service Tee


134R
Reducing Service Tee


165
Lateral Y Branche, 45°


180
Cross


180R
Reducing Cross


220
Socket


220S
Socket R/L


240
Reducing Socket


241
Bushing


241D
Bushing


245
Reducing Hexagon Nipple


246
Reducing Socket M/F

Material: BS EN 1562
Dimensions: BS EN 10242
Threads: ISO 7-1
Size Available: 1/8"- 6"


270
Parallel Thread Socket


280
Hexagon Nipple


291
Plain Plug


291LM
Plain Plug


291N
Countersunk Plug


291S
Solid Plug


300
Cap


310
Locknut


312
Backnut


321-4
Flange Bs4504


321-6
Flange 1600/4


321-H
Flange


321P
Flange


321PW
Flange


321TD
Flange


330
Flat Seat Union


330D
Flat Seat Union


331
Flat Seat Union M/F


340
Conical Joint Union


340Q
Deflection Union


341
Conical Joint Union M/F


342
Conical Joint Union


342A
Double Bronze Navy Union


526
Long Adapter M/F


529A
Long Extension Piece


529X
Short Extension Piece


1221
Side Outlet Elbow


1223
Side Outlet Tee


1224
Side Outlet Cross


LAA
Coupling Luck F/F


LAF
Coupling Luck M/F

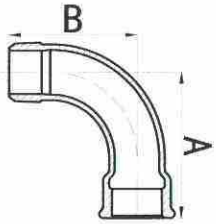

LCC
Long Compression Coupling


SCC
Short Compression Coupling


TCC
Compression Tee

1#

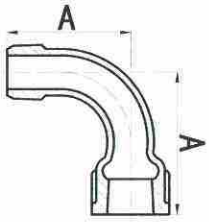
Bend 90°, M/F



Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A	35	40	48	55	69	85	105
	B	32	36	42	48	60	75	95
Size	Inch	11/2	2	21/2	3	4	6	
	mm	40	50	65	80	100	150	
Dim. (mm)	A	116	140	176	205	260	365	
	B	105	130	165	190	245	345	

1#F

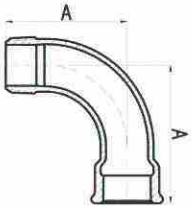
Bend 90°, M/F



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	52	65	82	100	115	140
Size	Inch	21/2	3	4			
	mm	65	80	100			
Dim. (mm)	A	175	205	260			

1A

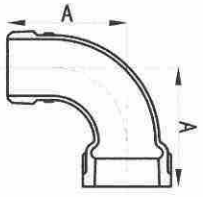
Short Bend 90°, M/F



Size	Inch	1/4	3/8	1/2	3/4	1	11/4
	mm	8	10	15	20	25	32
Dim. (mm)	A	30	36	45	50	63	76
Size	Inch	11/2	2	21/2	3	4	
	mm	40	50	65	80	100	
Dim. (mm)	A	85	102	115	138	167	

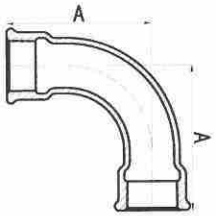
1AF

Short Bend 90°, M/F



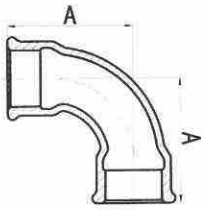
Size	Inch	1/4	3/8	1/2	3/4	1	11/4
	mm	8	10	15	20	25	32
Dim. (mm)	A	30	36	45	50	63	76
Size	Inch	11/2	2	21/2			
	mm	40	50	65			
Dim. (mm)	A	85	102	115			

2# Bend 90°, female



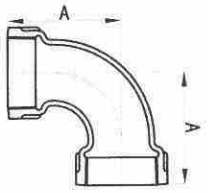
Size	Inch	1/4	3/8	1/2	3/4	1	11/4
	mm	8	10	15	20	25	32
Dim. (mm)	A	40	48	55	69	85	105
Size	Inch	11/2	2	21/2	3	4	
	mm	40	50	65	80	100	
Dim. (mm)	A	116	140	176	205	260	

2A Short bend 90°, female



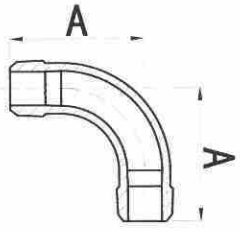
Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	45	50	63	76	85	102
Size	Inch	21/2	3	4			
	mm	65	80	100			
Dim. (mm)	A	115	138	167			

2AF Short bend 90°, female



Size	Inch	1/4	3/8	1/2	3/4	1	11/4
	mm	8	10	15	20	25	32
Dim. (mm)	A	30	36	45	50	63	76
Size	Inch	11/2	2	21/2	3		
	mm	40	50	65	80		
Dim. (mm)	A	85	102	113	138		

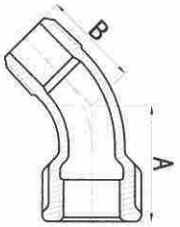
3# Bend 90°, male



Size	Inch	3/8	1/2	3/4	1	11/4	11/2
	mm	10	15	20	25	32	40
Dim. (mm)	A	42	48	60	75	95	105
Size	Inch	2	21/2	3	4		
	mm	50	65	80	100		
Dim. (mm)	A	130	165	190	245		

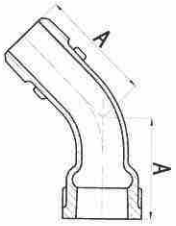
NSF/ANSI 61 NSF/ANSI 372 ACS

40 Bend 45°, M/F



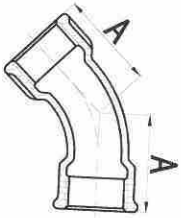
Size	Inch	1/4	3/8	1/2	3/4	1	11/4
	mm	8	10	15	20	25	32
Dim. (mm)	A	26	30	36	43	51	64
	B	21	24	30	36	42	54
Size	Inch	11/2	2	21/2	3	4	6
	mm	40	50	65	80	100	150
Dim. (mm)	A	68	81	99	113	142	197
	B	58	70	86	100	126	176

40F Bend 45°, M/F



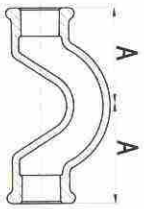
Size	Inch	3/4	1	11/4	11/2	2	21/2
	mm	20	25	32	40	50	65
Dim. (mm)	A	45	55	68	70	85	100
Size	Inch	3	4				
	mm	80	100				
Dim. (mm)	A	115	145				

41 Bend 45°, female



Size	Inch	1/4	3/8	1/2	3/4	1	11/4
	mm	8	10	15	20	25	32
Dim. (mm)	A	26	30	36	43	51	64
Size	Inch	11/2	2	21/2	3	4	6
	mm	40	50	65	80	100	150
Dim. (mm)	A	68	81	99	113	142	197

85 Crossover



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	45	54	70	91	100.5	115
Size	Inch						
	mm						
Dim. (mm)	A						

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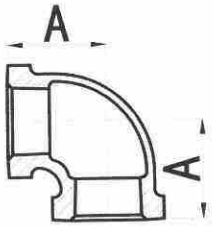
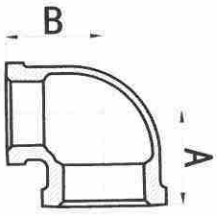
90 Elbow, 90°



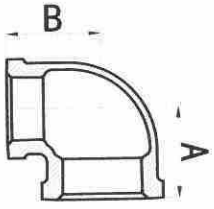
Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A	19	21	25	28	33	38	45
Size	Inch	11/2	2	21/2	3	4	5	6
	mm	40	50	65	80	100	125	150
Dim. (mm)	A	50	58	69	78	96	115	131

90R Reducing Elbow, 90°



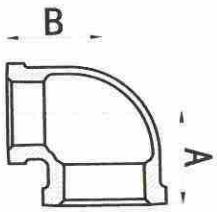
Size	Inch	4X11/4	4X11/2	4X2	4X21/2	4X3
	mm	100X32	100X40	100X50	100X65	100X80
Dim. (mm)	A	60	62	68	77	82
	B	85	85	86	89	90
Size	Inch	3/4X1/2	1X1/4	1X3/8	1X1/2	1X3/4
	mm	20X15	25X8	25X10	25X15	25X20
Dim. (mm)	A	30	27	30	32	35
	B	31	31	32	34	36

90R Reducing Elbow, 90°



Size	Inch	3/8X1/8	3/8X1/4	6X4	1/2X1/4	1/2X3/8
	mm	10X6	10X8	150X100	15X8	15X10
Dim. (mm)	A	20.5	23	102	24	26
	B	21.5	23	125	24	26
Size	Inch	11/4X3/8	11/4X1/2	11/4X3/4	11/4X1	11/2X1/2
	mm	32X10	32X15	32X20	32X25	40X15
Dim. (mm)	A	32	32	36	40	34
	B	36.5	37	41	42	41

90R Reducing Elbow, 90°



Size	Inch	3/4X1/4	3/4X3/8	11/2X11/4	2X1/2	2X3/4
	mm	20X8	20X10	40X32	50X15	50X20
Dim. (mm)	A	26	28	46	35	40
	B	27	28	48	47	48
Size	Inch	11/2X3/4	11/2X1	3X1	3X11/4	3X11/2
	mm	40X20	40X25	80X25	80X32	80X40
Dim. (mm)	A	37	42	50	53.5	56
	B	42	46	68	68	69

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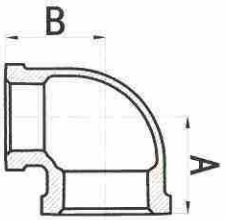
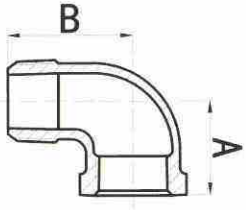
90R Reducing Elbow, 90°



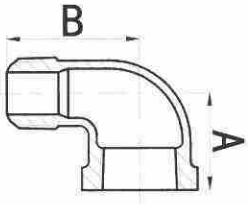
Size	Inch	2X1	2X11/4	2X11/2	21/2X3/4	21/2X1	21/2X2
	mm	50X25	50X32	50X40	65X20	65X25	65X50
Dim. (mm)	A	43	47	52	42.5	46.5	61
	B	50	53	56	57	58.5	66
Size	Inch	3X2	3X21/2	1/4X1/8	21/2X11/4	21/2X11/2	3X3/4
	mm	80X50	80X65	8X6	65X32	65X40	80X20
Dim. (mm)	A	60.5	71	18.5	50.5	53.5	45
	B	71	74	19	60	61	65

92 Street Elbow, 90°



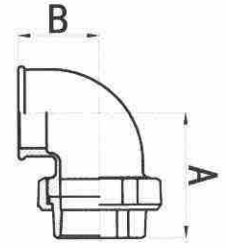
Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A	19	21	25	28	33	38	45
	B	25	28	32	37	43	52	60
Size	Inch	11/2	2	21/2	3	4	6	
	mm	40	50	65	80	100	150	
Dim. (mm)	A	50	58	69	78	96	127.5	
	B	65	74	88	98	118	202	

92R Reducing Street Elbow, 90°



Size	Inch	3/4X1/2	1X3/4			
	mm	20X15	25X20			
Dim. (mm)	A	30	35			
	B	65.4	46			
Size	Inch					
	mm					
Dim. (mm)	A					
	B					

95 Union Elbow F/F



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	28	33	38	45	50	58
	B	58	62	72	82	90	100
Size	Inch						
	mm						
Dim. (mm)	A						
	B						

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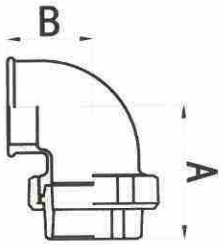
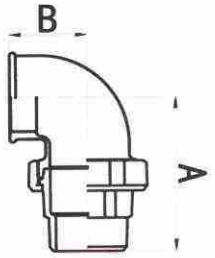
96 Union Elbow F/F



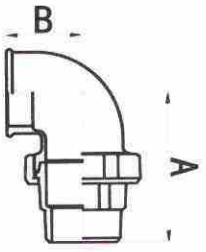
Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	58	62	72	82	90	100
	B	28	33	38	45	50	58
Size	Inch						
	mm						
Dim. (mm)	A						
	B						

97 Union Elbow M/F



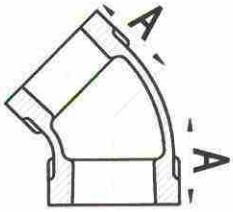
Size	Inch	11/2					
	mm	40					
Dim. (mm)	A	128					
	B	58					
Size	Inch						
	mm						
Dim. (mm)	A						
	B						

98 Union Elbow M/F



Size	Inch	1/2	3/4	1	11/4	11/2	
	mm	15	20	25	32	40	
Dim. (mm)	A	76	82	94	107	115	
	B	28	33	38	45	50	
Size	Inch						
	mm						
Dim. (mm)	A						
	B						

120 Elbow, 45°



Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A	16	18.5	20	22	25	28	33
Size	Inch	11/2	2	21/2	3	4	5	6
	mm	40	50	65	80	100	125	150
Dim. (mm)	A	50	58	69	78	96	77.5	86

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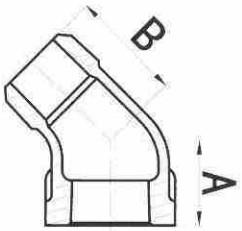
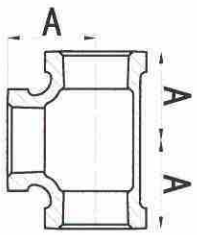
121 Street Elbow, 45°



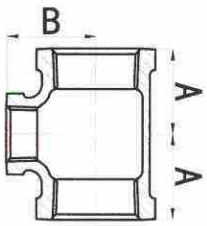
Size	Inch	1/8	1/4	3/8	1/2	3/4	1
	mm	6	8	10	15	20	25
Dim. (mm)	A	16	18.5	20	22	25	28
	B	21	24	25	28	32	37
Size	Inch	11/4	11/2	2	21/2	3	4
	mm	32	40	50	65	80	100
Dim. (mm)	A	33	36	43	49.5	55	66
	B	43	46	55	65	76	94

130 Tee



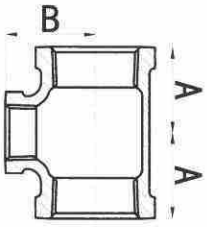
Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A	19	21	25	28	33	38	45
Size	Inch	11/2	2	21/2	3	4	5	6
	mm	40	50	65	80	100	125	150
Dim. (mm)	A	50	58	69	78	96	115	131

130R Reducing Tee



Size	Inch	4X1/2	4X3/4	4X1	4X11/4	4X11/2
	mm	100X15	100X20	100X25	100X32	100X40
Dim. (mm)	A	50	53	56	60	61
	B	79	79	81	84	84
Size	Inch	1/2X1/8	1/2X1/4	1/2X3/8	3/4X1/4	3/4X3/8
	mm	15X6	15X8	15X10	20X8	20X10
Dim. (mm)	A	22	24	26	26	28
	B	23	24	26	27	28

130R Reducing Tee



Size	Inch	4X2	4X21/2	4X3	3/8X1/4	6X4
	mm	100X50	100X65	100X80	10X8	150X100
Dim. (mm)	A	70	84	82	22	105
	B	86	92	90	22.5	125.5
Size	Inch	3/4X1/2	1X1/4	1X3/8	1X1/2	1X3/4
	mm	20X15	25X8	25X10	25X15	25X20
Dim. (mm)	A	30	28	30	32	35
	B	31	31	32	34	36

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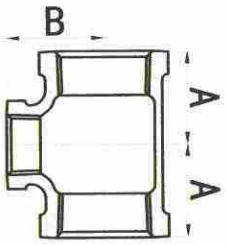
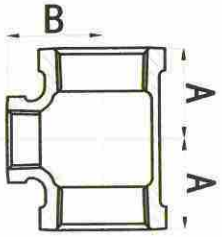
130R Reducing Tee



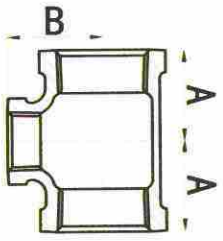
Size	Inch	6X2	6X3	11/4X3/4	11/4X1	11/2X3/8
	mm	150X50	150X80	32X20	32X25	40X10
Dim. (mm)	A	75	92.5	36	40	34
	B	115	120.5	41	42	39
Size	Inch	11/4X3/8	11/4X1/2	2X11/2	21/2X1/2	21/2X3/4
	mm	32X10	32X15	50X40	65X15	65X20
Dim. (mm)	A	32	34	52	40	43
	B	36	38	55	56	57

130R Reducing Tee



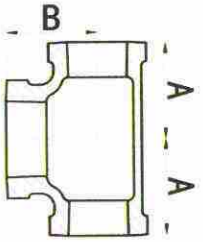
Size	Inch	11/2X1/2	11/2X3/4	11/2X1	11/2X11/4	2X3/8
	mm	40X15	40X20	40X25	40X32	50X10
Dim. (mm)	A	36	38	42	46	36
	B	42	44	46	48	46
Size	Inch	21/2X1	21/2X11/4	21/2X11/2	21/2X2	3X1/2
	mm	65X25	65X32	65X40	65X50	80X15
Dim. (mm)	A	47	52	55	61	42
	B	60	62	63	66	64

130R Reducing Tee



Size	Inch	2X1/2	2X3/4	2X1	2X11/4	3X2	3X3/4
	mm	50X15	50X20	50X25	50X32	80X50	80X20
Dim. (mm)	A	38	40	44	48	64	45
	B	48	50	52	54	73	65
Size	Inch	3X1	3X11/4	3X11/2	3X21/2	1/4X1/8	
	mm	80X25	80X32	80X40	80X65	8X6	
Dim. (mm)	A	51	55	58	72	18.5	
	B	67	70	71	76	19	

130R Reducing Tee



Size	Inch	1/2X1/2X3/4	1/2X1/2X1	3/4X3/4X1	3/4X3/4X11/4
	mm	15X15X20	15X15X25	20X20X25	20X20X32
Dim. (mm)	A	31	34	36	41
	B	30	32	35	36
Size	Inch	1X1X2	1X1X21/2	11/4X11/4X11/2	11/4X11/4X2
	mm	25X25X50	25X25X65	32X32X40	32X32X50
Dim. (mm)	A	51	60	48	54
	B	48.5	48	46	48

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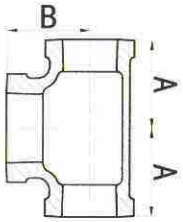
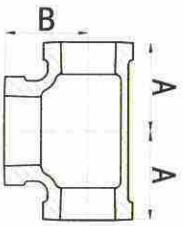
130R Reducing Tee



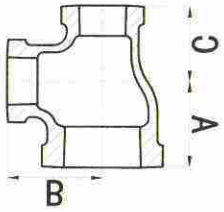
Size	Inch	1/2X1/2X3/4	1/2X1/2X1	3/4X3/4X1	3/4X3/4X11/4
	mm	15X15X20	15X15X25	20X20X25	20X20X32
Dim. (mm)	A	31	34	36	41
	B	30	32	35	36
Size	Inch	1X1X2	1X1X21/2	11/4X11/4X11/2	11/4X11/4X2
	mm	25X25X50	25X25X65	32X32X40	32X32X50
Dim. (mm)	A	51	60	48	54
	B	48.5	48	46	48

130R Reducing Tee



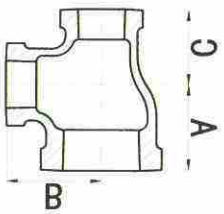
Size	Inch	1X1X11/4	1X1X11/2	2X2X21/2	21/2X21/2X3
	mm	25X25X32	25X25X40	50X50X65	65X65X80
Dim. (mm)	A	42	46	64	75
	B	40	42	59	72
Size	Inch	11/2X11/2X2	11/2X11/2X21/2	21/2X21/2X4	
	mm	40X40X50	40X40X65	65X65X100	
Dim. (mm)	A	55	65	90	
	B	52	55	78	

130R Reducing Tee



Size	Inch	3/4X1/2X1/2	1X1/2X1/2	1X3/4X3/4
	mm	20X15X15	25X15X15	25X20X20
Dim. (mm)	A	30	32	35
	B	31	34	36
	C	28	28	33
Size	Inch	11/2X3/4X3/4	11/2X1X1	11/2X11/4X11/4
	mm	40X20X20	40X25X25	40X32X32
Dim. (mm)	A	38	42	46
	B	43	46	48
	C	32	38	45

130R Reducing Tee



Size	Inch	11/4X1/2X1/2	11/4X3/4X3/4	11/4X1X1	2X1X1
	mm	32X15X15	32X20X20	32X25X25	50X25X25
Dim. (mm)	A	34	36	40	44
	B	38	41	42	51
	C	27	33	38	38
Size	Inch	2X11/4X11/4	2X11/2X11/2	21/2X2X2	3X2X2
	mm	50X32X32	50X40X40	65X50X50	80X50X50
Dim. (mm)	A	48	52	60.5	64
	B	54	55	66	73
	C	45	50	57	57

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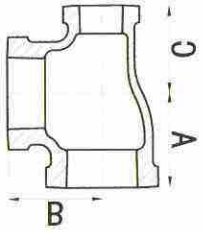
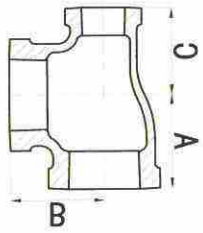
130R Reducing Tee



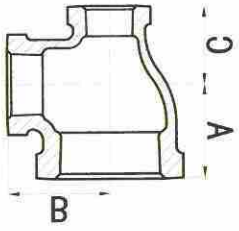
Size	Inch	3/4X1/2X3/4	1X1/4X1	1X1/2X1	11/4X1X11/4	11/2X1/2X11/2
	mm	20X15X20	25X8X25	25X15X25	32X25X32	40X15X40
Dim. (mm)	A	33	38	38	45	50
	B	33	38	38	45	50
	C	31	30	34	42	42
Size	Inch	11/2X3/4X11/2	1X3/4X1	11/4X1/2X11/4	11/4X3/4X11/4	11/2X1X11/2
	mm	40X20X40	25X20X25	32X15X32	32X20X32	40X25X40
Dim. (mm)	A	50	38	45	45	50
	B	50	38	45	45	50
	C	44	36	38	41	46

130R Reducing Tee



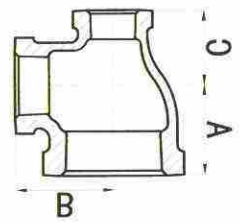
Size	Inch	11/2X11/4X11/2	2X1/2X2	2X3/4X2	2X1X2
	mm	40X32X40	50X15X50	50X20X50	50X25X50
Dim. (mm)	A	50	57	58	58
	B	50	57	58	58
	C	48	47.5	50	52
Size	Inch	2X11/4X2	2X11/2X2	21/2X11/2X21/2	21/2X2X21/2
	mm	50X32X50	50X40X50	65X40X65	65X50X65
Dim. (mm)	A	58	58	68.5	67
	B	58	58	68.5	67
	C	54	55	63.5	65

130R Reducing Tee



Size	Inch	4X3X2	3/4X1/2X1	1X1/2X3/4	11/4X3/4X1
	mm	100X80X50	20X15X25	25X15X20	32X20X25
Dim. (mm)	A	67	38	35	40
	B	83.5	34	36	42
	C	60	33	31	36
Size	Inch	11/4X1X1/2	11/4X1X3/4	11/4X1/2X3/4	11/4X1/2X11/4
	mm	32X25X15	32X25X20	32X15X20	32X15X25
Dim. (mm)	A	34	36	35	39
	B	38	41	38	41.5
	C	32	35	29	34

130R Reducing Tee



Size	Inch	11/4X3/4X1/2	11/2X1/2X1	11/2X3/4X1	11/2X3/4X11/4
	mm	32X20X15	40X15X25	40X20X25	40X20X32
Dim. (mm)	A	40	44	44	46
	B	42.5	46	46	48
	C	37	34	35	41
Size	Inch	11/2X1X1/2	11/2X3/4X11/4	11/2X11/4X1/2	2X1X11/2
	mm	40X25X15	40X25X32	40X32X15	50X25X40
Dim. (mm)	A	37	45	36	51
	B	41	47	42	55
	C	32	41.5	34	45.5

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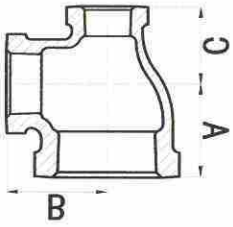
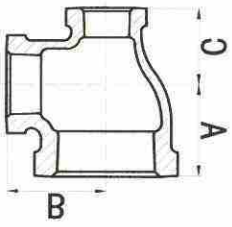
130R Reducing Tee



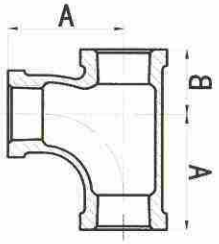
Size	Inch	2X11/4X1	2X11/4X11/2	11/2X11/4X3/4	11/2X11/4X1
	mm	50X32X25	50X32X40	40X32X20	40X32X25
Dim. (mm)	A	40	52	38	42
	B	51	55	44	46
	C	44	48	36	40
Size	Inch	11/2X11/4X2	2X11/2X1/2	2X11/2X3/4	2X11/2X1
	mm	40X32X50	50X40X15	50X40X20	50X40X25
Dim. (mm)	A	55	38	40	44
	B	51.5	48	50	52
	C	53.5	36	39	42

130R Reducing Tee



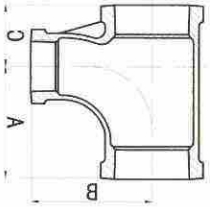
Size	Inch	2X11/2X11/4	21/2X2X1/2	21/2X2X1
	mm	50X40X32	65X50X15	65X50X25
Dim. (mm)	A	48	57	53
	B	54	64	60
	C	46	52	53
Size	Inch	21/2X2X11/4	3X21/2X2	
	mm	65X50X32	80X65X50	
Dim. (mm)	A	57	67	
	B	64	74.5	
	C	52	64	

131 Pitcher Tee



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	45	50	63	76	85	102
	B	24	28	33	40	43	53
Size	Inch						
	mm						
Dim. (mm)	A						
	B						

131R Reducing Pitcher Tee



Size	Inch	3/4X1/2	1X1/2	1X3/4	1X3/4X3/4
	mm	20X15	25X15	25X20	25X20X20
Dim. (mm)	A	47	49	53	53
	B	48	51	54	54
	C	25	28	30	28
Size	Inch	11/4X1/2	11/4X3/4	11/2X3/4	11/2X1
	mm	32X15	32X20	40X20	40X25
Dim. (mm)	A	51	55	55	66
	B	56	58	61	71
	C	30	33	33	36

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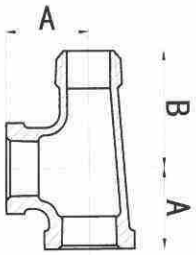
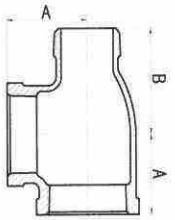
134 Service Tee



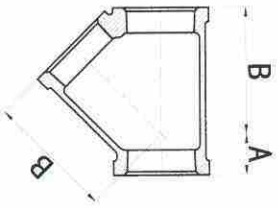
Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	28.5	33.5	38	44.5	49.5	57
	B	41.5	48	54.5	62	68.5	83
Size	Inch						
	mm						
Dim. (mm)	A						
	B						

134R Reducing Service Tee



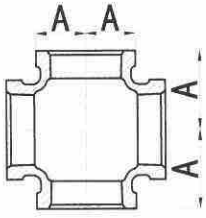
Size	Inch	2X11/4	21/2X2	3X21/2			
	mm	50X40	65X50	80X65			
Dim. (mm)	A	57	69	78			
	B	75	88	106			
Size	Inch						
	mm						
Dim. (mm)	A						
	B						

165 Lateral Y Branche, 45°



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	15.5	18.3	21.6	26	27.9	31.5
	B	43.4	52	61.7	74.2	83.3	99.8
Size	Inch	21/2	3	4			
	mm	65	80	100			
Dim. (mm)	A	38.6	43.4	51			
	B	120	141	177			

180 Cross



Size	Inch	1/8	1/4	3/8	1/2	3/4	1
	mm	6	8	10	15	20	25
Dim. (mm)	A	19	21	25	28	33	38
Size	Inch	11/4	11/2	2	21/2	3	4
	mm	32	40	50	65	80	100
Dim. (mm)	A	45	50	58	69	78	96

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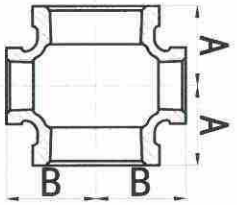
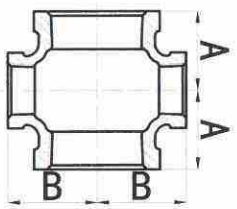
180R Reducing Cross



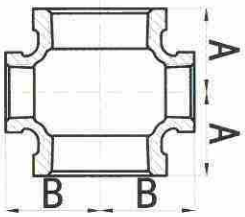
Size	Inch	4X1	4X11/4	4X11/2	4X2	4X21/2
	mm	100X25	100X32	100X40	100X50	100X65
Dim. (mm)	A	56	60	61	70	84
	B	81	84	84	86	92
Size	Inch	11/2X1/2	11/2X3/4	11/2X1	11/2X11/4	2X3/4
	mm	40X15	40X20	40X25	40X32	50X20
Dim. (mm)	A	36	38	42	46	40
	B	42	44	46	48	50

180R Reducing Cross



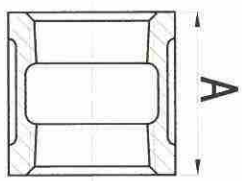
Size	Inch	4X3	3/4X1/2	1X1/2	1X3/4	11/4X1/2
	mm	100X80	20X15	25X15	25X20	32X15
Dim. (mm)	A	82	30	32	35	34
	B	90	31	34	36	38
Size	Inch	2X1	2X11/4	2X11/2	21/2X3/4	21/2X1
	mm	50X25	50X32	50X40	65X20	65X25
Dim. (mm)	A	44	48	52	43	47
	B	52	54	55	57	60

180R Reducing Cross



Size	Inch	11/4X3/4	11/4X1	21/2X2	3X3/4	3X1	21/2X11/4
	mm	32X20	32X25	65X50	80X20	80X25	65X32
Dim. (mm)	A	36	40	61	45	51	52
	B	41	42	66	65	67	62
Size	Inch	21/2X11/2	3X11/4	3X11/2	3X2	3X21/2	
	mm	65X40	80X32	80X40	80X50	80X65	
Dim. (mm)	A	55	55	58	64	72	
	B	63	70	71	73	76	

220 Socket



Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A	25	27	30	36	39	45	50
Size	Inch	11/2	2	21/2	3	4	5	6
	mm	40	50	65	80	100	125	150
Dim. (mm)	A	55	65	74	80	94	95	105

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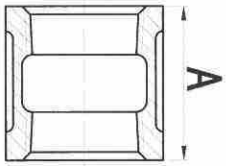
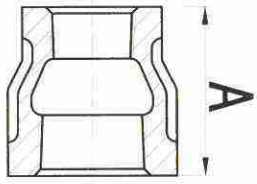
220S Socket R/L



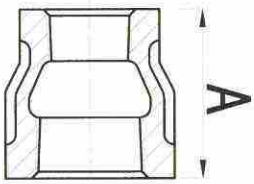
Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	36	39	45	50	55	65
Size	Inch						
	mm						
Dim. (mm)	A						

240 Reducing Socket



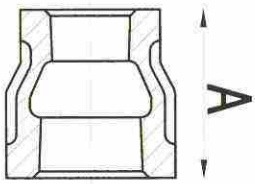
Size	Inch	4X1	4X11/4	4X11/2	4X2	4X21/2
	mm	100X25	100X32	100X40	100X50	100X65
Dim. (mm)	A	94	94	94	94	94
Size	Inch	1/2X1/8	1/2X1/4	1/2X3/8	3/4X1/8	3/4X1/4
	mm	15X6	15X8	15X10	20X6	20X8
Dim. (mm)	A	36	36	36	39	39

240 Reducing Socket



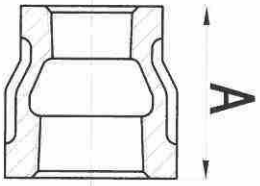
Size	Inch	4X3	3/8X1/8	3/8X1/4	5X4	6X4
	mm	100X80	10X6	10X8	125X100	150X100
Dim. (mm)	A	94	30	30	122	105
Size	Inch	3/4X3/8	3/4X1/2	1X1/4	1X3/8	1X1/2
	mm	20X10	20X15	25X8	25X10	25X15
Dim. (mm)	A	39	39	45	45	45

240 Reducing Socket



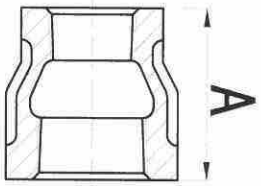
Size	Inch	6X2	6X3	11/4X3/8	11/4X1/2	11/4X3/4
	mm	150X50	150X80	32X10	32X15	32X20
Dim. (mm)	A	105	105	50	50	50
Size	Inch	1X3/4	11/4X1/4	2X1	2X11/4	2X11/2
	mm	25X20	32X8	50X25	50X32	50X40
Dim. (mm)	A	45	50	65	65	74

240 Reducing Socket



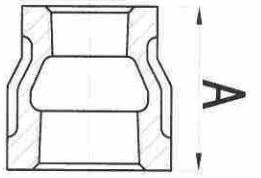
Size	Inch	6X2	6X3	11/4X3/8	11/4X1/2	11/4X3/4	1X3/4
	mm	150X50	150X80	32X10	32X15	32X20	25X20
Dim. (mm)	A	105	105	50	50	50	45
Size	Inch	11/4X1/4	2X1	2X11/4	2X11/2	11/4X1	11/2X1/4
	mm	32X8	50X25	50X32	50X40	32X25	40X8
Dim. (mm)	A	50	65	65	74	50	55

240 Reducing Socket



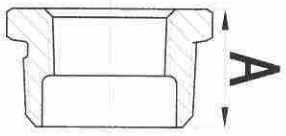
Size	Inch	11/2X3/8	11/2X1/2	11/2X3/4	21/2X1/2	21/2X3/4	21/2X1
	mm	40X10	40X15	40X20	65X15	65X20	65X25
Dim. (mm)	A	55	55	55	74	74	74
Size	Inch	21/2X11/4	21/2X11/2	11/2X1	11/2X11/4	2X1/2	2X3/4
	mm	65X32	65X40	40X25	40X32	50X15	50X20
Dim. (mm)	A	74	74	55	55	65	65

240 Reducing Socket



Size	Inch	3X11/4	21/2X2	3X1/2	3X3/4	3X1	3X11/2
	mm	80X32	65X50	80X15	80X20	80X25	80X40
Dim. (mm)	A	80	74	80	80	80	80
Size	Inch	3X2	3X21/2	1/4X1/8			
	mm	80X50	80X65	8X6			
Dim. (mm)	A	80	80	27			

241 Bushing



Size	Inch	4X3/4	4X1	4X11/4	4X11/2	4X3
	mm	100X20	100X25	100X32	100X40	100X80
Dim. (mm)	A	51	51	51	51	51
Size	Inch	1/2X3/8	3/4X1/8	3/4X1/4	3/4X3/8	3/4X1/2
	mm	15X10	20X6	20X8	20X10	20X15
Dim. (mm)	A	24	26	26	26	26

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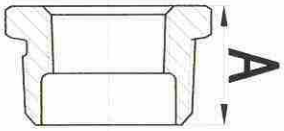
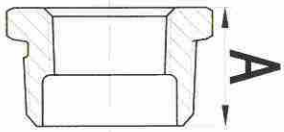
241 Bushing



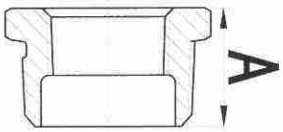
Size	Inch	3/8X1/8	3/8X1/4	5X4	6X5	6X21/2
	mm	10X6	10X8	125X100	150X125	150X65
Dim. (mm)	A	20	20	47	69	69
Size	Inch	1X1/4	1X3/8	1X1/2	1X3/4	11/4X3/8
	mm	25X8	25X10	25X15	25X20	32X10
Dim. (mm)	A	29	29	29	29	31

241 Bushing



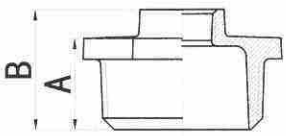
Size	Inch	1/2X1/8	1/2X1/4	11/4X1	11/2X1/4	11/2X3/8
	mm	15X6	15X8	32X25	40X8	40X10
Dim. (mm)	A	24	24	31	31	31
Size	Inch	11/4X1/2	11/4X3/4	21/2X11/2	21/2X2	3X2
	mm	32X15	32X20	65X40	65X50	80X50
Dim. (mm)	A	31	31	40	40	44

241 Bushing



Size	Inch	11/2X1/2	11/2X3/4	11/2X1	11/2X11/4	2X1	3X21/2
	mm	40X15	40X20	40X25	40X32	50X25	80X65
Dim. (mm)	A	31	31	31	31	35	44
Size	Inch	1/4X1/8	2X11/4	2X11/2	21/2X1/2	21/2X3/4	
	mm	8X6	50X32	50X40	65X15	65X20	
Dim. (mm)	A	20	35	35	40	40	

241D Bushing



Size	Inch	2X1/2	2X3/4	21/2X1	21/2X11/4	3X1/2
	mm	50X15	50X20	65X25	65X32	80X15
Dim. (mm)	A	35	35	40	40	44
	B	48	48	54	54	59
Size	Inch	6X4	3X3/4	3X1	3X11/4	3X11/2
	mm	150X100	80X20	80X25	80X32	80X40
Dim. (mm)	A	63	44	44	44	44
	B	86	59	59	59	59

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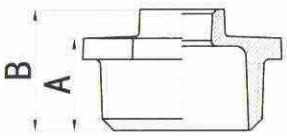
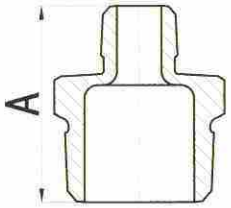
241D Bushing



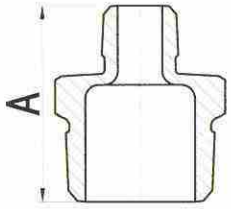
Size	Inch	4X2	4X21/2	6X3		
	mm	100X50	100X65	150X80		
Dim. (mm)	A	51	51	63		
	B	69	69	86		
Size	Inch					
	mm					
Dim. (mm)	A					
	B					

245 Reducing Hexagon Nipple



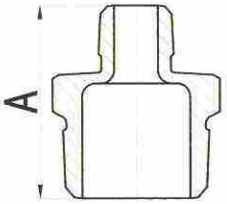
Size	Inch	4X2	4X21/2	4X3	3/8X1/4	1/2X1/4
	mm	100X50	100X65	100X80	10X8	15X8
Dim. (mm)	A	87	87	87	38	44
Size	Inch	11/4X3/4	11/4X1	11/2X1/2	11/2X3/4	11/2X1
	mm	32X20	32X25	40X15	40X20	40X25
Dim. (mm)	A	57	57	59	59	59

245 Reducing Hexagon Nipple



Size	Inch	1/2X3/8	3/4X1/4	3/4X3/8	3/4X1/2	1X1/2
	mm	15X10	20X8	20X10	20X15	25X15
Dim. (mm)	A	44	47	47	47	53
Size	Inch	11/2X11/4	2X1/2	2X3/4	2X1	2X11/4
	mm	40X32	50X15	50X20	50X25	50X32
Dim. (mm)	A	59	68	68	68	68

245 Reducing Hexagon Nipple



Size	Inch	1X3/4	11/4X1/2	21/2X11/4	21/2X11/2	21/2X2	2X11/2
	mm	25X20	32X15	65X32	65X40	65X50	50X40
Dim. (mm)	A	53	57	75	75	75	68
Size	Inch	1/4X1/8	21/2X1	3X11/2	3X2	3X21/2	
	mm	8X6	65X25	80X40	80X50	80X65	
Dim. (mm)	A	31	75	83	83	83	

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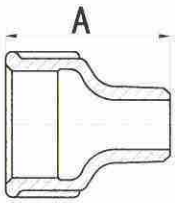
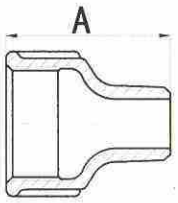
246 Reducing Socket M/F



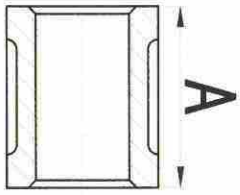
Size	Inch	3/8X1/4	1/2X1/4	1/2X3/8	3/4X3/8	3/4X1/2
	mm	10X8	15X8	15X10	20X10	20X15
Dim. (mm)	A	35	43	43	48	48
Size	Inch	11/2X11/4	2X1	2X11/4	2X11/2	1X1/2
	mm	40X32	50X25	50X32	50X40	25X15
Dim. (mm)	A	63	70	70	70	55

246 Reducing Socket M/F



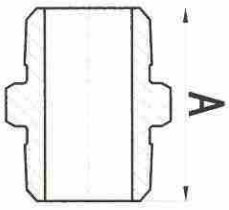
Size	Inch	1X3/4	11/4X1/2	11/4X3/4	11/4X1	11/2X3/4
	mm	25X20	32X15	32X20	32X25	40X20
Dim. (mm)	A	55	60	60	60	63
Size	Inch	11/2X1				
	mm	40X25				
Dim. (mm)	A	63				

270 Parallel Thread Socket



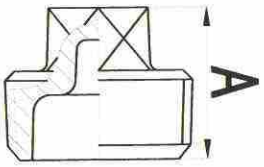
Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A	25	27	30	36	39	45	50
Size	Inch	6	11/2	2	21/2	3	4	
	mm	150	40	50	65	80	100	
Dim. (mm)	A	120	55	65	74	80	94	

280 Hexagon Nipple



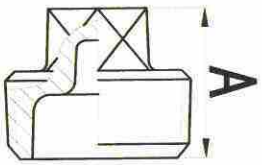
Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A	29	36	38	44	47	53	57
Size	Inch	5	6	11/2	2	21/2	3	4
	mm	125	150	40	50	65	80	100
Dim. (mm)	A	103	110	59	68	75	83	95

291 Plain Plug



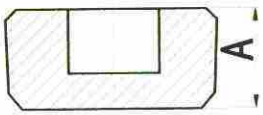
Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A Min	11	14	15	18	20	23	29
Size	Inch	11/2	2	21/2	3	4	6	
	mm	40	50	65	80	100	150	
Dim. (mm)	A Min	30	36	39	44	58	71.5	

291LM Plain Plug



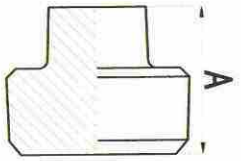
Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	25	28.5	32.5	35.1	37.6	40.1
Size	Inch	21/2	3	4			
	mm	65	80	100			
Dim. (mm)	A	46	50	64.5			

291N Countersunk Plug



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A Min	14.2	16	19	20.3	21.1	22.4
Size	Inch	21/2	3				
	mm	65	80				
Dim. (mm)	A Min	27.2	38.7				

291S Solid Plug



Size	Inch	1/4	3/8	1/2	3/4	1	11/4
	mm	8	10	15	20	25	32
Dim. (mm)	A Min	14	15	18	20	23	29
Size	Inch	11/2	2	21/2	3		
	mm	40	50	65	80		
Dim. (mm)	A Min	30	36	39	44		

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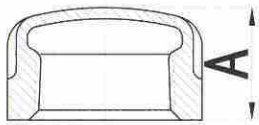
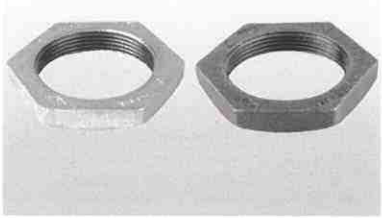
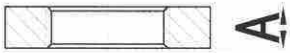
300 Cap



Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A Min	13	15	17	19	22	24	27
Size	Inch	11/2	2	21/2	3	4	5	6
	mm	40	50	65	80	100	125	150
Dim. (mm)	A Min	27	32	35	38	45	54	61

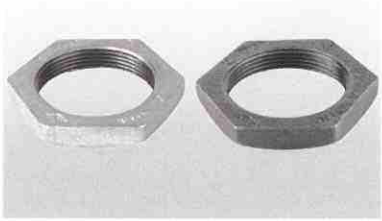
310 Locknut

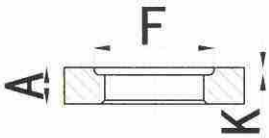




Size	Inch	1/4	3/8	1/2	3/4	1	11/4
	mm	8	10	15	20	25	32
Dim. (mm)	A	6	7	8	9	10	11
Size	Inch	11/2	2	21/2	3	4	
	mm	40	50	65	80	100	
Dim. (mm)	A	12	13	16	19	23	

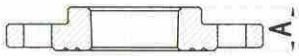
312 Backnut





Size	Inch	1/2	3/4	1	11/4	11/2	2	4
	mm	15	20	25	32	40	50	100
Dim. (mm)	A Min	7.9	8.6	9.7	10.7	11.9	13.5	20.3
	F Min	24.6	31.2	38.1	47.2	53.9	66.8	127
	K	1.5	1.5	1.5	1.5	1.5	2.3	3.3

321-4 Flange Bs4504



Size	Inch	11/4	11/2	2	21/2	3	4
	mm	32	40	50	65	80	100
Dim. (mm)	A	23	23	28	35	38	38
Size	Inch	6					
	mm	150					
Dim. (mm)	A	46					

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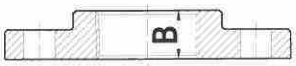
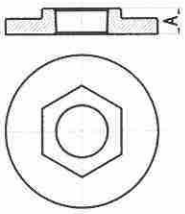
321-6 Flange 1600/4



Size	Inch	11/4	11/2	2	21/2	3	4
	mm	32	40	50	65	80	100
Dim. (mm)	B	20	20	22	26	28	34
Size	Inch	6					
	mm	150					
Dim. (mm)	B	40					

321-H Flange

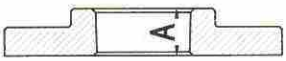


Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	15	16	19	21	21	26
Size	Inch	21/2	3	4			
	mm	65	80	100			
Dim. (mm)	A	30	33	39			

321P Flange

Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	15	16	19	21	21	26
Size	Inch	21/2	3	4	5	6	
	mm	65	80	100	125	150	
Dim. (mm)	A	30	33	39	40	40	

321PW Flange



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	15	16	19	21	21	26
Size	Inch	21/2	3	4	5	6	
	mm	65	80	100	125	150	
Dim. (mm)	A	30	33	39	40	40	

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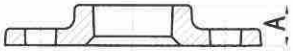
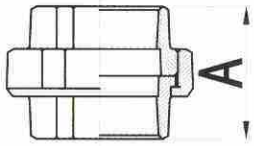
321TD Flange



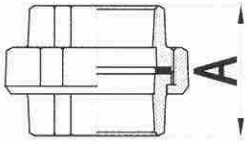
Size	Inch	1	11/4	11/2	2	21/2	3
	mm	25	32	40	50	65	80
Dim. (mm)	A	16	17.4	23	25	25	26.8
Size	Inch	4	6				
	mm	100	150				
Dim. (mm)	A	31.5	35				

330 Flat Seat Union



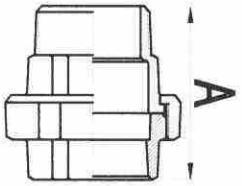
Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A	38	42	45	48	52	58	65
Size	Inch	11/2	2	21/2	3	4	6	
	mm	40	50	65	80	100	150	
Dim. (mm)	A	70	78	85	95	100	144	

330D Flat Seat Union



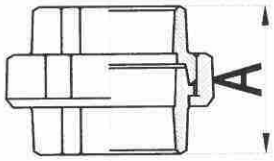
Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A	38	42	45	48	52	58	65
Size	Inch	11/2	2	21/2	3	4	6	
	mm	40	50	65	80	100	150	
Dim. (mm)	A	70	78	85	95	100	144	

331 Flat Seat Union M/F



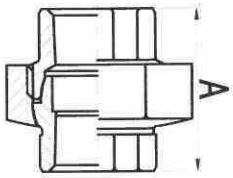
Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	66	72	80	90	95	106
Size	Inch	21/2	3	4			
	mm	65	80	100			
Dim. (mm)	A	118	130	133			

340 Conical Joint Union



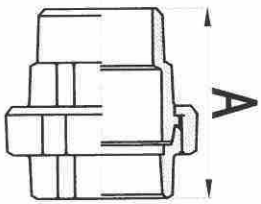
Size	Inch	1/8	1/4	3/8	1/2	3/4	1
	mm	6	8	10	15	20	25
Dim. (mm)	A	38	42	45	48	52	58
Size	Inch	11/4	11/2	2	21/2	3	4
	mm	32	40	50	65	80	100
Dim. (mm)	A	65	70	78	85	95	110

340Q Deflection Union



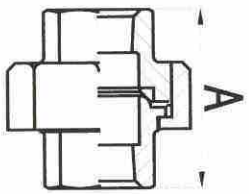
Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	46	49	55	64	74.5	83
Size	Inch						
	mm						
Dim. (mm)	A						

341 Conical Joint Union M/F



Size	Inch	1/4	3/8	1/2	3/4	1	11/4
	mm	8	10	15	20	25	32
Dim. (mm)	A	55	55	66	72	80	90
Size	Inch	11/2	2	21/2	3	4	
	mm	40	50	65	80	100	
Dim. (mm)	A	95	106	118	130	133	

342 Conical Joint Union



Size	Inch	1/8	1/4	3/8	1/2	3/4	1	11/4
	mm	6	8	10	15	20	25	32
Dim. (mm)	A Min	32	36.5	41	43.5	49.5	52.5	57.5
Size	Inch	11/2	2	21/2	3	4	6	
	mm	40	50	65	80	100	150	
Dim. (mm)	A Min	61	70	82	89	98	147	

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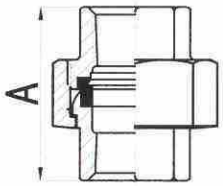
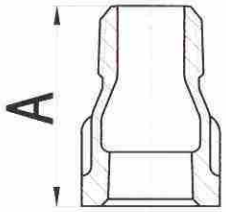
342A Double Bronze Navy Union



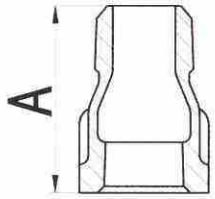
Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	48	52	58	65	70	78
Size	Inch						
	mm						
Dim. (mm)	A						

526 Long Adapter M/F



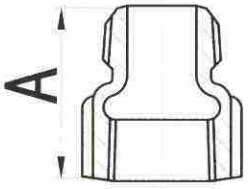
Size	Inch	1/2X30	1/2X40	1/2X50	1/2X60	1/2X100
	mm	15X30	15X40	15X50	15X60	15X100
Dim. (mm)	A	30	40	50	60	100
Size	Inch	1/2X30	1/2X40	1/2X50	1/2X60	1/2X100
	mm	15X30	15X40	15X50	15X60	15X100
Dim. (mm)	A	30	40	50	60	100

529A Long Extension Piece



Size	Inch	1/4	3/8	1/2	3/4	1	11/4
	mm	8	10	15	20	25	32
Dim. (mm)	A	33	35	43	48	55	60
Size	Inch	11/2	2	21/2	3	4	
	mm	40	50	65	80	100	
Dim. (mm)	A	61.5	68	76	83	97	

529X Short Extension Piece



Size	Inch	1/2					
	mm	15					
Dim. (mm)	A	32					
Size	Inch						
	mm						
Dim. (mm)	A						

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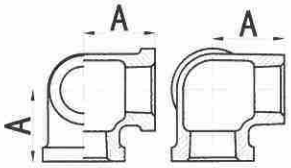
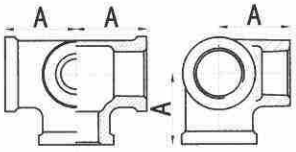
1221 Side Outlet Elbow



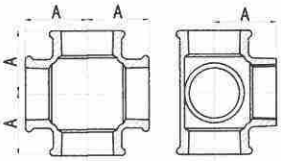
Size	Inch	1/2	3/4	1	11/2	2	
	mm	15	20	25	40	50	
Dim. (mm)	A	28	33	38	50	58	
Size	Inch						
	mm						
Dim. (mm)	A						

1223 Side Outlet Tee



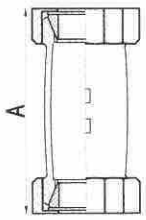
Size	Inch	1/2	3/4	1	11/4		
	mm	15	20	25	32		
Dim. (mm)	A	28	33	38	45		
Size	Inch						
	mm						
Dim. (mm)	A						

1224 Side Outlet Cross



Size	Inch	11/4	11/2				
	mm	32	40				
Dim. (mm)	A	45	50				
Size	Inch						
	mm						
Dim. (mm)	A						

LAA Coupling Luck F/F



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	95	104	110	114	122	129
Size	Inch						
	mm						
Dim. (mm)	A						

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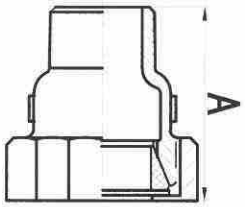
LAF

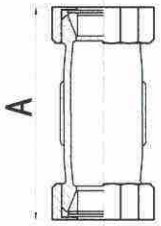
Coupling Luck M/F



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	59	63	65	69	71	79
Size	Inch						
	mm						
Dim. (mm)	A						

LCC

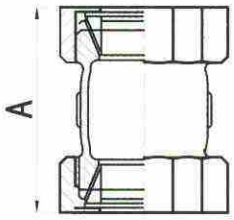
Long Compression Coupling



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	93	101	109	114	118	121
Size	Inch	21/2	3	4			
	mm	65	80	100			
Dim. (mm)	A	137	145	155			

SCC

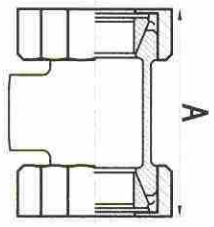
Short Compression Coupling



Size	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim. (mm)	A	62	69	73	79	79	84
Size	Inch	21/2	3				
	mm	65	80				
Dim. (mm)	A	100	110				

TCC

Compression Tee



Size	Inch	1/2	3/4				
	mm	15	20				
Dim. (mm)	A	80	88				
Size	Inch						
	mm						
Dim. (mm)	A						

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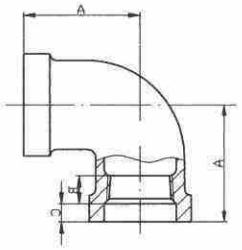
Malleable Iron Collar Fittings

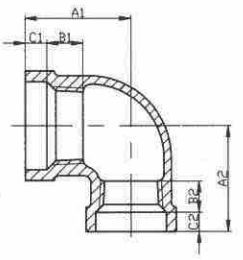
BS Standard

90 Elbow, 90°



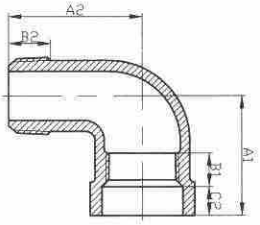
Size/ 规格	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim./ 尺寸 (mm)	A	35.5	41	47	55	60	69
	B	11	13	15	17	18	20
	C	7	8	9	10	10	11
Size/ 规格	Inch	3	4	6			
	mm	80	100	150			
Dim./ 尺寸 (mm)	A	91	110	145			
	B	25.5	28.5	33			
	C	13	14	15			

90R Reducing Elbow, 90°



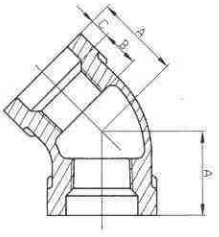
Size/ 规格	Inch	3/4X1/2	1X3/4	11/4X1	
	mm	20X15	25X20	32X25	
Dim./ 尺寸 (mm)	A1	38	44	50	
	B1	13	15	17	
	C1	8	9	10	
	A2	38	44	51	
	B2	11	13	15	
	C2	7	8	9	

92 Street Elbow, 90°



Size/ 规格	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim./ 尺寸 (mm)	A1	35	41	47	55	60	69
	B1	11	13	15	17	18	20
	C1	7	8	9	10	10	11
	A2	41	48	54	62	68	82.5
	B2	14	15	18	19	20	22

120 Elbow, 45°



Size/ 规格	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim./ 尺寸 (mm)	A	28	33	38	44	46	53
	B	11	13	15	17	18	20
	C	7	8	9	10	10	11
Size/ 规格	Inch	3	4	6			
	mm	80	100	150			
Dim./ 尺寸 (mm)	A	67	79	97			
	B	25.5	28.5	33			
	C	13	14	15			

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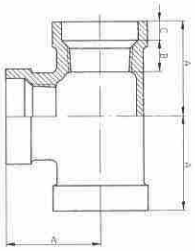
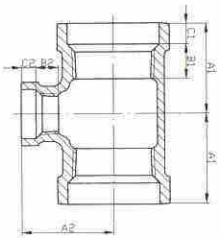
130 Tee



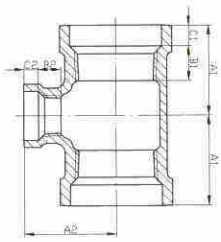
Size/ 规格	Inch	1/2	3/4	1	11/4	11/2	2
	mm	15	20	25	32	40	50
Dim./ 尺寸 (mm)	A	35.5	41	47	55	60	69
	B	11	13	15	17	18	20
	C	7	8	9	10	10	11
Size/ 规格	Inch	3	4	6			
	mm	80	100	150			
Dim./ 尺寸 (mm)	A	91	110	145			
	B	25.5	28.5	33			
	C	13	14	15			

130R Reducing Tee



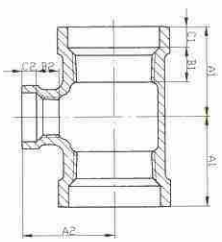
Size/ 规格	Inch	3/4X1/2	1X1/2	1X3/4	11/4X1/2	11/4X3/4
	mm	20X15	25X15	25X20	32X15	32X20
Dim./ 尺寸 (mm)	A1	38	41	43.5	44	46
	B1	13	15	15	17	17
	C1	8	9	9	10	10
	A2	38	41	44.5	45	49
	B2	11	11	13	11	13
	C2	7	7	8	7	8

130R Reducing Tee



Size/ 规格	Inch	11/4X1	11/2X1/2	11/2X3/4	11/2X1	11/2X11/4
	mm	32X25	40X15	40X20	40X25	40X32
Dim./ 尺寸 (mm)	A1	50	46	48.5	52	56
	B1	17	18	18	18	18
	C1	10	10	10	10	10
	A2	51	49	52.5	54.5	57.5
	B2	15	11	13	15	17
	C2	9	7	8	9	10

130R Reducing Tee



Size/ 规格	Inch	2X1/2	2X3/4	2X1	2X11/4	2X11/2
	mm	50X15	50X20	50X25	50X32	50X40
Dim./ 尺寸 (mm)	A1	49	51.5	54.5	59	62
	B1	20	20	20	20	20
	C1	11	11	11	11	11
	A2	55	58	60	63	64.5
	B2	11	13	15	17	18
	C2	7	8	9	10	10

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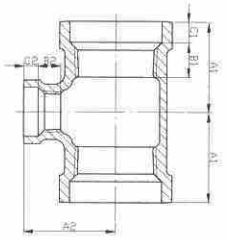
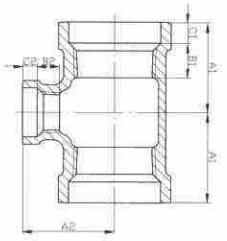
130R Reducing Tee



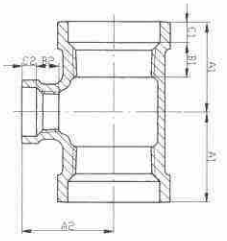
Size/ 规格	Inch	3X3/4	3X1	3X11/4	3X2	4X3/4
	mm	80X20	80X25	80X32	80X50	100X20
Dim./ 尺寸 (mm)	A1	60	63	68	77	68
	B1	25.5	25.5	25.5	25.5	28.5
	C1	13	13	13	13	14
	A2	74	76	79	84	88
	B2	13	15	17	20	13
	C2	8	9	10	11	8

130R Reducing Tee



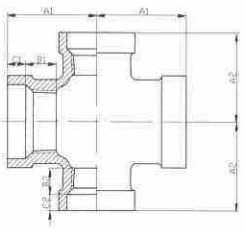
Size/ 规格	Inch	4X1	4X11/4	4X2	4X3	6X3
	mm	100X25	100X32	100X50	100X80	150X80
Dim./ 尺寸 (mm)	A1	71	75	83.5	97	107.5
	B1	28.5	28.5	28.5	28.5	33
	C1	14	14	14	14	15
	A2	95	96	97.5	104	133.5
	B2	15	17	20	25.5	25.5
	C2	9	10	11	13	13

130R Reducing Tee



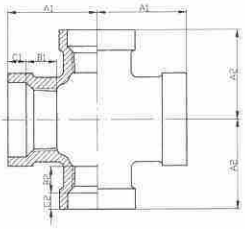
Size/ 规格	Inch	6X4	3/4X1/2X1/2			
	mm	150X100	20X15X15			
Dim./ 尺寸 (mm)	A1	119.5	38.5			
	B1	33	13			
	C1	15	8			
	A2	139.5	38			
	B2	28.5	11			
	C2	14	7			
	A3		35.5			

180R Reducing Cross



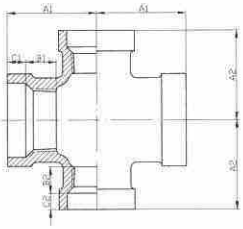
Size/ 规格	Inch	1X1/2	11/4X3/4	11/4X1	11/2X1/2	11/2X3/4
	mm	25X15	32X20	32X25	40X15	40X20
Dim./ 尺寸 (mm)	A1	41	46	50	46	48
	B1	15	17	17	18	18
	C1	9	10	10	10	10
	A2	41	49	51	49	52
	B2	11	13	15	11	13
	C2	7	8	9	7	8

180R Reducing Cross



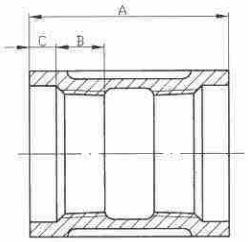
Size/ 规格	Inch	11/2X1	2X3/4	2X1	3X3/4	3X1
	mm	40X25	50X20	50X25	80X20	80X25
Dim./ 尺寸 (mm)	A1	52	51.5	54.5	60	63
	B1	18	20	20	25.5	25.5
	C1	10	11	11	13	13
	A2	54.5	58	60	74	76
	B2	15	13	15	13	15
	C2	9	8	9	8	9

180R Reducing Cross



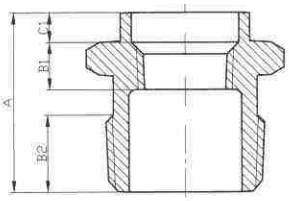
Size/ 规格	Inch	3X11/4	4X3/4	4X1	4X11/4	6X3
	mm	80X32	100X20	100X25	100X32	150X80
Dim./ 尺寸 (mm)	A1	68	68	71	75	107.5
	B1	25.5	28.5	28.5	28.5	33
	C1	13	14	14	14	15
	A2	79	88	90	96	133.5
	B2	17	13	15	17	25.5
	C2	10	8	9	10	13

220 Socket



Size/ 规格	Inch	1/2	3/4	1	11/4	11/2
	mm	15	20	25	32	40
Dim./ 尺寸 (mm)	A	48	54	60	69	74.5
	B	11	13	15	17	18
	C	7	8	9	10	10
Size/ 规格	Inch	2	3	4	6	
	mm	50	80	100	150	
Dim./ 尺寸 (mm)	A	86	106.5	121.5	146.5	
	B	20	25.5	28.5	33	
	C	11	13	14	15	

241 Bushing



Size/ 规格	Inch	3/4X1/2	1X1/2	1X3/4	11/4X3/4	11/4X1
	mm	20X15	25X15	25X20	32X20	32X25
Dim./ 尺寸 (mm)	A	38	42	42	49	50
	B1	11	11	14.5	13	17
	C1	7	7	7	8	9
	B2	14.5	17	17	19	19
Size/ 规格	Inch	11/2X3/4	11/2X1	11/2X11/4	2X3/4	2X1
	mm	40X20	40X25	40X32	50X20	50X25
Dim./ 尺寸 (mm)	A	49	50	51	56	57
	B1	13	15	19	13	15
	C1	8	9	10	8	9
	B2	19	19	19	22	22

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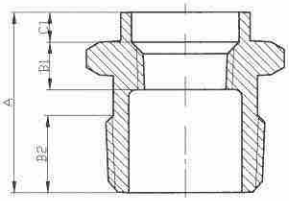
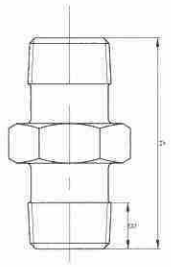
241 Bushing



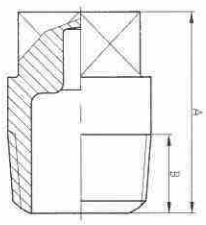
Size/ 规格	Inch	2X11/4	2X11/2	3X1	3X11/2	3X2
	mm	50X32	50X40	80X25	80X40	80X50
Dim./ 尺寸 (mm)	A	58	58	66	67	68
	B1	17	18	15	18	20
	C1	10	10	9	10	11
	B2	22	22	31	31	31
Size/ 规格	Inch	4X3	6X3	6X4		
	mm	100X80	150X80	150X100		
Dim./ 尺寸 (mm)	A	78	93	94		
	B1	25.5	25.5	28.5		
	C1	13	13	14		
	B2	36	41	41		

280 Hexagon Nipple



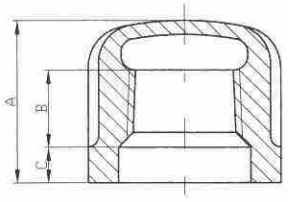
Size/ 规格	Inch	1/2	3/4	1	11/4	11/2
	mm	15	20	25	32	40
Dim./ 尺寸 (mm)	A	58	64	71	80	81
	B	13	14	16	19	19
Size/ 规格	Inch	2	3	4	6	
	mm	50	80	100	150	
Dim./ 尺寸 (mm)	A	94	110	130	146	
	B	23	29	35	40	

291 Plug



Size/ 规格	Inch	1/2	3/4	1	11/4	11/2
	mm	15	20	25	32	40
Dim./ 尺寸 (mm)	A	30	34.5	40	44.5	46.5
	B	15	16.5	19	21.5	21.5
Size/ 规格	Inch	2	3	4	6	
	mm	50	80	100	150	
Dim./ 尺寸 (mm)	A	51.5	65	76	87.5	
	B	25.5	33	39	43.5	

300 Cap



Size/ 规格	Inch	1/2	3/4	1	11/4	11/2
	mm	15	20	25	32	40
Dim./ 尺寸 (mm)	A	28	33	38	41	44
	B	11	13	15	17	18
	C	7	8	9	10	10
Size/ 规格	Inch	2	3	4		
	mm	50	80	100		
Dim./ 尺寸 (mm)	A	49	59	70		
	B	20	25.5	28.5		
	C	11	13	14		

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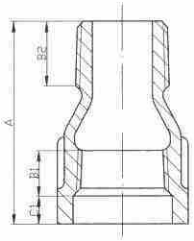
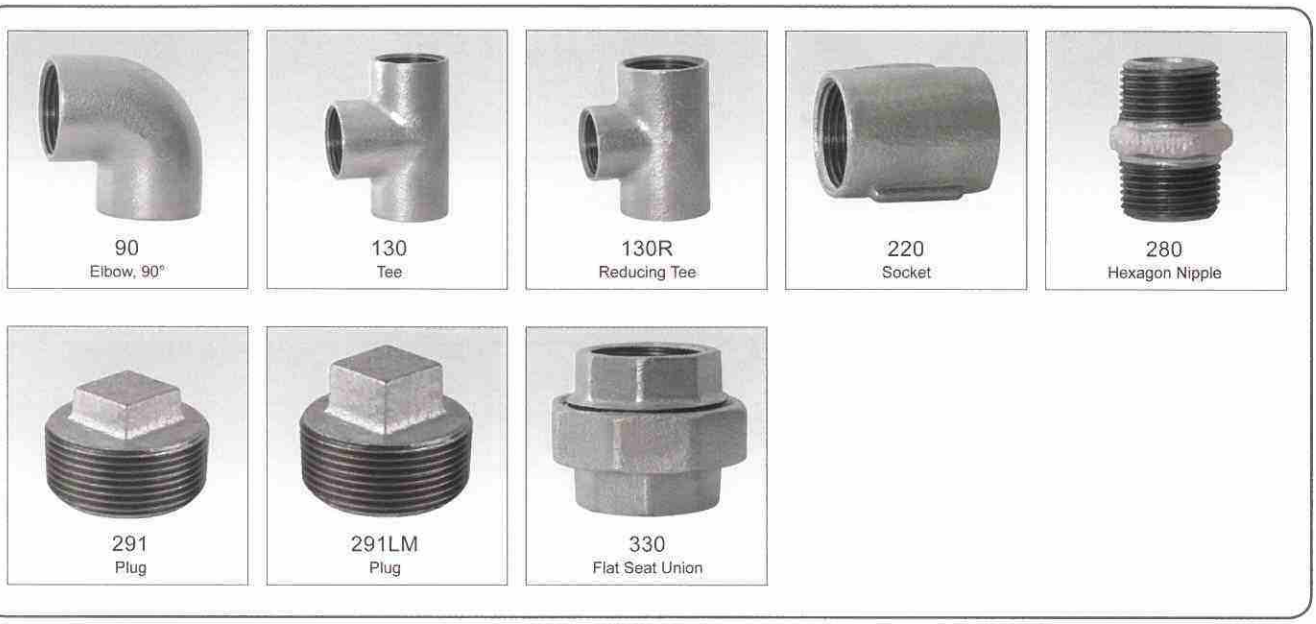
529A Long Extension Piece



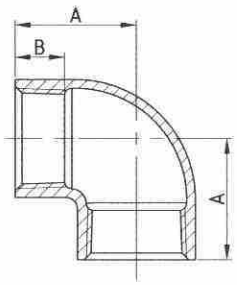
Size/ 规格	inch	1/2	3/4	1			
	mm	15	20	25			
Dim./ 尺寸 (mm)	A	50.5	56	66			
	B1	11	13	15			
	C1	7	8	9			
	B2	15	18	20			

Malleable Iron Plain End Fittings

BS Standard

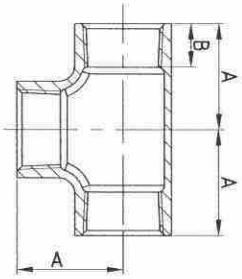


90 Elbow, 90°



Size/ 规格	Inch	1/2	3/4	1		
	mm	15	20	25		
Dim./ 尺寸 (mm)	A	27	32	38		
	B	11	13	15		
Size/ 规格	Inch					
	mm					
Dim./ 尺寸 (mm)	A					
	B					

130 Tee



Size/ 规格	Inch	1/2	3/4	1		
	mm	15	20	25		
Dim./ 尺寸 (mm)	A	27	32	38		
	B	11	13	15		
Size/ 规格	Inch					
	mm					
Dim./ 尺寸 (mm)	A					
	B					

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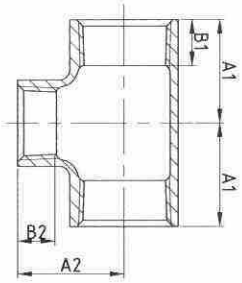
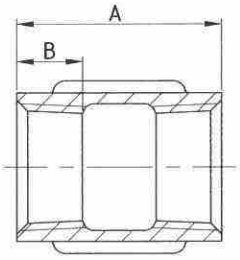
130R Reducing Tee



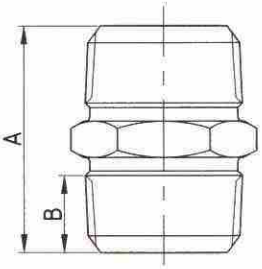
Size/ 规格	inch	3/4X1/2	1X3/4			
	mm	20X15	25X20			
Dim./ 尺寸 (mm)	A1	29.5	31.5			
	B1	13	15			
	A2	30.5	33			
	B2	11	13			

220 Socket



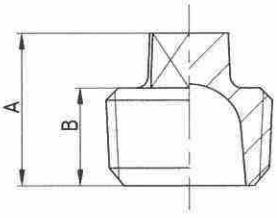
Size/ 规格	Inch	1/2	3/4	1	11/2	
	mm	15	20	25	40	
Dim./ 尺寸 (mm)	A	34	37	40	44	
	B	11	13	15	18	
Size/ 规格	Inch					
	mm					
Dim./ 尺寸 (mm)	A					
	B					

280 Hexagon Nipple



Size/ 规格	Inch	3/4	1			
	mm	20	25			
Dim./ 尺寸 (mm)	A	44	50			
	B	15	18			
Size/ 规格	Inch					
	mm					
Dim./ 尺寸 (mm)	A					
	B					

291 Plug



Size/ 规格	Inch	1/2	3/4	1		
	mm	15	20	25		
Dim./ 尺寸 (mm)	A	19.5	21	24		
	B	12.5	14	16.5		
Size/ 规格	Inch					
	mm					
Dim./ 尺寸 (mm)	A					
	B					

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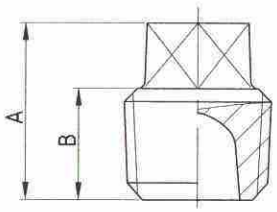
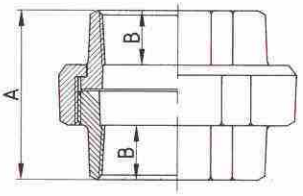
291LM Plug



Size/ 规格	Inch	1/2				
	mm	15				
Dim./ 尺寸 (mm)	A	25				
	B	15				
Size/ 规格	Inch					
	mm					
Dim./ 尺寸 (mm)	A					
	B					

330 Flat Seat Union



Size/ 规格	Inch	3/4	1			
	mm	20	25			
Dim./ 尺寸 (mm)	A	43	45.5			
	B	13	15			
Size/ 规格	Inch					
	mm					
Dim./ 尺寸 (mm)	A					
	B					

Basic Dimension for British and Din Standard Pipe Threads

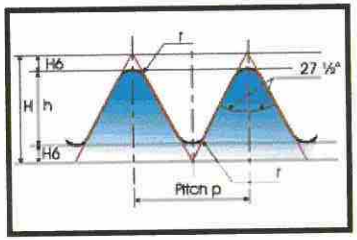
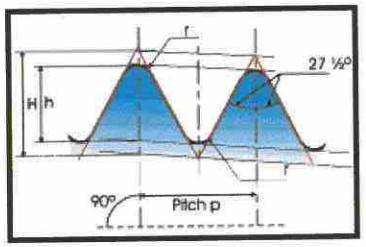
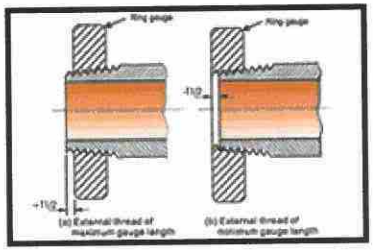


Fig 1 - Parallel thread
H = 0.960491 p
h = 0.640327 p
r = 0.137329 p



Taper 2 - Taper thread
H = 0.960237 p
H = 0.640327 p
r = 0.137278 p



(a) External thread of maximum gauge length
(b) External thread of minimum gauge length

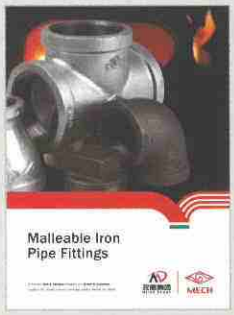
International Standard ISO7/1, Pipe Threads Dimensions

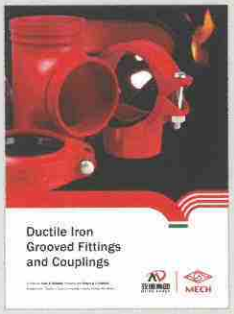
Dimensions in millimeters

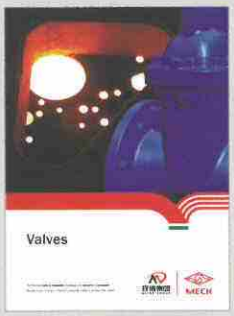
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Designations of thread size	Number of threads in 25.4 mm	Pitch P	Height of thread h	Diameters at gauge plane			Gauge Length (external thread)					Tolerance on position of gauge		Length of useful external thread not less than		
				Major (gauge diameter) d	Pitch d2	Minor d1	Nominal	Tolerance ±T1/2		Maximum	Minimum	Tolerance ±T2/2		For Nominal gauge length	For maximum gauge length	For minimum gauge length
									Turns of threads				Turns of threads			
1/8	28	0.907	0.581	9.728	9.147	8.566	4	0.9	1	4.9	3.1	1.1	1 1/4	6.5	7.4	5.6
1/4	19	1.337	0.856	13.157	12.301	11.445	6	1.3	1	7.3	4.7	1.7	1 1/4	9.7	11	8.4
3/8	19	1.337	0.856	16.662	15.806	14.95	6.4	1.3	1	7.7	5.1	1.7	1 1/4	10.1	11.4	8.8
1/2	14	1.814	1.162	20.955	19.793	18.631	8.2	1.8	1	10	6.4	2.3	1 1/4	13.2	15	11.4
3/4	14	1.814	1.162	26.441	25.279	24.117	9.5	1.8	1	10	7.7	2.3	1 1/4	14.5	16.3	12.7
1	11	2.309	1.479	33.249	31.77	30.291	10.4	2.3	1	12.7	8.1	2.9	1 1/4	16.8	19.1	14.5
1 1/4	11	2.309	1.479	41.91	40.431	38.952	12.7	2.3	1	15	10.4	2.9	1 1/4	19.1	21.4	16.8
1 1/2	11	2.309	1.479	47.803	46.324	44.845	12.7	2.3	1	15	10.4	2.9	1 1/4	19.1	21.4	16.8
2	11	2.309	1.479	59.614	58.135	56.656	15.9	2.3	1	18.2	13.6	2.9	1 1/4	23	25.7	21.1
2 1/2	11	2.309	1.479	75.184	73.705	72.226	17.5	3.5	1 1/2	21	14	3.5	1 1/2	26.7	30.2	23.2
3	11	2.309	1.479	87.884	86.405	84.926	20.6	3.5	1 1/2	24.1	17.1	3.5	1 1/2	29.8	33.3	26.3
4	11	2.309	1..479	113.03	111.551	110.072	25.4	3.5	1 1/2	28.9	21.9	3.5	1 1/2	35.8	39.3	32.3
5	11	2.309	1.479	138.43	136.951	135.472	28.6	3.5	1 1/2	32.1	25.1	3.5	1 1/2	40.1	43.6	36.6
6	11	2.309	1.479	163.83	162.351	160.872	28.6	3.5	1 1/2	32.1	25.1	3.5	1 1/2	40.1	43.6	36.6

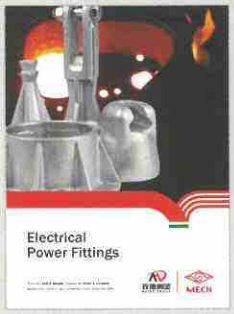
Note: This information is selected from the International Standard ISO7/1:2000: Pipe threads where pressure - tight joints, Table Table 1

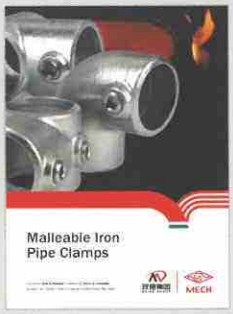
MECH FLOW SUPPLIES

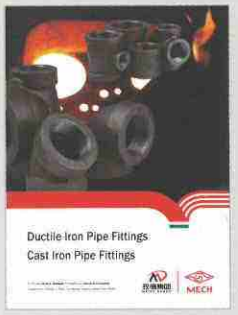


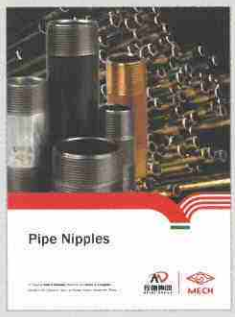












玫德集团
MEIDE GROUP

MECH

JINAN MEIDE CASTING CO., LTD.

Address: Meide Science & Technology Park,
Industrial Park Pingyin, Jinan, China 250400

Phone: (86)531 87879384 87885036 87885067

Fax: (86)531 87879387

Email: info@meide-casting.com

Http://www.meide-casting.com

UPDATED 07/2018

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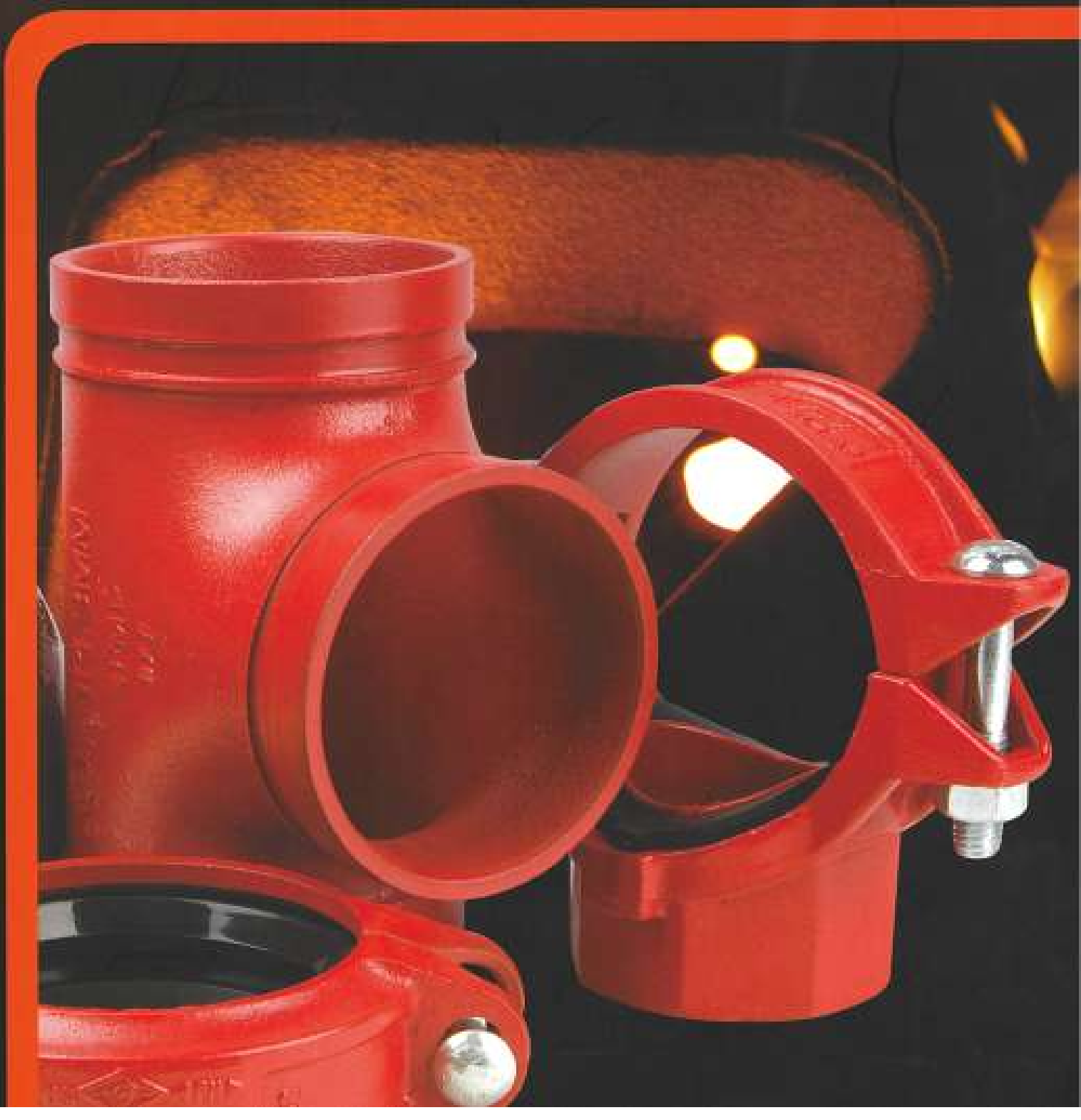
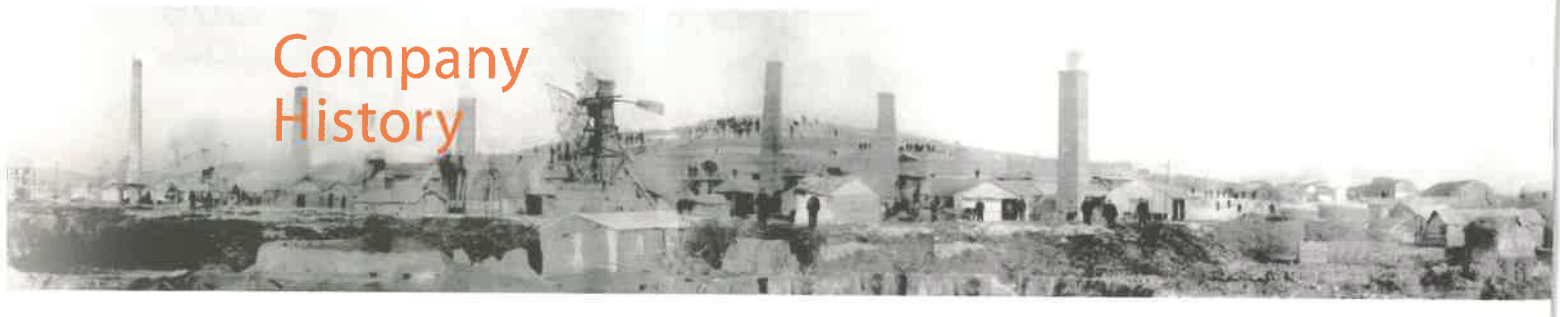
Ductile Iron Grooved Fittings and Couplings




More than
50 years of
Foundry
Experience



Company History

1961 — Business Started from Grey Iron Pot

1970 — Malleable Iron Pipe Fittings

1987 — Export, Main Market: Southeast Asia

1990 — Conduit Body

1993 — Self Export, Developed US and European Market

1995 — Cast Iron Fittings

1997 — Steel Pipe Nipples
Red Brass Pipe Nipples

1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997

Company Profile

Jinan Meide Casting Co. Ltd. was established in 1961. In the past decades, Jinan Meide has seized each opportunity to consolidate its strength, and has finally developed into what it is today, a large-scale enterprise group with advanced technology, equipment and strong comprehensive strength, known for its complete range of products, large producing capacity, high quality and strong R&D strength. The company owns altogether one main factory, three branch factories, two independent accounting steel pipe companys, and a science & technology park.

The company is the well-known manufacturer in the fitting industry with the most complete range of products, supplying malleable iron fittings, grooved fittings, grooved couplings, valves, cast iron fittings, ductile iron fittings, steel pipe nipples and couplings, stainless steel nipples, brass pipe nipples, cast bronze fittings, steel pipes, pipe hangers and supports, electric fittings, etc.

Over 50 years, Jinan Meide has been a trusted name in piping solutions by offering high-quality products, service and support to the PVF industry continuously. We provide expertise and product solutions for a wide range of applications, plumbing, mechanical, industrial, air-conditioning and refrigeration, mining, oil, gas, fire protection, equipment and power system. Many of the company's application technology are advanced in the world, with more than 20 patents registered each year, and the company has presided over and participated in the drafting of many important national standards of the industry.

We organize the whole production process in accordance with ISO 9001 and ISO 14001. It has also the most complete certificates in the PVF industry, including UL/FM/NSF of US, CRN/cUL of Canada, DVGW/TUV/CE/VdS of Germany, BSI/LPCB of UK, SII of Israel, JIS of Japan, ABNT of Brazil, GOST-R of Russia, CNBOP of Poland, KS of South Korea, TSE of Turkey, PSB of Singapore, SIRIM of Malaysia, SABS of South Africa etc. The products are well distributed in more than 130 countries and regions.

As an industry leader and key high-tech enterprise of the national torch plan, the company attaches great importance to environmental protection, energy-saving and emission-reduction. US-EEC recognizes MECH brand malleable iron pipe fittings as "the product to promote for the technology exchange of environmental protection". Protecting the environment is the duty of the company.

Customer satisfaction has always been the company's top objective, and we constantly stick to the principle: to provide customers with a value-added solution rather than simply delivering products.

1998 — Malleable Iron Pipe Clamps

1999 — Pipe Hangers and Brackets

2000 — Ductile Iron Grooved Fittings and Couplings

Ball Valves

2001 — Ductile Iron Pipe Fittings

2003 — Bronze Fittings

2007 — Electric Power Fittings

2011 — Valves

2012 — Extra-heavy Brass Pipe Nipples

2013 — Steel Pipes

2014 — "MECH" Malleable Iron Pipe Fittings

1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

State of the Art Equipment

High precision equipment is quality assurance. Jinan Meide's 8 factories are all equipped with the most advanced facilities and equipment in the industry. The main production facilities include Sinto automatic molding line, Tokyu automatic molding line, Chinese 416 automatic vertical molding line, automatic molding sand mixers, cupola furnaces, electric furnaces, water-cooled longevous cupola furnaces, CNC vertical machining centers, CNC machines, NC vertical lathes, radial drills, Jinan Meide proprietary automatic machines, hot-dipped galvanization line, automatic box sealing line, stereoscopic warehouse and so on.

Pattern

Tokyu AMF-111055

Pouring

Warehouse

Core Making

Sand Mulling

Melting

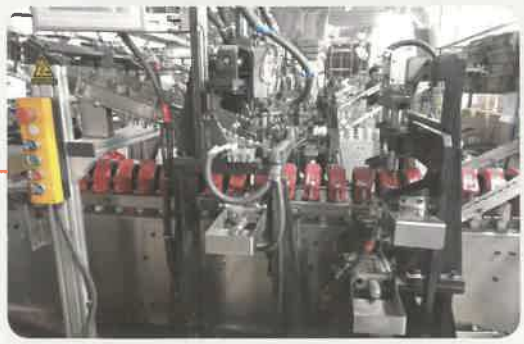
Sinto FCMX

DISA

End Grinding Line

Electrophoretic Coating

Threading, Air Pressure Test, and Anti-rust Treatment



Assembling

Reliable Quality Assurance

Jinan Meide is honored as the National enterprise technical center and is capable and qualified to conduct full series of tests and inspections including chemical checking, etc.

Inspection facilities include: spectrometer, carbon sulfur analyzer, metallurgical microscope, tensile strength testing equipment, pressure testing equipment, adhesive force testing equipment, CMM, hardness tester, etc.

From incoming inspection to finished product, quality is checked and monitored in the whole process. Each step of the manufacturing process is carefully documented, regularly reviewed for revision control and updating standard. Quality procedures are constantly monitored and updated to assure that only the highest and most consistent quality products are supplied to our valued customers.

3D Printer

Metallurgical Microscope

3D Scanner

Spectrometer

CMM

Projector

The Length of The Test Instrument

Roughness Tester

Carbon Sulfur Analyzer

Tensile Strength Testing Equipment

Sand Testing Instrument

Certificates

FM APPROVED

Certificate of Compliance

This certificate is issued for the following:

Gasketed Pipe Fittings for Use with Aboveground Fire Protection Systems

Model 1G Right Coupling with a Rated Working Pressure of 300 PSI (2448 kPa)
Model 1GS Right Coupling with a Rated Working Pressure of 300 PSI (2415 kPa)
Model 1N Flexible Coupling with a Rated Working Pressure of 600 PSI (3445 kPa)
Model 1NH Flexible Coupling with a Rated Working Pressure of 730 PSI (5170 kPa)

For Use with Aboveground Steel Fire Sprinkler Pipe

Prepared for:

Jinan Meide Casting Co Ltd
No 3 Nanmen Rd
Pingyin Jinan, 250400
China

Manufactured at:

Jinan Meide Casting Co Ltd
No 3 Nanmen Rd
Pingyin Jinan, 250400
China

FM Approvals Class: 1920 – "Pipe Couplings and Fittings for Aboveground Fire Protection Systems"

Approval Identification: 3018300

Approval Granted: September 23, 2016
Reissued: October 13, 2016

To verify the availability of the Approved product, please refer to www.approvalguide.com

Valid Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

David B. Fuller
AVP, Manager of Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062 USA

FM Approvals
Member of the FM Global Group

FM APPROVED

Certificate of Compliance

Figure 321 Grooved Split Flanges
Figure 321G Grooved Flange Adapters
Figure 1N Grooved Pipe Couplings
and Reducing Couplings
Figure 1G Grooved Pipe Couplings
Figure 1GS Grooved Pipe Couplings
Figure 90S Short Radius Elbows
Figure 130S Short Radius Tees
In Various Sizes

Manufactured by: JINAN MEIDE CASTING CO., LTD.
No. 3 Nanmen Road
Pingyin, Jinan
P. R. China 250400

FM Approvals confirms that the items have been found to comply with the following draft standard:

FM Approvals Draft Standard Class Number 1920

Project Number: 3024317 Date of Approval: January 20, 2006

Richard B. Danna
Group Manager, Hydraulics

January 20, 2006
Date

FM Approvals
Member of the FM Global Group

the standard in safety

Underwriters Laboratories

File EX6414
Project 04NK17245/EX6397
Project 04NK20884
Project 05NK28662
Project 06NK13493
Project 08CA19888
Project 09CA17524
Project 10NK10434

Issued: March 03, 2004
Revised: February 24, 2011

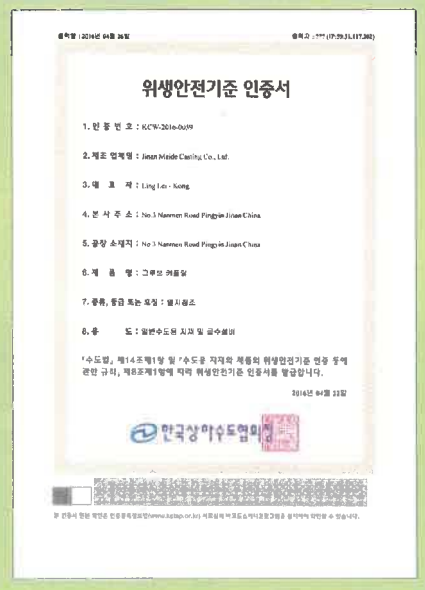
REPORT

on

FITTINGS, RUBBER GASKETED

Jinan Meide Casting Co. Ltd.

Shandong, CHINA



위생안전기준 인증서

1. 인 증 번 호 : KCWA2016-0059

2. 제조 업체명 : Jinan Meide Casting Co., Ltd.

3. 대 표 자 : Ling Lei - Kong

4. 본 사 주 소 : No.3 Nanmen Road Pingyin Jinan China

5. 공장 소재지 : No.3 Nanmen Road Pingyin Jinan China

6. 제 품 명 : 그루브 커플링

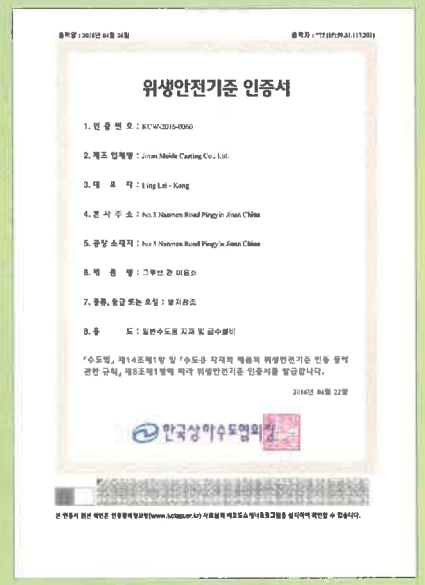
7. 종류, 등급 또는 모델 : 별지참조

8. 용 도 : 일반수도용 자재 및 급수설비

'수도법, 제14조제1항 및 '수도용 자재의 제품의 위생안전기준 인증 등에 관한 규칙, 제8조제1항에 따라 위생안전기준 인증서를 발급합니다.

2016년 04월 22일

한국상하수도협회장



위생안전기준 인증서

1. 인 증 번 호 : KCWA2016-0060

2. 제조 업체명 : Jinan Meide Casting Co., Ltd.

3. 대 표 자 : Ling Lei - Kong

4. 본 사 주 소 : No.3 Nanmen Road Pingyin Jinan China

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2016년 04월 22일

한국상하수도협회장

Zertifikat Certificate

Anerkennung
von Bauteilen und Systemen

VdS

Approval
of Components and Systems

Jinan Meide Casting Co., Ltd.
Meide Science and Technology Park,
Pingyin Industrial Park
CN-250400 Jinan, Jinan Shandong Province

Anerkennungs-Nr. / Approval No.	Ausgabe / Issue No. of pages	gültig bis / valid from	gültig bis / valid until
G 4990036	4	28.06.2017	27.06.2021

Rohrkupplung/ Pipe coupling
"Fig 10"

in ortsfesten Wasserlöschanlagen

in stationary water extinguishing systems

VdS 2344-2016-07
VdS 2100-04-2004-01

Köln, den 07.06.2017

Dr. Reinermann

i. V. Hesels

Loss Prevention Certification Board

This is to certify

Jinan Meide Casting Co. Ltd
No 3 Nanmen Road, Pingyin, Jinan, China

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix.

Jinan Meide Pipe Couplings
(refer to attached appendix for details)

which have complied with the requirements of the following:

LPS 1219 – Specification for Pipe Couplings
(refer to attached appendix for LPS 1219 issue status)

Certificate No. 968a Issue No. 01

Date of Issue 01 July 2010

Signed on behalf of LPCB

B W Lywood

LPCB is part of BRE Global Ltd., Garston, Watford WD25 9XX. Tel +44 (0)1923 664100
Fax +44 (0)1923 664603 www.redhouse.co.uk

This certificate remains the property of BRE Global Ltd and is issued subject to terms and conditions and is maintained and held in force through regular surveillance activities

中国国家强制性产品认证证书

CERTIFICATE FOR China COMPULSORY PRODUCT CERTIFICATION

认证委托人：
地 址：
生 产 者：
地 址：
生产企业：
地 址：
产品名称：
认证单元：
内含：
产 品 标 准：GB5135.11-2006
上述产品符合强制性认证实施规则 CNCA-C18-03：2014、产品认证实施细则 CCCF-MISB-01 的要求，特发此证。

首次发证日期：2016-10-10

发（换）证日期：2016 年 10 月 10 日 有效期至：2020 年 10 月 09 日

（本机构提示：该产品在安装使用时必须符合相关规定，确保规范的规定。）

本证书的有效性和信息通过证后监督获得保持

本证书的相关信息可通过国家认监委网站 www.cnca.gov.cn 和

中国消防产品信息网站 www.cccf.com.cn 查询

公安部消防产品合格评定中心

A 0043705

Ductile Iron Grooved Fittings and Couplings

1N
Standard Flexible Coupling

1N
Standard Flexible Coupling

1N
Standard Reducing Flexible Coupling

1NS
Light-duty Flexible Coupling

1NH
Heavy-duty Flexible Coupling

1G
Standard Rigid Coupling

1GS
Light-duty Rigid Coupling

1GK
Angle Pad Coupling

H305
HDPE Coupling

H307
HDPE Transition Coupling

90
90° Elbow

90C
90° Hydrant Elbow

90C
90° Drain Elbow

90R
90° Reducing Elbow

90S
Light-duty 90° Elbow

91R
90° END-ALL Elbow

105
11.25° Elbow

110
22.5° Elbow

120
45° Elbow

130
Tee

130C
Reducing tee

130D
Reducing tee

130S
Light-duty Tee

130R
Reducing Tee

130R
Reducing Tee

Material: ASTM A536, GRADE 65-45-12, QT450-10
Threads: ASME B1.20.1, ISO 7-1, GB 7306, EN10226
Size Available: 1"-24"

Surface Treatment:
P: Painted E: Electroplated
B: Black S: Epoxy G: Hot-dip Galvanized

131R
Reducing Tee with Female Thread

131R
Reducing Tee with Female Thread

180
Cross

180R
Reducing Cross

181
Reducing Cross with Female Thread

3L
U-Bolt Mechanical Tee

3G
Mechanical Tee Grooved Outlet

3GS
Light-duty Mechanical Tee Grooved Outlet

3J
Mechanical Tee Threaded Outlet

3JS
Light-duty Mechanical Tee Threaded Outlet

4G
Mechanical Cross Grooved Outlet

4GS
Light-duty Mechanical Cross Grooved Outlet

4J
Mechanical Cross Threaded Outlet

4JS
Light-duty Mechanical Cross Threaded Outlet

230
Grooved Eccentric Reducer

230N
Grooved Eccentric Reducer with Female Thread

240
Grooved Concentric Reducer

240N
Grooved Concentric Reducer with Female Thread

240W
Grooved Concentric Reducer with Male Thread

300
Cap

300
Cap with Concentric Hole

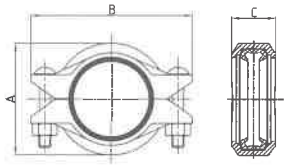
300PX
Cap with Eccentric Hole

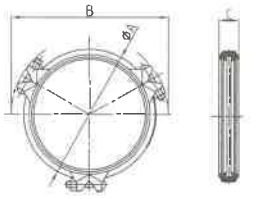
321
Grooved Flange

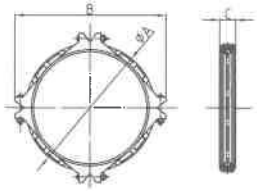
321G
Adaptor Flange

1N

Standard Flexible Coupling



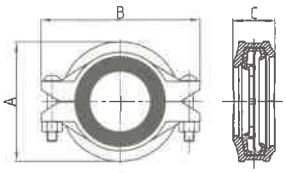




Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions A mm/in	Dimensions B mm/in	Dimensions C mm/in	Bolt Size No.-Size mm	Certificate
25 1	33.7 1.327	500 3.45	3.0/680	0-1.6 0-0.06	55 2.16	92 3.62	42 1.65	2-3/8×55 2-M10×57	UL FM VdS LPCB
32 1¼	42.4 1.669	500 3.45	4.8/1080	0-1.6 0-0.06	65 2.56	104 4.14	44 1.74	2-3/8×55 2-M10×57	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	6.3/1420	0-3.2 0-0.13	70 2.75	110 4.33	44 1.74	2-3/8×55 2-M10×57	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	9.8/2210	0-3.2 0-0.13	83 3.27	125 4.92	44 1.74	2-3/8×55 2-M10×57	UL FM VdS LPCB
65 2½	73.0 2.875	500 3.45	14.4/3240	0-3.2 0-0.13	96 3.78	143 5.63	45 1.78	2-3/8×55 2-M10×57	UL FM LPCB
65 2½	76.1 3.000	500 3.45	15.7/3520	0-3.2 0-0.13	100 3.94	145 5.71	45 1.78	2-3/8×55 2-M10×57	UL FM VdS LPCB
80 3	88.9 3.500	500 3.45	21.4/4810	0-3.2 0-0.13	115 4.53	160 6.30	45 1.78	2-1/2×70 2-M12×70	UL FM VdS LPCB
100 4	108.0 4.250	500 3.45	31.5/7100	0-3.2 0-0.13	138 5.43	190 7.48	50 1.97	2-1/2×70 2-M12×70	UL FM LPCB
100 4	114.3 4.500	500 3.45	35.4/7960	0-3.2 0-0.13	145 5.71	198 7.80	50 1.97	2-1/2×70 2-M12×70	UL FM VdS LPCB
125 5	133 5.250	300 2.07	28.7/6460	0-3.2 0-0.13	162 6.38	225 8.86	51.0 2.01	2-5/8×80 2-M16×85	UL FM LPCB
125 5	139.7 5.500	500 3.45	52.9/11800	0-3.2 0-0.13	169 6.65	230 9.06	52 2.05	2-5/8×80 2-M16×85	UL FM VdS LPCB
125 5	141.3 5.563	500 3.45	54.1/12100	0-3.2 0-0.13	170 6.69	232 9.13	51 2.01	2-5/8×80 2-M16×85	UL FM LPCB
150 6	159.0 6.250	300 2.07	41.0/9240	0-3.2 0-0.13	190 7.48	256 10.08	52 2.05	2-5/8×85 2-M16×85	UL FM LPCB
150 6	165.1 6.500	500 3.45	73.8/16610	0-3.2 0-0.13	196 7.72	260 10.24	52 2.05	2-5/8×85 2-M16×85	UL FM LPCB
150 6	168.3 6.625	500 3.45	76.7/17260	0-3.2 0-0.13	200 7.87	265 10.43	52 2.05	2-5/8×85 2-M16×85	UL FM VdS LPCB
200 8	216.3 8.516	300 2.07	76.0/17100	0-3.2 0-0.13	254 10.00	320 12.60	59 2.32	2-5/8×85 2-M16×85	UL FM
200 8	219.1 8.625	450 3.10	116.9/26280	0-3.2 0-0.13	258 10.24	342 13.46	60 2.37	2-3/4×115 2-M20×115	UL FM VdS LPCB
250 10	267.4 10.528	300 2.07	116.2/26140	0-3.2 0-0.13	308.5 12.15	403 15.87	64 2.52	2-3/4×115 2-M20×115	UL FM
250 10	273.0 10.750	300 2.07	121.0/27210	0-3.2 0-0.13	337 13.27	406 16.00	65 2.56	2-7/8×140 2-M22×140	UL FM VdS
300 12	318.5 12.539	300 2.07	164.8/37090	0-3.2 0-0.13	363 14.29	460 18.11	63 2.48	2-7/8×140 2-M22×140	UL FM
300 12	323.9 12.750	300 2.07	170.3/38280	0-3.2 0-0.13	378 14.96	465 18.31	65 2.56	2-7/8×140 2-M22×140	UL FM
350 14	355.6 14.000	300 2.07	205.5/46220	0-3.2 0-0.13	402 15.83	493 19.41	72 2.83	3-7/8×140 3-M22×140	——
350 14	377.0 14.843	225 1.6	178.5/40160	0-3.2 0-0.13	428 16.85	520 20.45	72 2.85	3-7/8X140 3-M22X140	——
400 16	406.4 16.000	300 2.07	268.4/60370	0-3.2 0-0.13	458 18.03	547 21.54	72 2.85	3-7/8×140 3-M22×140	——
400 16	426.0 16.772	225 1.6	227.9/51270	0-3.2 0-0.13	476 18.74	566 22.28	73 2.87	3-7/8X140 3-M22X140	——
450 18	457.2 18.000	300 2.07	262.5/59060	0-3.2 0-0.13	505 19.88	598 23.54	78 3.07	3-7/8×140 3-M22×140	——
500 20	508.0 20.000	300 2.07	324.1/72910	0-3.2 0-0.13	550 21.65	648 25.51	78 3.07	4-7/8×140 4-M22×140	——
600 24	609.6 24.000	300 2.07	466.7/104990	0-3.2 0-0.13	662 26.06	774 30.47	78 3.07	4-1X140	——

1N

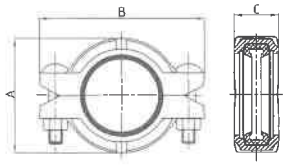
Standard Reducing Flexible Coupling



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions A mm/in	Dimensions B mm/in	Dimensions C mm/in	Bolt Size No.-Size mm	Certificate
50×40 2×1½	60.3×48.3 2.375×1.900	300 2.07	5.9/1330	0-3.2 0-0.13	86 3.39	125 4.93	44 1.74	2-3/8×55 2-M10×57	UL FM LPCB
65×25 2½×1	73.0×33.7 2.875×1.327	300 2.07	8.7/1950	0-3.2 0-0.13	100 3.94	138 5.44	45 1.78	2-3/8×55 2-M10×57	UL FM
65×50 2½×2	73.0×60.3 2.875×2.375	300 2.07	8.7/1950	0-3.2 0-0.13	100 3.94	138 5.43	45 1.78	2-3/8×55 2-M10×57	UL FM LPCB
65×25 2½×1	76.1×33.7 3.000×1.327	300 2.07	9.4/2120	0-3.2 0-0.13	102 4.02	140 5.51	45 1.78	2-3/8×55 2-M10×57	UL FM
65×40 2½×1½	76.1×48.3 3.000×1.900	300 2.07	9.4/2120	0-3.2 0-0.13	102 4.02	140 5.51	45 1.78	2-3/8×55 2-M10×57	UL FM LPCB
65×50 2½×2	76.1×60.3 3.000×2.375	300 2.07	9.4/2120	0-3.2 0-0.13	102 4.02	144 5.67	45 1.78	2-3/8×55 2-M10×57	UL FM VdS LPCB
80×25 3×1	88.9×33.7 3.500×1.327	300 2.07	12.8/2885	0-3.2 0-0.13	115 4.53	168 6.61	46 1.81	2-1/2×70 2-M12×70	UL FM
80×50 3×2	88.9×60.3 3.500×2.375	300 2.07	12.8/2885	0-3.2 0-0.13	115 4.53	168 6.61	46 1.81	2-1/2×70 2-M12×70	UL FM VdS LPCB
80×65 3×2½	88.9×73.0 3.500×2.875	300 2.07	12.8/2885	0-3.2 0-0.13	115 4.53	168 6.61	46 1.81	2-1/2×70 2-M12×70	UL FM LPCB
80×65 3×2½	88.9×76.1 3.500×3.000	300 2.07	12.8/2885	0-3.2 0-0.13	115 4.53	172 6.77	46 1.81	2-1/2×70 2-M12×70	UL FM VdS LPCB
100×25 4×1	114.3×33.7 4.500×1.327	300 2.07	21.2/4770	0-3.2 0-0.13	144 5.67	198 7.80	50 1.97	2-1/2×70 2-M12×70	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	21.2/4770	0-3.2 0-0.13	144 5.67	198 7.80	50 1.97	2-1/2×70 2-M12×70	UL FM VdS LPCB
100×65 4×2½	114.3×73.0 4.500×2.875	300 2.07	21.2/4770	0-3.2 0-0.13	144 5.67	198 7.80	50 1.97	2-1/2×70 2-M12×70	UL FM LPCB
100×65 4×2½	114.3×76.1 4.500×3.000	300 2.07	21.2/4770	0-3.2 0-0.13	144 5.67	202 7.95	50 1.97	2-1/2×70 2-M12×70	UL FM VdS LPCB
100×80 4×3	114.3×88.9 4.500×3.500	300 2.07	21.2/4770	0-3.2 0-0.13	148 5.83	198 7.80	50 1.97	2-1/2×70 2-M12×70	UL FM VdS LPCB
150 X 80 6×3	165.1×88.9 6.500×3.500	300 2.07	44.3/9960	0-3.2 0-0.13	200 7.87	260 10.24	51 2.01	2-3/4×115 2-M20×115	——
150×100 6×4	165.1×114.3 6.500×4.500	300 2.07	44.3/9960	0-3.2 0-0.13	197 7.75	260 10.24	51 2.01	2-5/8×85 2-M16×85	UL FM LPCB
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	46.0/10340	0-3.2 0-0.13	200 7.87	268 10.55	51 2.01	2-5/8×85 2-M16×85	UL FM
150×100 6×4	168.3×114.3 6.625×4.500	300 2.07	46.0/10340	0-3.2 0-0.13	202.5 7.97	268 10.55	52.5 2.07	2-5/8×85 2-M16×85	UL FM VdS LPCB
150×150 6×6	168.3×165.1 6.625×6.500	300 2.07	46.0/10340	0-3.2 0-0.13	204 8.031	268 10.551	52.5 2.066	2-5/8×85 2-M16×85	——
200×150 8×6	219.1×165.1 8.625×6.500	300 2.07	77.8/17500	0-3.2 0-0.13	257 10.12	335 13.19	60 2.36	2-3/4×115 2-M20×115	UL FM LPCB
200×150 8×6	219.1×168.3 8.625×6.625	300 2.07	77.8/17500	0-3.2 0-0.13	260 10.24	338 13.31	60 2.36	2-3/4×115 2-M20×115	UL FM LPCB

1NH

Heavy-duty Flexible Coupling

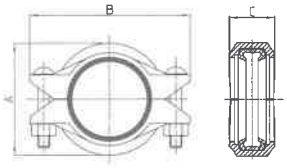


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions A mm/in	Dimensions B mm/in	Dimensions C mm/in	Bolt Size No.-Size mm	Certificate
50 2	60.3 2.375	750 5.17	14.8/3320	0-3.2 0-0.13	90 3.54	134 5.28	45 1.77	2-1/2X75 2-M12X76	UL FM
65 2½	73.0 2.875	750 5.17	21.6/4860	0-3.2 0-0.13	100 3.94	150 5.91	45 1.77	2-1/2X75 2-M12X76	UL FM
65 2½	76.1 3.000	750 5.17	23.5/5280	0-3.2 0-0.13	102 4.02	154 6.06	45 1.77	2-1/2X75 2-M12X76	UL FM
80 3	88.9 3.500	750 5.17	32.1/7210	0-3.2 0-0.13	121 4.76	172 6.78	45 1.77	2-1/2X75 2-M12X76	UL FM
100 4	114.3 4.500	750 5.17	53.0/11900	0-3.2 0-0.13	151 5.95	214 8.43	50 1.97	2-5/8X85 2-M16X85	UL FM
125 5	141.3 5.563	750 5.17	81.0/18200	0-3.2 0-0.13	180 7.09	248 9.76	51 2.00	2-3/4X115 2-M20X115	UL FM
150 6	165.1 6.500	750 5.17	110.6/24800	0-3.2 0-0.13	205 8.07	278 10.95	51 2.00	2-3/4X115 2-M20X115	UL FM
150 6	168.3 6.625	750 5.17	115.0/25800	0-3.2 0-0.13	208 8.20	284 11.18	51 2.00	2-3/4X115 2-M20X115	UL FM
200 8	219.1 8.625	750 5.17	194.8/43800	0-3.2 0-0.13	268 10.56	354 13.94	61 2.40	2-7/8X140 2-M22X140	UL FM

1NS

Light-duty Flexible Coupling

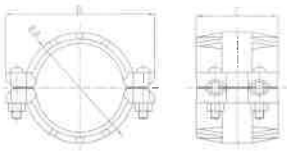
c UL us LISTED FM APPROVED



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions A mm/in	Dimensions B mm/in	Dimensions C mm/in	Bolt Size No.-Size mm	Certificate
100 4	114.3 4.500	300 2.07	21.2/4770	0-3.2 0-0.13	139 5.47	182 7.16	50 1.97	2-3/8X55 2-M10X57	UL FM
125 5	139.7 5.500	450 3.10	47.5/10680	0-3.2 0-0.13	168 6.61	228 8.98	51 2.01	2-5/8X80 2-M16X85	UL FM
165 6	165.1 6.500	300 2.07	44.3/9960	0-3.2 0-0.13	192 7.56	244 9.61	51 2.01	2-1/2X75 2-M12X76	UL FM
165 6	168.3 6.625	300 2.07	46.0/10340	0-3.2 0-0.13	200 7.87	266 10.47	52 2.05	2-5/8X85 2-M16X85	UL FM
250 10	273.0 10.750	300 2.07	121.0/27210	0-3.2 0-0.13	320 12.60	398.0 15.67	64 2.52	2-3/4X120 2-M20X115	UL FM

H305

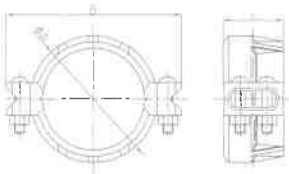
HDPE Coupling



Nominal Size mm/in	Pipe O.D mm/in	Dimensions A mm/in	Dimensions B mm/in	Dimensions C mm/in	Bolt Size No.-Size mm
50 2	60.3 2.375	86.5 3.406	133 5.24	116 4.567	4-1/2X70
80 3	88.9 3.5	118 4.65	165 6.5	116 4.567	4-1/2X75
100 4	114.3 4.5	148 5.827	202 7.953	146 5.75	4-1/2X75
150 6	168.3 6.625	203 7.99	273 10.75	149 5.87	4-5/8X85
200 8	219.1 8.625	263 10.35	333 13.11	152 5.98	4-5/8X85
250 10	273.0 10.75	321 12.65	399 15.709	165 6.496	4-3/4X120
300 12	323.9 12.75	372 14.656	452 17.795	185 7.28	4-3/4X120

H307

HDPE Transition Coupling

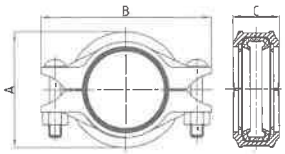


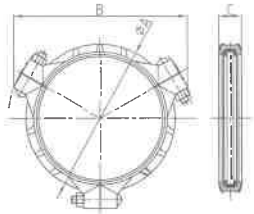
Nominal Size mm/in	Pipe O.D mm/in	Dimensions A mm/in	Dimensions B mm/in	Dimensions C mm/in	Bolt Size No.-Size mm
50 2	60.3 2.375	86.5 3.406	147 5.787	79 3.11	4-1/2X70
80 3	88.9 3.5	116 4.567	176 6.929	79 3.11	4-1/2X75
100 4	114.3 4.5	148 5.827	209 8.228	95 3.75	4-1/2X75
150 6	168.3 6.625	202 7.95	280 11.02	95 3.74	4-5/8X85
200 8	219.1 8.625	264 10.39	342 13.46	107.5 4.23	4-5/8X85
250 10	273.0 10.75	321 12.65	424 16.693	127 5	4-3/4X120
300 12	323.9 12.75	372 14.656	483 19.016	127 5	4-3/4X120

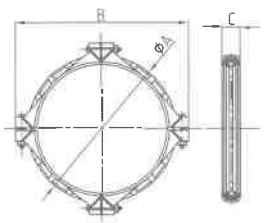
CE SE c UL us LISTED FM APPROVED VdS apsad WRAS NSF/ANSI 61 NSF/ANSI 372 ACS DVGW CERT GMBH W JIS KS

1G

Standard
Rigid Coupling



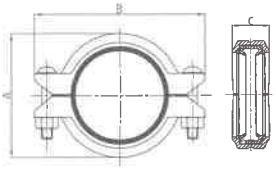




Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions			Bolt Size	Certificate
					A mm/in	B mm/in	C mm/in	No.-Size mm	
25 1	33.7 1.327	500 3.45	3.0/680	0-1.6 0-0.06	59 2.33	100 3.94	44 1.74	2-3/8X55 2-M10X57	UL FM VdS LPCB
32 1¼	42.4 1.669	500 3.45	4.8/1080	0-1.6 0-0.06	66 2.60	109.5 4.31	45 1.78	2-3/8X55 2-M10X57	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	6.3/1420	0-3.2 0-0.13	72 2.84	115 4.53	45 1.78	2-3/8X55 2-M10X57	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	9.8/2210	0-3.2 0-0.13	85 3.35	131 5.16	45 1.78	2-3/8X55 2-M10X57	UL FM VdS LPCB
65 2½	73.0 2.875	500 3.45	14.4/3240	0-3.2 0-0.13	98 3.86	145 5.71	45 1.78	2-3/8X55 2-M10X57	UL FM LPCB
65 2½	76.1 3.000	500 3.45	15.7/3520	0-3.2 0-0.13	101 3.98	147 5.78	45 1.77	2-3/8X55 2-M10X57	UL FM VdS LPCB
80 3	88.9 3.500	500 3.45	21.4/4810	0-3.2 0-0.13	115.0 4.53	170 6.69	46 1.82	2-1/2X70 2-M12X70	UL FM VdS LPCB
100 4	108.0 4.250	500 3.45	31.5/7100	0-3.2 0-0.13	140 5.51	197 7.76	52 2.05	2-1/2X70 2-M12X70	UL FM LPCB
100 4	114.3 4.500	500 3.45	35.4/7960	0-3.2 0-0.13	146 5.75	200 7.88	52 2.05	2-1/2X70 2-M12X70	UL FM VdS LPCB
125 5	133 5.250	300 2.07	28.7/6460	0-3.2 0-0.13	165 6.50	232 9.13	52 2.05	2-5/8X85 2-M16X85	UL FM LPCB
125 5	139.7 5.500	500 3.45	52.9/11800	0-3.2 0-0.13	170 6.69	238 9.37	52 2.05	2-5/8X85 2-M16X85	UL FM VdS LPCB
125 5	141.3 5.563	500 3.45	54.1/12100	0-3.2 0-0.13	172 6.77	236.5 9.31	52 2.05	2-5/8X85 2-M16X85	UL FM LPCB
150 6	159.0 6.250	300 2.07	41.0/9240	0-3.2 0-0.13	190 7.48	258 10.16	52 2.05	2-5/8X85 2-M16X85	UL FM LPCB
150 6	165.1 6.500	500 3.45	73.8/16610	0-3.2 0-0.13	198 7.80	266 10.47	52 2.05	2-5/8X85 2-M16X85	UL FM LPCB
150 6	168.3 6.625	500 3.45	76.7/17260	0-3.2 0-0.13	202.0 7.95	270 10.63	52 2.05	2-5/8X85 2-M16X85	UL FM VdS LPCB
200 8	219.1 8.625	450 3.10	116.9/26280	0-3.2 0-0.13	260.0 10.24	346 13.625	62 2.44	2-3/4X115 2-M20X115	UL FM VdS LPCB
250A 10	267.4 10.528	300 2.07	116/26130	0-3.2 0-0.13	318 12.52	396 15.60	63 2.48	2-3/4X120 2-M20X115	UL FM
250 10	273.0 10.750	400 2.8	163.8/36800	0-3.2 0-0.13	327 12.88	420 16.54	63 2.48	2-7/8X125 2-M22X125	UL FM VdS
300A 12	318.5 12.539	300 2.07	164.8/37080	0-3.2 0-0.13	364 14.33	456 17.95	63 2.48	2-7/8X140 2-M22X140	UL FM
300 12	323.9 12.750	400 2.8	230.6/51880	0-3.2 0-0.13	378 14.88	466 18.35	63 2.48	2-7/8X140 2-M22X140	UL FM
350 14	355.6 14.000	300 2.07	205.5/46220	0-3.2 0-0.13	415 16.34	510 20.08	72 2.84	3-7/8X140 3-M22X140	UL FM
400 16	406.4 16.000	300 2.07	268.4/60370	0-3.2 0-0.13	468 18.43	575 22.64	72 2.84	3-7/8X140 3-M22X140	UL FM
450 18	457.2 18.000	225 1.6	262.5/59060	0-3.2 0-0.13	508 20	608 23.94	78 3.07	3-7/8X140 3-M22X140	——
500 20	508.0 20.0	225 1.6	324.1/72910	0-3.2 0-0.13	563 22.17	660 25.98	78 3.07	4-7/8X140 4-M22X140	——
600 24	609.6 24.000	225 1.6	466.7/104990	0-3.2 0-0.13	668 26.30	772 30.40	78 3.07	4-1X140	——

1GS

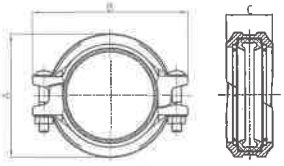
Light-duty Rigid Coupling



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions			Bolt Size	Certificate
					A mm/in	B mm/in	C mm/in	No.-Size mm	
80 3	88.9 3.500	350 2.41	15.0/3360	0-3.2 0-0.13	114 4.50	160 6.30	45 1.78	2-3/8X55 2-M10X57	UL FM VdS LPCB
100 4	108.0 4.250	300 2.07	18.9/4260	0-3.2 0-0.13	135 5.30	185 7.28	50 1.97	2-1/2X70 2-M12X70	UL FM LPCB
100 4	114.3 4.500	350 2.41	24.7/5560	0-3.2 0-0.13	140 5.51	192 7.56	46.5 1.83	2-1/2X70 2-M12X70	UL FM VdS LPCB
125 5	139.7 5.500	350 2.41	36.9/8300	0-3.2 0-0.13	168 6.62	225 8.86	50 1.97	2-1/2X75 2-M12X76	UL FM LPCB
125 5	141.3 5.563	350 2.41	37.8/8490	0-3.2 0-0.13	170 6.69	225 8.86	50 1.97	2-1/2X75 2-M12X76	U L FM LPCB
150 6	159.0 6.250	300 2.07	41.0/9240	0-3.2 0-0.13	190 7.48	252 9.92	50 1.97	2-5/8X80 2-M16X85	UL FM LPCB
150 6	165.1 6.500	350 2.41	51.6/11600	0-3.2 0-0.13	195 7.68	250 9.84	50 1.97	2-1/2X75 2-M12X76	UL FM LPCB
150 6	168.3 6.625	350 2.41	53.6/12000	0-3.2 0-0.13	200 7.87	255 10.04	50 1.97	2-1/2X75 2-M12X76	UL FM LPCB
200A 8	216.3 8.516	300 2.07	76.0/17100	0-3.2 0-0.13	255 10.04	320 12.60	58 2.28	2-5/8X85 2-M16X85	UL FM
200 8	219.1 8.625	350 2.41	90.8/20430	0-3.2 0-0.13	255 10.05	324 12.76	58 2.28	2-5/8X85 2-M16X85	UL FM LPCB
250 10	273.0 10.750	300 2.07	121.0/27210	0-3.2 0-0.13	318 12.52	410 16.14	63 2.48	2-3/4X120 2-M20X115	UL FM

1GK

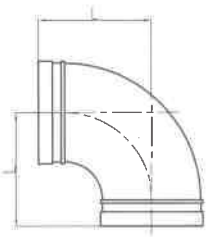
Angle Pad Coupling



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions			Bolt Size	Certificate
					A mm/in	B mm/in	C mm/in	No.-Size mm	
32 1¼	42.4 1.669	500 3.45	4.8/1080	0-1.6 0-0.06	64 2.52	99 3.90	46.5 1.83	2-M10X55	UL FM
40 1½	48.3 1.900	500 3.45	6.3/1420	0-3.2 0-0.13	70 2.76	105 4.13	46.5 1.83	2-M10X55	UL FM
50 2	60.3 2.375	500 3.45	9.8/2210	0-3.2 0-0.13	85 3.35	121 4.76	46.5 1.83	2-M10X55	UL FM
65 2½	73.0 2.875	300 2.07	8.7/1950	0-3.2 0-0.13	99 3.90	134 5.28	47.5 1.87	2-M10X63	UL FM
65 2½	76.1 3.000	500 3.45	15.7/3520	0-3.2 0-0.13	102 4.02	137 5.39	47.5 1.87	2-M10X63	UL FM
80 3	88.9 3.500	500 3.45	21.4/4810	0-3.2 0-0.13	115 4.53	150 5.91	47.5 1.87	2-M10X60	UL FM
100 4	114.3 4.500	500 3.45	35.4/7960	0-3.2 0-0.13	142 5.59	180 7.09	50 1.97	2-M10X65	UL FM
125 5	139.7 5.500	300 2.07	31.7/7130	0-3.2 0-0.13	171 6.73	214 8.43	52.5 2.07	2-M12X75	UL FM
150 6	165.1 6.500	300 2.07	44.3/9960	0-3.2 0-0.13	198 7.80	242 9.53	52.5 2.07	2-M12X75	UL FM
150 6	168.3 6.625	300 2.07	46.0/10340	0-3.2 0-0.13	201 7.91	245 9.65	52.5 2.07	2-M12X75	UL FM
200 8	219.1 8.625	300 2.07	77.8/17500	0-3.2 0-0.13	258 10.16	331 13.03	63.5 2.50	2-M20X110	UL FM
250 10	273.0 10.750	300 2.07	121.0/27210	0-3.2 0-0.13	321 12.64	406 15.98	64.5 2.54	2-M22X140	UL

90

90° Elbow

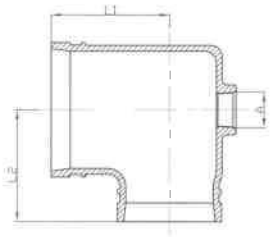


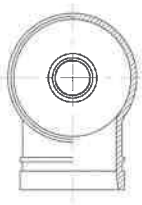
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
25 1	33.7 1.315	500 3.45	57 2.24	UL FM VdS LPCB
32 1¼	42.4 1.660	500 3.45	70 2.75	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	70 2.75	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	82.5 3.25	UL FM VdS LPCB
65 2½	73.0 2.875	500 3.45	95 3.74	UL FM
65 2½	76.1 3.000	500 3.45	95 3.74	UL FM VdS LPCB
80 3	88.9 3.500	500 3.45	108 4.25	UL FM VdS LPCB
100 4	114.3 4.500	500 3.45	127 5.00	UL FM VdS LPCB
125 5	133.0 5.250	500 3.45	122 4.80	UL FM
125 5	139.7 5.500	500 3.45	140 5.50	UL FM VdS LPCB
125 5	141.3 5.563	500 3.45	140 5.50	UL FM
150 6	165.1 6.500	500 3.45	165 6.50	UL FM LPCB
150 6	168.3 6.625	500 3.45	165 6.50	UL FM VdS LPCB
200 8	219.1 8.625	500 3.45	197 7.75	UL FM VdS LPCB
250 10	267.4 10.528	300 2.07	229 9.00	UL FM
250 10	273.0 10.750	300 2.07	229 9.00	UL FM VdS
300 12	318.5 12.539	300 2.07	254 10.00	UL FM
300 12	323.9 12.750	300 2.07	254 10.00	UL FM VdS
350 14	355.6 14.000	300 2.07	280 11.02	—
350 14	377.0 14.84	300 2.07	279 10.98	—
400 16	406.4 16.000	300 2.07	305 12.00	—
400 16	426.0 16.77	300 2.07	305 12.00	—
450 18	457.2 18.000	300 2.07	394 15.50	—
450 18	480.0 18.90	300 2.07	335 13.19	—
500 20	508.0 20.000	300 2.07	438 17.25	—
600 24	609.6 24.000	300 2.07	508 20.00	—

90C

90° Hydrant Elbow

Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions			Certificate
			A	L 1 mm/in	L 2 mm/in	
100X80X25 4X3X1	114.3X88.9X33.7 4.500X3.500X1.327	300 2.07	1-11.5NPT Rp1-ISO7/1	102 4.016	95 3.74	UL FM
150x80X25 6X3X1	165.1X88.9X33.7 6.500X3.500X1.327	300 2.07	1-11.5NPT Rp1-ISO7/1	130 5.118	130 5.118	UL FM

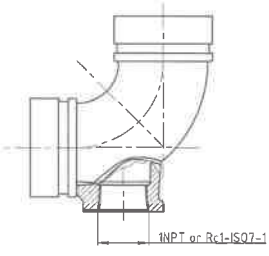


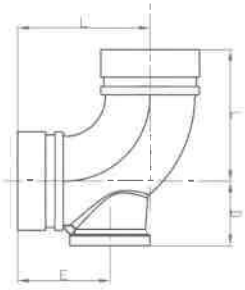


90C

90° Drain Elbow

Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions			Certificate
			L mm/in	D mm/in	E mm/in	
50 2	60.3 2.375	300 2.07	82.5 3.248	57 2.244	40 1.575	——
65 21/2	73 2.875	300 2.07	95 3.74	70 2.756	43 1.693	——
80 3	88.9 3.500	300 2.07	108 4.25	70 2.756	53 2.087	——
100 4	114.3 4.5	300 2.07	127 5	70 2.756	66 2.598	——
150 6	168.3 6.625	300 2.07	165 6.496	70 2.756	93 3.661	——
200 8	219.1 8.625	300 2.07	197 7.756	70 2.756	126 4.961	——





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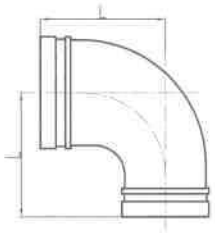
90R

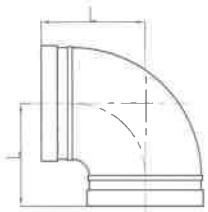
90° Reducing Elbow



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
80X65 3X2 1/2	88.9X76.1 3.500X3.000	500 3.45	108 4.25	UL FM
100X65 4X2 1/2	114.3X76.1 4.500X3.000	500 3.45	127 5.00	UL FM
100X80 4X3	114.3X88.9 4.500X3.500	500 3.45	127 5.00	UL FM
150X100 6X4	165.1X114.3 6.500X4.500	500 3.45	165 6.50	UL FM
150X100 6X4	168.3X114.3 6.625X4.500	500 3.45	165 6.50	UL FM

90S

Light-duty 90° Elbow



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
50 2	60.3 2.375	300 2.07	70 2.75	UL FM VdS LPCB
65 2½	73.0 2.875	300 2.07	76 3.00	UL FM
65 2½	76.1 3.000	300 2.07	76 3.00	UL FM VdS LPCB
80 3	88.9 3.500	300 2.07	85.5 3.37	UL FM VdS LPCB
100 4	108.0 4.500	500 3.45	101 3.98	UL FM
100 4	114.3 4.500	365 2.52	101 3.98	UL FM VdS LPCB
125 5	139.7 5.500	300 2.07	124 4.88	UL FM VdS LPCB
150 6	159.0 6.500	300 2.07	140 5.50	UL FM
150 6	165.1 6.500	365 2.52	140 5.50	UL FM LPCB
150 6	168.3 6.625	300 2.07	140 5.50	UL FM VdS LPCB
200 8	216.3 8.625	300 2.07	175 6.89	UL FM
200 8	219.1 8.625	300 2.07	165 6.50	UL FM VdS LPCB

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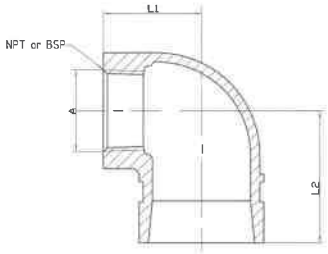
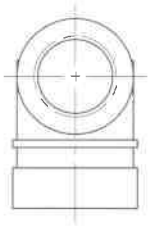
91R

90° END-ALL Elbow

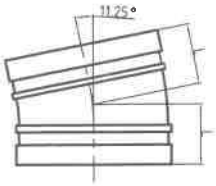




Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions			Certificate
			A (NPT/BSP)	L1 mm/in	L2 mm/in	
32X15 1 1/4X1/2	42.4X21.3 1.660X0.825	300 2.07	1/2	35.1 1.382	44.5 1.752	UL
32X20 1 1/4X3/4	42.4X26.9 1.660X1.050	300 2.07	3/4	34.9 1.374	47.6 1.874	UL
32X25 1 1/4X1	42.4X33.7 1.660X1.315	300 2.07	1	38.1 1.5	51.6 2.031	UL
40X15 1 1/2X1/2	48.3X21.3 1.900X0.825	300 2.07	1/2	34.9 1.374	44.5 1.752	UL
40X20 1 1/2X3/4	48.3X26.9 1.900X1.050	300 2.07	3/4	34.9 1.374	47.6 1.874	UL
40X25 1 1/2X1	48.3X33.7 1.900X1.315	300 2.07	1	38.1 1.5	51.6 2.031	UL
50X15 2X1/2	60.3X21.3 2.375X0.825	300 2.07	1/2	41.4 1.63	44.5 1.752	UL
50X20 2X3/4	60.3X26.9 2.375X1.050	300 2.07	3/4	41.3 1.626	47.6 1.874	UL
50X25 2X1	60.3X33.7 2.375X1.315	300 2.07	1	44.5 1.752	51.6 2.031	UL
65X15 2 1/2X1/2	73.0X21.3 2.875X0.825	300 2.07	1/2	46 1.811	44.5 1.752	UL
65X20 2 1/2X3/4	73.0X26.9 2.875X1.050	300 2.07	3/4	46 1.811	47.6 1.874	UL
65X25 2 1/2X1	73.0X33.7 2.875X1.315	300 2.07	1	49.2 1.937	51.6 2.031	UL
80X20 3X3/4	88.9X26.9 3.500X1.050	300 2.07	3/4	60.3 2.374	52.4 2.063	UL
80X25 3X1	88.9X33.7 3.500X1.315	300 2.07	1	63.5 2.5	52.4 2.063	UL

105

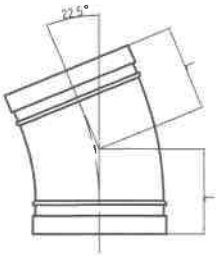
11.25° Elbow



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
32 1 1/4	42.4 1.660	500 3.45	35 1.38	UL FM
40 1 1/2	48.3 1.900	500 3.45	35 1.38	UL FM
50 2	60.3 2.375	500 3.45	35 1.38	UL FM VdS LPCB
65 2 1/2	73.0 2.875	500 3.45	38 1.506	UL FM
65 2 1/2	76.1 3.000	500 3.45	38 1.506	UL FM VdS LPCB
80 3	88.9 3.500	500 3.45	38 1.50	UL FM VdS LPCB
100 4	108.0 4.250	500 3.45	44 1.73	UL FM
100 4	114.3 4.500	500 3.45	44 1.73	UL FM VdS LPCB
125 5	139.7 5.500	500 3.45	51 2.00	UL FM VdS LPCB
150 6	159.0 6.250	500 3.45	51 2.00	UL FM
150 6	165.1 6.500	500 3.45	51 2.00	UL FM LPCB
150 6	168.3 6.625	500 3.45	51 2.00	UL FM VdS
200 8	219.1 8.625	500 3.45	51 2.00	UL FM VdS LPCB

110

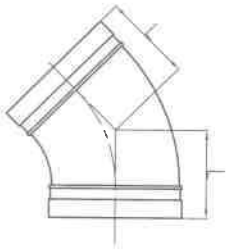
22.5° Elbow



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
32 1¼	42.4 1.660	500 3.45	45 1.77	UL FM
40 1½	48.3 1.900	500 3.45	45 1.77	UL FM
50 2	60.3 2.375	500 3.45	48 1.89	UL FM
65 2½	73.0 2.875	500 3.45	51 2.00	UL FM
65 2½	76.1 3.000	500 3.45	51 2.00	UL FM VdS LPCB
80 3	88.9 3.500	500 3.45	57 2.24	UL FM VdS LPCB
100 4	108.0 4.250	500 3.45	73 2.87	UL FM
100 4	114.3 4.500	500 3.45	73 2.87	UL FM VdS LPCB
125 5	139.7 5.500	500 3.45	73 2.87	UL FM VdS LPCB
150 6	159.0 6.250	500 3.45	79 3.11	UL FM
150 6	165.1 6.500	500 3.45	79 3.11	UL FM LPCB
150 6	168.3 6.625	500 3.45	79 3.11	UL FM VdS
200 8	219.1 8.625	500 3.45	98 3.86	UL FM VdS LPCB

120

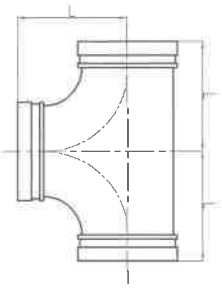
45° Elbow



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
25 1	33.7 1.315	500 3.45	44.5 1.75	UL FM VdS LPCB
32 1¼	42.4 1.660	500 3.45	44.5 1.75	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	44.5 1.75	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	51 2.00	UL FM VdS LPCB
65 2½	73.0 2.875	500 3.45	57 2.24	UL FM
65 2½	76.1 3.000	500 3.45	57 2.24	UL FM VdS LPCB
80 3	88.9 3.500	500 3.45	63.5 2.50	UL FM VdS LPCB
100 4	108.0 4.250	500 3.45	76 3.00	UL FM
100 4	114.3 4.500	500 3.45	76 3.00	UL FM VdS LPCB
125 5	133.0 5.250	500 3.45	82.5 3.25	——
125 5	139.7 5.500	500 3.45	82.5 3.25	UL FM VdS LPCB
125 5	141.3 5.563	500 3.45	82.5 3.25	UL FM
150 6	159.0 6.250	500 3.45	89 3.50	UL FM
150 6	165.1 6.500	500 3.45	89 3.50	UL FM LPCB
150 6	168.3 6.625	500 3.45	89 3.50	UL FM VdS LPCB
200 8	216.3 8.516	500 3.45	108 4.25	UL FM
200 8	219.1 8.625	500 3.45	108 4.25	UL FM VdS LPCB
250 10	267.4 10.528	300 2.07	120.5 4.75	UL FM
250 10	273.0 10.750	500 3.45	120.5 4.75	UL FM VdS
300 12	318.5 12.750	300 2.07	133 5.25	UL FM
300 12	323.9 12.750	500 3.45	133 5.25	UL FM VdS
350 14	377 14.843	300 2.07	122 4.80	——
350 14	355.6 14.000	300 2.07	152 6.00	——
400 16	406.4 16.000	300 2.07	184 7.25	——
450 18	457.2 18.000	300 2.07	203 8.00	——
500 20	508.0 20.000	300 2.07	229 9.00	——
600 24	609.6 24.000	300 2.07	280 11.00	——

130

Tee

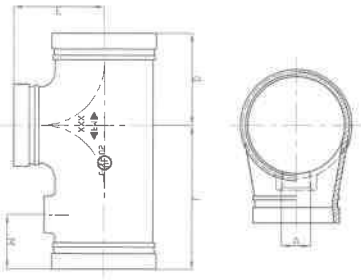


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
25 1	33.7 1.315	500 3.45	57 2.24	UL FM VdS LPCB
32 1¼	42.4 1.660	500 3.45	70 2.75	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	70 2.75	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	82.5 3.25	UL FM VdS LPCB
65 2½	73.0 2.875	500 3.45	95 3.74	UL FM
65 2½	76.1 3.000	500 3.45	95 3.74	UL FM VdS LPCB
80 3	88.9 3.500	500 3.45	108 4.25	UL FM VdS LPCB
100 4	114.3 4.500	500 3.45	127 5.00	UL FM VdS LPCB
125 5	133.0 5.250	500 3.45	122 4.80	UL FM
125 5	139.7 5.500	500 3.45	140 5.50	UL FM VdS LPCB
125 5	141.3 5.563	500 3.45	140 5.50	UL FM
150 6	165.1 6.500	500 3.45	165 6.50	UL FM LPCB
150 6	168.3 6.625	500 3.45	165 6.50	UL FM VdS LPCB
200 8	219.1 8.625	500 3.45	197 7.75	UL FM VdS LPCB
250 10	267.4 10.528	500 3.45	229 9.00	UL FM
250 10	273.0 10.750	500 3.45	229 9.00	UL FM VdS
300 12	318.5 12.539	500 3.45	254 10.00	——
300 12	323.9 12.750	500 3.45	254 10.00	UL FM VdS
350 14	355.6 14.000	300 2.07	280 11.02	——
350 14	377.0 14.84	300 2.07	279 10.98	——
400 16	406.4 16.000	300 2.07	305 12.00	——
400 16	426.0 16.77	300 2.07	285 11.22	——
450 18	457.2 18.000	300 2.07	342 13.46	——
450 18	480.0 18.90	300 2.07	335 13.19	——
500 20	508.0 20.000	300 2.07	381 15.00	——
600 24	609.6 24.000	300 2.07	432 17.01	——

130C

Reducing tee

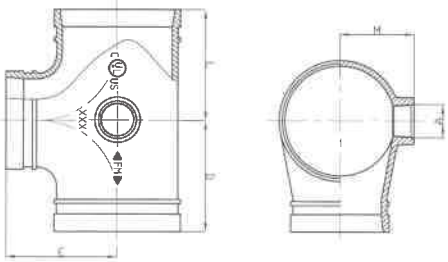
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions					Certificate
			A	L mm/in	D mm/in	E mm/in	M mm/in	
100X80X25 4X3X1	114.3X88.9X33.7 4.5X3.5X1.327	300 2.07	1-11.5NPT Rp1-ISO7/1	160 6.3	102 4.02	102 4.02	60 2.36	UL FM
150X80X25 6X3X1	165.1X88.9X33.7 6.5X3.5X1.327	300 2.07	1-11.5NPT Rp1-ISO7/1	165 6.5	130 5.12	130 5.12	60 2.36	UL FM



130D

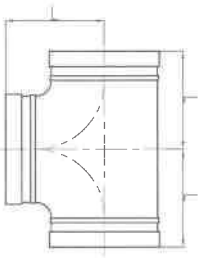
Reducing tee

Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions					Certificate
			A	L mm/in	D mm/in	E mm/in	M mm/in	
100X80X25 4X3X1	114.3X88.9X33.7 4.5X3.5X1.327	300 2.07	1-11.5NPT Rp1-ISO7/1	102 4.02	102 4.02	102 4.02	67 2.638	UL FM
150X80X25 6X3X1	165.1X88.9X33.7 6.5X3.5X1.327	300 2.07	1-11.5NPT Rp1-ISO7/1	130 5.12	130 5.12	130 5.12	91 3.58	UL FM



130S

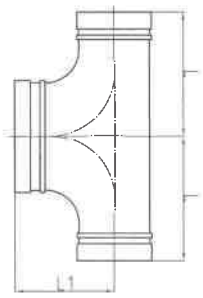
Light-duty Tee



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
50 2	60.3 2.375	300 2.07	70 2.75	UL FM VdS LPCB
65 2½	73.0 2.875	300 2.07	76 3.00	UL FM
65 2½	76.1 3.000	300 2.07	76 3.00	UL FM VdS LPCB
80 3	88.9 3.500	300 2.07	85.5 3.37	UL FM VdS LPCB
100 4	108.0 4.500	500 3.45	101 3.98	UL FM
100 4	114.3 4.500	300 2.07	101 3.98	UL FM VdS LPCB
125 5	139.7 5.500	300 2.07	124 4.88	UL FM VdS LPCB
150 6	159.0 6.500	300 2.07	140 5.50	UL FM
150 6	165.1 6.500	300 2.07	140 5.50	UL FM LPCB
150 6	168.3 6.625	300 2.07	140 5.50	UL FM VdS LPCB
200 8	216.3 8.625	300 2.07	175 6.89	UL FM
200 8	219.1 8.625	300 2.07	175 6.89	UL FM VdS LPCB

130R

Reducing Tee



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Dimensions L 1 mm/in	Certificate
65×65×80 2½×2½×3	76.1×76.1×88.9 3.000×3.000×3.500	500 3.45	108 4.25	95 3.74	——
65×65×100 2½×2½×4	76.1×76.1×114.3 3.000×3.000×4.500	500 3.45	127 5.00	102 4.02	——
80×80×100 3×3×4	88.9×88.9×114 3.500×3.500×4.500	500 3.45	127 5.00	102 4.02	——

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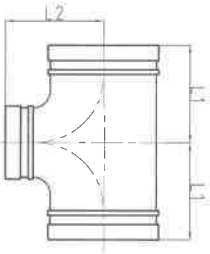
130R

Reducing Tee



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
50×25 2×1	60.3×33.7 2.375×1.315	500 3.45	70 2.75	70 2.75	UL FM VdS LPCB
50×40 2×1½	60.3×48.3 2.375×1.900	500 3.45	70 2.75	70 2.75	UL FM VdS LPCB
65×40 2½×1½	73.0×48.3 2.875×1.900	500 3.45	76 3.00	76 3.00	UL FM
65×50 2½×2	73.0×60.3 2.875×2.375	500 3.45	69 2.72	76 3.00	UL FM
65×32 2½×1¼	76.1×42.4 3.000×1.660	500 3.45	76 3.00	76 3.00	UL FM
65×40 2½×1½	76.1×48.3 3.000×1.900	500 3.45	76 3.00	76 3.00	UL FM VdS LPCB
65×50 2½×2	76.1×60.3 3.000×2.375	500 3.45	69 2.72	76 3.00	UL FM VdS LPCB
80×32 3×1	88.9×33.7 3.500×1.315	500 3.45	108 4.25	108 4.25	UL FM VdS LPCB
80×32 3×1¼	88.9×42.4 3.500×1.660	500 3.45	85.5 3.37	85.5 3.37	UL FM
80×40 3×1½	88.9×48.3 3.500×1.900	500 3.45	85.5 3.37	85.5 3.37	UL FM VdS LPCB
80×50 3×2	88.9×60.3 3.500×2.375	500 3.45	85.5 3.37	85.5 3.37	UL FM VdS LPCB
80×65 3×2½	88.9×73.0 3.500×2.875	500 3.45	85.5 3.37	85.5 3.37	UL FM
80×65 3×2½	88.9×76.1 3.500×3.000	500 3.45	85.5 3.37	85.5 3.37	UL FM VdS LPCB
100×50 4×2	108.0×60.3 4.250×2.375	500 3.45	101 3.98	101 3.98	UL FM
100×80 4×3	108.0×88.9 4.250×3.500	500 3.45	101 3.98	101 3.98	UL FM
100×25 4×1	114.3×33.7 4.500×1.315	500 3.45	101 3.98	101 3.98	UL FM VdS LPCB
100×40 4×1½	114.3×48.3 4.500×1.900	500 3.45	101 3.98	101 3.98	UL FM VdS LPCB
100×50 4×2	114.3×60.3 4.500×2.375	500 3.45	101 3.98	101 3.98	UL FM VdS LPCB
100×65 4×2½	114.3×73.0 4.500×2.875	500 3.45	101 3.98	101 3.98	UL FM
100×65 4×2½	114.3×76.1 4.500×3.000	500 3.45	101 3.98	101 3.98	UL FM VdS LPCB
100×80 4×3	114.3×88.9 4.500×3.500	500 3.45	101 3.98	101 3.98	UL FM VdS LPCB
125×50 5×2	133.0×60.3 5.250×2.375	500 3.45	124 4.88	124 4.88	UL FM
125×65 5×2½	133.0×76.1 5.250×3.000	500 3.45	124 4.88	124 4.88	UL FM
125×100 5×4	133.0×108.0 5.250×4.250	500 3.45	124 4.88	124 4.88	UL FM
125×100 5×4	133.0×114.3 5.250×4.500	500 3.45	124 4.88	124 4.88	UL FM
125×40 5×1½	139.7×48.3 5.500×1.900	500 3.45	124 4.88	124 4.88	UL FM
125×50 5×2	139.7×60.3 5.500×2.375	500 3.45	124 4.88	124 4.88	UL FM
125×65 5×2½	139.7×76.1 5.500×3.000	500 3.45	124 4.88	124 4.88	UL FM
125×80 5×3	139.7×88.9 5.500×3.500	500 3.45	124 4.88	124 4.88	UL FM
125×100 5×4	139.7×114.3 5.500×4.500	500 3.45	124 4.88	124 4.88	UL FM VdS LPCB
125×50 5×2	141.3×60.3 5.563×2.375	500 3.45	124 4.88	124 4.88	UL FM
125×80 5×3	141.3×88.9 5.563×3.500	500 3.45	124 4.88	124 4.88	UL FM
125×100 5×4	141.3×114.3 5.563×4.500	500 3.45	124 4.88	124 4.88	UL FM
150×60 6×2	159.0×60.3 6.250×2.375	500 3.45	140 5.50	140 5.50	UL FM
150×65 6X2½	159.0×76.1 6.250×3.000	500 3.45	140 5.50	140 5.50	UL FM
150×80 6×3	159.0×88.9 6.250×3.500	500 3.45	140 5.50	140 5.50	UL FM
150×100 6×4	159.0×108.0 6.250×4.250	500 3.45	140 5.50	140 5.50	UL FM
150×100 6×4	159.0×114.3 6.250×4.500	500 3.45	140 5.50	140 5.50	UL FM

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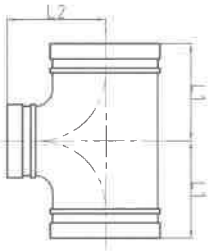
130R

Reducing Tee



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
150×125 6×5	159.0×133.0 6.250×5.250	500 3.45	140 5.50	140 5.50	UL FM
150×50 6×2	165.1×60.3 6.500×2.375	300 2.07	140 5.50	140 5.50	UL FM
150×65 6×2½	165.1×76.1 6.500×3.000	300 2.07	140 5.50	140 5.50	UL FM
150×80 6×3	165.1×88.9 6.500×3.500	300 2.07	140 5.50	140 5.50	UL FM LPCB
150×100 6×4	165.1×114.3 6.500×4.500	300 2.07	140 5.50	140 5.50	UL FM LPCB
150×125 6×5	165.1×139.7 6.500×5.500	300 2.07	140 5.50	140 5.50	UL FM LPCB
165×133	165.1×133.0 6.500×5.250	300	140 5.50	140 5.50	UL
150×50 6×2	168.3×60.3 6.625×2.375	500 3.45	140 5.50	140 5.50	UL FM VdS LPCB
150×65 6×2½	168.3×73.0 6.625×2.875	500 3.45	140 5.50	140 5.50	UL FM
150×65 6×2½	168.3×76.1 6.625×3.000	500 3.45	140 5.50	140 5.50	UL FM VdS LPCB
150×80 6×3	168.3×88.9 6.625×3.500	500 3.45	140 5.50	140 5.50	UL FM VdS LPCB
150×100 6×4	168.3×114.3 6.625×4.500	500 3.45	140 5.50	140 5.50	UL FM VdS LPCB
150×125 6×5	168.3×139.7 6.625×5.500	300 2.07	140 5.50	140 5.50	UL FM VdS LPCB
150×125 6×5	168.3×141.3 6.625×5.563	300 2.07	140 5.50	140 5.50	UL FM
200×100 8×4	216.3×114.3 8.516×4.500	300 2.07	175 6.89	175 6.89	——
200×150 8×6	216.3×165.1 8.516×6.500	300 2.07	175 6.89	175 6.89	UL FM
200×50 8×2	219.1×60.3 8.625×2.375	500 3.45	175 6.89	175 6.89	UL FM VdS LPCB
200×65 8×2½	219.1×76.1 8.625×3.000	300 2.07	175 6.89	175 6.89	UL FM
200×80 8×3	219.1×88.9 8.625×3.500	500 3.45	175 6.89	175 6.89	UL FM VdS LPCB
200×100 8×4	219.1×108.0 8.625×4.250	500 3.45	175 6.89	175 6.89	UL FM
200×100 8×4	219.1×114.3 8.625×4.500	500 3.45	175 6.89	175 6.89	UL FM VdS LPCB
200×125 8×5	219.1×133.0 8.625×5.250	300 2.07	175 6.89	175 6.89	UL FM
200×125 8×5	219.1×139.7 8.625×5.500	300 2.07	175 6.89	175 6.89	UL FM
200×150 8×6	219.1×159.0 8.625×6.250	300 2.07	175 6.89	175 6.89	UL FM
200×150 8×6	219.1×165.1 8.625×6.500	300 2.07	175 6.89	175 6.89	UL FM
200×150 8×6	219.1×168.3 8.625×6.625	500 3.45	175 6.89	175 6.89	UL FM VdS LPCB
250×150 10×6	273.0×159.0 10.750×6.250	500 3.45	229 9.00	229 9.00	UL FM
250×150 10×6	273.0×165.1 10.750×6.500	300 2.07	229 9.00	229 9.00	UL FM
250×150 10×6	273.0×168.3 10.750×6.625	300 2.07	229 9.00	229 9.00	UL FM VdS
250×200 10×8	273.0×219.1 10.750×8.625	300 2.07	229 9.00	229 9.00	UL FM VdS
300×65 12×2½	323.9×73.0 12.750×2.875	300 2.07	254 10	254 10	——
300×80 12×3	323.9×88.9 12.750×3.500	300 2.07	254 10	254 10	——
300×150 12×6	323.9×165.1 12.750×6.500	300 2.07	254 10	254 10	UL FM
300×150 12×6	323.9×168.3 12.750×6.625	300 2.07	254 10	254 10	——
300×200 12×8	323.9×219.1 12.750×8.625	300 2.07	254 10	254 10	UL FM VdS
300×250 12×10	323.9×273.0 12.750×10.750	300 2.07	254 10	254 10	UL FM VdS
450×300 18×12	480.0×323.9 18.897×12.750	300 2.07	335 13.188	335 13.188	——
450×350 18×14	480.0×377.0 18.897×14.840	300 2.07	335 13.188	335 13.188	——

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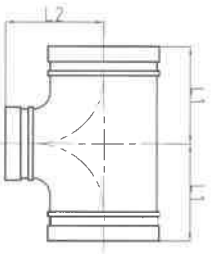
130R

Reducing Tee



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
350×150 14×6	355.6×168.3 14.000×6.625	300 2.07	279 10.98	238 9.37	—
350×200 14×8	355.6×219.1 14.00×8.625	300 2.07	280 11.02	280 11.02	—
350×250 14×10	355.6×273.0 14.000×10.750	300 2.07	279 10.98	257 10.12	—
350×300 14×12	355.6×323.9 14.000×12.750	300 2.07	279 10.98	270 10.63	—
350×125 14×5	377.0×133.0 14.840×5.250	300 2.07	240 9.45	265 10.43	—
350×150 14×6	377.0×159.0 14.840×6.250	300 2.07	240 9.45	265 10.43	—
350×200 14×8	377.0×219.1 14.840×8.625	300 2.07	240 9.45	265 10.43	—
350×250 14×10	377.0×273.0 14.840×10.750	300 2.07	240 9.45	265 10.43	—
350×300 14×12	377.0×323.9 14.840×12.750	300 2.07	240 9.45	265 10.43	—
400×150 16×6	406.4×168.3 16.000×6.625	300 2.07	305 12.01	264 10.39	—
400×200 16×8	406.4×219.1 16.000×8.625	300 2.07	305 12.01	273 10.75	—
400×250 16×10	406.4×273.0 16.000×10.750	300 2.07	305 12.01	283 11.14	—
400×300 16×12	406.4×323.9 16.000×12.750	300 2.07	305 12.01	295 11.61	—
400×350 16×14	406.4×355.6 16.000×14.000	300 2.07	305 12.01	305 12.01	—
400×125 16×5	426.0×133.0 16.772×5.250	300 2.07	260 10.24	285 11.22	—
400×150 16×6	426.0×159.0 16.772×6.250	300 2.07	260 10.24	285 11.22	—
400×200 16×8	426.0×219.1 16.772×8.625	300 2.07	260 10.24	285 11.22	—
400×250 16×10	426.0×273.0 16.772×10.750	300 2.07	260 10.24	285 11.22	—
400×300 16×12	426.0×323.9 16.772×12.750	300 2.07	260 10.24	285 11.22	—
450×150 18×6	457.2×168.3 18.000×6.625	300 2.07	343 13.50	298 11.73	—
450×200 18×8	457.2×219.1 18.000×8.625	300 2.07	343 13.50	298 11.73	—
450×250 18×10	457.2×273.0 18.000×10.750	300 2.07	343 13.50	308 12.13	—
450×300 18×12	457.2×323.9 18.000×12.750	300 2.07	343 13.50	321 12.64	—
450×350 18×14	457.2×355.6 18.000×14.000	300 2.07	343 13.50	330 12.99	—
450×400 18×16	457.2×406.4 18.000×16.000	300 2.07	343 13.50	330 12.99	—
500×150 20×6	508.0×168.3 20.000×6.625	300 2.07	381 15.00	324 12.76	—
500×200 20×8	508.0×219.1 20.000×8.625	300 2.07	381 15.00	324 12.76	—
500×250 20×10	508.0×273.0 20.000×10.750	300 2.07	381 15.00	333 13.11	—
500×300 20×12	508.0×323.9 20.000×12.750	300 2.07	381 15.00	346 13.62	—
500×350 20×14	508.0×355.6 20.000×14.000	300 2.07	381 15.00	356 14.02	—
500×400 20×16	508.0×406.4 20.000×16.000	300 2.07	381 15.00	356 14.02	—
500×450 20×18	508.0×457.2 20.000×18.000	300 2.07	381 15.00	368 14.49	—
600×150 24×6	609.6×168.3 24.000×6.625	300 2.07	432 17.01	384 15.12	—
600×200 24×8	609.6×219.1 24.000×8.625	300 2.07	432 17.01	384 15.12	—
600×250 24×10	609.6×273.0 24.000×10.750	300 2.07	432 17.01	384 15.12	—
600×300 24×12	609.6×323.9 24.000×12.750	300 2.07	432 17.01	397 15.63	—
600×350 24×14	609.6×355.6 24.000×14.000	300 2.07	432 17.01	406 15.98	—
600×400 24×16	609.6×406.4 24.000×16.000	300 2.07	432 17.01	406 15.98	—
600×450 24×18	609.6×457.2 24.000×18.000	300 2.07	432 17.01	419 16.50	—
600×500 24×20	609.6×508.0 24.000×20.000	300 2.07	432 17.01	432 17.01	—

Segmental sizes are made of carbon steel pipe or fabricated from wrought carbon steel. Contact manufacturer for details.

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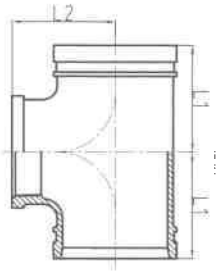
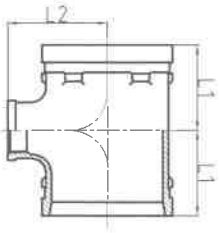
Reducing Tee with Female Thread



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
50×25 2×1	60.3×33.7 2.375×1.315	500 3.45	70 2.75	70 2.75	UL FM
50×32 2×1¼	60.3×42.4 2.375×1.660	500 3.45	70 2.75	70 2.75	——
50×40 2×1½	60.3×48.3 2.375×1.900	500 3.45	70 2.75	70 2.75	UL FM
50×50×65 2×2×2½	60.3×60.3×76.1 2.375×2.375×3.000	300 2.07	66 2.59	76 2.99	
50×50×80 2×2×3	60.3×60.3×88.9 2.375×2.375×3.500	300 2.07	70 2.755	80 3.149	
65×25 2½×1	73.0×33.7 2.875×1.315	500 3.45	76 3.00	76 3.00	UL FM
65×40 2½×1½	73.0×48.3 2.875×1.900	300 2.07	76 3.00	76 3.00	——
65×32 2½×1¼	73.0×42.4 2.875×1.660	500 3.45	76 3.00	76 3.00	UL FM
65×25 2½×1	76.1×33.7 3.000×1.315	500 3.45	76 3.00	76 3.00	UL FM
65×32 2½×1¼	76.1×42.4 3.000×1.660	500 3.45	76 3.00	76 3.00	UL FM
65×40 2½×1½	76.1×48.3 3.000×1.900	500 3.45	76 3.00	76 3.00	UL FM
65×50 2½×2	76.1×60.3 3.000×2.375	500 3.45	76 3.00	76 3.00	UL FM
80×25 3×1	88.9×33.7 3.500×1.315	500 3.45	85.5 3.37	85.5 3.37	UL FM
80×32 3×1¼	88.9×42.4 3.500×1.660	500 3.45	85.5 3.37	85.5 3.37	UL FM
80×40 3×1½	88.9×48.3 3.500×1.900	500 3.45	85.5 3.37	85.5 3.37	UL FM
80×50 3×2	88.9×60.3 3.500×2.375	500 3.45	85.5 3.37	85.5 3.37	UL FM
80×65 3×2½	88.9×76.1 3.500×3.000	500 3.45	85.5 3.37	85.5 3.37	UL FM
100×65 4×2½	108.0×76.1 4.250×3.000	300 2.07	100 3.94	96 3.78	UL FM
100×80 4×3	108.0×88.9 4.250×3.500	300 2.07	100 3.94	96 3.78	UL FM
100×65 4×2½	114.3×76.1 4.500×3.000	300 2.07	100 3.94	96 3.78	UL FM
100×80 4×3	114.3×88.9 4.500×3.500	300 2.07	100 3.94	96 3.78	UL FM
200×50 8×2	219.1×60.3 8.625×2.375	300 2.07	175 6.89	175 6.89	FM
200×65 8×2½	219.1×76.1 8.625×3.000	300 2.07	175 6.89	175 6.89	FM
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	175 6.89	175 6.89	FM

131R

Reducing Tee with Female Thread



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
100×25 4×1	114.3×33.7 4.500×1.315	300 2.07	76 2.99	88 3.47	UL FM
100×32 4×1¼	114.3×42.4 4.500×1.660	300 2.07	76 2.99	88 3.47	UL FM
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	85 3.35	91 3.58	UL FM
100×50 4×2	108.0×60.3 4.250×2.375	300 2.07	85 3.35	91 3.58	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	85 3.35	91 3.58	UL FM
125×50 5×2	133.0×60.3 5.250×2.375	300 2.07	86 3.39	106 4.17	UL FM
125×65 5×2½	133.0×76.1 5.250×3.000	300 2.07	102 4.02	111 4.37	UL FM
125×80 5×3	133.0×88.9 5.250×3.500	300 2.07	102 4.02	111 4.37	UL FM
125×25 5×1	139.7×33.7 5.500×1.315	300 2.07	78 3.07	103 4.06	UL FM
125×32 5×1¼	139.7×42.4 5.500×1.660	300 2.07	78 3.07	103 4.06	UL FM
125×40 5×1½	139.7×48.3 5.500×1.900	300 2.07	86 3.39	106 4.17	UL FM
125×50 5×2	139.7×60.3 5.500×2.375	300 2.07	86 3.39	106 4.17	UL FM
125×65 5×2½	139.7×76.1 5.500×3.000	300 2.07	102 4.02	111 4.37	UL FM
125×80 5×3	139.7×88.9 5.500×3.500	300 2.07	102 4.02	111 4.37	UL FM
150×60 6×2	159.0×60.3 6.250×2.375	300 2.07	92 3.62	124 4.88	UL FM
150×65 6×2½	159.0×76.1 6.250×3.000	300 2.07	107 4.21	129 5.08	UL FM
150×80 6×3	159.0×88.9 6.25×03.500	300 2.07	107 4.21	129 5.08	UL FM
150×25 6×1	165.1×33.7 6.500×1.315	300 2.07	83 3.27	121 4.76	UL FM
150×32 6×1¼	165.1×42.4 6.500×1.660	300 2.07	83 3.27	121 4.76	UL FM
150×40 6×1½	165.1×48.3 6.500×1.900	300 2.07	92 3.62	124 4.88	UL FM
150×50 6×2	165.1×60.3 6.500×2.375	300 2.07	92 3.62	124 4.88	UL FM
150×65 6×2½	165.1×76.1 6.500×3.000	300 2.07	107 4.21	129 5.08	UL FM
150×80 6×3	165.1×88.9 6.500×3.500	300 2.07	107 4.21	129 5.08	UL FM
150×50 6×2	168.3×60.3 6.625×2.375	300 2.07	92 3.62	124 4.88	UL FM
150×65 6×2½	168.3×76.1 6.625×3.000	300 2.07	107 4.21	129 5.08	UL FM
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	107 4.21	129 5.08	——

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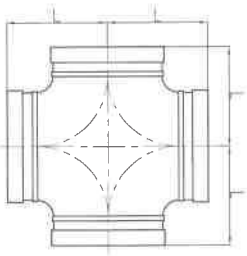
Cross

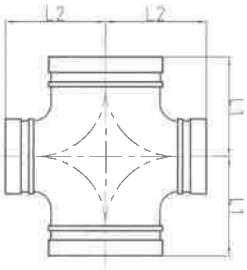


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
32 1¼	42.4 1.660	500 3.45	70 2.75	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	70 2.75	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	70 2.75	UL FM VdS LPCB
65 2½	73.0 2.875	500 3.45	76 3.00	UL FM
65 2½	76.1 3.000	500 3.45	76 3.00	UL FM VdS LPCB
80 3	88.9 3.500	500 3.45	85.5 3.37	UL FM VdS LPCB
100 4	108.0 4.250	500 3.45	101 3.98	UL FM
100 4	114.3 4.500	500 3.45	101 3.98	UL FM VdS LPCB
125 5	139.7 5.500	500 3.45	124 4.88	UL FM VdS LPCB
125 5	141.3 5.563	500 3.45	124 4.88	UL FM
150 6	159.0 6.250	500 3.45	140 5.50	UL FM
150 6	165.1 6.500	500 3.45	140 5.50	UL FM LPCB
150 6	168.3 6.625	500 3.45	140 5.50	UL FM VdS LPCB
200 8	219.1 8.625	500 3.45	175 6.89	UL FM VdS LPCB
250 10	273.0 10.750	500 3.45	229 9.00	UL FM VdS
300 12	323.9 12.750	500 3.45	254 10.00	UL FM VdS
350 14	355.6 14.000	300 2.07	279 10.98	—
350 14	377.0 14.84	300 2.07	279 10.98	—
400 16	406.4 16.000	300 2.07	305 12.01	—
450 18	457.2 18.000	300 2.07	343 13.5	—
500 20	508.0 20.000	300 2.07	381 15.00	—
600 24	609.6 24.000	300 2.07	432 17.01	—

Segmental sizes are made of carbon steel pipe or fabricated from wrought carbon steel. Contact manufacturer for details.

180R

Reducing Cross



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
65×50 2½×2	76.1×60.3 3.000×2.375	500 3.45	76 3.00	76 3.00	——
80×50 3×2	88.9×60.3 3.500×2.375	500 3.45	85.5 3.37	85.5 3.37	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	500 3.45	101 3.98	101 3.98	UL FM
100×80 4×3	114.3×88.9 4.500×3.500	500 3.45	101 3.98	101 3.98	UL FM
125×100 5×4	139.7×114.3 5.500×4.500	500 3.45	124 4.88	124 4.88	UL FM
159×108	159.0×108.0 6.250×4.250	500 3.45	124 4.88	124 5.50	UL FM
150×50 6×2	165.1×60.3 6.500×2.375	500 3.45	140 5.50	140 5.50	UL FM
150×65 6×2½	165.1×76.1 6.500×3.000	500 3.45	140 5.50	140 5.50	UL FM
150×80 6×3	165.1×88.9 6.500×3.500	500 3.45	140 5.50	140 5.50	UL FM
150×100 6×4	165.1×114.3 6.500×4.500	500 3.45	140 5.50	140 5.50	UL FM
150×50 6×2	168×60.3 6.625×2.375	500 3.45	140 5.50	140 5.50	UL FM
200×50 8×2	219.1×60.3 8.625×2.375	500 3.45	197 7.75	197 7.75	UL FM
200×100 8×4	219.1×114.3 8.625×4.500	500 3.45	175 6.89	175 6.89	UL FM
200×125 8×5	219.1×139.7 8.625×5.500	300 2.07	175 6.89	175 6.89	UL FM
200×150 8×6	219.1×159.0 8.625×6.250	300 2.07	175 6.89	175 6.89	UL FM
200×150 8×6	219.1×165.1 8.625×6.500	300 2.07	175 6.89	175 6.89	UL FM

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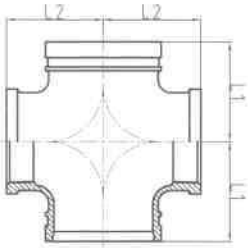
Reducing Cross with Female Thread



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
65×50 2½×2	76.1×60.3 3.000×2.375	300 2.07	76 3.00	76 3.00	——
80×32 3×1¼	88.9×42.4 3.500×1.660	300 2.07	108 4.25	108 4.25	——
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	85.5 3.37	85.5 3.37	——
80×50 3×2	88.9×60.3 3.500×2.375	300 2.07	85.5 3.37	85.5 3.37	——
100×25 4×1	114.3×33.7 4.500×1.315	300 2.07	76 2.99	88 3.47	UL FM
100×32 4×1¼	114.3×42.4 4.500×1.660	300 2.07	76 2.99	88 3.47	UL FM
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	85 3.35	91 3.58	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	85 3.35	91 3.58	UL FM
100×65 4×2½	114.3×76.1 4.500×3.000	300 2.07	101 3.98	96 3.78	——
100×80 4×3	114.3×88.9 4.500×3.500	300 2.07	101 3.98	96 3.78	——
150×32 6×1¼	165.1×42.4 6.500×1.660	300 2.07	92 3.62	124 4.88	——
150×40 6×1½	165.1×48.3 6.500×1.900	300 2.07	92 3.62	124 4.88	——
150×50 6×2	165.1×60.3 6.500×2.375	300 2.07	92 3.62	124 4.88	UL FM
150×65 6×2½	165.1X 76.1 6.500×3.000	300 2.07	140 5.50	140 5.50	——
150×80 6×3	165.1×88.9 6.500×3.500	300 2.07	140 5.50	140 5.50	——
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	175 6.89	175 6.89	——

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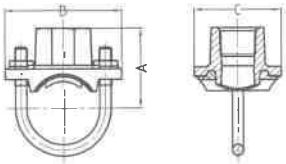
3L

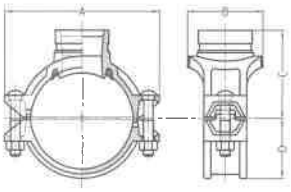
U-Bolt
Mechanical Tee



Nominal Size mm/in	Hole Dia mm/in +1.6,0/+0.063,0	Working Pressure PSI/MPa	Dimensions			U Bolt Size mm/in	Certificate
			A mm/in	B mm/in	C mm/in		
32X15 1¼X1/2	30 1.18	300 2.07	54.4 2.14	88.9 3.50	57.2 2.25	3/8X73 M10X73	UL FM VdS
32X20 1¼X3/4	30 1.18	300 2.07	54.4 2.14	88.9 3.50	57.2 2.25	3/8X73 M10X73	UL FM VdS
32X25 1¼X1	30 1.18	300 2.07	57.7 2.27	88.9 3.50	57.2 2.25	3/8X73 M10X73	UL FM VdS
40X15 1½X1/2	30 1.18	300 2.07	57.7 2.27	88.9 3.50	57.2 2.25	3/8X73 M10X73	UL FM VdS
40X20 1½X3/4	30 1.18	300 2.07	57.7 2.27	88.9 3.50	57.2 2.25	3/8X73 M10X73	UL FM VdS
40X25 1½X1	30 1.18	300 2.07	60.8 2.39	88.9 3.50	57.2 2.25	3/8X73 M10X73	UL FM VdS
50X15 2X1/2	30 1.18	300 2.07	63.3 2.49	95.3 3.75	57.2 2.25	3/8X90 M10X90	UL FM VdS
50X20 2X3/4	30 1.18	300 2.07	63.3 2.49	95.3 3.75	57.2 2.25	3/8X90 M10X90	UL FM VdS
50X25 2X1	30 1.18	300 2.07	66.6 2.62	95.3 3.75	57.2 2.25	3/8X90 M10X90	UL FM VdS
50X32 2X11/4	45 1.75	300 2.07	66.6 2.62	4.72 120	3.00 76	1/2X52	——
65X15 2½X1/2	30 1.18	300 2.07	69.9 2.75	108.0 4.25	57.2 2.250	3/8X105 M10X105	UL FM
65X20 2½X3/4	30 1.18	300 2.07	69.9 2.75	108.0 4.25	57.2 2.250	3/8X105 M10X105	UL FM
65X25 2½X1	30 1.18	300 2.07	73.2 2.88	108.0 4.25	57.2 2.25	3/8X105 M10X105	UL FM
65X15 76.1X1/2	30 1.18	300 2.07	69.9 2.75	108.0 4.25	57.2 2.250	3/8X105 M10X105	UL FM VdS
65X20 76.1X3/4	30 1.18	300 2.07	69.9 2.75	108.0 4.25	57.2 2.250	3/8X105 M10X105	UL FM VdS
65X25 76.1X1	30 1.18	300 2.07	73.2 2.88	108.0 4.25	57.2 2.25	3/8X105 M10X105	UL FM VdS
80X25 88.9X1	38 1.5	300 2.07	79 3.11	145 5.70	73 2.87	1/2X58	UL FM VdS
100X25 4X1	30 1.18	300 2.07	89 3.50	185 7.28	72 2.83	1/2X70	FM
100X32 4X1¼	51 2	300 2.07	95 3.74	185 7.28	85 3.35	1/2X70	FM
100X40 4X1½	51 2	300 2.07	95 3.74	185 7.28	85 3.35	1/2X70	FM
150X25 6X1	38 1.5	300 2.07	124 4.88	254 10.0	75 2.95	5/8X102	FM

3G

Mechanical Tee Grooved Outlet

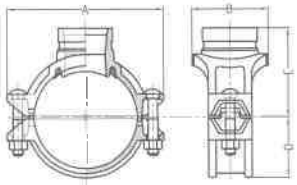


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions A mm/in	B mm/in	C mm/in	D mm/in	Bolt Size mm/in	Certificate
50×32 2×1¼	60.3×42.4 2.375×1.660	300 2.07	45 1.75	116 4.57	76 2.99	69.5 2.74	39 1.54	3/8×55 M10X57	UL FM VdS
50×40 2×1½	60.3×48.3 2.375×1.900	300 2.07	45 1.75	116 4.57	76 2.99	69.5 2.74	39 1.54	3/8×55 M10X57	UL FM VdS
65×25 2½×1	73.0×33.7 2.875×1.315	300 2.07	38 1.50	137 5.39	71 2.80	78 3.07	49 1.93	1/2×70 M12X70	——
65×32 2½×1¼	73.0×42.4 2.875×1.660	300 2.07	51 2.00	137 5.39	84.5 3.33	78 3.07	49 1.93	1/2×70 M12X70	UL FM
65×40 2½×1½	73.0×48.3 2.875×1.900	300 2.07	51 2.00	137 5.39	84.5 3.33	78 3.07	49 1.93	1/2×70 M12X70	UL FM
65×25 76.1×1	76.1×33.7 3.000×1.315	300 2.07	38 1.50	137 5.39	71 2.80	78 3.07	49.5 1.95	1/2×70 M12X70	UL FM VdS
65×32 76.1×1¼	76.1×42.4 3.000×1.660	300 2.07	51 2.00	137 5.39	84.5 3.33	78 3.07	49.5 1.95	1/2×70 M12X70	UL FM VdS
65×40 76.1×1½	76.1×48.3 3.000×1.900	300 2.07	51 2.00	137 5.39	84.5 3.33	78 3.07	49.5 1.95	1/2×70 M12X70	UL FM VdS
80×25 3×1	88.9×33.7 3.500×1.315	300 2.07	38 1.50	152 5.98	72.5 2.85	84.5 3.33	56.5 2.22	1/2×75 M12X76	UL FM VdS
80×32 3×1¼	88.9×42.4 3.500×1.660	300 2.07	51 2.00	152 5.98	85.5 3.37	84.5 3.33	56.5 2.22	1/2×75 M12X76	UL FM VdS
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	51 2.00	152 5.98	85.5 3.37	84.5 3.33	56.5 2.22	1/2×75 M12X76	UL FM VdS
80×50 3×2	88.9×60.3 3.500×2.375	300 2.07	64 2.50	152 5.98	98 3.86	84.5 3.33	56.5 2.22	1/2×75 M12X76	UL FM VdS
100×25 4×1	114.3×33.7 4.500×1.315	300 2.07	38 1.50	188 7.40	78.4 3.09	102 4.02	70 2.76	1/2×75 M12X76	UL FM VdS
100×32 4×1¼	114.3X42.4 4.500×1.660	300 2.07	51 2.00	188 7.40	89 3.50	102 4.02	70 2.76	1/2×75 M12X76	UL FM VdS
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	51 2.00	188 7.40	89 3.50	102 4.02	70 2.76	1/2×75 M12X76	UL FM VdS
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	64 2.5	188 7.40	104.5 4.11	102 4.02	70 2.76	1/2×75 M12X76	UL FM VdS
100×65 4×2½	114.3×73.0 4.500×2.875	300 2.07	70 2.75	188 7.40	104.5 4.11	102 4.02	70 2.76	1/2×75 M12X76	UL FM
100×65 4×76.1	114.3×76.1 4.500×3.000	300 2.07	70 2.75	188 7.40	104.5 4.11	102 4.02	70 2.76	1/2×75 M12X76	VdS LPCB
100×80 4×3	114.3×88.9 4.500×3.500	300 2.07	89 3.50	188 7.40	128 5.03	102 4.02	70 2.76	1/2×75 M12X76	UL FM VdS LPCB
125×32 139.7×1¼	139.7×42.4 5.500×1.660	300 2.07	51 2.00	221.5 8.72	95 3.74	118 4.65	84 3.31	5/8×85 M16X85	UL FM
125×40 139.7×1½	139.7×48.3 5.500×1.900	300 2.07	51 2.00	221.5 8.72	95 3.74	118 4.65	84 3.31	5/8×85 M16X85	UL FM
125×50 139.7×2	139.7×60.3 5.500×2.375	300 2.07	64 2.5	221.5 8.72	112.5 4.43	118 4.65	84 3.31	5/8×85 M16X85	UL FM VdS
125×65 139.7×76.1	139.7×76.1 5.500×3.000	300 2.07	70 2.75	221.5 8.72	112.5 4.43	118 4.65	84 3.31	5/8×85 M16X85	UL FM VdS LPCB
125×80 139.7×3	139.7×88.9 5.500×3.500	300 2.07	89 3.50	221.5 8.720	132 5.20	118 4.65	84 3.31	5/8×85 M16X85	UL FM VdS LPCB
125×100 139.7×4	139.7×114.3 5.500×4.500	300 2.07	114 4.50	221.5 8.720	160 6.30	125 4.92	84 3.31	5/8×85 M16X85	UL FM VdS LPCB
150×50 159.0×2	159.1×60.3 6.250×2.375	300 2.07	64 2.5	244 9.60	112.5 4.43	125 4.92	94 3.70	5/8×105 M16X108	——
150×100 159.0×108.0	159.1×108.0 6.250×4.250	300 2.07	114 4.50	244 9.60	154 6.06	133 5.24	94 3.70	5/8×105 M16X108	UL FM
150×100 159.0×4	159.1×114.3 6.250×4.500	300 2.07	114 4.50	244 9.60	159 6.26	125 4.92	94 3.70	5/8×105 M16X108	UL FM
150×50 165.1×2	165.1×60.3 6.500×2.375	300 2.07	64 2.5	244 9.60	112.5 4.43	127 5.00	97.5 3.84	5/8×105 M16X108	UL FM
150×65 165.1×76.1	165.1×76.1 6.500×3.000	300 2.07	70 2.75	244 9.60	112.5 4.43	130 5.12	97.5 3.84	5/8×105 M16X108	UL FM LPCB
150×80 6½O.D×3	165.1×88.9 6.500×3.500	300 2.07	89 3.50	244 9.60	132 5.20	130 5.12	97.5 3.84	5/8×105 M16X108	UL FM LPCB
150×100 6½O.D×4	165.1×114.3 6.500×4.500	300 2.07	114 4.50	244 9.60	154 6.06	135 5.32	97.5 3.84	5/8×105 M16X108	UL FM LPCB
150×40 6×1½	168.3×48.3 6.500×1.900	300 2.07	51 2.00	247 9.72	95 3.74	128 5.04	98.5 3.88	5/8×105 M16X108	UL FM VdS
150×50 6×2	168.3×60.3 6.625×2.375	300 2.07	64 2.5	247 9.72	114 4.49	134 5.28	98.5 3.88	5/8×105 M16X108	UL FM VdS

NSF/ANSI 61 NSF/ANSI 372 ACS

3G

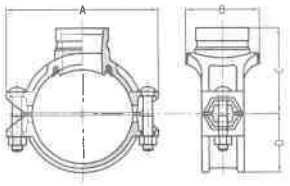
Mechanical Tee
Grooved Outlet



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions A mm/in	B mm/in	C mm/in	D mm/in	Bolt Size mm/in	Certificate
150×65 6×2½	168.3×73.0 6.625×2.875	300 2.07	70 2.75	247 9.72	112.5 4.43	135 5.32	98.5 3.88	5/8×105 M16X108	UL FM
150×65 6×2½	168.3×76.1 6.625×3.000	300 2.07	70 2.75	247 9.72	112.5 4.43	135 5.32	98.5 3.88	5/8×105 M16X108	VdS LPCB
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	89 3.50	247 9.72	132 5.20	136.5 5.37	98.5 3.88	5/8×105 M16X108	UL FM VdS LPCB
150×100 6×4	168.3×114.3 6.625×4.500	300 2.07	114 4.50	247 9.72	160 6.30	138 5.43	98.5 3.88	5/8×105 M16X108	UL FM VdS LPCB
200×50 8×2	219.1×60.3 8.625×2.375	300 2.07	64 2.5	320 12.60	118 4.65	158 6.22	125 4.92	3/4×115 M20X115	UL FM VdS
200×65 8×76.1	216.3×76.1 8.516×3.000	300 2.07	70 2.75	315 12.40	117 4.61	157 6.18	122 4.80	3/4×115 M20X115	——
200×65 8×21/2	219.1×73.0 8.625×2.875	300 2.07	70 2.75	320 12.60	118 4.65	158 6.22	125 4.92	3/4×115 M20X115	UL FM VdS LPCB
200×65 8×76.1	219.1×76.1 8.625×3.000	300 2.07	70 2.75	320 12.60	118 4.65	158 6.22	125 4.92	3/4×115 M20X115	UL FM VdS LPCB
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	89 3.50	320 12.60	136.5 5.37	161 6.34	125 4.92	3/4×115 M20X115	UL FM VdS LPCB
200×100 8×4	219.1×108.0 8.625×4.250	300 2.07	114 4.50	320 12.60	162 6.38	161 6.34	125 4.92	3/4×115 M20X115	UL FM
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	114 4.50	320 12.60	162 6.38	161 6.34	125 4.92	3/4×115 M20X115	UL FM VdS LPCB
250×65 10×2½	273.0×76.1 10.75×3.000	300 2.07	70 2.75	376 14.80	118 4.65	189 7.44	155 6.10	3/4×120 M20X115	——
250×80 10×3	273.0×88.9 10.75×3.500	300 2.07	89 3.50	376 14.80	136.5 5.37	189 7.44	155 6.10	3/4×120 M20X115	——
250×100 10×4	273.0×108 10.75×4.250	300 2.07	114 4.50	376 14.80	164 6.46	189 7.44	155 6.10	3/4×120 M20X115	UL FM
250×100 10×4	273.0×114.3 10.75×4.500	300 2.07	114 4.50	376 14.80	164 6.46	189 7.44	155 6.10	3/4×120 M20X115	UL FM VdS

3GS

Light-duty
Mechanical Tee
Grooved Outlet

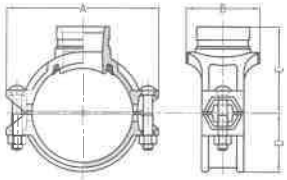


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions A mm/in	B mm/in	C mm/in	D mm/in	Bolt Size mm/in	Certificate
80×25 3×1	88.9×33.7 3.500×1.315	365 2.52	38 1.50	150 5.91	71.0 2.80	84 3.31	55.5 2.19	1/2×75 M12X76	UL FM
80×32 3×1¼	88.9×42.4 3.500×1.660	365 2.52	51 2.00	150 5.91	84.5 3.33	84 3.31	55.5 2.19	1/2×75 M12X76	UL FM
80×40 3×1½	88.9×48.3 3.500×1.900	365 2.52	51 2.00	150 5.91	84.5 3.33	84 3.31	55.5 2.19	1/2×75 M12X76	UL FM
80×50 3×2	88.9×60.3 3.500×2.375	365 2.52	64 2.50	150 5.91	98 3.86	84 3.31	55.5 2.19	1/2×75 M12X76	UL FM
100×25 4×1	114.3×33.7 4.500×1.315	300 2.07	38 1.50	178 7.01	77.5 3.05	98 3.86	67.5 2.66	1/2×75 M12X76	UL FM
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	51 2.00	178 7.01	88 3.46	98 3.86	67.5 2.66	1/2×75 M12X76	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	64 2.50	178 7.01	103.5 4.07	98 3.86	67.5 2.66	1/2×75 M12X76	UL FM
100×65 4×2½	114.3×73.0 4.500×2.875	300 2.07	70 2.75	178 7.01	103.5 4.07	98 3.86	67.5 2.66	1/2×75 M12X76	UL FM
100×65 4×76.1	114.3×76.1 4.500×3.000	300 2.07	70 2.75	178 7.01	103.5 4.07	98 3.86	67.5 2.66	1/2×75 M12X76	UL FM
100×80 4×3	114.3×88.9 4.500×3.500	300 2.07	89 3.50	178 7.01	124 4.88	98 3.86	67.5 2.66	1/2×75 M12X76	UL FM

3GS

Light-duty Mechanical Tee Grooved Outlet

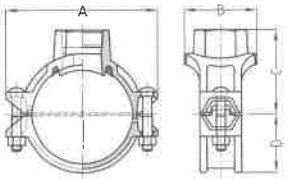
c UL us LISTED FM APPROVED



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
125×80 133.0×3	133.0×88.9 5.250×3.500	300 2.07	89 3.50	203 7.99	132 5.12	110 4.33	77.5 3.05	5/8×85 M16X85	UL FM
125×32 139.7×11/4	139.7×42.4 5.500×1.660	300 2.07	51 2.00	210 8.27	91 3.58	113 4.45	82 3.23	5/8×85 M16X85	UL FM
125×40 139.7×11/2	139.7×48.3 5.500×1.900	300 2.07	51 2.00	210 8.27	91 3.58	113 4.45	82 3.23	5/8×85 M16X85	UL FM
125×50 139.7×2	139.7×60.3 5.500×2.375	300 2.07	64 2.50	210 8.27	110 4.33	113 4.45	82 3.23	5/8×85 M16X85	UL FM
125×65 139.7×76.1	139.7×76.1 5.500×3.000	300 2.07	70 2.75	210 8.27	110 4.33	113 4.45	82 3.23	5/8×85 M16X85	UL FM
125×80 139.7×3	139.7×88.9 5.500×3.500	300 2.07	89 3.50	210 8.27	130 5.12	113 4.45	82 3.23	5/8×85 M16X85	UL FM
125×6 139.7×4	139.7×114.3 5.500×4.500	175 1.21	114 4.50	210 8.27	153 6.02	115 4.52	82 3.23	5/8×85 M16X85	UL FM
150×65 159.0×76.1	159.1×76.1 6.250×3.000	300 2.07	70 2.75	227 8.94	110 4.33	122.5 4.83	91 3.58	5/8×105 M16X108	UL FM
150×80 159.0×88.9	159.1×88.9 6.250×3.500	300 2.07	89 3.50	227 8.94	130 5.11	122.5 4.83	91 3.58	5/8×105 M16X108	UL FM
150×100 159.0×108.0	159.1×108.0 6.250×4.250	300 2.07	114 4.50	227 8.94	155 6.10	122.5 4.83	91 3.58	5/8×105 M16X108	UL FM
150×100 159.0×4	159.1×114.3 6.250×4.500	300 2.07	114 4.50	227 8.94	155 6.10	122.5 4.83	91 3.58	5/8×105 M16X108	UL FM
150×32 165.1×11/4	165.1×42.4 6.500×1.900	300 2.07	51 2.00	235 9.25	92.5 3.64	124.5 4.90	94.5 3.72	5/8×105 M16X108	UL FM
150×50 165.1×2	165.1×60.3 6.500×2.375	300 2.07	64 2.50	235 9.25	110 4.33	124.5 4.90	94.5 3.72	5/8×105 M16X108	UL FM
150×65 165.1×76.1	165.1×76.1 6.500×3.000	300 2.07	70 2.75	235 9.25	110 4.33	124.5 4.90	94.5 3.72	5/8×105 M16X108	UL FM
150×80 165.1×3	165.1×88.9 6.500×3.500	300 2.07	89 3.50	235 9.25	130 5.12	124.5 4.90	94.5 3.72	5/8×105 M16X108	UL FM
150×100 165.1×4	165.1×108 6.500×4.250	300 2.07	114 4.50	235 9.25	155 6.10	126 4.96	94.5 3.72	5/8×105 M16X108	——
150×100 165.1×4	165.1×114.3 6.500×4.500	300 2.07	114 4.50	235 9.25	155 6.10	126 4.96	94.5 3.72	5/8×105 M16X108	UL FM
150×32 6×1¼	168.3×42.4 6.500×1.660	300 2.07	51 2.00	240 9.45	92.5 3.64	126 4.96	96.5 3.80	5/8×105 M16X108	UL FM
150×40 6×1½	168.3×48.3 6.500×1.900	300 2.07	51 2.00	240 9.45	92.5 3.64	126 4.96	96.5 3.80	5/8×105 M16X108	UL FM
150×50 6×2	168.3×60.3 6.625×2.375	300 2.07	64 2.50	240 9.45	110 4.33	126 4.96	96.5 3.80	5/8×105 M16X108	UL FM
150×65 6×2½	168.3×73.0 6.625×2.875	300 2.07	70 2.75	240 9.45	110 4.33	126 4.96	96.5 3.80	5/8×105 M16X108	UL FM
150×65 6×76.1	168.3×76.1 6.625×3	300 2.07	70 2.75	240 9.45	110 4.33	126 4.96	96.5 3.80	5/8×105 M16X108	UL FM
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	89 3.50	240 9.45	130 5.12	126 4.96	96.5 3.80	5/8×105 M16X108	UL FM
150×100 6×4	168.3×114.3 6.625×4.500	300 2.07	114 4.50	240 9.45	155 6.10	128 5.04	96.5 3.80	5/8×105 M16X108	UL FM
200×50 8×2	219.1×60.3 8.625×2.375	300 2.07	64 2.50	300 11.81	117 4.60	155 6.10	123 4.84	5/8×105 M16X108	UL FM
200×65 8×2½	219.1×73 8.625×2.875	300 2.07	70 2.75	300 11.81	117 4.60	155 6.10	123 4.84	5/8×105 M16X108	UL FM
200×65 8×76.1	219.1×76.1 8.625×3.000	300 2.07	70 2.75	300 11.81	117 4.60	155 6.10	123 4.84	5/8×105 M16X108	UL FM
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	89 3.50	300 11.81	135.5 5.33	155 6.10	123 4.84	5/8×105 M16X108	UL FM
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	114 4.50	300 11.81	164 6.46	160 6.30	123 4.84	5/8×105 M16X108	UL FM

3J

Mechanical Tee
Threaded Outlet



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions A mm/in	B mm/in	C mm/in	D mm/in	Bolt Size mm/in	Certificate
25X10 1X3/8	33.7X17.2 1.315X0.677	300 2.07	23.5 0.92	86 3.38	46 1.81	26 1.02	24.5 0.96	M8X30	——
25X15 1X1/2	33.7X21.3 1.315X0.825	300 2.07	23.5 0.92	86 3.38	46 1.81	26 1.02	24.5 0.96	M8X30	VdS
25X20 1X3/4	33.7X26.9 1.315X1.050	300 2.07	23.5 0.92	86 3.38	52 2.05	41 1.61	24.5 0.96	M8X30	VdS
25X25 1X1	33.7X33.7 1.315X1.315	300 2.07	23.5 0.92	86 3.38	57 2.24	45 1.77	24.5 0.96	M8X30	VdS
32X10 11/4X3/8	42.4X17.2 1.660X0.677	300 2.07	30 1.18	95.5 3.76	53 2.09	32 1.26	29 1.14	M10X35	——
32X15 11/4X1/2	42.4X21.3 1.660X0.825	300 2.07	30 1.18	95.5 3.76	57 2.24	32 1.26	29 1.14	M10X35	VdS
32X20 11/4X3/4	42.4X26.9 1.660X1.050	300 2.07	30 1.18	95.5 3.76	57 2.24	44 1.73	29 1.14	M10X35	VdS
32X25 11/4X1	42.4X33.7 1.660X1.315	300 2.07	30 1.18	95.5 3.76	57 2.24	53 2.09	29 1.14	M10X35	VdS
40X10 11/2X3/8	48.3X17.2 1.900X0.677	300 2.07	30 1.18	101.5 3.99	53 2.09	34 1.34	32.5 1.28	M10X35	——
40X15 11/2X1/2	48.3X21.3 1.900X0.825	300 2.07	30 1.18	101.5 3.99	57 2.24	35.5 1.40	32.5 1.28	M10X35	VdS
40X20 11/2X3/4	48.3X26.9 1.900X1.050	300 2.07	30 1.18	101.5 3.99	57 2.24	47.5 1.87	32.5 1.28	M10X35	VdS
40X25 11/2X1	48.3X33.7 1.900X1.315	300 2.07	30 1.18	101.5 3.99	57 2.24	56 2.20	32.5 1.28	M10X35	VdS
50×10 2×3/8	60.3×17.2 2.375×0.677	300 2.07	38 1.50	116 4.57	68 2.68	44 1.73	39 1.54	3/8×55 M10X57	——
50×15 2×½	60.3×21.3 2.375×0.825	300 2.07	38 1.50	116 4.57	68 2.68	60 2.36	39 1.54	3/8×55 M10X57	UL FM VdS
50×20 2×¾	60.3×26.9 2.375×1.050	300 2.07	38 1.50	116 4.57	68 2.68	60 2.36	39 1.54	3/8×55 M10X57	UL FM VdS
50×25 2×1	60.3×33.7 2.375×1.315	300 2.07	38 1.50	116 4.57	68 2.68	60 2.36	39 1.54	3/8×55 M10X57	UL FM VdS
50×32 2×1¼	60.3×42.4 2.375×1.660	300 2.07	45 1.75	116 4.57	76 2.99	65 2.56	39 1.54	3/8×55 M10X57	UL FM VdS
50×40 2×1½	60.3×48.3 2.375×1.900	300 2.07	45 1.75	116 4.57	76 2.99	65 2.56	39 1.54	3/8×55 M10X57	UL FM VdS
65×15 2½×½	73.0×21.3 2.875×0.825	300 2.07	38 1.50	137 5.39	71 2.76	68 2.67	49 1.93	1/2×70 M12X70	UL FM
65×20 2½×¾	73.0×26.9 2.875×1.050	300 2.07	38 1.50	137 5.39	71 2.76	68 2.67	49 1.93	1/2×70 M12X70	UL FM
65×25 2½×1	73.0×33.7 2.875×1.315	300 2.07	38 1.50	137 5.39	71 2.76	70 2.75	49 1.93	1/2×70 M12X70	UL FM
65×32 2½×1¼	73.0×42.4 2.875×1.660	300 2.07	51 2.00	137 5.397	84.5 3.33	73 2.87	49 1.93	1/2×70 M12X70	UL FM
65×40 2½×1½	73.0×48.3 2.875×1.900	300 2.07	51 2.00	137 5.39	84.5 3.33	73 2.87	49 1.93	1/2×70 M12X70	UL FM
65×15 76.1×½	76.1×21.3 3.000×0.825	300 2.07	38 1.50	137 5.39	71 2.80	61.5 2.42	49.5 1.95	1/2×70 M12X70	UL FM VdS
65×20 76.1×¾	76.1×26.9 3.000×1.050	300 2.07	38 1.50	137 5.39	71 2.80	68 2.67	49.5 1.95	1/2×70 M12X70	UL FM VdS
65×25 76.1×1	76.1×33.7 3.000×1.315	300 2.07	38 1.50	137 5.39	71 2.80	75 3.05	49.5 1.95	1/2×70 M12X70	UL FM VdS
65×32 76.1×1¼	76.1×42.4 3.000×1.660	300 2.07	51 2.00	137 5.39	84.5 3.33	75 3.05	49.5 1.95	1/2×70 M12X70	UL FM VdS
65×40 76.1×1½	76.1×48.3 3.000×1.900	300 2.07	51 2.00	137 5.39	84.5 3.33	75 3.05	49.5 1.95	1/2×70 M12X70	UL FM VdS
80×15 3×½	88.9×21.3 3.500×0.825	300 2.07	38 1.50	152 5.98	72.5 2.85	71.5 2.81	56.5 2.22	1/2×75 M12X76	UL FM VdS
80×20 3×¾	88.9×26.9 3.500×1.050	300 2.07	38 1.50	152 5.98	72.5 2.85	71.5 2.81	56.5 2.22	1/2×75 M12X76	UL FM VdS
80×25 3×1	88.9×33.7 3.500×1.315	300 2.07	38 1.50	152 5.98	72.5 2.85	80 3.15	56.5 2.22	1/2×75 M12X76	UL FM VdS
80×32 3×1¼	88.9×42.4 3.500×1.660	300 2.07	51 2.00	152 5.98	85.5 3.37	80 3.15	56.5 2.22	1/2×75 M12X76	UL FM VdS
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	51 2.00	152 5.98	85.5 3.37	80 3.15	56.5 2.22	1/2×75 M12X76	UL FM VdS
80×50 3×2	88.9×60.3 3.500×2.375	300 2.07	64 2.50	152 5.98	98 3.86	80 3.15	56.5 2.22	1/2×75 M12X76	UL FM VdS

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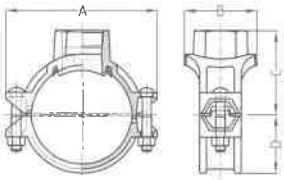
Mechanical Tee Threaded Outlet



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				A mm/in	B mm/in	C mm/in	D mm/in		
100×15 108.0×1/2	108.1×21.3 4.250×0.825	300 2.07	38 1.50	172 6.77	78.5 3.09	87 3.43	64.5 2.54	1/2×75 M12X76	UL FM
100×20 108.0×3/4	108.1×26.9 4.250×1.050	300 2.07	38 1.50	172 6.77	78.5 3.09	87 3.43	64.5 2.54	1/2×75 M12X76	UL FM
100×25 108.0×1	108.1×33.7 4.250×1.315	300 2.07	38 1.50	172 6.77	78.5 3.09	87 3.43	64.5 2.54	1/2×75 M12X76	UL FM
100×32 108.0×1¼	108.1×42.4 4.250×1.660	300 2.07	51 2.00	172 6.77	89 3.50	87 3.43	64.5 2.54	1/2×75 M12X76	UL FM
100×40 108.0×1½	108.0×48.3 4.250×1.900	300 2.07	51 2.00	172 6.77	89 3.50	87 3.43	64.5 2.54	1/2×75 M12X76	UL FM
100×50 108.0×2	108.0×60.3 4.250×2.375	300 2.07	64 2.50	172 6.77	106.5 4.19	92 3.62	64.5 2.54	1/2×75 M12X76	UL FM
100×65 108.0×76.1	108.0×76.1 4.250×3.000	300 2.07	70 2.75	172 6.77	106.5 4.19	100 3.94	64.5 2.54	1/2×75 M12X76	UL FM
100×15 4×½	114.3×21.3 4.500×0.825	300 2.07	38 1.50	188 7.40	78.5 3.09	90 3.54	70 2.76	1/2×75 M12X76	UL FM VdS
100×20 4×¾	114.3×26.9 4.500×1.050	300 2.07	38 1.50	188 7.40	78.5 3.09	90 3.54	70 2.76	1/2×75 M12X76	UL FM VdS
100×25 4×1	114.3×33.7 4.500×1.315	300 2.07	38 1.50	188 7.40	78.5 3.09	93 3.66	70 2.76	1/2×75 M12X76	UL FM VdS
100×32 4×1¼	114.3×42.4 4.500×1.660	300 2.07	51 2.00	188 7.40	89 3.50	95 3.74	70 2.76	1/2×75 M12X76	UL FM VdS
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	51 2.00	188 7.40	89 3.50	97 3.82	70 2.76	1/2×75 M12X76	UL FM VdS
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	64 2.50	188 7.40	104.5 4.11	100 3.94	70 2.76	1/2×75 M12X76	UL FM VdS
100×65 4×2½	114.3×73.0 4.500×2.875	300 2.07	70 2.75	188 7.40	104.5 4.11	102 4.02	70 2.76	1/2×7 M12X765	UL FM
100×65 4×76.1	114.3×76.1 4.500×3.000	300 2.07	70 2.75	188 7.40	104.5 4.11	102 4.02	70 2.76	1/2×75 M12X76	UL FM VdS LPCB
100×80 4×3	114.3×88.9 4.500×3.500	300 2.07	89 3.50	188 7.40	128 5.039	102 4.02	70 2.76	1/2×75 M12X76	UL FM VdS LPCB
125×32 133.0×1.25	133.0×42.4 5.250×1.660	300 2.07	51 2.00	209 8.23	93 3.66	105 4.13	77 3.03	5/8×85 M16X85	UL FM
125×40 133.0×1½	133.0×48.3 5.250×1.900	300 2.07	51 2.00	209 8.23	93 3.66	105 4.13	77 3.03	5/8×85 M16X85	UL FM
125×50 133.0×2	133.0×60.3 5.250×2.375	300 2.07	64 2.50	209 8.23	112.5 4.43	110 4.33	77 3.03	5/8×85 M16X85	UL FM
125×15 139.7×1/2	139.7×21.3 5.500×0.825	300 2.07	38 1.50	221.5 8.72	78 3.07	110 4.33	84 3.31	5/8×85 M16X85	UL FM VdS
125×20 139.7×3/4	139.7×26.9 5.500×1.050	300 2.07	38 1.50	221.5 8.72	78 3.07	110 4.33	84 3.31	5/8×85 M16X85	UL FM VdS
125×25 139.7×1	139.7×33.7 5.500×1.315	300 2.07	38 1.50	221.5 8.72	78 3.07	110 4.33	84 3.31	5/8×85 M16X85	UL FM VdS
125×32 139.7×1¼	139.7×42.4 5.500×1.660	300 2.07	51 2.00	221.5 8.72	95 3.74	112 4.41	84 3.31	5/8×85 M16X85	UL FM VdS
125×40 139.7×1½	139.7×48.3 5.500×1.900	300 2.07	51 2.00	221.5 8.72	95 3.74	112 4.41	84 3.31	5/8×85 M16X85	UL FM VdS
125×50 139.7×2	139.7×60.3 5.500×2.375	300 2.07	64 2.50	221.5 8.72	112.5 4.43	115 4.53	84 3.31	5/8×85 M16X85	UL FM VdS
125×65 139.7×76.1	139.7×76.1 5.500×3.000	300 2.07	70 2.75	221.5 8.72	112.5 4.43	115 4.53	84 3.31	5/8×85 M16X85	UL FM VdS LPCB
125×80 139.7×3	139.7×88.9 5.500×3.500	300 2.07	89 3.50	221.5 8.72	132 5.20	120 4.72	84 3.31	5/8×85 M16X85	UL FM VdS LPCB
125×100 139.7×4	139.7×114.3 5.500×4.500	300 2.07	114 4.50	221.5 8.72	156 6.30	125 4.92	84 3.31	5/8×85 M16X85	UL FM VdS LPCB
150×15 159.0×1/2	159.0×21.3 6.250×0.825	300 2.07	38 1.50	244 9.60	78 3.07	116 4.57	94 3.70	5/8×105 M16X108	UL FM
150×25 159.0×1	159.0×33.7 6.250×1.315	300 2.07	38 1.50	244 9.60	78 3.07	116 4.57	94 3.70	5/8×105 M16X108	UL FM
150×32 159.0×1¼	159.0×42.4 6.250×1.660	300 2.07	51 2.00	244 9.60	93 3.66	118 4.65	94 3.70	5/8×105 M16X108	UL FM
150×40 159.0×1½	159.0×48.3 6.250×1.900	300 2.07	51 2.00	244 9.60	93 3.66	118 4.65	94 3.70	5/8×105 M16X108	UL FM

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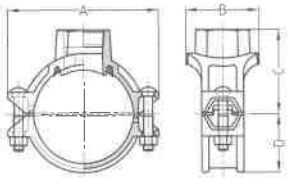
Mechanical Tee
Threaded Outlet



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
150×50 159.0×2	159.0×60.3 6.250×2.375	300 2.07	64 2.50	244 9.60	112.5 4.43	125 4.92	94 3.70	5/8×105 M16X108	UL FM
150×65 159.0×76.1	159.0×76.1 6.250×3.000	300 2.07	70 2.75	244 9.60	112.5 4.43	125 4.92	94 3.70	5/8×105 M16X108	UL FM
150×80 159.0×3	159.0×88.9 6.250×3.500	300 2.07	89 3.50	244 9.60	133 5.20	125 4.92	94 3.70	5/8×105 M16X108	UL FM
150×100 159.0×4	159.1×114.3 6.250×4.500	175 1.20	114 4.50	244 9.60	156.5 6.16	130 5.12	94 3.70	5/8×105 M16X108	UL FM
150×15 165.1×½	165.1×21.3 6.500×0.825	300 2.07	38 1.50	244 9.60	78 3.07	110 4.33	97.5 3.84	5/8×105 M16X108	UL FM
125×20 165.1×¾	165.1×26.9 6.500×1.050	300 2.07	38 1.50	244 9.60	78 3.07	110 4.33	97.5 3.84	5/8×105 M16X108	UL FM
150×25 165.1×1	165.1×33.7 6.500×1.315	300 2.07	38 1.50	244 9.60	78 3.07	118 4.65	97.5 3.84	5/8×105 M16X108	UL FM
150×32 165.1×1¼	165.1×42.4 6.500×1.660	300 2.07	51 2.00	244 9.60	93 3.66	118 4.65	97.5 3.84	5/8×105 M16X108	UL FM
150×40 165.1×1½	165.1×48.3 6.500×1.900	300 2.07	51 2.00	244 9.60	93 3.66	118 4.65	97.5 3.84	5/8×105 M16X108	UL FM
150×50 165.1×2	165.1×60.3 6.500×2.375	300 2.07	64 2.50	244 9.60	112.5 4.43	128.5 5.43	97.5 3.84	5/8×105 M16X108	UL FM
150×65 165.1×76.1	165.1×76.1 6.500×3.000	300 2.07	70 2.75	244 9.60	112.5 4.43	128.5 5.43	97.5 3.84	5/8×105 M16X108	UL FM LPCB
150×80 165.1×3	165.1×88.9 6.500×3.500	300 2.07	89 3.50	244 9.60	132 5.20	128.5 5.06	97.5 3.84	5/8×105 M16X108	UL FM LPCB
150×100 165.1×4	165.1×114.3 6.500×4.500	225 1.6	114 4.50	244 9.60	154 6.18	135 5.32	97.5 3.84	5/8×105 M16X108	UL FM LPCB
150×32 6×1¼	168.3×42.4 6.500×1.660	300 2.07	51 2.00	247 9.72	95 3.74	122 4.80	98.5 3.88	5/8×105 M16X108	UL FM VdS
150×40 6×1½	168.3×48.3 6.500×1.900	300 2.07	51 2.00	247 9.72	95 3.74	122 4.80	98.5 3.88	5/8×105 M16X108	UL FM VdS
150×50 6×2	168.3×60.3 6.825×2.375	300 2.07	64 2.50	247 9.72	112.5 4.43	132 5.20	98.5 3.88	5/8×105 M16X108	UL FM VdS
150×65 6×2½	168.3×73.0 6.625×2.875	300 2.07	70 2.75	247 9.72	112.5 4.43	132 5.20	98.5 3.88	5/8×105 M16X108	UL FM
150×65 6×76.1	168.3×76.1 6.625×3.000	300 2.07	70 2.75	247 9.72	112.5 4.43	132 5.20	98.5 3.88	5/8×105 M16X108	UL FM VdS LPCB
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	89 3.50	247 9.72	132 5.20	140 5.51	98.5 3.88	5/8×105 M16X108	UL FM VdS LPCB
150×100 6×4	168.3×114.3 6.625×4.500	300 2.07	114 4.50	247 9.72	160 6.30	140 5.51	98.5 3.88	5/8×105 M16X108	UL FM VdS LPCB
200×25 8×1	219.1×33.7 8.625×1.315	300 2.07	38 1.50	320 12.60	79.5 3.13	150 5.91	125 4.92	3/4×115 M20X115	UL FM VdS
200×32 8×1¼	219.1×42.4 8.625×1.660	300 2.07	51 2.00	320 12.60	96.5 3.80	150 5.91	125 4.92	3/4×115 M20X115	UL FM VdS
200×40 8×1½	219.1×48.3 8.625×1.900	300 2.07	51 2.00	320 12.60	96.5 3.80	150 5.91	125 4.92	3/4×115 M20X115	UL FM VdS
200×50 8×2	219.1×60.3 8.625×2.375	300 2.07	64 2.50	320 12.60	117 4.61	160 6.30	125 4.92	3/4×115 M20X115	UL FM VdS
200×65 8×2½	219.1×73.0 8.625×2.875	300 2.07	70 2.75	320 12.60	118 4.65	160 6.30	125 4.92	3/4×115 M20X115	UL FM
200×65 8×76.1	219.1×76.1 8.625×3.000	300 2.07	70 2.75	320 12.60	118 4.65	160 6.30	125 4.92	3/4×115 M20X115	UL FM VdS LPCB
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	89 3.50	320 12.60	136.5 5.37	160 6.30	125 4.92	3/4×115 M20X115	UL FM VdS LPCB
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	114 4.50	320 12.60	164 6.46	160 6.30	125 4.92	3/4×115 M20X115	UL FM VdS LPCB
250×40 10×1½	273.0×48.3 10.750×1.900	300 2.07	51 2.00	376 14.80	95.5 3.76	180 7.09	155 6.10	3/4×120 M20X115	UL FM
250×50 10×2	273.0×60.3 10.750×2.375	300 2.07	64 2.50	376 14.80	118 4.65	185 7.28	155 6.10	3/4×120 M20X115	UL FM VdS
250×65 10×76.1	273.0×76.1 10.750×3.000	300 2.07	70 2.75	376 14.80	118 4.65	190 7.48	155 6.10	3/4×120 M20X115	UL FM VdS
250×80 10×3	273.0×88.9 10.750×3.500	300 2.07	89 3.50	376 14.80	136.5 5.37	190 7.48	155 6.10	3/4×120 M20X115	UL FM VdS
250×100 10×4	273.0×114.3 10.750×4.500	300 2.07	114 4.50	376 14.80	164 6.46	190 7.48	155 6.10	3/4×120 M20X115	UL FM VdS

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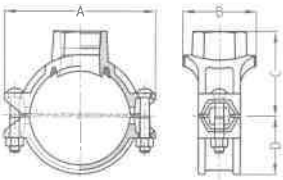
Light-duty Mechanical Tee Threaded Outlet



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80×20 3×¾	88.9×26.9 3.500×1.050	300 2.07	38 1.50	150 5.91	71.0 2.80	68 2.68	55.5 2.19	1/2×75 M12X76	UL FM
80×25 3×1	88.9×33.7 3.500×1.315	300 2.07	38 1.50	150 5.91	71.0 2.80	71.0 2.80	55.5 2.19	1/2×75 M12X76	UL FM
80×32 3×1¼	88.9×42.4 3.500×1.660	300 2.07	51 2.00	150 5.91	84.5 3.33	74 2.91	55.5 2.19	1/2×75 M12X76	UL FM
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	51 2.00	150 5.91	84.5 3.33	74 2.91	55.5 2.19	1/2×75 M12X76	UL FM
80×50 3×2	88.9×60.3 3.500×2.375	300 2.07	64 2.50	150 5.91	98 3.86	77 3.03	55.5 2.19	1/2×75 M12X76	UL FM
100×15 108.0×½	108.1×21.3 4.250×0.825	300 2.07	38 1.50	172 6.77	77.5 3.05	85 3.35	64.5 2.54	1/2×75 M12X76	UL FM
100×25 108.0×1	108.1×33.7 4.250×1.315	300 2.07	38 1.50	172 6.77	77.5 3.05	85 3.35	64.5 2.54	1/2×75 M12X76	UL FM
100×32 108.0×1¼	108.1×42.4 4.250×1.660	300 2.07	51 2.00	172 6.77	88 3.46	85 3.35	64.5 2.54	1/2×75 M12X76	UL FM
100×40 108.0×1½	108.0×48.3 4.250×1.900	300 2.07	51 2.00	172 6.77	88 3.46	85 3.35	64.5 2.54	1/2×75 M12X76	UL FM
100×50 108.0×2	108.0×60.3 4.250×2.375	300 2.07	64 2.50	172 6.77	103.5 4.19	90.5 3.56	64.5 2.54	1/2×75 M12X76	UL FM
100×65 108.0×76.1	108.0×76.1 4.250×3.000	300 2.07	70 2.75	172 6.77	103.5 4.07	97.5 3.84	64.5 2.54	1/2×75 M12X76	UL FM
100×25 4×1	114.3×33.7 4.500×1.315	300 2.07	38 1.50	178 7.01	77.5 3.05	89.5 3.52	67.5 2.66	1/2×75 M12X76	UL FM
100×32 4×1¼	114.3×42.4 4.500×1.660	300 2.07	51 2.00	178 7.01	88 3.46	89.5 3.53	67.5 2.66	1/2×75 M12X76	UL FM
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	51 2.00	178 7.01	88 3.46	89.5 3.53	67.5 2.66	1/2×75 M12X76	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	64 2.50	178 7.01	103.5 4.07	92 3.62	67.5 2.66	1/2×75 M12X76	UL FM
100×65 4×2½	114.3×73.0 4.500×2.875	300 2.07	70 2.75	178 7.01	103.5 4.07	98 3.86	67.5 2.66	1/2×75 M12X76	UL FM
100×65 4×76.1	114.3×76.1 4.500×3.000	300 2.07	70 2.75	178 7.01	103.5 4.07	98 3.86	67.5 2.66	1/2×75 M12X76	UL FM
100×80 4×3	114.3×88.9 4.500×3.500	300 2.07	89 3.50	178 7.01	124 4.88	98 3.86	67.5 2.66	1/2×75 M12X76	UL FM
125×25 133.0×1	133.0×33.7 5.250×1.315	300 2.07	38 1.50	203 7.99	77 3.03	98 3.86	77.5 3.05	5/8×85	UL FM
125×32 133.0×1.25	133.0×42.4 5.250×1.660	300 2.07	51 2.00	203 7.99	91 3.58	102 4.01	77.5 3.05	5/8×85	UL FM
125×40 133.0×1½	133.0×48.3 5.250×1.900	300 2.07	51 2.00	203 7.99	91 3.58	102 4.01	77.5 3.05	5/8×85	UL FM
125×50 133.0×2	133.0×60.3 5.250×2.375	300 2.07	64 2.50	203 7.99	110 4.33	105 4.13	77.5 3.05	5/8×85	UL FM
125×65 133.0×76.1	133.0×76.1 5.250×3.000	300 2.07	70 2.75	203 7.99	110 4.33	113 4.45	77.5 3.05	5/8×85	UL FM
125×80 133.0×3	133.0×88.9 5.250×3.500	300 2.07	89 3.50	203 7.99	132 5.12	110 4.33	77.5 3.05	5/8×85	UL FM
125×25 139.7×1	139.7×33.7 5.500×1.315	300 2.07	38 1.50	210 8.27	77 3.03	100 3.94	82 3.23	5/8×85 M16X85	UL FM
125×32 139.7×1¼	139.7×42.4 5.500×1.660	300 2.07	51 2.00	210 8.27	91 3.58	105 4.13	82 3.23	5/8×85 M16X85	UL FM
125×40 139.7×1½	139.7×48.3 5.500×1.900	300 2.07	51 2.00	210 8.27	91 3.58	105 4.13	82 3.23	5/8×85 M16X85	UL FM
125×50 139.7×2	139.7×60.3 5.500×2.375	300 2.07	64 2.50	210 8.27	110 4.33	108 4.25	82 3.23	5/8×85 M16X85	UL FM
125×65 139.7×76.1	139.7×76.1 5.500×3.000	300 2.07	70 2.75	210 8.27	110 4.33	115 4.53	82 3.23	5/8×85 M16X85	UL FM
125×80 139.7×3	139.7×88.9 5.500×3.500	300 2.07	89 3.50	210 8.27	130 5.12	115 4.53	82 3.23	5/8×85 M16X85	UL FM
125×100 139.7×4	139.7×114.3 5.500×4.500	300 2.07	114 4.50	210 8.27	153 6.02	118 4.65	82 3.23	5/8×85 M16X85	UL FM
125×32 5×1¼	141.3×42.4 5.563×1.660	300 2.07	51 2.00	210 8.27	91 3.58	105 4.13	82 3.23	5/8×85 M16X85	——
125×40 5×1½	141.3×48.3 5.563×1.900	300 2.07	51 2.00	210 8.27	91 3.58	105 4.13	82 3.23	5/8×85 M16X85	——
125×50 5×2	141.3×60.3 5.563×2.375	300 2.07	64 2.50	210 8.27	110 4.33	108 4.25	82 3.23	5/8×85 M16X85	——

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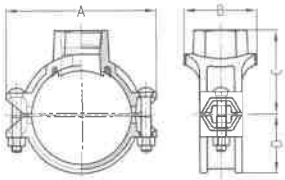
3JS

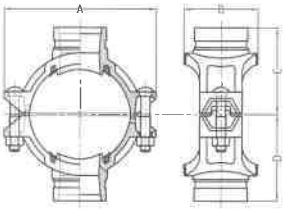
Light-duty Mechanical Tee Threaded Outlet



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
150×25 159.0×1	159.0×33.7 6.250×1.315	300 2.07	38 1.50	227 8.94	77 3.03	110 4.33	91 3.58	5/8×85 M16X85	UL FM
150×32 159.0×1¼	159.0×42.4 6.250×1.660	300 2.07	51 2.00	227 8.94	92.5 3.64	112 4.41	91 3.58	5/8×105 M16X108	UL FM
150×40 159.0×1½	159.0×48.3 6.250×1.900	300 2.07	51 2.00	227 8.94	92.5 3.64	112 4.41	91 3.58	5/8×105 M16X108	UL FM
150×50 159.0×2	159.0×60.3 6.250×2.375	300 2.07	64 2.50	227 8.94	110 4.33	116.5 4.59	91 3.58	5/8×105 M16X108	UL FM
150×65 159.0×76.1	159.0×76.1 6.250×3.000	300 2.07	70 2.75	227 8.94	110 4.33	121.5 4.78	91 3.58	5/8×105 M16X108	UL FM
150×80 159.0×3	159.0×88.9 6.250×3.500	300 2.07	89 3.50	227 8.94	130 5.12	123.5 4.86	91 3.58	5/8×105 M16X108	UL FM
150×100 159.0×4	159.1×114.3 6.250×4.500	300 2.07	114 4.50	227 8.94	155 6.10	127 5.00	91 3.58	5/8×105 M16X108	UL FM
150×15 165.1×½	165.1×21.3 6.500×0.825	300 2.07	38 1.50	235 9.25	77 3.03	115 4.53	94.5 3.72	5/8×105 M16X108	UL FM
125×20 165.1×¾	165.1×26.9 6.500×1.050	300 2.07	38 1.50	235 9.25	77 3.03	115 4.53	94.5 3.72	5/8×105 M16X108	UL FM
150×25 165.1×1	165.1×33.7 6.500×1.315	300 2.07	38 1.50	235 9.25	77 3.03	115 4.53	94.5 3.72	5/8×105 M16X108	UL FM
150×32 165.1×1¼	165.1×42.4 6.500×1.660	300 2.07	51 2.00	235 9.25	92.5 3.64	115 4.53	94.5 3.72	5/8×105 M16X108	UL FM
150×40 165.1×1½	165.1×48.3 6.500×1.900	300 2.07	51 2.00	235 9.25	92.5 3.64	115 4.53	94.5 3.72	5/8×105 M16X108	UL FM
150×50 165.1×2	165.1×60.3 6.500×2.375	300 2.07	64 2.50	235 9.25	110 4.33	120 4.72	94.5 3.72	5/8×105 M16X108	UL FM
150×65 165.1×76.1	165.1×76.1 6.500×3.000	300 2.07	70 2.75	235 9.25	110 4.33	125 4.92	94.5 3.72	5/8×105 M16X108	UL FM
150×80 165.1×3	165.1×88.9 6.500×3.500	300 2.07	89 3.50	235 9.25	130 5.12	125 4.92	94.5 3.72	5/8×105 M16X108	UL FM
150×100 165.1×4	165.1×114.3 6.500×4.500	300 2.07	114 4.50	240 9.45	155 6.10	130 5.12	94.5 3.72	5/8×105 M16X108	UL FM
150×25 6×1	168.3×33.7 6.500×1.315	300 2.07	38 1.50	240 9.45	77 3.03	115 4.53	96.5 3.80	5/8×105 M16X108	UL FM
150×32 6×1¼	168.3×42.4 6.500×1.660	300 2.07	51 2.00	240 9.45	92.5 3.64	115 4.53	96.5 3.80	5/8×105 M16X108	UL FM
150×40 6×1½	168.3×48.3 6.500×1.900	300 2.07	51 2.00	240 9.45	92.5 3.64	115 4.53	96.5 3.80	5/8×105 M16X108	UL FM
150×50 6×2	168.3×60.3 6.625×2.375	300 2.07	64 2.50	240 9.45	110 4.33	121 4.76	96.5 3.80	5/8×105 M16X108	UL FM
150×65 6×2½	168.3×73.0 6.625×2.875	300 2.07	70 2.75	240 9.45	110 4.33	127 5.00	96.5 3.80	5/8×105 M16X108	UL FM
150×65 6×2½	168.3×76.0 6.625×3.000	300 2.07	70 2.75	240 9.45	110 4.33	127 5.00	96.5 3.80	5/8×105 M16X108	——
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	89 3.50	240 9.45	130 5.12	127 5.00	96.5 3.80	5/8×105 M16X108	UL FM
150×100 6×4	168.3×114.3 6.625×4.500	300 2.07	114 4.50	240 9.45	155 6.10	130 5.12	96.5 3.80	5/8×105 M16X108	UL FM
200×25 8×1	219.0×33.7 8.625×1.315	300 2.07	38 1.50	300 11.81	78 3.07	140 5.51	123 4.84	5/8×105 M16X108	UL FM
200×32 8×1¼	219.1×42.4 8.625×1.660	300 2.07	51 2.00	300 11.81	96.5 3.80	140 5.51	123 4.84	5/8×105 M16X108	UL FM
200×40 8×1½	219.1×48.3 8.625×1.900	300 2.07	51 2.00	300 11.81	96.5 3.80	143 5.63	123 4.84	5/8×105 M16X108	UL FM
200×50 8×2	219.1×60.3 8.625×2.375	300 2.07	64 2.50	300 11.81	117 4.61	149 5.87	123 4.84	5/8×105 M16X108	UL FM
200×65 8×2½	219.1×73.0 8.625×2.875	300 2.07	70 2.75	300 11.81	117 4.61	155 6.10	123 4.84	5/8×105 M16X108	UL FM
200×65 8×76.1	219.1×76.1 8.625×3.000	300 2.07	70 2.75	300 11.81	117 4.61	155 6.10	123 4.84	5/8×105 M16X108	UL FM
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	89 3.50	300 11.81	133.5 5.25	155 6.10	123 4.84	5/8×105 M16X108	UL FM
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	114 4.50	300 11.81	164 6.45	160 6.30	123 4.84	5/8×105 M16X108	UL FM

4G

Mechanical Cross Grooved Outlet



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in
				A mm/in	B mm/in	C mm/in	D mm/in	
65×32 2½×1¼	73.0×42.4 2.875×1.669	300 2.07	51 2	144 5.67	84.5 3.33	75 2.95	75 2.95	1/2×70 M12X70
65×25 2½×1	76.1×33.7 3.000×1.327	300 2.07	38 1.5	137 5.39	71 2.8	78 3.07	78 3.07	1/2×70 M12X70
65×32 2½×1¼	76.1×42.4 3.000×1.669	300 2.07	51 2	137 5.39	84.5 3.33	78 3.07	78 3.07	1/2×70 M12X70
80×25 3×1	88.9×33.7 3.500×1.327	300 2.07	38 1.5	152 5.98	72.5 2.85	84.5 3.33	84.5 3.33	1/2×75 M12X76
80×32 3×1¼	88.9×42.4 3.500×1.669	300 2.07	51 2	152 5.98	85.5 3.37	84.5 3.33	84.5 3.33	1/2×75 M12X76
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	51 2	152 5.98	85.5 3.37	84.5 3.33	84.5 3.33	1/2×75 M12X76
100×25 4×1	114.3×33.7 4.500×1.327	300 2.07	38 1.5	188 7.4	78.4 3.09	102 4.02	102 4.02	1/2×75 M12X76
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	51 2	188 7.4	89 3.5	102 4.02	102 4.02	1/2×75 M12X76
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	64 2.5	188 7.4	104.5 4.11	102 4.02	102 4.02	1/2×75 M12X76
125×50 5×2	139.7×60.3 5.500×2.375	300 2.07	64 2.5	221.5 8.72	112.5 4.43	118 4.65	118 4.65	5/8X85 M16X85
125×65 5×2½	139.7×76.1 5.500×3.000	300 2.07	70 2.75	221.5 8.72	112.5 4.43	118 4.65	118 4.65	5/8X85 M16X85
150×50 6×2	165.1×60.3 6.500×2.375	300 2.07	64 2.5	244 9.6	112.5 4.43	127 5	127 5	5/8X105
150×65 6×2½	165.1×76.1 6.500×3.000	300 2.07	70 2.75	244 9.6	112.5 4.43	127 5	127 5	5/8X105 M16X108
150×80 6×3	165.1×88.9 6.500×3.500	300 2.07	89 3.5	244 9.6	132 5.2	141 5.55	141 5.55	5/8X105 M16X108
150×40 6×1½	168.3×48.3 6.625×1.900	300 2.07	51 2	247 9.72	95 3.74	128 5.04	128 5.04	5/8X105 M16X108
150×50 6×2	168.3×60.3 6.625×2.375	300 2.07	64 2.5	247 9.72	114 4.49	134 5.28	134 5.28	5/8X105 M16X108
150×65 6×2½	168.3×73.0 6.625×2.875	300 2.07	70 2.75	247 9.72	115 4.53	134 5.28	134 5.28	5/8X105 M16X108
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	89 3.5	247 9.72	132 5.2	141 5.55	141 5.55	5/8X105 M16X108
200×50 8×2	219.1×60.3 8.625×2.375	300 2.07	64 2.5	320 12.6	118 4.65	158 6.22	158 6.22	3/4X115 M20X115
200×65 8×2½	219.1×76.1 8.625×3.000	300 2.07	70 2.75	320 12.6	118 4.65	158 6.22	158 6.22	3/4X115 M20X115
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	89 3.5	320 12.6	136.5 5.37	161 6.34	161 6.34	3/4X115 M20X115
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	114 4.5	320 12.6	162 6.38	161 6.34	161 6.34	3/4X115 M20X115
250×65 10×2½	273.0×76.1 10.750×3.000	300 2.07	70 2.75	376 14.8	118 4.65	189 7.44	189 7.44	3/4X120 M20X115
250×80 10×3	273.0×88.9 10.750×3.500	300 2.07	89 3.5	376 14.8	136.5 5.37	189 7.44	189 7.44	3/4X120 M20X115
250×100 10×4	273.0×114.3 10.750×4.500	300 2.07	114 4.5	376 14.8	164 6.46	189 7.44	189 7.44	3/4X120 M20X115

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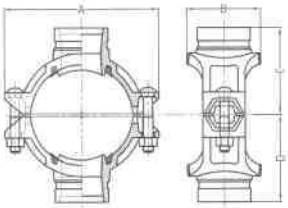
4GS

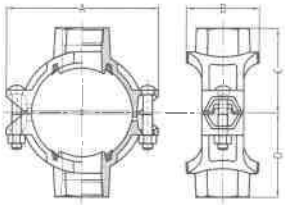
Light-duty Mechanical Cross Grooved Outlet



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in
				A mm/in	B mm/in	C mm/in	D mm/in	
80×25 3×1	88.9×33.7 3.500×1.315	300 2.07	38 1.50	150 5.91	71.0 2.80	84 3.31	84 3.31	1/2×70 M12X76
80×32 3×1¼	88.9×42.4 3.500×1.660	300 2.07	51 2.00	150 5.91	84.5 3.33	84 3.31	84 3.31	1/2×70 M12X76
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	51 2.00	150 5.91	84.5 3.33	84 3.31	84 3.31	1/2×70 M12X76
100×25 4×1	114.3×33.7 4.500×1.315	300 2.07	38 1.50	178 7.01	77.5 3.05	98 3.86	98 3.86	1/2×70 M12X76
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	51 2.00	178 7.01	88 3.46	98 3.86	98 3.86	1/2×70 M12X76
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	64 2.50	178 7.01	103.5 4.07	98 3.86	98 3.86	1/2×70 M12X76
125×50 139.7×2	139.7×60.3 5.500×2.375	300 2.07	64 2.50	210 8.27	110 4.33	113 4.45	113 4.45	5/8×85 M16X85
125×65 139.7×76.1	139.7×76.1 5.500×3.000	300 2.07	70 2.75	210 8.27	110 4.33	113 4.45	113 4.45	5/8×85 M16X85
150×50 165.1×2	165.1×60.3 6.500×2.375	300 2.07	64 2.50	235 9.25	110 4.33	124.5 4.90	124.5 4.90	5/8×105 M16X108
150×65 165.1×76.1	165.1×76.1 6.500×3.000	300 2.07	70 2.75	235 9.25	110 4.33	124.5 4.90	124.5 4.90	5/8×105 M16X108
150×80 165.1×3	165.1×88.9 6.500×3.500	300 2.07	89 3.50	235 9.25	130 5.12	124.5 4.90	124.5 4.90	5/8×105 M16X108
150×32 6×1¼	168.3×42.4 6.500×1.660	300 2.07	51 2.00	240 9.45	92.5 3.64	126 4.96	126 4.96	5/8×105 M16X108
150×40 6×1½	168.3×48.3 6.500×1.900	300 2.07	51 2.00	240 9.45	92.5 3.64	126 4.96	126 4.96	5/8×105 M16X108
150×50 6×2	168.3×60.3 6.625×2.375	300 2.07	64 2.50	240 9.45	110 4.33	126 4.96	126 4.96	5/8×105 M16X108
150×65 6×2½	168.3×73.0 6.625×2.875	300 2.07	70 2.75	240 9.45	110 4.33	126 4.96	126 4.96	5/8×105 M16X108
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	89 3.50	240 9.45	130 5.12	126 4.96	126 4.96	5/8×105 M16X108
200×50 8×2	219.1×60.3 8.625×2.375	300 2.07	64 2.50	300 11.81	115 4.53	155 6.10	155 6.10	5/8×105 M16X108
200×65 8×76.1	219.1×76.1 8.625×3.000	300 2.07	70 2.75	300 11.81	115 4.53	155 6.10	155 6.10	5/8×105 M16X108
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	89 3.50	300 11.81	133.5 5.25	155 6.10	155 6.10	5/8×105 M16X108
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	114 4.50	300 11.81	159.5 6.29	160 6.30	160 6.30	5/8×105 M16X108

4J

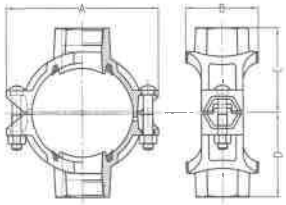
Mechanical Cross Threaded Outlet



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in
				A mm/in	B mm/in	C mm/in	D mm/in	
65×20 2½×¾	73.0×26.9 2.875×1.050	300 2.07	38 1.50	137 5.39	71 2.80	68 2.68	68 2.68	1/2×70 M12X70
65×25 2½×1	73.0×33.7 2.875×1.315	300 2.07	38 1.50	137 5.39	71 2.80	70 2.76	70 2.76	1/2×70 M12X70
65×32 2½×1¼	73.0×42.4 2.875×1.660	300 2.07	51 2.00	137 5.39	84.5 3.33	73 2.87	73 2.87	1/2×70 M12X70
65×15 2½×½	76.1×21.3 3.000×0.825	300 2.07	38 1.5	137 5.39	71 2.8	61.5 2.42	61.5 2.42	1/2X70 M12X70
65×20 2½×¾	76.1×26.9 3.000×1.059	300 2.07	38 1.5	137 5.39	71 2.8	75 3.05	75 3.05	1/2X70 M12X70
65×25 2½×1	76.1×33.7 3.000×1.327	300 2.07	38 1.5	137 5.39	71 2.8	75 3.05	75 3.05	1/2X70 M12X70
65×32 2½×1¼	76.1×42.4 3.000×1.669	300 2.07	51 2	137 5.39	84.5 3.33	75 3.05	75 3.05	1/2X70 M12X70
80×15 3×½	88.9×21.3 3.500×0.825	300 2.07	38 1.5	152 5.98	72.5 2.85	71.5 2.81	71.5 2.81	1/2X75 M12X76
80X20 3×¾	88.9×26.9 3.500×1.059	300 2.07	38 1.5	152 5.98	72.5 2.85	71.5 2.81	71.5 2.81	1/2X75 M12X76
80×25 3×1	88.9×33.7 3.500×1.327	300 2.07	38 1.5	152 5.98	72.5 2.85	80 3.15	80 3.15	1/2X75 M12X76
80×32 3×1¼	88.9×42.4 3.500×1.669	300 2.07	51 2	152 5.98	85.5 3.37	80 3.15	80 3.15	1/2X75 M12X76
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	51 2	152 5.98	85.5 3.37	80 3.15	80 3.15	1/2X75 M12X76
100×32 108.0×1¼	108.1×42.4 4.250×1.660	300 2.07	51 2.00	172 6.77	89 3.50	87 3.43	87 3.43	1/2×75 M12X76
100×40 108.0×1½	108.0×48.3 4.250×1.900	300 2.07	51 2.00	172 6.77	89 3.50	87 3.43	87 3.43	1/2×75 M12X76
100×50 108.0×2	108.0×60.3 4.250×2.375	300 2.07	64 2.50	172 6.77	106.5 4.19	92 3.62	92 3.62	1/2×75 M12X76
100×15 4×½	114.3×21.3 4.500×0.825	300 2.07	38 1.5	188 7.4	78.5 3.09	90 3.54	90 3.54	1/2X75 M12X76
100×20 4×¾	114.3×26.9 4.500×1.059	300 2.07	38 1.5	188 7.4	78.5 3.09	90 3.54	90 3.54	1/2X75 M12X76
100×25 4×1	114.3×33.7 4.500×1.327	300 2.07	38 1.5	188 7.4	78.5 3.09	93 3.66	93 3.66	1/2X75 M12X76
100×32 4×1¼	114.3×42.4 4.500×1.669	300 2.07	51 2	188 7.4	89 3.5	95 3.74	95 3.74	1/2X75 M12X76
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	51 2	188 7.4	89 3.5	97 3.82	97 3.82	1/2X75 M12X76
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	64 2.5	188 7.4	104.5 4.11	100 3.94	100 3.94	1/2X75\ M12X76
125×50 133.0×2	133.0×60.3 5.250×2.375	300 2.07	64 2.50	209 8.23	112.5 4.43	110 4.33	110 4.33	5/8×85 M16X85
125×25 5×1	139.7×33.7 5.500×1.327	300 2.07	38 1.5	221.5 8.72	78 3.07	110 4.33	110 4.33	5/8X85 M16X85
125×32 5×1¼	139.7×42.4 5.500×1.669	300 2.07	51 2	221.5 8.72	95 3.74	112 4.41	112 4.41	5/8X85 M16X85
125×40 5×1½	139.7×48.3 5.500×1.900	300 2.07	51 2	221.5 8.72	95 3.74	112 4.41	112 4.41	5/8X85 M16X85
125×50 5×2	139.7×60.3 5.500×2.375	300 2.07	64 2.5	221.5 8.72	112.5 4.43	115 4.53	115 4.53	5/8X85 M16X85
125×65 5×2½	139.7×76.1 5.500×3.000	300 2.07	70 2.75	221.5 8.72	112.5 4.43	115 4.53	115 4.53	5/8X85 M16X85
150×32 159.0×1¼	159.0×42.4 6.250×1.660	300 2.07	51 2.00	244 9.60	93 3.66	118 4.65	118 4.65	5/8×105 M16X108

4J

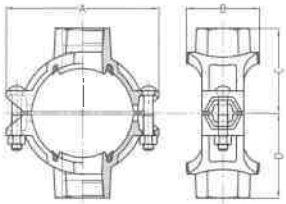
Mechanical Cross Threaded Outlet



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in
				A mm/in	B mm/in	C mm/in	D mm/in	
150×40 159.0×1½	159.0×48.3 6.250×1.900	300 2.07	51 2.00	244 9.60	93 3.66	118 4.65	118 4.65	5/8×105 M16X108
150×50 159.0×2	159.0×60.3 6.250×2.375	300 2.07	64 2.50	244 9.60	112.5 4.43	125 4.92	125 4.92	5/8×105 M16X108
150×65 159.0×76.1	159.0×76.1 6.250×3.000	300 2.07	70 2.75	244 9.60	112.5 4.43	125 4.92	125 4.92	5/8×105 M16X108
150×15 6×½	165.1×21.3 6.500×0.825	300 2.07	38 1.5	244 9.6	78 3.07	110 4.33	110 4.33	5/8X105 M16X108
150×20 6×¾	165.1×26.9 6.500×1.059	300 2.07	38 1.5	244 9.6	78 3.07	110 4.33	110 4.33	5/8X105 M16X108
150×25 6×1	165.1×33.7 6.500×1.327	300 2.07	38 1.5	244 9.6	78 3.07	118 4.65	118 4.65	5/8X105 M16X108
150×32 6×1¼	165.1×42.4 6.500×1.669	300 2.07	51 2	244 9.6	93 3.66	118 4.65	118 4.65	5/8X105 M16X108
150×40 6×1½	165.1×48.3 6.500×1.900	300 2.07	51 2	244 9.6	93 3.66	118 4.65	118 4.65	5/8X105 M16X108
150×50 6×2	165.1×60.3 6.500×2.375	300 2.07	64 2.5	244 9.6	112.5 4.43	128.5 5.43	128.5 5.43	5/8X105 M16X108
150×65 6×2½	165.1×76.1 6.500×3.000	300 2.07	70 2.75	244 9.6	112.5 4.43	128.5 5.43	128.5 5.43	5/8X105 M16X108
150×80 6×3	165.1×88.9 6.500×3.500	300 2.07	89 3.5	244 9.6	132 5.2	128.5 5.06	128.5 5.06	5/8X105 M16X108
150×32 6×1¼	168.3×42.4 6.500×1.669	300 2.07	51 2	247 9.72	95 3.74	130 5.12	130 5.12	5/8X105 M16X108
150×40 6×1½	168.3×48.3 6.500×1.900	300 2.07	51 2	247 9.72	95 3.74	122 4.8	122 4.8	5/8X105 M16X108
150×50 6×2	168.3×60.3 6.625×2.375	300 2.07	64 2.5	247 9.72	112.5 4.43	132 5.2	132 5.2	5/8X105 M16X108
150×65 6×2½	168.3×73.0 6.625×2.875	300 2.07	70 2.75	247 9.72	112.5 4.43	132 5.2	132 5.2	5/8X105 M16X108
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	89 3.5	247 9.72	132 5.2	140 5.51	140 5.51	5/8X105 M16X108
200×25 8×1	219.0×33.7 8.625×1.327	300 2.07	38 1.5	320 12.60	79.5 3.13	150 5.91	150 5.91	3/4X115 M20X115
200×32 8×1¼	219.1×42.4 8.625×1.669	300 2.07	51 2	320 12.60	96.5 3.8	150 5.91	150 5.91	3/4X115 M20X115
200×40 8×1½	219.1×48.3 8.625×1.900	300 2.07	51 2	320 12.60	96.5 3.8	150 5.91	150 5.91	3/4X115 M20X115
200×50 8×2	219.1×60.3 8.625×2.375	300 2.07	64 2.5	320 12.60	117 4.61	160 6.3	160 6.3	3/4X115 M20X115
200×65 8×2½	219.1×76.1 8.625×3.000	300 2.07	70 2.75	320 12.60	118 4.65	158.5 6.24	158.5 6.24	3/4X115 M20X115
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	89 3.5	320 12.60	136.5 5.37	160 6.3	160 6.3	3/4X115 M20X115
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	114 4.5	320 12.60	164 6.46	160 6.3	160 6.3	3/4X115 M20X115
250×40 10×1½	273.0×48.3 10.750×1.900	300 2.07	51 2	376 14.8	95.5 3.76	180 7.09	180 7.09	3/4X120 M20X115
250×50 10×2	273.0×60.3 10.750×2.375	300 2.07	64 2.5	376 14.8	118 4.65	185 7.28	185 7.28	3/4X120 M20X115
250×65 10×2½	273.0×76.1 10.750×3.000	300 2.07	70 2.75	376 14.8	118 4.65	190 7.48	190 7.48	3/4X120 M20X115
250×80 10×3	273.0×88.9 10.750×3.500	300 2.07	89 3.5	376 14.8	136.5 5.37	190 7.48	190 7.48	3/4X120 M20X115
250×100 10×4	273.0×114.3 10.750×4.500	300 2.07	114 4.5	376 14.8	164 6.46	190 7.48	190 7.48	3/4X120 M20X115

4JS

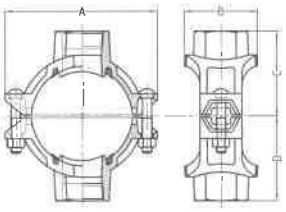
Light-duty Mechanical Cross Threaded Outlet



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensionsmm/in				Bolt Size mm/in
				A mm/in	B mm/in	C mm/in	D mm/in	
80×15 3×½	88.9×21.3 3.500×0.825	300 2.07	38 1.50	150 5.91	71.0 2.80	68 2.68	68 2.68	1/2×75 M12X76
80×20 3×¾	88.9×26.9 3.500×1.050	300 2.07	38 1.50	150 5.91	71.0 2.80	68 2.68	68 2.68	1/2×75 M12X76
80×25 3×1	88.9×33.7 3.500×1.315	300 2.07	38 1.50	150 5.91	71.0 2.80	71.0 2.80	71.0 2.80	1/2×75 M12X76
80×32 3×1¼	88.9×42.4 3.500×1.660	300 2.07	51 2.00	150 5.91	84.5 3.33	74 2.91	74 2.91	1/2×75 M12X76
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	51 2.00	150 5.91	84.5 3.33	74 2.91	74 2.91	1/2×75 M12X76
100×25 108.0×1	108.1×33.7 4.250×1.315	300 2.07	38 1.50	172 6.77	77.5 3.05	85 3.35	85 3.35	1/2×75 M12X76
100×32 108.0×1¼	108.1×42.4 4.250×1.660	300 2.07	51 2.00	172 6.77	88 3.46	85 3.35	85 3.35	1/2×75 M12X76
100×40 108.0×1½	108.0×48.3 4.250×1.900	300 2.07	51 2.00	172 6.77	88 3.46	85 3.35	85 3.35	1/2×75 M12X76
100×50 108.0×2	108.0×60.3 4.250×2.375	300 2.07	64 2.50	172 6.77	103.5 4.19	89 3.50	89 3.50	1/2×75 M12X76
100×15 4×½	114.3×21.3 4.500×0.825	300 2.07	38 1.50	178 7.01	77.5 3.05	82 3.23	82 3.23	1/2×75 M12X76
100×20 4×¾	114.3×26.9 4.500×1.050	300 2.07	38 1.50	178 7.01	77.5 3.05	82 3.23	82 3.23	1/2×75 M12X76
100×25 4×1	114.3×33.7 4.500×1.315	300 2.07	38 1.50	178 7.01	77.5 3.05	82 3.23	82 3.23	1/2×75 M12X76
100×32 4×1¼	114.3×42.4 4.500×1.660	300 2.07	51 2.00	178 7.01	88 3.46	89.5 3.53	89.5 3.53	1/2×75 M12X76
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	51 2.00	178 7.01	88 3.46	89.5 3.53	89.5 3.53	1/2×75 M12X76
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	64 2.50	178 7.01	103.5 4.07	92 3.62	92 3.62	1/2×75 M12X76
125×25 133.0×1	133.0×33.7 5.250×1.315	300 2.07	38 1.50	203 7.99	77 3.03	98 3.86	98 3.86	5/8×85 M16X85
125×32 133.0×1.25	133.0×42.4 5.250×1.660	300 2.07	51 2.00	203 7.99	91 3.58	102 4.01	102 4.01	5/8×85 M16X85
125×40 133.0×1½	133.0×48.3 5.250×1.900	300 2.07	51 2.00	203 7.99	91 3.58	102 4.01	102 4.01	5/8×85 M16X85
125×50 133.0×2	133.0×60.3 5.250×2.375	300 2.07	64 2.50	203 7.99	110 4.33	105 4.13	105 4.13	5/8×85 M16X85
125×65 133.0×76.1	133.0×76.1 5.250×3.000	300 2.07	70 2.75	203 7.99	110 4.33	110 4.33	110 4.33	5/8×85 M16X85
125×25 139.7×1	139.7×33.7 5.500×1.315	300 2.07	38 1.50	210 8.27	77 3.03	100 3.94	100 3.94	5/8×85 M16X85
125×32 139.7×1¼	139.7×42.4 5.500×1.660	300 2.07	51 2.00	210 8.27	91 3.58	105 4.13	105 4.13	5/8×85 M16X85
125×40 139.7×1½	139.7×48.3 5.500×1.900	300 2.07	51 2.00	210 8.27	91 3.58	105 4.13	105 4.13	5/8×85 M16X85
125×50 139.7×2	139.7×60.3 5.500×2.375	300 2.07	64 2.50	210 8.27	110 4.33	108 4.25	108 4.25	5/8×85 M16X85
125×65 139.7×76.1	139.7×76.1 5.500×3.000	300 2.07	70 2.75	210 8.27	110 4.33	115 4.53	115 4.53	5/8×85 M16X85
150×25 159.0×1	159.0×33.7 6.250×1.315	300 2.07	38 1.50	227 8.94	77 3.03	110 4.33	110 4.33	5/8×85 M16X85

4JS

Light-duty Mechanical Cross Threaded Outlet



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensionsmm/in				Bolt Size mm/in
				A mm/in	B mm/in	C mm/in	D mm/in	
150×32 159.0×1¼	159.0×42.4 6.250×1.660	300 2.07	51 2.00	227 8.94	92.5 3.64	112 4.41	112 4.41	5/8×85 M16X85
150×40 159.0×1½	159.0×48.3 6.250×1.900	300 2.07	51 2.00	227 8.94	92.5 3.64	112 4.41	112 4.41	5/8×105 M16X108
150×50 159.0×2	159.0×60.3 6.250×2.375	300 2.07	64 2.50	227 8.94	110 4.33	116.5 4.59	116.5 4.59	5/8×105 M16X108
150×65 159.0×76.1	159.0×76.1 6.250×3.000	300 2.07	70 2.75	227 8.94	110 4.33	121.5 4.78	121.5 4.78	5/8×105 M16X108
150×80 159.0×3	159.0×88.9 6.250×3.500	300 2.07	89 3.50	227 8.94	130 5.12	123.5 4.86	123.5 4.86	5/8×105 M16X108
150×15 165.1×½	165.1×21.3 6.500×0.825	300 2.07	38 1.50	235 9.25	77 3.03	115 4.53	115 4.53	5/8×105 M16X108
125×20 165.1×¾	165.1×26.9 6.500×1.050	300 2.07	38 1.50	235 9.25	77 3.03	115 4.53	115 4.53	5/8×105 M16X108
150×25 165.1×1	165.1×33.7 6.500×1.315	300 2.07	38 1.50	235 9.25	77 3.03	115 4.53	115 4.53	5/8×105 M16X108
150×32 165.1×1¼	165.1×42.4 6.500×1.660	300 2.07	51 2.00	235 9.25	92.5 3.64	115 4.53	115 4.53	5/8×105 M16X108
150×40 165.1×1½	165.1×48.3 6.500×1.900	300 2.07	51 2.00	235 9.25	92.5 3.64	115 4.53	115 4.53	5/8×105 M16X108
150×50 165.1×2	165.1×60.3 6.500×2.375	300 2.07	64 2.50	235 9.25	110 4.33	120 4.72	120 4.72	5/8×105 M16X108
150×65 165.1×76.1	165.1×76.1 6.500×3.000	300 2.07	70 2.75	235 9.25	110 4.33	125 4.92	125 4.92	5/8×105 M16X108
150×80 165.1×3	165.1×88.9 6.500×3.500	300 2.07	89 3.50	235 9.25	130 5.12	125 4.92	125 4.92	5/8×105 M16X108
150×25 6×1	168.3×33.7 6.500×1.315	300 2.07	38 1.50	240 9.45	77 3.03	115 4.53	115 4.53	5/8×105 M16X108
150×32 6×1¼	168.3×42.4 6.500×1.660	300 2.07	51 2.00	240 9.45	92.5 3.64	115 4.53	115 4.53	5/8×105 M16X108
150×40 6×1½	168.3×48.3 6.500×1.900	300 2.07	51 2.00	240 9.45	92.5 3.64	115 4.53	115 4.53	5/8×105 M16X108
150×50 6×2	168.3×60.3 6.625×2.375	300 2.07	64 2.50	240 9.45	110 4.33	121 4.76	121 4.76	5/8×105 M16X108
150×65 6×2½	168.3×73.0 6.625×2.875	300 2.07	70 2.75	240 9.45	110 4.33	127 5.00	127 5.00	5/8×105 M16X108
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	89 3.50	240 9.45	130 5.12	127 5.00	127 5.00	5/8×105 M16X108
200×25 8×1	219.0×33.7 8.625×1.315	300 2.07	38 1.50	300 11.81	78 3.07	140 5.51	140 5.51	5/8×105 M16X108
200×32 8×1¼	219.1×42.4 8.625×1.660	300 2.07	51 2.00	300 11.81	93 3.66	140 5.51	140 5.51	5/8×105 M16X108
200×40 8×1½	219.1×48.3 8.625×1.900	300 2.07	51 2.00	300 11.81	93 3.66	143 5.63	143 5.63	5/8×105 M16X108
200×50 8×2	219.1×60.3 8.625×2.375	300 2.07	64 2.50	300 11.81	115 4.53	149 5.87	149 5.87	5/8×105 M16X108
200×65 8×76.1	219.1×76.1 8.625×3.000	300 2.07	70 2.75	300 11.81	115 4.53	155 6.10	155 6.10	5/8×105 M16X108
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	89 3.50	300 11.81	133.5 5.25	155 6.10	155 6.10	5/8×105 M16X108
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	114 4.50	300 11.81	159.5 6.29	160 6.30	160 6.30	5/8×105 M16X108

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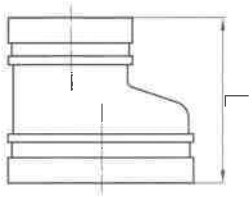
Grooved Eccentric Reducer

c UL us LISTED FM APPROVED



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
40X32 $1^1/_2$X$1^1/_4$	48.3X42.4 1.900X1.660	500 3.45	89 3.50	——
50X40 2X$1^1/_2$	60.3X48.3 2.375X1.900	500 3.45	89 3.50	——
80X50 3X2	88.9X60.3 3.500X2.375	500 3.45	89 3.50	UL FM
100X65 4X2$^1/_2$	108.0X76.1 4.250X3.000	500 3.45	102 4.00	UL FM
100X80 4X3	108.0X88.9 4.250X3.500	500 3.45	102 4.00	UL FM
100X50 4X2	114.3X60.3 4.500X2.000	500 3.45	102 4.00	UL FM
100X65 4X21/2	114.3X76.1 4.500X3.000	300 2.07	102 4.00	UL FM
100X80 4X3	114.3X88.9 4.500X3.500	500 3.45	102 4.00	UL FM
125X100 5X4	139.7X114.3 5.500X4.500	300 2.07	127 5.00	UL FM
150X100 6X4	159.0X108.0 6.250X4.250	300 2.07	140 5.50	UL FM
150X100 6X4	159.0X114.3 6.250X4.500	300 2.07	140 5.50	UL FM
150X80 6X3	165.1X88.9 6.500X3.500	300 2.07	140 5.50	UL FM
150X100 6X4	165.1X114.3 6.500X4.500	300 2.07	140 5.50	UL FM
150X125 6X5	165.1X139.7 6.500X5.500	300 2.07	140 5.50	UL FM
150X80 6X3	168.3X88.9 6.625X3.500	300 2.07	140 5.50	UL FM
150X100 6X4	168.3X114.3 6.625X4.500	300 2.07	140 5.50	UL FM
150X125 6X5	168.3X139.7 6.625X5.500	300 2.07	140 5.50	UL FM
200X100 8X4	219.1X114.3 8.625X4.500	300 2.07	215 8.50	UL FM
200X150 8X6	219.1X165.1 8.625X6.50	300 2.07	215 8.50	——
200X150 8X6	219.1X168.3 8.625X6.625	300 2.07	215 8.50	——
250X200 10X8	273.0X219.1 10.750X8.625	300 2.07	215 8.50	UL FM
350X150 14X6	355.6X168.3 14.000X6.625	300 2.07	330 12.99	——
350X200 14X8	355.6X219.1 14.000X8.625	300 2.07	330 12.99	——
350X250 14X10	355.6X273.0 14.000X10.750	300 2.07	330 12.99	——
350X300 14X12	355.6X323.9 14.000X12.750	300 2.07	330 12.99	——
400X200 16X8	406.4X219.1 16.000X8.625	300 2.07	356 14.02	——
400X250 16X10	406.4X273.0 16.000X10.750	300 2.07	356 14.02	——
400X300 16X12	406.4X323.9 16.000X12.750	300 2.07	356 14.02	——
400X350 16X14	406.4X355.6 16.000X14.000	300 2.07	356 14.02	——
450X150 18X6	457.2X168.3 18.000X6.625	300 2.07	381 15.00	——
450X250 18X10	457.2X273.0 18.000X10.750	300 2.07	381 15.00	——
450X300 18X12	457.2X323.9 18.000X12.750	300 2.07	381 15.00	——
450X350 18X14	457.2X355.6 18.000X14.000	300 2.07	381 15.00	——
450X400 18X16	457.2X406.4 18.000X16.000	300 2.07	381 15.00	——

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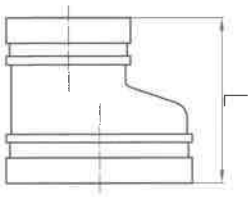
Grooved Eccentric Reducer

Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
500X300 20X12	508.0X323.9 20.000X12.750	300 2.07	508 20.00	—
500X350 20X14	508.0X355.6 20.000X14.000	300 2.07	508 20.00	—
500X400 20X16	508.0X406.4 20.000X16.000	300 2.07	508 20.00	—
500X450 20X18	508.0X457.2 20.000X18.000	300 2.07	508 20.00	—
600X400 24X16	609.6X406.4 24.000X16.000	300 2.07	508 20.00	—
600X450 24X18	609.6X457.2 24.000X18.000	300 2.07	508 20.00	—
600X500 24X20	609.6X508.0 24.000X20.000	300 2.07	508 20.00	—

Segmental sizes are made of carbon steel pipe or fabricated from wrought carbon steel. Contact manufacturer for details.



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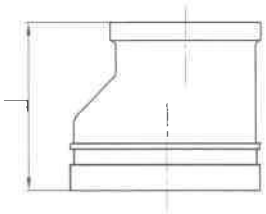
Grooved Eccentric Reducer with Female Thread

Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
100X65 4X2$^{1}/_{2}$	114.3X76.1 4.500X3.000	300 2.07	102 4.00	UL FM
125X80 5X3	139.7X88.9 5.500X3.500	300 2.07	127 5.00	UL FM
150X80 6X3	165.1X88.9 6.500X3.500	300 2.07	140 5.50	UL FM



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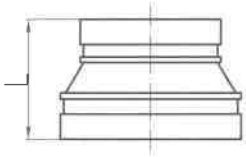
Grooved Concentric Reducer



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
32X25 1¼X1	42.4X33.7 1.660X1.315	500 3.45	64 2.50	UL FM VdS LPCB
40X25 1½X1	48.3X33.7 1.900X1.315	500 3.45	64 2.50	UL FM VdS LPCB
40X32 1½X1¼	48.3X42.4 1.900X1.660	500 3.45	64 2.50	UL FM VdS LPCB
50X25 2X1	60.3X33.7 2.375X1.315	500 3.45	64 2.50	UL FM VdS LPCB
50X32 2X1¼	60.3X42.4 2.375X1.660	500 3.45	64 2.50	UL FM VdS LPCB
50X40 2X1½	60.3X48.3 2.375X1.900	500 3.45	64 2.50	UL FM VdS LPCB
65X25 2½X1	73.0x33.7 2.875X1.315	500 3.45	64 2.50	UL FM
65X32 2½X1¼	73.0X42.4 2.875X1.660	500 3.45	64 2.50	UL FM
65X40 2½X1½	73.0X48.3 2.875X1.900	500 3.45	64 2.50	UL FM
65X50 2½X2	73.0X60.3 2.875X2.375	500 3.45	64 2.50	UL FM
65X25 2½X1	76.1 X33.7 3.000X1.315	500 3.45	64 2.50	——
65X32 2½X1¼	76.1X42.4 3.000X1.660	500 3.45	64 2.50	UL FM VdS LPCB
65X40 2½X1½	76.1X48.3 3.000X1.900	500 3.45	64 2.50	UL FM VdS LPCB
65X50 2½X2	76.1X60.3 3.000X2.375	500 3.45	64 2.50	UL FM VdS LPCB
80X25 3X1	88.9X33.7 3.500X1.315	500 3.45	64 2.50	UL FM VdS
80X32 3X1¼	88.9X42.4 3.500X1.660	500 3.45	64 2.50	UL FM
80X40 3X1½	88.9X48.3 3.500X1.900	500 3.45	64 2.50	UL FM VdS
80X50 3X2	88.9X60.3 3.500X2.375	500 3.45	64 2.50	UL FM VdS LPCB
80X65 3X2½	88.9X73.0 3.500X2.875	500 3.45	64 2.50	UL FM
80X65 3X2½	88.9X76.1 3.500X3.000	500 3.45	64 2.50	UL FM VdS LPCB
100X50 4X2	108.0X60.3 4.250X2.375	500 3.45	76 3.00	UL FM
100X65 4X2½	108.0X73.0 4.250X2.875	500 3.45	76 3.00	UL FM
100X65 4X2½	108.0X76.1 4.250X3.000	500 3.45	76 3.00	UL FM
100X80 4X3	108.0X88.9 4.250X3.500	500 3.45	76 3.00	UL FM
100X32 4X1¼	114.3X42.4 4.500X1.660	500 3.45	76 3.00	UL FM VdS
100X40 4X1½	114.3X48.3 4.500X1.900	500 3.45	76 3.00	UL FM VdS LPCB
100X50 4X2	114.3X60.3 4.500X2.375	500 3.45	76 3.00	UL FM VdS LPCB
100X65 4X2½	114.3X73.0 4.500X2.875	500 3.45	76 3.00	UL FM
100X65 4X2½	114.3X76.1 4.500X3.000	500 3.45	76 3.00	UL FM VdS LPCB
100X80 4X3	114.3X88.9 4.500X3.500	500 3.45	76 3.00	UL FM VdS LPCB
125X100 5X4	133.0X108.0 5.250X4.250	500 3.45	89 3.50	UL FM
125X100 15X4	133.0X114.3 5.250X4.500	500 3.45	89 3.50	UL FM
125X50 5X2	139.7X60.3 5.500X2.375	500 3.45	89 3.50	UL FM
125X65 5X2½	139.7X76.1 5.500X3.000	500 3.45	89 3.50	UL FM VdS
125X80 5X3	139.7X88.9 5.500X3.500	500 3.45	89 3.50	UL FM VdS

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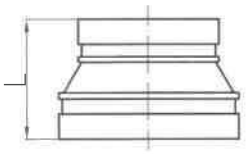
Grooved Concentric Reducer



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
125X100 5X4	139.7X114.3 5.500X4.500	500 3.45	89 3.50	UL FM VdS LPCB
125X65 5X2½	141.3X73.0 5.563X2.875	500 3.45	89 3.50	UL FM
125X80 5X3	141.3X88.9 5.563X3.500	500 3.45	89 3.50	UL FM
125X100 5X4	141.3X114.3 5.563X4.500	500 3.45	89 3.50	UL FM
150X50 6X2	159.0X60.3 6.250X2.375	500 3.45	102 4.00	UL FM
150X65 159.0X2½	159.0X76.1 6.250X3.000	500 3.45	102 4.00	UL FM
150X80 6X3	159.0X88.9 6.250X3.500	500 3.45	102 4.00	UL FM
150X100 6X4	159.0X108 6.250X4.250	500 3.45	102 4.00	UL FM
150X100 6X4	159.0X114.3 6.250X4.500	500 3.45	102 4.00	UL FM
150X125 6X5	159.0X133.0 6.250X5.250	500 3.45	102 4.00	UL FM
150X50 6X2	165.1X60.3 6.500X2.375	500 3.45	102 4.00	UL FM
150X65 6X2½	165.1X76.1 6.500X3.000	500 3.45	102 4.00	UL FM
150X80 6X3	165.1X88.9 6.500X3.500	500 3.45	102 4.00	UL FM LPCB
150X100 6X4	165.1X108.0 6.500X4.250	500 3.45	102 4.00	——
150X100 6X4	165.1X114.3 6.500X4.500	500 3.45	102 4.00	UL FM LPCB
150X125 6X5	165.1X139.7 6.500X5.500	500 3.45	102 4.00	UL FM LPCB
150X125 6X5	165.1X141.3 6.500X5.563	500 3.45	102 4.00	——
150X50 6X2	168.3X60.3 6.625X2.375	500 3.45	102 4.00	UL FM VdS
150X65 6X2½	168.3X73.0 6.625X2.875	500 3.45	102 4.00	UL FM
150X65 6X2½	168.3X76.1 6.625X3.000	500 3.45	102 4.00	UL FM VdS
150X80 6X3	168.3X88.9 6.625X3.500	500 3.45	102 4.00	UL FM VdS
150X100 6X4	168.3X114.3 6.625X4.500	500 3.45	102 4.00	UL FM VdS LPCB
150X125 6X5	168.3X139.7 6.625X5.500	500 3.45	102 4.00	UL FM VdS LPCB
150X125 6X5	168.3X141.3 6.625X5.563	500 3.45	102 4.00	UL FM
200X100 8X4	216.3X114.3 8.516X4.500	500 3.45	127 5.00	UL FM
200X150 8X6	216.3X165.1 8.516X6.500	500 3.45	127 5.00	UL FM
200X65 8X2½	219.1X73.0 8.625X2.875	500 3.45	127 5.00	UL FM
200X80 8X3	219.1X88.9 8.625X3.500	500 3.45	127 5.00	UL FM VdS LPCB
200X100 8X4	219.1X108.0 8.625X4.250	500 3.45	127 5.00	UL FM
200X100 8X4	219.1X114.3 8.625X4.500	500 3.45	127 5.00	UL FM VdS LPCB
200X125 8X5	219.1X139.7 8.625X5.500	500 3.45	127 5.00	UL FM VdS LPCB
200X125 8X5	219.1X141.3 8.625X5.563	500 3.45	127 5.00	UL FM
200X150 8X6	219.1X159.0 8.625X6.250	500 3.45	127 5.00	UL FM
200X150 8X6	219.1X165.1 8.625X6.500	500 3.45	127 5.00	UL FM
200X150 8X6	219.1X168.3 8.625X6.625	500 3.45	127 5.00	UL FM VdS LPCB

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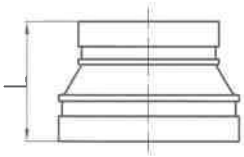
Grooved Concentric Reducer



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
250X150 10X6	273.0X159.0 10.750X6.250	500 3.45	152 6.00	UL FM
250X150 10X6	273.0X165.1 10.750X6.500	500 3.45	152 6.00	UL FM
250X150 10X6	273.0X168.3 10.750X6.625	500 3.45	152 6.00	UL FM VdS
250X200 10X8	273.0X219.1 10.750X8.625	500 3.45	152 6.00	UL FM VdS
300X200 12X8	323.9X219.1 12.750X8.625	500 3.45	178 7.00	UL FM VdS
300X250 12X10	323.9X273.0 12.750X10.750	500 3.45	178 7.00	UL FM VdS
350X125 14X5	377.0X133.0 14.850X5.250	300 2.07	127 5.00	——
350X150 14X6	377.0X159.0 14.850X6.250	300 2.07	127 5.00	——
350X150 14X6	355.6X168.3 14.000X6.625	300 2.07	330 12.99	——
350X200 14X8	355.6X219.1 14.000X8.625	300 2.07	203 7.99	——
350X250 14X10	355.6X273.0 14.000X10.750	300 2.07	203 7.99	——
350X300 14X12	355.6X323.9 14.000X12.750	300 2.07	203 7.99	——
400X200 16X8	406.4X219.1 16.000X8.625	300 2.07	229 9.00	——
400X250 16X10	406.4X273.0 16.000X10.750	300 2.07	229 9.00	——
400X300 16X12	406.4X323.9 16.000X12.750	300 2.07	229 9.00	——
400X350 16X14	406.4X355.6 16.000X14.000	300 2.07	229 9.00	——
450X150 18X6	457.2X168.3 18.000X6.625	300 2.07	381 15.00	——
450X250 18X10	457.2X273.0 18.000X10.750	300 2.07	381 15.00	——
450X300 18X12	457.2X323.9 18.000X12.750	300 2.07	241 9.50	——
450X350 18X14	457.2X355.6 18.000X14.000	300 2.07	241 9.50	——
450X400 18X16	457.2X406.4 18.000X16.000	300 2.07	241 9.50	——
500X200 20X8	530.0X219.1 20.866X8.625	300 2.07	135 5.31	——
500X300 20X12	508.0X323.9 20.000X12.750	300 2.07	254 10.00	——
500X350 20X14	508.0X355.6 20.000X14.000	300 2.07	254 10.00	——
500X400 20X16	508.0X406.4 20.000X16.000	300 2.07	254 10.00	——
500X450 20X18	508.0X457.2 20.000X18.000	300 2.07	254 10.00	——
600X400 24X16	609.6X406.4 24.000X16.000	300 2.07	305 12.00	——
600X450 24X18	609.6X457.2 24.000X18.000	300 2.07	305 12.00	——
600X500 24X20	609.6X508.0 24.000X20.000	300 2.07	305 12.00	——

Segmental sizes are made of carbon steel pipe or fabricated from wrought carbon steel. Contact manufacturer for details.

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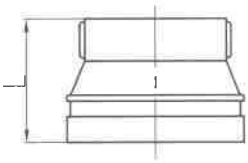
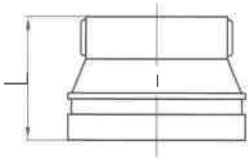
Grooved Concentric Reducer with Female Thread



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
50X15 2X1/2	60.3X21.3 2.375X0.825	500 3.45	64 2.50	VdS
50X20 2X3/4	60.3X26.9 2.375X1.05	500 3.45	64 2.50	UL FM VdS LPCB
50X25 2X1	60.3X33.7 2.375X1.315	500 3.45	64 2.50	UL FM VdS LPCB
50X32 2X1¼	60.3X42.4 2.375X1.660	500 3.45	64 2.50	UL FM VdS LPCB
50X40 2X1½	60.3X48.3 2.375X1.900	500 3.45	64 2.50	UL FM VdS LPCB
65X25 2½X1	73.0X33.7 2.875X1.315	500 3.45	64 2.50	UL FM
65X25 2½X1¼	73.0X42.4 2.875X1.660	500 3.45	64 2.50	UL FM
65X40 2½X1½	73.0X48.3 2.875X1.900	500 3.45	64 2.50	UL FM
65X50 2½X2	73.0X60.3 2.875X2.375	500 3.45	64 2.50	UL FM
65X15 2½X1/2	76.1X21.3 3.000X0.825	500 3.45	64 2.50	UL FM VdS
65X20 2½X3/4	76.1X26.9 3.000X1.05	500 3.45	64 2.50	UL FM VdS
65X25 2½X1	76.1X33.7 3.000X1.315	500 3.45	64 2.50	UL FM VdS
65X32 2½X1¼	76.1X42.4 3.000X1.660	500 3.45	64 2.50	UL FM VdS LPCB
65X40 2½X1½	76.1X48.3 3.000X1.900	500 3.45	64 2.50	FM VdS LPCB
65X50 2½X2	76.1X60.3 3.000X2.375	500 3.45	64 2.50	UL FM VdS LPCB
80X15 3X1/2	88.9X21.3 3.500X0.825	500 3.45	64 2.50	VdS
80X20 3X3/4	88.9X26.9 3.500X1.05	500 3.45	64 2.50	UL FM VdS
80X25 3X1	88.9X33.7 3.500X1.315	500 3.45	64 2.50	UL FM VdS
80X32 3X1¼	88.9X42.4 3.500X1.660	500 3.45	64 2.50	VdS
80X40 3X1½	88.9X48.3 3.500X1.900	500 3.45	64 2.50	UL FM VdS
80X50 3X2	88.9X60.3 3.500X2.375	500 3.45	64 2.50	UL FM VdS LPCB
80X65 3X2½	88.9X73.0 3.500X2.875	500 3.45	64 2.50	UL FM
80X65 3X2½	88.9X76.1 3.500X3.000	500 3.45	64 2.50	UL FM VdS LPCB
100X25 4X1	108.0X33.7 4.250X1.315	500 3.45	76 3.00	UL FM
100X32 4X1¼	108.0X42.4 4.250X1.660	500 3.45	76 3.00	UL FM
100X40 4X1½	108.0X48.3 4.250X1.900	500 3.45	76 3.00	UL FM
100X50 4X2	108.0X60.3 4.250X2.375	500 3.45	76 3.00	UL FM
100X65 4X2½	108.0X76.1 4.250X3.000	500 3.45	76 3.00	UL FM
100X80 4X3	108.0X88.9 4.250X3.500	500 3.45	76 3.00	UL FM
100X15 4X1/2	114.3X21.3 4.500X0.825	500 3.45	76 3.00	UL FM VdS
100X20 4X3/4	114.3X26.9 4.500X1.05	500 3.45	76 3.00	UL FM VdS
100X25 4X1	114.3X33.7 4.500X1.315	500 3.45	76 3.00	UL FM VdS
100X32 4X1¼	114.3X42.4 4.500X1.660	500 3.45	76 3.00	UL FM VdS
100X40 4X1½	114.3X48.3 4.500X1.900	500 3.45	76 3.00	UL FM VdS LPCB
100X50 4X2	114.3X60.3 4.500X2.375	500 3.45	76 3.00	UL FM VdS LPCB
100X65 4X2½	114.3X73.0 4.500X2.875	500 3.45	76 3.00	UL FM
100X65 4X2½	114.3X76.1 4.500X3.000	500 3.45	76 3.00	UL FM VdS LPCB
100X80 4X3	114.3X88.9 4.500X3.500	500 3.45	76 3.00	UL FM VdS LPCB
125X40 5X1½	133.0X48.3 5.250X1.900	500 3.45	89 3.50	UL FM

240N

Grooved Concentric Reducer with Female Thread

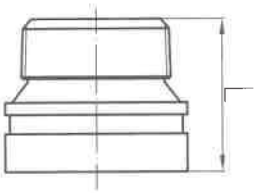


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
125X40 5X2	133.0X60.3 5.250X2.375	500 3.45	89 3.50	——
125X65 5X2½	133.0X76.1 5.250X3.000	500 3.45	89 3.50	UL FM
125X65 5X3	133.0X88.9 5.250X3.500	500 3.45	89 3.50	——
125X25 5X1	139.7X33.7 5.500X1.315	500 3.45	89 3.50	UL FM VdS
125X32 5X1¼	139.7X42.4 5.500X1.660	500 3.45	89 3.50	UL FM VdS
125X40 5X1½	139.7X48.3 5.500X1.900	500 3.45	89 3.50	UL FM VdS
125X50 5X2	139.7X60.3 5.500X2.375	500 3.45	89 3.50	UL FM VdS
125X65 5X2½	139.7X76.1 5.500X3.000	500 3.45	89 3.50	UL FM VdS
125X80 5X3	139.7X88.9 5.500X3.500	500 3.45	89 3.50	UL FM VdS
125X100 5X4	139.7X114.3 5.500X4.500	500 3.45	89 3.50	UL FM VdS LPCB
125X100 5X4	141.3X114.3 5.563X4.500	500 3.45	89 3.50	UL FM
150X20 6X3/4	159.0X26.9 6.250X1.05	500 3.45	102 4.00	UL FM
150X25 6X1	159.0X33.7 6.250X1.315	500 3.45	102 4.00	UL FM
150X32 6X1¼	159.0X42.4 6.250X1.660	500 3.45	102 4.00	UL FM
150X40 6X1½	159.0X48.3 6.250X1.900	500 3.45	102 4.00	UL FM
150X50 6X2	159.0X60.3 6.250X2.375	500 3.45	102 4.00	UL FM
150X65 6X2½	159.0X76.1 6.250X3.000	500 3.45	102 4.00	UL FM
150X80 6X3	159.0X88.9 6.250X3.500	500 3.45	102 4.00	UL FM
150X100 6X4	159.0X114.3 6.250X4.500	500 3.45	102 4.00	UL FM
150X15 6X1/2	165.1X21.3 6.500X0.825	500 3.45	102 4.00	UL FM
150X20 6X3/4	165.1X26.9 6.500X1.05	500 3.45	102 4.00	UL FM
150X25 6X1	165.1X33.7 6.500X1.315	500 3.45	102 4.00	UL FM
150X32 6X1¼	165.1X42.4 6.500X1.660	500 3.45	102 4.00	UL FM
150X40 6X1½	165.1X48.3 6.500X1.900	500 3.45	102 4.00	UL FM
150X50 6X2	165.1X60.3 6.500X2.375	500 3.45	102 4.00	UL FM
150X65 6X2½	165.1X76.1 6.500X3.000	500 3.45	102 4.00	UL FM
150X80 6X3	165.1X88.9 6.500X3.500	500 3.45	102 4.00	UL FM LPCB
150X100 6X4	165.1X114.3 6.500X4.500	500 3.45	102 4.00	UL FM
150X25 6X1	168.3X33.7 6.625X1.315	500 3.45	102 4.00	UL FM
150X50 6X2	168.3X60.3 6.625X2.375	500 3.45	102 4.00	UL FM VdS
200X40 8X1½	219.1X48.3 8.625X1.900	500 3.45	127 5.00	UL FM
200X50 8X2	219.1X60.3 8.625X2.375	500 3.45	127 5.00	UL FM VdS
200X65 8X2½	219.1X76.1 8.625X3.000	500 3.45	127 5.00	UL FM VdS
200X80 8X3	219.1X88.9 8.625X3.500	500 3.45	127 5.00	UL FM VdS LPCB
200X100 8X4	219.1X114.3 8.625X4.500	500 3.45	127 5.00	UL FM

240W

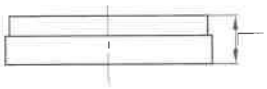
Grooved Concentric Reducer with Male Thread

Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
65X50 2"½X2	73.0X60.3 2.875X2.375	500 3.45	64 2.50	UL FM
65X50 2"½X2	76.1X60.3 3.000X2.375	500 3.45	64 2.50	UL FM
80X25 3X1	88.9X33.7 3.500X1.315	500 3.45	64 2.50	UL FM
100X50 4X2	114.3X60.3 4.500X2.375	500 3.45	76 3.00	UL FM



300

Cap



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
25 1	33.7 1.315	500 3.45	22.1 0.87	UL FM VdS LPCB
32 1¼	42.4 1.660	500 3.45	23.5 0.93	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	23.5 0.93	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	23.5 0.93	UL FM VdS LPCB
65 2½	73.0 2.875	500 3.45	23.5 0.93	UL FM
65 2½	76.1 3.000	500 3.45	24.5 0.96	UL FM VdS LPCB
80 3	88.9 3.500	500 3.45	24 0.94	UL FM VdS LPCB
100 4	108.0 4.250	500 3.45	27 1.06	UL FM
100 4	114.3 4.500	500 3.45	27 1.06	UL FM VdS LPCB
25 5	133.0 5.250	500 3.45	25.5 1.00	UL FM
125 5	139.7 5.500	500 3.45	25.5 1.00	UL FM VdS LPCB
125 5	141.3 5.563	500 3.45	25.5 1.00	UL FM
150 6	159.0 6.250	500 3.45	27 1.06	UL FM
150 6	165.1 6.500	500 3.45	27 1.06	UL FM LPCB
150 6	168.3 6.625	500 3.45	24.5 0.97	UL FM VdS LPCB
200 8	216.3 8.516	500 3.45	30 1.18	UL FM
200 8	219.1 8.625	500 3.45	30 1.18	UL FM VdS LPCB
250 10	273.0 10.750	500 3.45	32 1.26	UL FM VdS LPCB
300 12	323.9 12.750	500 3.45	32 1.26	UL FM VdS
350 14	355.6 14.000	300 2.07	165 6.50	——
400 16	406.4 16.000	300 2.07	178 7.00	——
450 18	457.2 18.000	300 2.07	203 8.00	——
500 20	508.0 20.000	300 2.07	229 9.00	——
600 24	609.6 24.000	300 2.07	267 10.50	——

Segmental sizes are made of carbon steel pipe or fabricated from wrought carbon steel. Contact manufacturer for details.

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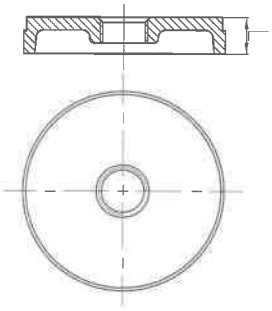
300

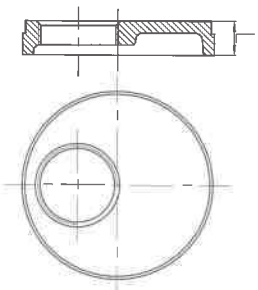
Cap with Concentric Hole



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
50X25 2X1	60.3X33.7 2.375X1.315	500 3.45	23.5 0.93	——
65X25 2½×1	76.1X33.7 3.000X1.315	500 3.45	24.5 0.96	——
65×40 2½×1½	76.1×48.3 3.000×1.900	500 3.45	23.5 0.925	UL FM
65X50 2½×2	76.1X60.3 3.000X2.375	500 3.45	24 0.94	——
80X15 3X1/2	88.9X21.3 3.500X0.825	500 3.45	25.4 1.00	UL FM
80X25 3X1	88.9X33.7 3.500X1.315	500 3.45	24 0.94	UL FM
80X40 3X1½	88.9X48.3 3.500X1.900	500 3.45	23.5 0.925	UL FM
80×50 3×2	88.9×60.3 3.500×2.375	500 3.45	23.5 0.925	UL FM
100×15 4×1/2	114.3×21.3 4.500×0.825	500 3.45	27.0 1.06	UL FM
100×25 4×1	114.3×33.7 4.500×1.315	500 3.45	27.0 1.06	UL FM
100X40 4X1½	114.3X48.3 4.500X1.900	500 3.45	25.4 1.00	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	500 3.45	25.4 1.00	——
125×50 5×2	139.7×60.3 5.500×2.375	500 3.45	27 1.06	UL FM
150×15 6×1/2	165.1×21.3 6.500×0.825	500 3.45	27 1.06	UL FM
150×25 6×1	165.1×33.7 6.500×1.315	500 3.45	27 1.06	UL FM
150×50 6×2	165.1×60.3 6.500×2.375	500 3.45	27 1.06	UL FM
150X40 6X11/2	168.3x48.3 6.625X1.900	500 3.45	27 1.06	——
150×50 6×2	168.3×60.3 6.625×2.375	500 3.45	27 1.06	——
200X25 8X1	219.1X33.7 8.625X1.315	500 3.45	30 1.18	——

300PX

Cap with Eccentric Hole



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
65X25 21/2X1	76.1X33.7 3000X1.315	500 3.45	23.5 0.925	——
65X40 21/2X11/2	76.1X48.3 3.000X1.900	500 3.45	23.5 0.925	——
80X25 3X1	88.9X33.7 3.500X1.315	500 3.45	23.5 0.925	——
80X40 3X1½	88.9X48.3 3.500X1.900	500 3.45	23.5 0.925	UL FM
80×50 3×2	88.9×60.3 3.500×2.375	500 3.45	23.5 0.925	UL FM
100X25 4X1	114.3X33.7 4.500X1.315	500 3.45	27 1.06	——
100X40 4X1½	114.3X48.3 4.500X1.900	500 3.45	25.4 1.00	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	500 3.45	25.4 1.00	UL FM
125×40 5×1½	139.7×48.3 5.500×1.900	500 3.45	25.4 1.00	UL FM
125×50 5×2	139.7×60.3 5.500×2.375	500 3.45	25.4 1.00	UL FM
150×40 6×1½	165.1×48.3 6.500×1.900	500 3.45	25.4 1.00	UL FM
150×40 6×1½	168.3×48.3 6.625×1.900	500 3.45	25.4 1.00	UL FM
150×50 6×2	168.3X60.3 6.625X2.375	500 3.45	25.4 1.00	UL FM
200×40 8×1½	219.1×48.3 8.625×1.900	500 3.45	30.2 1.19	UL FM
200×50 8×2	219.1×60.3 8.625×2.375	500 3.45	30.2 1.19	UL FM

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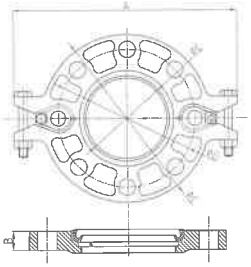
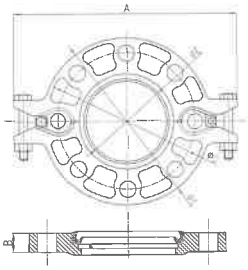
321
PN16
Grooved Flange



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	Bolt/Nut No.-SIZE mm		Certificate
40 1½	48.3 1.900	300 2.07	195 7.68	18.5 0.73	150 5.90	110 4.33	45.4 1.78	2-M10X50	4-M16	UL FM VdS
50 2	60.3 2.375	300 2.07	220 8.66	18.5 0.73	165 6.50	125 4.92	57.5 2.26	2-M10X50	4-M16	UL FM VdS
65 76.1	76.1 3.000	300 2.07	235 9.25	18.5 0.73	185 7.28	145 5.71	72.7 2.86	2-M10X50	4-M16	UL FM VdS
80 3	88.9 3.500	300 2.07	255 10.04	18.5 0.73	195 7.68	160 6.30	85.5 3.37	2-M10X50	8-M16	UL FM VdS
100 108.0	108.0 4.250	300 2.07	279 10.98	18.5 0.73	220 8.66	180 7.09	104.5 4.11	2-M10X50	8-M16	UL FM
100 4	114.3 4.500	300 2.07	279 10.98	18.5 0.73	224 8.82	180 7.09	110.5 4.35	2-M10X50	8-M16	UL FM VdS
125 5	133.0 5.250	300 2.07	312 12.28	21.5 0.85	250 9.84	210 8.27	129.2 5.08	2-M12X65	8-M16	UL FM
125 5	139.7 5.500	300 2.07	320 12.60	23 0.91	250 9.84	210 8.27	135.5 5.33	2-M12X65	8-M16	UL FM
150 6	159.0 6.25	300 2.07	346 13.62	21.5 0.85	280 11.00	240 9.45	154.8 6.10	2-M12X65	8-M20	UL FM
150 6	165.1 6.500	300 2.07	346 13.62	21.5 0.85	280 11.00	240 9.45	160.8 6.33	2-M12X65	8-M20	UL FM
150 6	168.3 6.625	300 2.07	346 13.62	24 0.94	280 11.00	240 9.45	164.3 6.47	2-M12X65	8-M20	UL FM
200 8	219.1 8.625	300 2.07	414.3 16.31	30 1.18	340 13.39	295 11.61	214.9 8.46	2-3/8X70 2-M10X70	12-M20	UL FM VdS
250 10	273.0 10.750	300 2.07	480 18.90	25.5 1.00	405 15.94	355 13.98	268.9 10.59	2-3/8X70 2-M10X70	12-M24	UL FM VdS
300 12	323.9 12.750	300 2.07	530.5 20.88	25.5 1.00	460 18.11	410 16.14	318.9 12.56	2-3/8X70 2-M10X70	12-M24	UL FM
350 14	355.6 14.000	300 2.07	580 22.83	30 1.18	520 20.47	470 18.50	350.6 13.80	——	16-M24	——
400 16	406.4 16.000	300 2.07	630 24.80	32 1.26	580 22.83	525 20.67	401.5 15.81	——	16-M27	——
450 18	457.2 18.000	300 2.07	693 27.28	36 1.42	640 25.20	585 23.03	452.2 17.80	——	20-M27	——
500 20	508.0 20.000	300 2.07	770 30.31	36 1.42	715 28.15	650 25.59	503 19.80	——	20-M30	——
600 24	609.6 24.000	300 2.07	895 35.24	40 1.57	840 33.07	770 30.31	601.6 23.69	——	20-M33	——

321H
PN25
Grooved Flange



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	Bolt/Nut No.-SIZE mm		Certificate
100 108.0	108.0 4.250	362 2.5	290 11.41	21.5 0.85	230 9.06	190 7.48	104.5 4.11	2-M10X50	8-M20	UL FM
150 165.1	165.1 6.500	362 2.5	365 14.37	21.5 0.85	300 11.80	250 9.84	160.8 6.33	2-M12X65	8-M24	UL FM

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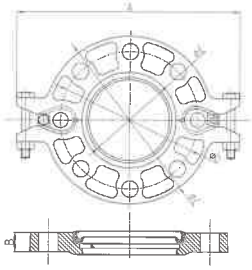
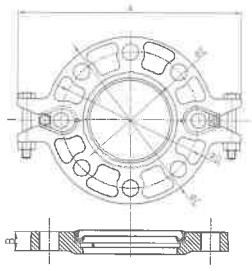
321A
ANSI 125/150
Grooved Flange

c UL us LISTED FM APPROVED



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	Bolt/Nut No.-SIZE mm		Certificate
50 2	60.3 2.375	300 2.07	206 8.11	19 0.75	152 5.98	121 4.76	57.5 2.26	2-M10X50	4-5/8	UL FM
65 2½	73.0 2.875	300 2.07	230 9.05	19 0.75	178 7.00	140 5.51	69.8 2.74	2-M10X50	4-5/8	UL FM
65 2½	76.1 3.000	300 2.07	230 9.05	19 0.75	178 7.00	140 5.51	72.7 2.86	2-M10X50	4-5/8	——
80 3	88.9 3.500	300 2.07	246 9.68	19 0.75	191 7.52	152 5.98	85.5 3.37	2-M10X50	4-5/8	UL FM
100 4	114.3 4.500	300 2.07	280 11.02	19 0.75	229 9.00	191 7.52	110.5 4.35	2-M12X55	8-5/8	UL FM
125 5	141.3 5.563	300 2.07	320 12.60	22 0.87	254 10.00	216 8.50	137.4 5.41	2-M12X65	8-3/4	UL FM
150 6	168.3 6.625	300 2.07	346 13.62	24 0.94	280 11.00	241.3 9.50	164.3 6.47	2-M12X65	8-3/4	UL FM
200 8	219.1 8.625	300 2.07	414.3 16.31	30 1.18	341.4 13.44	298.5 11.75	214.9 8.46	2-3/8X70 2-M10X70	8-3/4	UL FM
250 10	273.0 10.750	300 2.07	481.2 18.94	30.3 1.19	405.6 15.97	361.95 14.25	268.9 10.59	2-3/8X70 2-M10X70	12-7/8	UL FM
300 12	323.9 12.750	300 2.07	553.3 21.78	30.4 1.20	482.6 19.00	431.8 17.00	318.9 12.56	2-3/8X70 2-M10X70	12-7/8	UL FM
350 14	355.6 14.000	300 2.0	590 23.22	37 1.44	535 21.00	476.3 18.75	350.6 13.80	——	12-1	——
400 16	406.4 16.000	300 2.0	650 25.59	37 1.44	595 23.50	539.8 21.25	401.5 15.81	——	16-1	——
450 18	457.2 18.000	300 2.0	690 27.17	40 1.56	635 25.80	577.8 22.75	452.2 17.80	——	16-11/8	——
500 20	508.0 20.000	300 2.0	765 30.12	43 1.69	700 27.50	635 25.00	503 19.80	——	20-11/8	——
600 24	609.6 24.000	300 2.0	875 34.45	49 1.94	815 32.00	749.3 29.50	601.6 23.69	——	20-11/4	——

321E
BS.TABLE'E'
Grooved Flange



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	Bolt/Nut No.-SIZE mm		Certificate
50 2	60.3 2.375	300 2.07	211 8.31	18.5 0.73	150 5.91	114 4.49	57.5 2.26	2-M10X50	4-M16	——
80 3	88.9 3.500	300 2.07	241 9.49	18.5 0.73	185 7.28	146 5.75	85.5 3.37	2-M10X50	4-M16	——
100 4	114.3 4.500	300 2.07	270 10.63	18.5 0.73	216 8.50	178 7.00	110.5 4.35	2-M10X50	8-M16	——
150 6	165.1 6.500	300 2.07	346 13.62	21.5 0.85	280 11.02	235 9.25	160.8 6.33	2-M12X65	8-M20	——
200 8	219.1 8.625	300 2.07	408 16.06	24 0.94	335 13.19	292 11.50	214.9 8.46	2-3/8X70	8-M20	——
250 10	273.0 10.750	200 1.4	480 18.90	25.5 1.00	406 16.00	356 14.00	268.9 10.59	——	12-3/4	——
300 12	323.9 12.750	200 1.4	530.5 20.88	25.5 1.00	457 18.00	406 16.00	318.9 12.56	——	12-7/8	——
350 14	355.6 14.000	200 1.4	580 22.83	32 1.26	527 20.75	470 18.50	350.6 13.80	——	12-7/8	——
400 16	406.4 16.000	200 1.4	630 24.80	32 1.26	578 22.76	521 20.51	401.5 15.81	——	12-7/8	——
450 18	457.2 18.000	200 1.4	693 27.28	36 1.42	641 25.24	584 23.00	452.2 17.80	——	16-7/8	——
500 20	508.0 20.000	200 1.4	770 30.31	38 1.50	705 27.76	641 25.24	503 19.80	——	16-7/8	——
600 24	609.6 24.000	200 1.4	880 34.65	42 1.65	826 32.52	756 29.76	601.6 23.69	——	16-11/8	——

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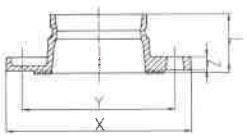
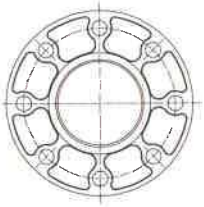
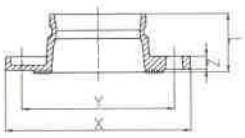
321G
PN16
Adaptor Flange

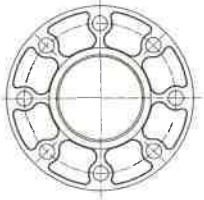




Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm	
25 1	33.7 1.327	300 2.0	60.5 2.382	115 4.53	85 3.35	16 0.63	4-M12	UL FM VdS LPCB
32 1¼	42.4 1.669	300 2.0	60.5 2.382	140 5.51	100 3.94	16 0.63	4-M16	UL FM VdS LPCB
40 1½	48.3 1.902	300 2.0	60.5 2.382	150 5.91	110 4.33	16 0.63	4-M16	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	65 2.559	165 6.50	125 4.92	16 0.63	4-M16	UL FM VdS LPCB
65 76.1	76.1 3.000	500 3.45	65 2.559	185 7.28	145 5.70	16 0.63	4-M16	UL FM VdS LPCB
80 3	88.9 3.500	500 3.45	65 2.559	200 7.87	160 6.30	16 0.63	8-M16	UL FM VdS LPCB
100 108.0	108.0 4.250	300 2.0	70 2.756	220 8.66	180 7.09	16 0.63	8-M16	UL FM
100 4	114.3 4.500	300 2.0	70 2.756	220 8.66	180 7.09	16 0.63	8-M16	UL FM VdS LPCB
125 133.0	133 5.250	300 2.0	70 2.756	250 9.84	210 8.27	18 0.71	8-M16	UL FM
125 139.7	139.7 5.500	300 2.0	70 2.756	250 9.84	210 8.27	18 0.71	8-M16	UL FM VdS LPCB
150 159.1	159.0 6.250	500 3.45	70 2.756	285 11.22	240 9.45	18 0.71	8-M20	UL FM
150 165.1	165.1 6.500	500 3.45	70 2.756	285 11.22	240 9.45	18 0.71	8-M20	UL FM LPCB
150 6	168.3 6.625	500 3.45	70 2.756	285 11.22	240 9.45	18 0.71	8-M20	UL FM VdS LPCB
200 8	219.1 8.625	300 2.0	80 3.150	340 13.39	295 11.61	19 0.75	12-M20	UL FM VdS LPCB
250 10	273.0 10.750	300 2.0	85 3.346	405 15.94	355 13.98	21 0.83	12-M24	UL FM VdS
300 12	323.9 12.750	225 1.6	90 3.543	460 18.11	410 16.14	24 0.94	12-M24	UL FM VdS
350 14	377.0 14.843	225 1.6	100 3.937	520 20.47	470 18.50	25 1.00	16-M24	UL FM
400 16	426.0 16.772	225 1.6	110 4.331	580 22.83	525 20.67	27 1.06	16-M27	UL FM
450 18	480 18.897	225 1.6	115 4.528	640 25.196	585 23.03	20 0.787	20-M27	——

321GH
PN25
Adaptor Flange



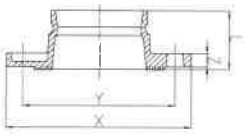


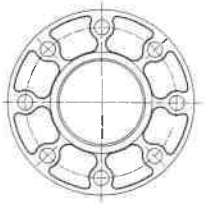
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm	
100 108.0	108.0 4.250	362 2.5	70 2.756	230 9.05	190 7.48	18 0.71	8-M20	UL FM
100 4	114.3 4.500	362 2.5	70 2.756	235 9.25	190 7.48	16 0.63	8-M20	UL FM
150 159.0	159.0 6.250	362 2.5	70 2.756	300 11.80	250 9.85	20 0.79	8-M24	UL FM
150 165.1	165.1 6.500	362 2.5	70 2.756	300 11.80	250 9.84	18 0.71	8-M24	UL FM
200 8	219.1 8.625	362 2.5	80 3.150	360 14.17	310 12.20	19 0.75	12-M24	UL FM
250 10	273.0 10.75	362 2.5	85 3.346	425 16.73	370 14.57	22 0.87	12-M27	——
300 12	323.9 12.750	362 2.5	88 3.46	485 19.09	430 16.93	23.5 0.93	16-M27	——
350 14	355.6 14.000	362 2.5	100 3.94	555 21.85	490 19.29	26 1.02	16-M30	——
400 16	406.4 16.000	362 2.5	110 4.33	620 24.41	550 21.65	28 1.10	16-M33	——

NSF/ANSI 61 NSF/ANSI 372 ACS

321GA
ANSI 125/150
Adaptor Flange
Class 125/150

c UL us LISTED FM APPROVED

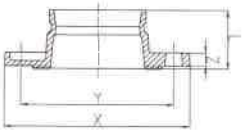


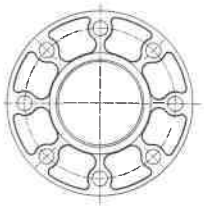


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	X mm/in	Y mm/in	Z mm/in	Bolt/Nut No.-SIZE mm	Certificate
50 2	60.3 2.375	300 2.07	65 2.559	152 6.0	120.5 4.74	16 0.63	4-5/8	UL FM
65 2½	73.0 2.875	300 2.07	65 2.559	185 7.28	139.7 5.50	16 0.63	4-5/8	UL FM
80 3	88.9 3.500	300 2.07	65 2.559	200 7.87	152.4 6.00	16 0.63	8-5/8	UL FM
100 4	114.3 4.500	300 2.07	70 2.756	229 9.01	190.5 7.50	16 0.63	8-5/8	UL FM
150 6	168.3 6.625	300 2.07	70 2.756	282 11.10	241.3 9.50	18 0.71	8-3/4	UL FM
200 8	219.1 8.625	300 2.07	75 2.953	340 13.39	298.5 11.75	19 0.75	8-3/4	UL FM
250 10	273.0 10.75	300 2.07	85 3.35	406 15.98	362 14.25	21 0.826	12-7/8	UL FM
350 14	355.6 12.750	300 2.0	127 5.00	535 21.00	476.3 18.75	37 1.44	12-1	——
400 16	406.4 16.000	300 2.0	127 5.00	595 23.50	539.8 21.25	37 1.44	16-1	——
450 18	457.2 18.000	300 2.0	140 5.50	642 25.28	577.8 22.75	40 1.56	16-11/8	——
500 20	508.0 20.000	300 2.0	152 6.00	700 27.50	635 25.00	43 1.69	20-11/8	——
600 24	609.6 24.000	300 2.0	152 6.00	815 32.00	749.3 29.50	49 1.94	20-11/4	——

321GL
PN10
Adaptor Flange

c UL us LISTED FM APPROVED

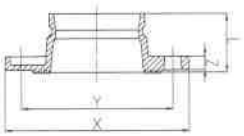


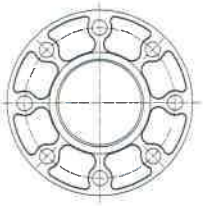


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions L mm/in	X mm/in	Y mm/in	Z mm/in	Bolt/Nut No.-SIZE mm	Certificate
200 8	219.1 8.625	145 1.0	75 2.95	340 13.39	295 11.61	19 0.75	8-M20	UL FM
250 10	273.0 10.750	145 1.0	85 3.346	405 15.94	350 13.78	21 0.83	12-M20	UL FM
300 12	323.9 12.750	145 1.0	90 3.543	460 18.11	400 15.75	24 0.94	12-M20	UL FM

321G
BS.TABLE 'E'
Adaptor Flange

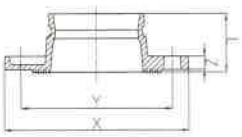
FM APPROVED

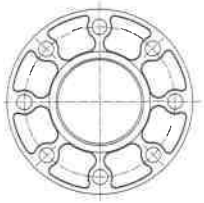




Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm	
50 2	60.3 2.375	225 1.6	65 2.56	152 5.98	114 4.49	16 0.63	4-M16	—
65 76.1	76.1 3.000	225 1.6	70 2.756	165 6.50	127 5.00	16 0.63	4-M16	—
80 3	88.9 3.500	225 1.6	70 2.756	184 7.24	146 5.75	16 0.63	4-M16	—
100 4	114.3 4.500	225 1.6	70 2.756	216 8.50	178 7.00	16 0.63	8-M16	FM
150 165.1	165.1 6.500	225 1.6	70 2.756	280 11.02	235 9.25	21 0.71	8-M20	FM
200 8	219.1 8.625	225 1.6	102 4.02	337 13.27	292 11.50	19 0.75	8-M20	—
250 10	273.0 10.75	225 1.6	85 3.35	405 15.94	356 14.02	25 0.98	12-M20	—
300 12	323.9 10.750	200 1.4	102 4.02	457 18.00	406 16.00	25.5 1.00	12-7/8	—
350 14	355.6 12.750	200 1.4	127 5.00	527 20.75	470 18.50	32 1.26	12-7/8	—
400 16	406.4 16.000	200 1.4	127 5.00	578 22.76	521 20.51	32 1.26	12-7/8	—
450 18	457.2 18.000	200 1.4	140 5.50	641 25.24	584 23.00	36 1.42	16-7/8	—

321GJ
JIS 10K
Adaptor Flange

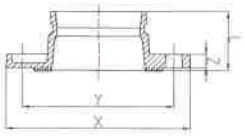


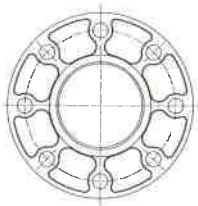


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm	
65 2½	76.3 3.00	145 1.0	65 2.559	175 6.89	140 5.51	18 0.71	4-M16	—
80 3	89.1 3.50	145 1.0	65 2.559	185 7.28	150 5.91	18 0.71	8- M16	—
100 4	114.3 4.50	145 1.0	70 2.756	210 8.27	175 6.89	18 0.71	8- M16	—
125 5	139.8 5.50	145 1.0	70 2.756	250 9.84	210 8.27	20 0.79	8-M20	—
150 6	165.2 6.50	145 1.0	70 2.756	280 11.02	240 9.45	20 0.79	8- M20	—

321GJ
JIS 16K
Adaptor Flange

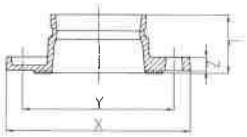
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm	
80 3	88.9 3.500	225 1.6	65 2.559	200 7.87	160 6.30	17 0.67	8-M20	—
100 4	114.3 4.500	225 1.6	70 2.756	225 8.86	185 7.28	19 0.75	8-M20	—
150 165.1	165.1 6.500	225 1.6	70 2.756	305 12.00	260 10.236	21 0.827	12-M22	—

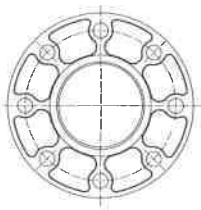




321GJ
JIS 20K
Adaptor Flange

Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm	
100 4	114.3 4.500	300 2.0	70 2.756	225 8.86	185 7.28	19 0.75	8-M20	—
150 165.1	165.1 6.500	300 2.0	70 2.756	305 12.00	260 10.236	21 0.827	12-M22	—



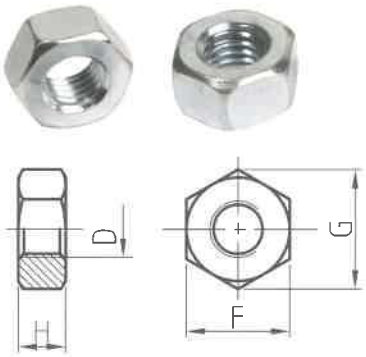


Gasket Data

Gasket	Name	Temperature Range	General Service Recommendations	Color Mark
E	EPDM	-34~+110℃ (-30~+230° F)	Recommended for hot water service within the specified temperature range plus a variety of dilute acids,oil-free air and many chemical services.UL classified in accordance with ANSI/NSF 61or cold+86° F(+30°)and hot +180° F(+82℃) potable water service.Not recommended for petroleum service.	Black Green Strip
D	NBR	-29~+82℃ (-20~+180° F)	Recommended for petroleum products, air with oil vapors,vegetable and mineral oils within the specified temperature range.Not recommended for hot water services.	Orange Strip
S	Silicone	-40~+177℃ (-40~+350° F)	Recommended for high temperature dry air and some high temperature chemical products.	White

NSF/ANSI 61 NSF/ANSI 372 ACS

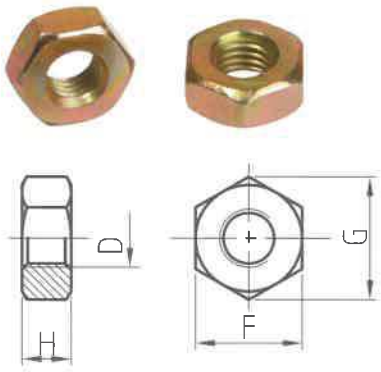
ANSI Heavy Hex Nut



1. Material: SAE J995 2.
2.Thread: ANSI B 1.1-1982, class 2B.
3.Surface Treatment: Zinc electroplated per ASTM B633 CLASS FE/ZN5 TYPE III, thickness ≥5 μ m per class SC1.

d	F		G		H	
	Min	Max	Min	Max	Min	Max
3/8-16UNC	16.99	17.47	19.38	20.17	8.66	9.57
1/2-13UNC	21.59	22.22	24.61	25.65	11.78	12.80
5/8-11UNC	26.19	26.97	29.85	31.16	14.90	16.02
3/4-10UNC	30.78	31.75	35.10	36.65	18.03	19.25
7/8-9UNC	35.41	36.53	40.36	42.16	21.16	22.48

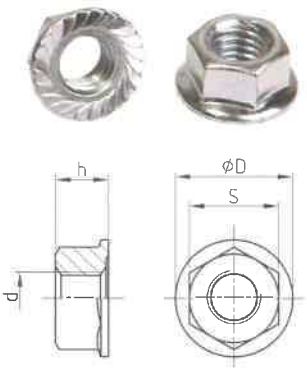
Metric Heavy Hex Nut



1.Material: ISO 898-2:1992 \ GB/T3098.2-2000 Class 8.
2.Thread: ISO 261, tolerance 6h for M10& M12, 7h for M16 and above.
3.Surface Treatment: Zinc Electroplated followed by a yellow chromate dip per ISO 2081 FE/ZN5, ISO4520 CLASS 1A.

d	F		G	H	
	Min	Max	Min	Min	Max
M10	15.73	16.0	17.7	8.0	8.4
M12	21.16	22.0	23.9	9.34	10.0
M16	23.16	24.0	26.17	14.1	15.9
M20	29.16	30.0	32.95	16.9	19.0
M22	33.0	34.0	37.29	18.1	20.2

Hexagon Flange Nut

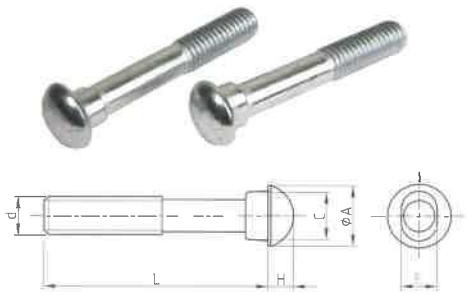


Dimension according to DIN6923.

d	S		D	h	
	Min	Max	Max	Min	Max
M8	12.3	13	17.9	7.6	8
M10	14.73	15.0	21.8	9.64	10
M12	17.73	18.0	26.0	11.57	12.0

NSF/ANSI 61 NSF/ANSI 372 ACS

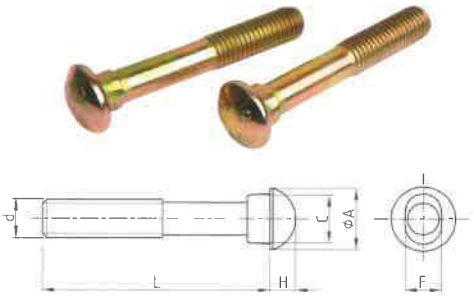
ANSI Oval Neck Track Bolt



1.Material: SAE J429 5.
2.Thread: UNC thread per ANSI B 1.1 Class 2A.
3.Surface Treatment: Silver chromate electroplated per ASTM B633 CLASS FE/ZN5 TYPE III, thickness ≥5 μ m per class SC1.

d	A	C	F	H	L
3/8-16UNC	19	13.9	9.50	6.0	55/70
1/2-13UNC	22.5	16	12.70	8.0	70/75
5/8-11UNC	27.4	19.8	15.90	10.0	80/85/105
3/4-10UNC	32.5	26.2	19.05	12.0	115/120
7/8-9UNC	37.7	28.8	22.20	14.0	125/140

Metric Oval Neck Track Bolt

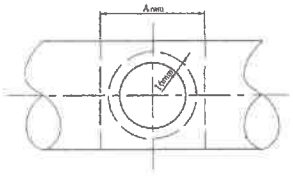


1.Material: ISO 898-1:1992 \ GB/T3098.1-2000 Class 8.8.
2.Thread: ISO metric thread per ISO 261, tolerance 6h.
3.Surface Treatment: Yellow chromate electroplated per ISO 2081 FE/ZN5 ISO4520 CLASS 1A.

d	A	C	F	H	L
M10	18.5	13.5	9.5	5	50/57/63/70/89
M12	23.5	17.5	12.3	8	70/76/82/89/108
M16	29.5	20.5	15.7	10	85/89/95/108
M20	38	27	18.3	12.5	110/115
M22	42.2	31	21.4	14	125/140/150

Hole Diameter of pipe

Hole—cutting Machine



Run Nominal Size mm/in	Outlet Nominal Size mm/in	Hole Dia. +3.2,0+0.13,0 mm/in
25 1"/33.7	10 3/8	23.5 0.925 A89
	15 1/2	
	20 3/4	
	25 1	
32 11/4"/42.4	10 3/8	30 1.18 A89
	15 1/2	
	20 3/4	
	25 1	
40 11/2"/48.3	10 3/8	30 1.18 A89
	15 1/2	
	20 3/4	
	25 1	
50 2"/60.3	15 1/2	38 1.50 A89
	20 3/4	
	25 1	
	32 11/4	45 1.75 A102
	40 11/2	
65 21/2"/73.0 76.1	15 1/2	38 1.50 A89
	20 3/4	
	25 1	
	32 11/4	51 2.00 A102
	40 11/2	

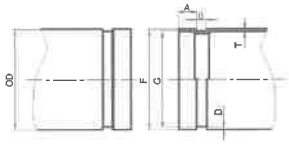
Run Nominal Size mm/in	Outlet Nominal Size mm/in	Hole Dia. +3.2,0+0.13,0 mm/in
80 3"/88.9	15 1/2	38 1.50 A89
	20 3/4	
	25 1	
	32 11/4	51 2.00 A102
	40 11/2	
	50 2	64 2.50 A114
100 108.0 4"/114.3	15 1/2	38 1.50 A89
	20 3/4	
	25 1	
	32 11/4	51 2.00 A102
	40 11/2	
	50 2	64 2.50 A114
	65 21/2/76	70 2.75 A120
	80 3	89 3.50 A140
125 133.0 139.7 5"/141.3	15 1/2	38 1.50 A89
	20 3/4	
	25 1	
	32 11/4	51 2.00 A102
	40 11/2	
	50 2	64 2.50 A114
	65 21/2/76	70 2.75 A120
	80 3	89 3.50 A140

Run Nominal Size mm/in	Outlet Nominal Size mm/in	Hole Dia. +3.2,0+0.13,0 mm/in
150 159.0 165.1 6"/168.3	15 1/2	38 1.50 A89
	20 3/4	
	25 1	
	32 11/4	51 2.00 A102
	40 11/2	
	50 2	64 2.50 A114
	65 21/2/76	70 2.75 A120
	80 3	89 3.50 A140
	100 108.0/4	114 4.50 A165
200 8"/219.1 250 10"/273.0	25 1	38 1.50 A89
	32 11/4	51 2.00 A102
	40 11/2	
	50 2	64 2.50 A114
	65 21/2/76	70 2.75 A120
	80 3	89 3.50 A140
	100 108.0/4	114 4.50 A165

The outside surface of the pie within 16mm from the hole must be clean and smooth.

Roll Groove Dimensions

Roll Grooving Machine



Nominal Size mm/in	Pipe OD			Gasket seat A ±0.76/±0.03 mm/in	Groove Width B ±0.76/±0.03 mm/in	Groove Dia C		Groove Depth D(ref) mm/in	MaxAllow Flare Dia F mm/in	Min.Allow wall thickness T mm/in
	Basic mm/in	Tolerence mm/in				Basic mm/in	Tolerence mm/in			
25 1	33.7 1.327	+0.41 +0.016	-0.68 -0.026	15.88 0.625	7.14 0.281	30.23 1.190	-0.38 -0.015	1.60 0.063	34.5 1.358	1.8 0.071
32 11/4	42.4 1.669	+0.50 0.020	-0.60 -0.023	15.88 0.625	7.14 0.281	38.99 1.535	-0.38 -0.015	1.60 0.063	43.3 1.705	1.8 0.071
40 11/2	48.3 1.900	+0.44 0.017	-0.52 -0.020	15.88 0.625	7.14 0.281	45.09 1.775	-0.38 -0.015	1.60 0.063	49.4 1.945	1.8 0.071
50 2	60.3 2.375	+0.61 +0.024	-0.61 -0.024	15.88 0.625	8.74 0.344	57.15 2.250	-0.38 -0.015	1.60 0.063	62.2 2.449	1.8 0.071
65 2-1/2	73.0 2.875	+0.74 +0.029	-0.74 -0.029	15.88 0.625	8.74 0.344	69.09 2.720	-0.46 -0.018	1.98 0.078	75.2 2.961	2.3 0.091
65 2½	76.1 3.000	+0.76 +0.030	-0.76 -0.030	15.88 0.625	8.74 0.344	72.26 2.845	-0.46 -0.018	1.99 0.078	77.7 3.059	2.3 0.091
80 3	88.9 3.500	+0.89 +0.035	-0.79 -0.031	15.88 0.625	8.74 0.344	84.94 3.344	-0.46 -0.018	1.98 0.078	90.6 3.567	2.3 0.091
100 4	108.0 4.250	+1.07 +0.042	-0.79 -0.031	15.88 0.625	8.74 0.344	103.73 4.084	-0.51 -0.020	2.11 0.083	109.7 4.319	2.3 0.091
100 4	114.3 4.500	+1.14 +0.045	-0.79 -0.031	15.88 0.625	8.74 0.344	110.08 4.334	-0.51 -0.020	2.11 0.083	116.2 4.575	2.3 0.091
125 5	133.0 5.250	+1.32 +0.052	-0.79 -0.031	15.88 0.625	8.74 0.344	129.13 5.084	-0.51 -0.020	2.11 0.083	134.9 5.311	2.9 0.114
125 5	139.7 5.500	+1.40 +0.055	-0.79 -0.031	15.88 0.625	8.74 0.344	135.48 5.334	-0.51 -0.020	2.11 0.083	141.7 5.579	2.9 0.114
125 5	141.3 5.563	+1.42 +0.056	-0.79 -0.031	15.88 0.625	8.74 0.344	137.03 5.395	-0.56 -0.022	2.13 0.084	143.5 5.650	2.9 0.114
150 6	159.0 6.250	+1.60 +0.063	-0.79 -0.031	15.88 0.625	8.74 0.344	154.50 6.083	-0.56 -0.022	2.16 0.085	161.0 6.339	2.9 0.114
150 6	165.1 6.500	+1.60 +0.063	-0.79 -0.031	15.88 0.625	8.74 0.344	160.8 6.330	-0.56 -0.022	2.16 0.085	167.1 6.579	2.9 0.114
150 6	168.3 6.625	+1.60 +0.063	-0.79 -0.031	15.88 0.625	8.74 0.344	163.96 6.455	-0.56 -0.022	2.16 0.085	170.7 6.720	2.9 0.114
200A 8	216.3 8.516	+1.60 +0.063	-0.79 -0.031	19.05 0.750	11.91 0.469	211.60 8.331	-0.64 -0.025	2.35 0.093	219.8 8.653	2.9 0.114
200 8	219.1 8.625	+1.60 +0.063	-0.79 -0.031	19.05 0.750	11.91 0.469	214.40 8.441	-0.64 -0.025	2.34 0.092	221.5 8.720	2.9 0.114
250A 10	267.4 10.528	+1.60 +0.063	-0.79 -0.031	19.05 0.750	11.91 0.469	262.60 10.339	-0.69 -0.027	2.40 0.095	270.9 10.665	3.6 0.142
250 10	273.0 10.750	+1.60 +0.063	-0.79 -0.031	19.05 0.750	11.91 0.469	268.28 10.562	-0.69 -0.027	2.39 0.094	275.4 10.842	3.6 0.142
300A 12	318.5 12.539	+1.60 +0.063	-0.79 -0.031	19.05 0.750	11.91 0.469	312.90 12.319	-0.76 -0.030	2.77 0.109	322.0 12.677	4.0 0.158
300 12	323.9 12.750	+1.60 +0.063	-0.79 -0.031	19.05 0.750	11.91 0.469	318.29 12.531	-0.76 -0.030	2.77 0.109	326.2 12.842	4.0 0.158
350 14	355.6 14.000	+1.60 +0.063	-0.79 -0.031	23.83 0.938	11.91 0.469	350.04 13.781	-0.76 -0.030	2.77 0.109	359.7 14.16	4.0 0.158
350 14	377.0 14.842	+1.60 +0.063	-0.79 -0.031	23.83 0.938	11.91 0.469	371.44 14.623	-0.76 -0.030	2.77 0.109	379.5 14.941	4.5 0.177
400 16	406.4 16.000	+1.60 +0.063	-0.79 -0.031	23.83 0.938	11.91 0.469	400.84 15.781	-0.76 -0.030	2.77 0.109	410.5 16.16	4.2 0.165
400 16	426.0 16.772	+1.60 +0.063	-0.79 -0.031	23.83 0.938	11.91 0.469	420.46 16.553	-0.76 -0.030	2.77 0.109	428.5 16.870	4.5 0.177
450 18	457.2 18.000	+1.60 +0.063	-0.79 -0.031	25.40 1.000	11.91 0.469	451.64 17.781	-0.76 -0.030	2.77 0.109	461.3 18.16	4.2 0.165
450 18	480 18.897	+1.60 +0.063	-0.79 -0.031	25.40 1.000	11.91 0.469	469 18.465	-0.76 -0.030	5.50 0.216	484.1 19.06	4.2 0.165
500 20	508.0 20.000	+1.60 +0.063	-0.79 -0.031	25.40 1.000	11.91 0.469	502.44 19.781	-0.76 -0.030	2.77 0.109	512.1 20.16	4.8 0.188
500 20	530 20.866	+1.60 +0.063	-0.79 -0.031	25.40 1.000	11.91 0.469	522 20.55	-0.76 -0.030	4.0 0.157	535.1 21.067	5.0 0.197
600 24	609.6 24.000	+1.60 +0.063	-0.79 -0.031	25.40 1.000	12.7 0.500	600.9 23.656	0.76 -0.030	4.35 0.172	614.7 24.20	4.8 0.188
600 24	630 24.803	+1.60 +0.063	-0.79 -0.031	25.40 1.000	12.7 0.500	620.9 24.445	0.76 -0.030	4.55 0.179	635.1 25.00	4.8 0.188

NSF/ANSI 61 NSF/ANSI 372 ACS

Pressure Ratings and End Loads for Mech Couplings on Steel Pipe

1G Rigid

1GS L/Duty Rigid

1N Reducing

Nom. Size	Pipe O.D	Pipe Sched	Wall Thick.	1G		1GS		1N	
				Roll Grooved		Roll Grooved		Roll Grooved	
				Max.Work Press.	Max.End Load	Max.Work Press.	Max.End Load	Max.Work Press.	Max.End Load
DN/in	mm	(Sch)	mm	Bar/Psi	kN/Lbs	Bar/Psi	kN/Lbs	Bar/Psi	kN/Lbs
25	33.7	40	3.38	35/500	3.0/680	--	--	20/300	1.8/410
		10	2.77	35/500	3.0/680	--	--	20/300	1.8/410
32	42.4	40	3.56	35/500	4.8/1080	--	--	20/300	2.9/650
		10	2.77	35/500	4.8/1080	--	--	20/300	2.9/650
40	48.3	40	3.68	35/500	6.3/1420	--	--	20/300	3.8/850
		10	2.77	35/500	6.3/1420	--	--	20/300	3.8/850
50	60.3	40	3.91	35/500	9.8/2210	--	--	20/300	5.9/1330
		10	2.77	35/500	9.8/2210	--	--	20/300	5.9/1330
65	73	40	5.16	35/500	14.4/3240	--	--	20/300	8.7/1950
		10	3.05	35/500	14.4/3240	--	--	20/300	8.7/1950
65	76.1	--	6.35	--	--	--	--	--	--
		--	5.08	35/500	15.7/3520	--	--	20/300	9.4/2120
		--	3.81	35/500	15.7/3520	--	--	20/300	9.4/2120
80	88.9	40	5.49	35/500	21.4/4810	24/350	15.0/3360	20/300	12.8/2885
		10	3.05	35/500	21.4/4810	24/350	15.0/3360	20/300	12.8/2885
100	114.3	40	6.02	35/500	35.4/7960	24/350	24.7/5560	20/300	21.2/4770
		10	3.05	35/500	35.4/7960	24/350	24.7/5560	20/300	21.2/4770
125	141.3	40	6.55	35/500	54.1/12100	24/350	37.8/8490	20/300	32.4/7290
		10	3.4	35/500	54.1/12100	24/350	37.8/8490	20/300	32.4/7290
150	165.1	--	6.35	35/500	73.8/16610	24/350	51.6/11600	20/300	44.3/9960
		--	5.08	35/500	73.8/16610	24/350	51.6/11600	20/300	44.3/9960
150	168.3	40	7.11	35/500	76.7/17260	24/350	53.6/12000	20/300	46.0/10340
		10	3.4	35/500	76.7/17260	24/350	53.6/12000	20/300	46.0/10340
200	219.1	40	8.18	31/450	116.9/26280	24/350	90.8/20430	--	--
		30	7.04	31/450	116.9/26280	24/350	90.8/20430	--	--
		10	4.77	20/300	77.8/17500	24/350	90.8/20430	--	--
250	273	40	9.27	28/400	163.8/36800	--	--	--	--
		30	7.8	20/300	121.0/27210	--	--	--	--
		10	4.77	20/300	121.0/27210	--	--	--	--
300	323.9	40	10.31	28/400	230.6/51880	--	--	--	--
		STD	9.53	20/300	170.3/38280	--	--	--	--
		30	6.35	20/300	170.3/38280	--	--	--	--
		10	4.77	20/300	170.3/38280	--	--	--	--

NSF/ANSI 61 NSF/ANSI 372 ACS

Pressure Ratings and End Loads for Mech Couplings on Steel Pipe

1N Flexible

1NH Heavy Duty Flexible

321 Flange

Nom. Size	Pipe O.D	Pipe Sched	Wall Thick.	1N		1NH		321	
				Roll Grooved		Roll Grooved		Roll Grooved	
				Max.Work Press.	Max.End Load	Max.Work Press.	Max.End Load	Max.Work Press.	Max.End Load
DN/in	mm	(Sch)	mm	Bar/Psi	kN/Lbs	Bar/Psi	kN/Lbs	Bar/Psi	kN/Lbs
25	33.7	40	3.38	35/500	3.0/680	--	--	--	--
		10	2.77	35/500	3.0/680	--	--	--	--
32	42.4	40	3.56	35/500	4.8/1080	--	--	--	--
		10	2.77	35/500	4.8/1080	--	--	--	--
40	48.3	40	3.56	35/500	6.3/1420	--	--	16/225	3.2/710
		10	2.77	35/500	6.3/1420	--	--	16/225	3.2/710
50	60.3	40	3.91	35/500	9.8/2210	52/750	14.8/3320	16/225	4.4/1000
		10	2.77	35/500	9.8/2210	35/500	9.8/2210	16/225	4.4/1000
65	73	40	5.16	35/500	14.4/3240	52/750	21.6/4860	20/300	5.9/1330
		10	3.05	35/500	14.4/3240	35/500	14.4/3240	20/300	5.9/1330
65	76.1	--	6.35	--	--	--	--	--	--
		--	5.08	35/500	15.7/3520	52/750	23.5/5280	16/225	7.1/1590
		--	3.81	35/500	15.7/3520	35/500	15.7/3530	16/225	7.1/1590
80	88.9	40	5.49	35/500	21.4/4810	52/750	32.1/7210	16/225	9.6/2165
		10	3.05	35/500	21.4/4810	35/500	21.4/4800	16/225	9.6/2165
100	114.3	40	6.02	35/500	35.4/7960	52/750	53.0/11900	16/225	15.9/3580
		10	3.05	35/500	35.4/7960	35/500	35.4/7950	16/225	15.9/3580
125	141.3	40	6.55	35/500	54.1/12100	52/750	81.0/18200	20/300	31.3/7035
		10	3.4	35/500	54.1/12100	31/450	48.6/10930	20/300	31.3/7035
150	165.1	--	6.35	35/500	73.8/16610	52/750	110.6/24800	16/225	33.2/7460
		--	5.08	35/500	73.8/16610	31/450	66.4/14930	16/225	33.2/7460
150	168.3	40	7.11	35/500	76.7/17260	52/750	115.0/25800	16/225	34.5/7750
		10	3.4	35/500	76.7/17260	31/450	68.9/15500	16/225	34.5/7750
200	219.1	40	8.18	31/450	116.9/26280	52/750	194.8/43800	16/225	58.4/13140
		30	7.04	31/450	116.9/26280	35/500	130.0/29250	16/225	58.4/13140
		10	3.76	20/300	77.8/17500	20/300	77.8/17500	16/225	58.4/13140
250	273	40	9.27	20/300	121.0/27210	--	--	16/225	90.8/20410
		30	6.35	20/300	121.0/27210	--	--	16/225	90.8/20410
		10	4.19	20/300	121.0/27210	--	--	16/225	90.8/20410
300	323.9	40	10.31	20/300	170.3/38280	--	--	16/225	127.7/28710
		STD	9.53	20/300	170.3/38280	--	--	16/225	127.7/28710
		20	6.35	20/300	170.3/38280	--	--	16/225	127.7/28710
		10	4.57	20/300	170.3/38280	--	--	16/225	127.7/28710

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Installation Instruction For Rigid & Flexible Coupling

1.Pipe preparation

Check pipe end for proper groove dimensions and to assure that pipe end is free of indentations and projections that would prevent proper sealing.

2.Lubricate gasket

Check gasket to be sure it's compatible for the intended service. Apply thin lubricant to the outside and sealing lips of the gasket.

3.Gasket installation

Slip the gasket over one pipe, making sure the gasket lip does not over-hang the pipe end.

4.Alignment

After aligning two pipe ends together, pull the gasket into position, centering between the grooves on each pipe. The gasket should not extend into the groove on either pipe.

5.Housing installation

Romove one bolt&nut and loosen the other nut. Place one housing over the gasket, making sure the housing keys fit into the pipe grooves. Swing the other housing over the gasket and into the grooves on both pipes. Re-insert the bolt and connect two housings.

6.Tighten nuts

Firstly hand tighten nuts and make sure oval neck bolt completely fits into bolt hole. Then securely tighten nuts alternatively and equally to the specified bolt torque by using spanner.

7 a.Assembly completed- Rigid Coupling

For Rigid Coupling, keep the gaps at bolt pads evenly spaced. Gaskets can't be seen visually.

7 b. Assembly completed- Flexible Coupling

For Flexible Coupling, two housings should be iron to iron connected. Gaskets can't be seen visually.

Caution
Proper torquing of bolts is required to obtain specified performance. - Over torquing the bolts may result in damage to the bolt and / or casting which could result in pipe joint separation. - Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

Specified Bolt Torque		
ANSI BOLTS		
Bolt Size	Specified Bolt Torque	
Inch	Lbs-Ft.	N.m
3/8	30-45	40-60
1/2	80-100	110-135
5/8	100-130	135-175
3/4	130-180	175-245
7/8	180-240	245-325

Installation Instruction For Threaded & Grooved Mechanical Tee

1.Pipe preparation

Clean the gasket sealing surface within 16mm of the hole and visually inspect the sealing surface for defects that may prevent proper sealing of the gasket. Don't drill the hole on weld line.

2.Remove burrs

If any burrs or slug exists at the pipe hole, please remove them before assembly, to protect the gasket and avoid leakage.

3.Gasket installation

Insert the gasket into outlet housing making sure the tab in the gasket line up with the tab recesses in the housing. Align outlet housing over the pipe hole making sure that the locating collar is in the pipe hole.

4.Alignment

Align the strap around the pipe, inser the bolts and tighten the nuts finger tight.

5.Tighten nuts

Alternatively and evenly tighten the nuts to the specified bolt torque.

6.Assembly completed

There should be even gaps on two sides between upper and lower housings.

Caution
Proper torquing of bolts is required to obtain specified performance. - Over torquing the bolts may result in damage to the bolt and / or casting which could result in pipe joint separation. - Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

Specified Bolt Torque		
ANSI BOLTS		
Bolt Size	Specified Bolt Torque	
Inch	Lbs-Ft.	N.m
3/8	30-45	40-60
1/2	80-100	110-135
5/8	100-130	135-175
3/4	——	——
7/8	——	——

Installation Instruction For U-Bolt Mechanical Tee

1.Pipe preparation

Clean the gasket sealing surface within 16mm of the hole and visually inspect the sealing surface for defects that may prevent proper sealing of the gasket. Don't drill the hole on weld line.

2.Remove burrs

If any burrs or slug exists at the pipe hole, please remove them before assembly, to protect the gasket and avoid leakage.

3.Gasket installation

Insert the gasket into outlet housing properly. Align outlet housing over the pipe hole making sure that the locating collar is in the pipe hole.

4.Alignment

Attach the U-bolt from the other side and tighten the nuts finger tight.

5.Tighten nuts

Alternatively and evenly tighten the nuts to the specified bolt torque.

6.Assembly completed

Assembly completed.

Caution
Proper torquing of bolts is required to obtain specified performance. - Over torquing the bolts may result in damage to the bolt and / or casting which could result in pipe joint separation. - Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

Specified Bolt Torque		
ANSI BOLTS		
Bolt Size	Specified Bolt Torque	
Inch	Lbs-Ft.	N.m
3/8	20-30	30-40
1/2	80-100	110-135
5/8	100-130	135-175
3/4	——	——
7/8	——	——

Installation Instruction For Grooved Flange

1.Pipe preparation

Check pipe end for proper groove dimensions and to assure that pipe end is free of indentations and projections that would prevent proper sealing.

2.Lubricate gasket

Check gasket to be sure it's compatible for the intended service. Apply thin lubricant to the outside and sealing lips of the gasket.

3.Gasket installation

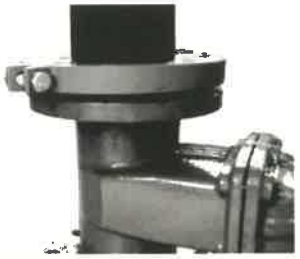
Slip the gasket over pipe end, with the gasket opening side towards "A". Make sure the gasket sealing lip is even with pipe end.

4.Housing installation

Romove bolts and nuts, place two housings over the gasket, making sure the housing keys fit into the pipe grooves. Re-insert the bolts and hand tighten the nuts.

5.Tighten nuts

Securely tighten nuts alternatively and equally to the specified bolt torque by using spanner.



6.Connect mating flange

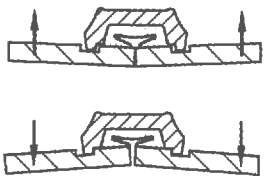
Align flange bolt holes with mating flange (or valve) bolt holes. Insert a standard flange bolt through bolt hole and hand tighten a nut. Insert another bolt opposite the first and hand tighten a nut. Continue this until all bolt holes are fitted. Tighten nuts evenly to specified bolt torque, so flange faces remain parallel. Assembly completed.

Caution
Proper torquing of bolts is required to obtain specified performance. - Over torquing the bolts may result in damage to the bolt and / or casting which could result in pipe joint separation. - Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities, joint leakage and pipe joint separation. Pipe joint separation may result in significant property damage and serious injury.

Specified Bolt Torque		
ANSI BOLTS		
Bolt Size	Specified Bolt Torque	
Inch	Lbs-Ft.	N.m
M10	30-45	40-60
M12	80-100	110-135
M16	——	——
M20	——	——
M22	——	——
M24	——	——

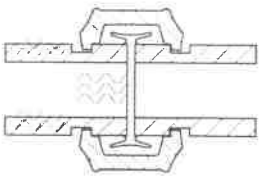
Flexible Coupling

1.A flexible coupling accommodates pipe deflection and or non-alignment as below: If nominal diameter <DN200, deflection angle is ≥1° ; If nominal diameter ≥DN200, deflection angle is ≥0.5° but <1° .

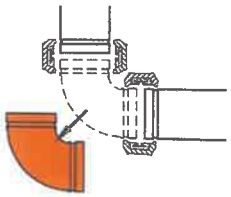


2.The C-shaped rubber gasket provides excellent self-sealing capabilities in both low and high pressure service as well as under certain vacuum conditions.

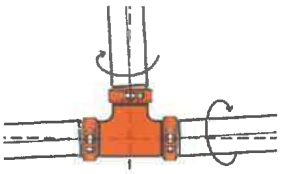
3.The design and construction of the coupling with elastomeric gaskets can provide significant noise and vibration absorption as well as seismic stress.



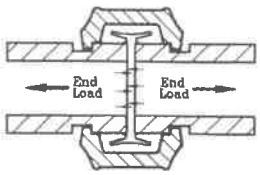
4.With the removal of just a few bolts you can easily access the system for cleaning, maintenance, changes or system expansion.



5.Coupling are non-directive and pipe can be rotated 360° during installation.



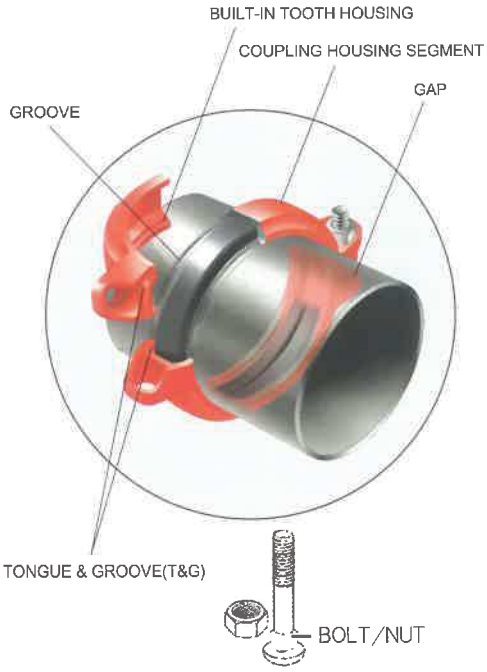
6.Coupling keys engage the full circumference of the grooves and provide significant pressure and end load restraint against pipe movement from internal and external forces.



Rigid Coupling

1.The T&G mechanism in combination with a slightly shortened key diameter provides a mechanical and frictional interlock resulting in a rigid joint which reduces undesired angular movement.

2.The built-in teeth on the coupling grip the groove shoulder and serve to reduce linear movement.

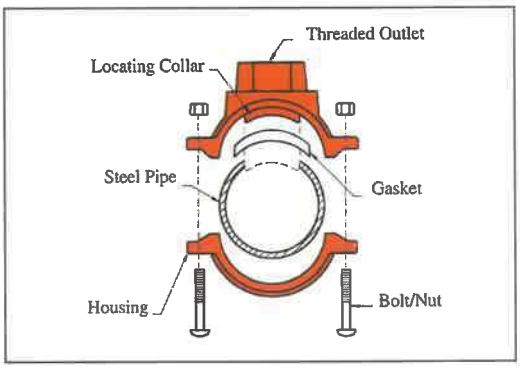


3.The T&G mechanism features a slight offset at the foot of the coupling halves which serve to protect the gasket from exposure.

4.With the T&G style coupling no metal-to-metal contact of the bolt pads is required. You will normally see a 1/16″ - 1/8″ (1.6mm to 3.2mm) gap between the bold pads when installed.

Mechanical Tee Connection

The Mechanical Tee (3J, 3G, 3L) provide for a fast and easy grooved or threaded branch outlet and eliminate the need for welding or the use of a reducing tee and couplings. Simply cut a hole to the specified size at the expected location and fasten the mechanical tee to the pipe with the nuts and bolts provided. As the housing bolts are tightened, the pressure responsive gasket forms a leak-tight seal.



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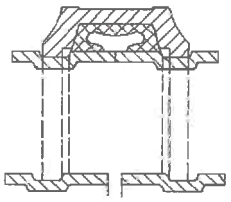
Movement

Each flexible design coupling can provide for pipe system movement up to the design maximum for the specific size and type coupling being utilized. Movement is possible in the coupling due to two factors: (1) designed-in clearance between the key of the coupling and the groove diameter and groove width, and (2) the gap between pipe ends joined by the coupling.

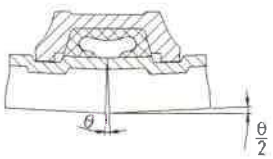
1.Linear Movement



Linear movement is accommodated within the coupling by allowing the pipe ends to move together or apart in response to pressure thrusts and temperature changes. The available linear movement provided by couplings is shown below:

size	1-1¼ (25-32MM)	1½-12 (40-300MM)
movement	0-4.0MM	0-6.4MM

2.Angular Movement



Designed-in clearances allow limited deflection of the pipe joint within the coupling, without introducing eccentric loads into the coupling joint.

The maximum available angular movement of coupling joints is shown in the performance data for each coupling type. The amount of angular flexibility varies for each coupling size and type. For design purposes the published figures should be reduced by the below listed factors to account for pipe, groove and coupling tolerances.

size	1-3(IN)	4-12(IN)
Design factor	Reduce to 50%	Reduce to 75%

Flexible Couplings: Linear Movement and Angular Movement

Size		Cut			Roll Groove		
		Linear Movement	Angular Movement		Linear Movement	Angular Movement	
inch	mm	mm	Degree	mm/m	mm	Degree	mm/m
1	33.7	2	2°-45'	48	1	1°-22'	24
1 1/4	42.4	2	2°-10'	38	1	1°-05'	19
1 1/2	48.3	3.2	1°-54'	33	1.6	0°-57'	16.5
2	60.3	3.2	1°-31'	26	1.6	0°-45'	13
2 1/2	73	3.2	1°-27'	25	1.6	0°-43'	12.5
2 1/2	76.1	3.2	1°-12'	21	1.6	0°-36'	10.5
3	88.9	3.2	1°-02'	18	1.6	0°-31'	9
4	108	3.2	1°-51'	32	1.6	0°-55'	16
4	114.3	3.2	1°-36'	28	1.6	0°-48'	14
5	133	3.2	1°-41'	30	1.6	0°-50'	15
5	139.7	3.2	1°-19'	23	1.6	0°-37'	11.5
5	141.3	3.2	1°-03'	18	1.6	0°-30'	9
6	159	3.2	1°-18'	23	1.6	0°-39'	11.5
6	165.1	3.2	1°-05'	20	1.6	0°-35'	10
6	168.3	3.2	1°-05'	19	1.6	0°-32'	9.5
8	219.1	3.2	0°-50'	15	1.6	0°-25'	7.5
10	273	3.2	0°-40'	12	1.6	0°-20'	6
12	323.9	3.2	0°-34'	10	1.6	0°-18'	5

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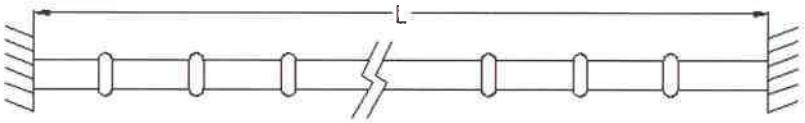
Movement -Application

• Thermal stress

Thermal stress is caused by changes in temperature, resulting in either expansion or contraction. When designing a system you must allow for this thermal movement. To determine the appropriate number of flexible couplings to allow for this thermal movement please refer to the following.



Example:

- 4" straight steel pipe, 30m long
- Anchored on both ends
- Minimum temperature (during installation) = 5˚C
- Maximum working temperature = 55˚C

From the thermal expansion table, we know the overall pipeline length will increase by 18mm (0.71"). You can also use Formula 1 or Table 3 to find the amount of thermal expansion. We want to know the number of couplings that are required to address this thermal movement problem.

The allowed movement of a 4" flexible coupling is :

Movement range x Adjustment = Allowed movement

4.3mm x 75% = 3.2mm

The appropriate number of coupling is:

Thermal expansion / Allowed movement = Number of couplings

18mm / 3.2mm = 5.6

Conclusion:

The appropriate number of coupling is 6.

• Thermal Expansion

Temperature difference (˚C)	Pipe length (m)					
	1	5	10	20	30	40
	Thermal Expansion(mm)					
1	0.012	0.06	0.12	0.24	0.36	0.48
5	0.06	0.3	0.6	1.2	1.8	2.4
10	0.12	0.6	1.2	2.4	3.6	4.8
20	0.24	1.2	2.4	4.8	7.2	9.6
30	0.36	1.8	3.6	7.2	11	15
40	0.48	2.4	4.8	9.6	14	20
50	0.6	3	6	12	18	24
60	0.72	3.6	7.2	14	22	29
70	0.84	4.2	8.4	17	25	34
80	0.96	4.8	9.6	19	29	39

Thermal Expansion Formula 1

$\lambda = \alpha \times L \times T$

λ : Thermal Expansion

α : Linear Expansion coefficient for steel

L : Pipe length

T : Temperature difference

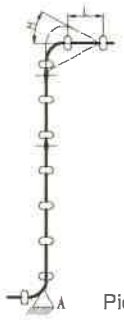
Riser Design

Risers assembled with Flexible couplings are generally installed in either of two ways. In the most common method, the pipe ends are butted together within the coupling joint. Note that when installing risers, the gasket is first placed onto the lower pipe and rolled back away from the pipe end prior to positioning the upper pipe. Anchoring of the riser may be done prior to pressur-ization with the pipe ends butted or while pressurized, when, due to pressure thrust, the pipe ends will be fully separated.

An alternative method or riser installation is to place a metal spacer of a predetermined thickness, between the pipe ends when an additional length of pipe is added to the riser stack. The upper pipe length is anchored, the spacer removed and the coupling is then installed. This method creates a predetermined gap at each pipe joint which can be utilized in pipe systems where thermal move-ment is anticipated and in systems with rigid (threaded, welded, flanged) branch connections where shear forces due to pressure thrust could damage the rigid connections.

The following examples illustrate methods of installing commonly encountered riser designs.

- **Risers without Branch Connections**



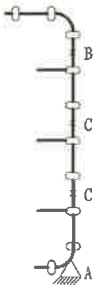
Picture 1

Install the riser with the pipe ends butted.

Locate an anchor at the base of the riser (A) to support the total weight of the pipe, couplings and fluid. Provide pipe guides on every other pipe length, as a minimum, to pre-vent possible deflection of the pipe line at the coupling joints as the riser expands due to pressure thrust or thermal growth. Note that no intermediate anchors are required.

When the system is pressurized the pipe stack will “grow” due to pres-sure thrust which causes maximum separation of pipe ends within the couplings. The maximum amount of stack growth can be predeter-mined (see Linear Movement). In this example the pipe length “L” at the top of the riser must be long enough to permit sufficient deflec-tion (see Angular Movement) to accommodate the total movement “M” from both pressure thrust and thermal gradients.

- **Risers with Branch Connections**



Picture 2

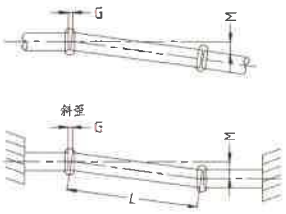
Install the riser with the predetermined gap method. Anchor the pipe at or near the base with a pressure thrust anchor “A” capable of supporting the full pressure thrust, weight of pipe and the fluid column. Anchor at “B” with an anchor capable of withstanding full pressure thrust at the top of the riser plus weight of pipe column. Place intermediate anchors “C” as shown, between anchors “A” and “B”. Also place intermediate clamps at every other pipe length as a minimum.

When this system is pressurized, the pipe movement due to pressure thrust will be strained and there will be no shear forces acting at the branch connections.

• Misalignment & Deflections

The angular movement capability of the flexible coupling permits the assembly of pipe joints where the piping is not properly aligned . At least two couplings are required to provide for lateral pipe misalignment . Deflection (longitudinal misalignment) may be accommodated within a single coupling as long as the angle of deflection does not exceed the value shown in the coupling performance data for the particular size and coupling type .

A pipe joint that utilizes the angular deflection capability of the coupling will react to pressure and thermal forces dependent upon the manner in which it is restrained . An unrestrained joint will react to these forces by straightening, thus reducing, if not eliminating, the deflection at the joint . If joint deflection has been designed into the pipe layout and must be maintained, then sufficient anchors must be provided to resist the lateral forces and hold the joint in the deflected condition .



The amount of deflection from pipe run centerline can be calculated utilizing the following equations:

$M = L \sin\theta$

$\theta = \sin^{-1}(G \div D)$

$M = (G \div D) \times L$

Where:

M = Misalignment (inches)

G = Maximum Allowable Pipe End Movement (Inches) as shown under "Performance Data" (Value to be reduced by Design Factor)

θ = Maximum Deflection (Degrees) from centerline as shown under "Performance Data" (Value to be reduced by Design Factor)

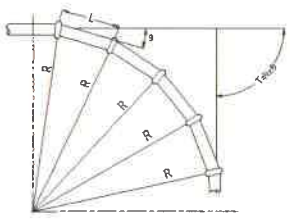
D = Pipe Outside Diameter (Inches)

L = Pipe Length (Inches)

• Curve Layout

Utilizing the angular deflection at each coupling joint curves may be laid out using straight pipe lengths and Couplings.

This example shows how to calculate the curve radius, required pipe lengths, and number of required couplings.



$R = L / (2 \times \sin(\theta/2))$

$L = 2 \times R \times \sin(\theta/2)$

$N = T / \theta$

WHERE:

N = Number of Couplings

R = Radius of Curve (feet)

L = Pipe Length (feet)

θ= Deflection from centerline (Degrees) of each Coupling

(See coupling performance data, value to be reduced by Design Factor)

T = Total Angular Deflection of all Couplings.

Anchoring and Supports

When designing the hangers, supports and anchors for a grooved end pipe system, the piping designer must consider certain unique characteristics of the grooved type coupling in additional to many universal pipe hanger and support design factors. As with any pipe system, the hanger or support system must provide for

1)the weight of the pipe, couplings, fluid and pipe system components;

2)reduce stresses at pipe joints; and

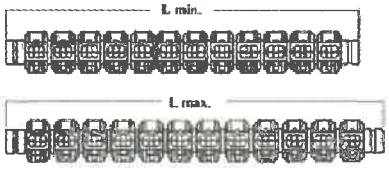
3)permit required pipe system movement to relieve stress.

The following chart shows the maximum span between pipe hangers, supports and anchors.

Max. Span between Supports (steel pipe)

Nominal Size (mm)		15	20	25	32	40	50	70	80	100	125	150	200	250	300
Max. Span Between Supports (m)	Insulating Pipe	2	2.5	2.5	2.5	3	3	4	4	4.5	6	7	7	8	8.5
	Non-insulating Pipe	2.5	3	3.5	4	4.5	5	6	6	6.5	7	8	9.5	11	12

Movement capability of couplings-expansion and contraction joints



Nominal Size	Pipe O.D. (mm)	Maximum Allowable Movement (mm)	L min. (mm)	L max. (mm)	Number of Couplings	Filled With Water Pressure
1	33.7	45	617	662	10	300
1¼	42.4	45	617	662	10	300
1½	48.3	45	617	662	10	300
2	60.3	45	617	662	10	300
2½	73.0	45	617	662	10	300
76.1	76.1	45	617	662	10	300
3	88.9	45	617	662	10	300
4	114.3	47	503	550	7	300
139.7	139.7	47	503	550	7	300
5	141.3	47	503	550	7	300
165.1	165.1	52	503	550	7	300
6	168.3	52	591	643	7	300
8	219.1	52	591	643	7	300
10	273.0	52	591	643	7	300
12	323.9	52	591	643	7	300

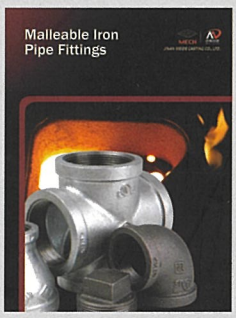
Engineering Test

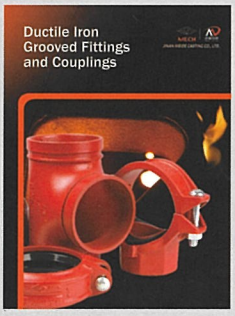
No.	Item	Standard Requirements
1	Vacuum Test	Grooved couplings, grooved reducing couplings, grooved split flanges, mechanical tees, and plain end couplings shall be able to withstand the effects of vacuum conditions encountered when sprinkler systems are drained. Samples of each nominal size and style of gasketed coupling and fitting shall be subjected to an internal vacuum of 25 inHg (85 kPa) for a duration of 5 minutes. Following the vacuum test, the test assembly shall be pneumatically pressurized from zero to 50 psi (345 kPa) while submerged in a water bath. There shall be no leakage or permanent deformation as a result of this test.
2	Hydrostatic Strength Test	All items shall be able to withstand an internal hydrostatic pressure equal to three-five times the rated working pressure without cracking, rupture, or permanent distortion. . The test shall be conducted for a duration of 1 minute. (Test Size ≤6″ , Five time; 8″ -10″ , 4time; ≥12″ , 3times)
3	Air Leakage Test	The coupling assembly shall be pressurised with air to 3 bar +0.5/-0 bar. The assembly shall be immersed in water to establish that there is no visible leakage
4	Moment Test	The moment resistance shall be demonstrated while the test assembly is internally pressurized to the rated working pressure. Then a force was applied to the test assembly. There shall be no leakage, cracking, or fitting or coupling pull-off as a result of this test.
5	Hot Gasket Test	Standard gaskets shall be assembled to short lengths of pipe, and subjected to 275° F (135° C) for a duration of 45 days. After exposure, the test assembly shall be submerged in a water bath and subjected to an air under water leakage test from zero to 50 psi (0 to 345 kPa) in order to evaluate for leakage. After the air under water testing is completed, the test assembly shall be disassembled and the gasket shall not crack when squeezed together from any two diametrically opposite points, or twisted into a figure-eight shape. The gasket shall then be visually inspected for signs of cracking, tearing, or excessive degradation as a result of this test.
6	Cold Gasket Test	The low temperature exposure shall consist of -40 ° F (-40 ° C) air exposure for 4 days. After exposure, the assembly while submerged in -40 ° F (-40 ° C) antifreeze, shall be pneumatically pressurized from 0 to 50 psi (0 - 345 kPa). No leakage shall occur. The assembly shall then be allowed to warm to ambient temperature and then be disassembled. The gasket, after removal from the assembly, shall not crack when squeezed together from any two diametrically opposite points, or twisted into a figure eight shape.
7	Flame test	The test shall be conducted in a room free from air draught., The test joint is mounted, U-bent on the test apparatus and filled with water. The angle corresponds to the angle documented as a result of the test Subsequently the test joint is drained. The fuel pan is placed centrally below the pipe joint Fuel is filled into the pan and the fuel is ignited, Burning time 5 min for nominal diameters < DN 100; 8 min for nominal diameters ≥ DN 100 For reducer couplings the dimension of the smaller nominal diameter shall apply for the determination of the burning time. The flame shall be extinguished immediately once the burning time has expired (5 min or 8 min) and the test joint shall be cooled down. For cooling the test joint is immediately sprayed with water until steam formation is no longer visible, but at least for 3 min. The test joint is then filled completely with water and exposed to a test pressure which corresponds to the maximum permissible pressure and is checked visibly for leaks. Water may leak in form of drops, however, not in form of flowing water or a water spray. The test joint is then pressure relieved (force and internal pressure).
8	Cycling Pressure Resistance （Water Hammer Test）	Prior to the cycling, assemblies shall be subjected to a hydrostatic strength test to the rated working pressure, 175 psi (1205 kPa) minimum, for a duration of 5 minutes. Without leakage or cracking. Assemblies shall then be subjected to 20,000 cycles from zero pressure to the rated working pressure, 175 psi (1205 kPa) minimum. After cycling, the test assembly shall be tested Hydrostatic Strength and maintain 5minutes without leakage and cracking.

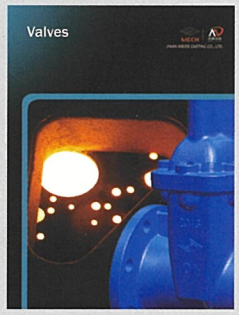
Engineering Test

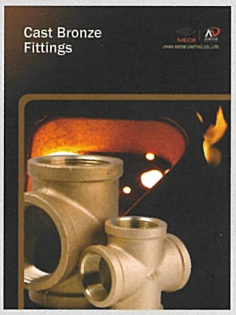
No.	Item	Standard Requirements
9	Friction Loss Determination	The construction and installation of the coupling or fitting shall be such that obstruction to the passage of water through the coupling or fitting body is minimal. The loss in pressure through the coupling or fitting shall not exceed 5.0 psi (35 kPa) at a flow producing a velocity of 20 ft/s (6.1 m/s) in Schedule 40 steel pipe of the same nominal diameter as the coupling or fitting.
10	Leakage Test - Assembly without Gasket	Leakage from a gasket-less coupling assembly or fitting shall not exceed that of an operating sprinkler head whose discharge coefficient (K-factor) is 5.3 to 5.8 gal/min(psi)1/2 [76 - 84 L/min/(bar)1/2].This test is for nominal pipe sizes normally associated with over-head piping, less than or equal to 12 in. NPS (300 mm).
11	Torsion test	This test relates to pipe joints ≤ DN 40 only. The test joint is filled with water and exposed once to the maximum permissible pressure and is then pressure relieved again. Subsequently the test joint is fixed on one pipe end and an increasing torque is applied to the other pipe end. At the pressure-less test joint the pipe joint shall be able to transmit a torque of up to 80 Nm from one pipe end to the other pipe end without any torsion of the pipe ends against each other.
12	Flexibility Test for Flexible Fittings	With the assembly pressurized to its rated pressure, a bending moment is to be applied to deflect the joint to the maximum angle specified by the manufacturer, while not less than 1 degree for nominal pipe diameters less than 8 inches (203.2 mm) or 0.5 degrees for 8 inches (203.2 mm) and larger. Observations are to be made for leakage or pipe damage.
13	Seismic Evaluation	In order to evaluate the use of grooved couplings in Earthquake zones 50 through 500 years, test assemblies utilizing flexible couplings and short lengths of steel pipe, in the same nominal size, will be subjected to cyclic testing. The test will deflect the assembly to the manufacturer' s maximum recommended angle in the forward and reverse direction for a total 15 cycles with the internal pressure equal to the rated working pressure. There shall be no leakage, cracking, or rupture as a result of this test.
14	Lateral Displacement	The coupling shall not leak during any of the tests, within the manufacturer' s stated limitations for angular deflection or lateral displacement of associated pipework.
15	Hydrostatic fluctuation pressure test	The coupling assembly shall be pressurised with water to a gauge pressure of 10 bar ±1 bar for 2min, +30s/-0s to establish a datum. The assembly shall then be drained before being subjected to the greatest vacuum attainable to a maximum of 600mm a/mercury or –0.8bar +0bar/-0.1 bar for 2min +30s/-0s, and allowed to return to atmospheric pressure in not less than 5s. The assembly shall then be pressurised with water to 10 bar ±1bar for 2 min +30s/-0s. The assembly shall be examined for leakage throughout the test. The relative movement of each pipe shall be recorded at the greatest vacuum and at each pressure. There shall be no leakage.
16	Fire Test	If a gasketed pipe coupling or fitting employs non-ferrous materials for its substantial structural components, or if in the judgment of FM Approvals, the design is otherwise suspect with respect to fire resistance, a fire test shall be conducted. A representative size assembled joint without a gasket shall be exposed to a 1000 ° F (538 ° C) fire environment for 5 minutes. The assembly shall be dry for the duration of this exposure. Immediately after the exposure, a water flow shall be introduced through the joint and sustained until the assembly is cool to the touch. No cracking or distortion of any component of the coupling or fitting shall occur. The coupling or fitting shall then be disassembled and the gasket installed. After reassembly, the joint shall be hydrostatically tested, as described in to the hydrostatic test.

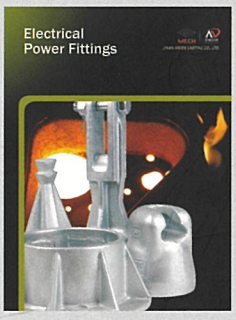
MECH FLOW SUPPLIES

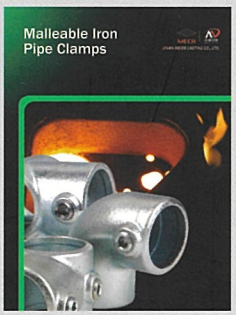


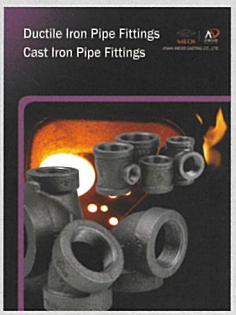


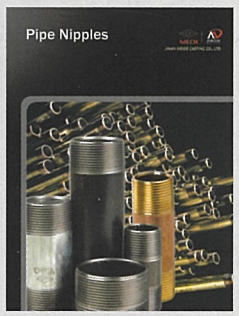












MECH | 济南玫德 MEIDE CASTING

JINAN MEIDE CASTING CO., LTD.
Address: No.3 Nanmen Road Pingyin, Jinan, China 250400
Phone: (86)531 87879384 87885036 87885067
Fax: (86)531 87879387
Email: info@meide-casting.com
Http://www.meide-casting.com

UPDATED 10/2015

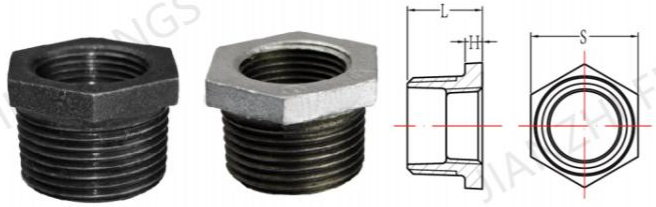
建支集团 JIANZHI GROUP

建支铸造集团 Jianzhi Casting Group

FIG. 241

Bushing GAVALNIZED/BLACK

Bushing



Fitting size, package and your order quantity Fig.241					
Size	PCS/CTN.	Size	PCS/CTN.	Size	PCS/CTN.
1/2" x 3/8"	960	2 "x 1/2"	96	3 "x 1"	36
3/4" x 1/2"	600	2 "x 3/4"	96	3 "x 1-1/4"	36
1 "x 3/8"	300	2"x 1"	96	3 "x 1-1/2"	36
1 "x 1/2"	300	2 "x 1-1/4"	96	3 "x 2"	36
1 "x 3/4"	300	2 "x 1-1/2"	96	3 "x 2-1/2"	36
1-1/4" x 3/8"	200	2-1/2" x 1/2"	68	4 "x 1/2"	18
1-1/4" x 1/2"	200	2-1/2" x 3/4"	68	4 "x3/4"	18
1-1/4" x 3/4"	200	2-1/2" x 1"	68	4 "x 1"	18
1-1/4" x 1"	160	2-1/2 "x 1-1/4"	68	4 "x 1-1/4"	18
1-1/2" x 1/2"	160	2-1/2 "x 1-1/2"	68	4 "x 1-1/2"	18
1-1/2" x 3/4"	160	2-1/2" x 2"	68	4 "x 2"	18
1-1/2" x 1"	160	3 "x 1/2"	36	4 "x 2-1/2"	18
1-1/2" x 1-1/4"	300	3 "x 3/4"	36	4 "x 3"	18

Pipe Fitting Standards and Technical Data Fig.241							
	CE	FM/UL	ABNT	ISO	BS	DIN	ISI
Standard	EN10242	ANSI/ASME B16.3 B16.14 B16.39	NBR6943	ISO49	BSEN10242	DIN2950	IS1879
Thread	EN10226	ANSI/ASME B.1.20.1 Or NPT	NBR NM – ISO7 -1	ISO 7-1* ISO 228*	BSEN10226 Or PT	DIN2999	IS554
Technical Data	Working pressure: 25 BAR/ 363PSI/ 2.5MPA/ CLASS 150/ PN25 Temperature: 200°C (392°F) Tensile Strength: ≥350MPA Elongation: ≥10% Hardness: ≤HB150						

*ISO7-1 is for pressure-tight joints on the threads, ISO228 is for pressure-tight joints not on the threads.

Our JIANZHI malleable iron pipe fittings are FM and UL approved.

- Production Standard :

Fittings: ASME B16.3
Bushings/Plugs: ASME B16.14
Unions: ASME B16.39

Item	Standard Class	Dimension	Material	Galvanizing	Thread	Pressure Rating *	Federal / other
Fittings	Class 150	ANSI B16.3	ASTM A-197	ASTM A-153	ANSI B.1.20.1	ANSI B16.3	WW-P-521
Bushings / Plugs	Class 150	ANSI B16.14	ASTM A-197	ASTM A-153	ANSI B.1.20.1		WW-P-471
Unions	Class 150	ANSI B16.39	ASTM A-197	ASTM A-153	ANSI B.1.20.1	ANSI B16.39	WW-U-531

Pressure Rating:
Class 150 : 150 P.S.I. – Saturated Steam
300 P.S.I. – At 150 degrees W.O.G.

- Malleable cast iron standard : ASTM A197

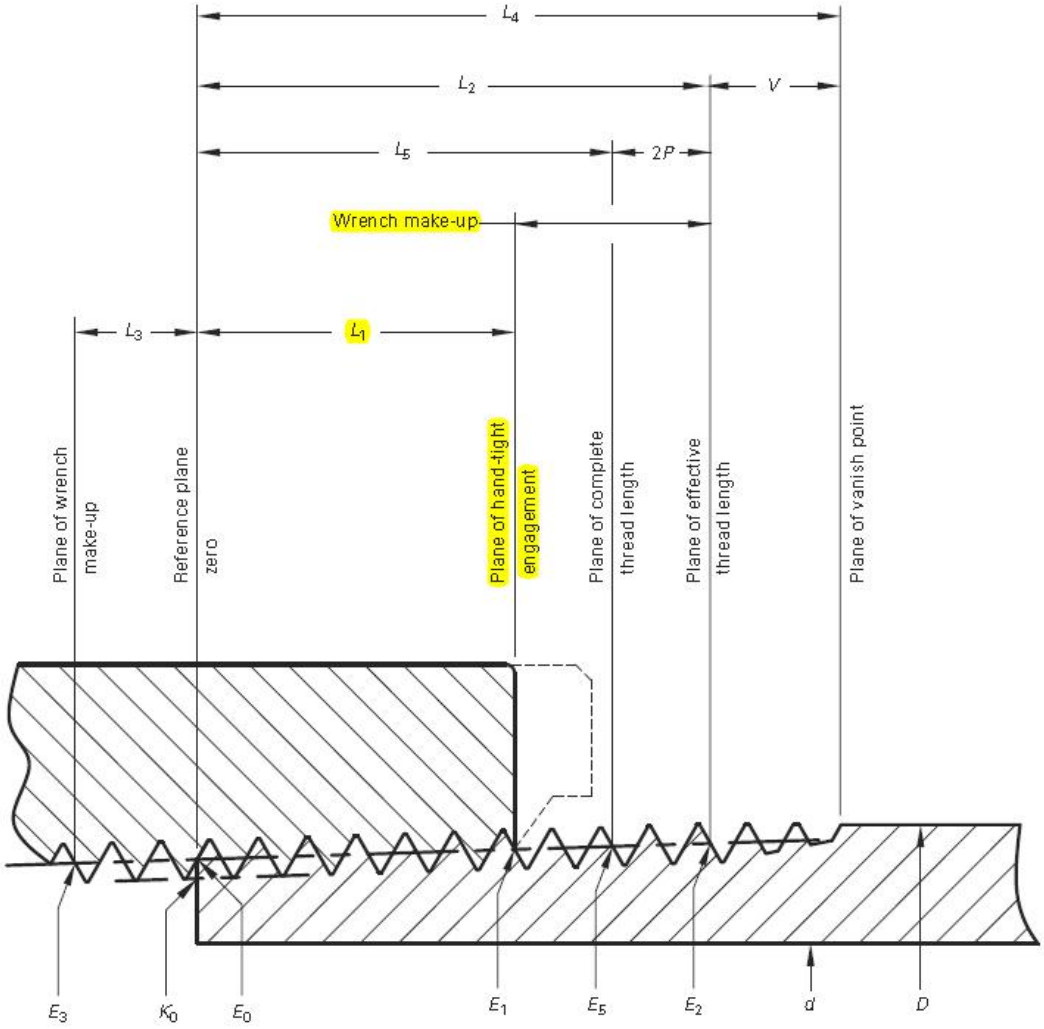
Jianzhi brand thread pipe fitting uses Grand A malleable cast iron to ensure the top quality compared with other suppliers.
Tensile strength: ≥350mpa
Elongation: ≥10%
Hardness: ≤HB150
Although the material of the 300-6 also meets the EU standards, we adopt higher standards to ensure that our products can be used in a wider and more severe environment, which is one of the reasons why the quality of our products is better than other brands.

	EN1562	Jianzhi standard
Malleable cast iron	300-6 or 350-10	350-10

- Thread standard: ASME B.1.20.1

NPT Pipe thread
N = National (American) Standard
P = Pipe
T = Taper

American National Standard Taper Pipe Thread Notation



for backnuts, union nuts and their mating threads are in accordance with ISO228-1/ENISO228.

The axes of the screw thread is accurate to within ±0.5° of the specified angle according to ISO7-1, Jianjin axes of the screw thread accuracy is ±0.3°,higher 40% than ISO7-1.

	ISO7-1/EN10226	Jianzhi standard
Axe angle	±0.5°	±0.3°

Basic Dimensions of American National Standard Taper Pipe Thread ,NPT

Nominal Pipe Size	O.D. of Pipe, D	Threads/ Inch, n	Pitch of Thread, P	Pitch Diameter at Beginning of External Thread, E_0	Hand-tight Engagement		Effective Thread, External				Length, L_1 Plane to L_2 Plane, External Thread, $L_2 - L_1$		Wrench Make-Up Length, Internal Thread			Vanish Thread, V		Overall Length, External Thread,[4] L_4	Nominal Complete External Threads[5]		Height of Thread, h	Change in Diameter per Turn of Thread, $0.0625/n$	Basic Minor[6] Diameter at Small End of Pipe, K_0
					Length,[1] L_1		Pitch Diameter,[2] E_1	Length,[3] L_2		Pitch Diameter, E_3			Length, L_3		Pitch Diameter, E_3				Length, L_5	Pitch Diameter, E_5			
					in.	Threads		in.	Threads		in.	Threads	in.	Threads		in.	Threads		in.				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1/16	0.3125	27	0.03703704	0.27118	0.1600	4.32	0.28118	0.2611	7.05	0.28750	0.1011	2.73	0.1111	3	0.26424	0.1285	3.47	0.3896	0.1870	0.28287	0.02963	0.00231	0.2415
1/8	0.4050	27	0.03703704	0.36351	0.1615	4.36	0.37360	0.2639	7.13	0.38000	0.1024	2.76	0.1111	3	0.35656	0.1285	3.47	0.3924	0.1898	0.37537	0.02963	0.00231	0.3338
1/4	0.5400	18	0.05555556	0.47739	0.2278	4.10	0.49163	0.4018	7.23	0.50250	0.1740	3.13	0.1667	3	0.46697	0.1928	3.47	0.5946	0.2907	0.49556	0.04444	0.00347	0.4329
3/8	0.6750	18	0.05555556	0.61201	0.2400	4.32	0.62701	0.4078	7.34	0.63750	0.1678	3.02	0.1667	3	0.60160	0.1928	3.47	0.6006	0.2967	0.63056	0.04444	0.00347	0.5675
1/2	0.8400	14	0.07142857	0.75843	0.3200	4.48	0.77843	0.5337	7.47	0.79178	0.2137	2.99	0.2143	3	0.74504	0.2479	3.47	0.7815	0.3909	0.78286	0.05714	0.00446	0.7014
3/4	1.0500	14	0.07142857	0.96768	0.3390	4.75	0.98887	0.5457	7.64	1.00178	0.2067	2.89	0.2143	3	0.95429	0.2479	3.47	0.7935	0.4029	0.99286	0.05714	0.00446	0.9106
1	1.3150	11.5	0.08695652	1.21363	0.4000	4.60	1.23863	0.6828	7.85	1.25631	0.2828	3.25	0.2609	3	1.19733	0.3017	3.47	0.9845	0.5089	1.24544	0.06957	0.00543	1.1441
1 1/4	1.6600	11.5	0.08695652	1.55713	0.4200	4.83	1.58338	0.7068	8.13	1.60131	0.2868	3.30	0.2609	3	1.54083	0.3017	3.47	1.0085	0.5329	1.59044	0.06957	0.00543	1.4876
1 1/2	1.9000	11.5	0.08695652	1.79609	0.4200	4.83	1.82234	0.7235	8.32	1.84131	0.3035	3.49	0.2609	3	1.77978	0.3017	3.47	1.0252	0.5496	1.83044	0.06957	0.00543	1.7266
2	2.3750	11.5	0.08695652	2.26902	0.4360	5.01	2.29627	0.7565	8.70	2.31630	0.3205	3.69	0.2609	3	2.25272	0.3017	3.47	1.0582	0.5826	2.30543	0.06957	0.00543	2.1995
2 1/2	2.8750	8	0.12500000	2.71953	0.6820	5.46	2.76216	1.1375	9.10	2.79063	0.4555	3.64	0.2500	2	2.70391	0.4338	3.47	1.5712	0.8875	2.77500	0.10000	0.00781	2.6195
3	3.5000	8	0.12500000	3.34063	0.7660	6.13	3.38850	1.2000	9.60	3.41563	0.4340	3.47	0.2500	2	3.32500	0.4338	3.47	1.6337	0.9500	3.40000	0.10000	0.00781	3.2406
3 1/2	4.0000	8	0.12500000	3.83750	0.8210	6.57	3.88881	1.2500	10.00	3.91563	0.4290	3.43	0.2500	2	3.82188	0.4338	3.47	1.6837	1.0000	3.90000	0.10000	0.00781	3.7374
4	4.5000	8	0.12500000	4.33438	0.8440	6.75	4.38713	1.3000	10.40	4.41563	0.4560	3.65	0.2500	2	4.31875	0.4338	3.47	1.7337	1.0500	4.40000	0.10000	0.00781	4.2343
5	5.5630	8	0.12500000	5.39073	0.9370	7.50	5.44929	1.4063	11.25	5.47863	0.4693	3.75	0.2500	2	5.37511	0.4338	3.47	1.8400	1.1563	5.46300	0.10000	0.00781	5.2907
6	6.6250	8	0.12500000	6.44609	0.9580	7.66	6.50597	1.5125	12.10	6.54063	0.5545	4.44	0.2500	2	6.43047	0.4338	3.47	1.9462	1.2625	6.52500	0.10000	0.00781	6.3460
8	8.6250	8	0.12500000	8.43359	1.0630	8.50	8.50003	1.7125	13.70	8.54063	0.6495	5.20	0.2500	2	8.41797	0.4338	3.47	2.1462	1.4625	8.52500	0.10000	0.00781	8.3335
10	10.7500	8	0.12500000	10.54531	1.2100	9.68	10.62094	1.9250	15.40	10.66563	0.7150	5.72	0.2500	2	10.52969	0.4338	3.47	2.3587	1.6750	10.6500	0.10000	0.00781	10.4453
12	12.7500	8	0.12500000	12.53281	1.3600	10.88	12.61781	2.1250	17.00	12.66563	0.7650	6.12	0.2500	2	12.51719	0.4338	3.47	2.5587	1.8750	12.6500	0.10000	0.00781	12.4328
14	14.0000	8	0.12500000	13.77500	1.5620	12.50	13.87263	2.2500	18.00	13.91563	0.6880	5.50	0.2500	2	13.75938	0.4338	3.47	2.6837	2.0000	13.9000	0.10000	0.00781	13.6749
16	16.0000	8	0.12500000	15.76250	1.8120	14.50	15.87575	2.4500	19.60	15.91563	0.6380	5.10	0.2500	2	15.74688	0.4338	3.47	2.8837	2.2000	15.9000	0.10000	0.00781	15.6624
18	18.0000	8	0.12500000	17.75000	2.0000	16.00	17.87500	2.6500	21.20	17.91563	0.6500	5.20	0.2500	2	17.73438	0.4338	3.47	3.0837	2.4000	17.9000	0.10000	0.00781	17.6499
20	20.0000	8	0.12500000	19.73750	2.1250	17.00	19.87031	2.8500	22.80	19.91563	0.7250	5.80	0.2500	2	19.72188	0.4338	3.47	3.2837	2.6000	19.9000	0.10000	0.00781	19.6374
24	24.0000	8	0.12500000	23.71250	2.3750	19.00	23.86094	3.2500	26.00	23.91563	0.8750	7.00	0.2500	2	23.69688	0.4338	3.47	3.6837	3.0000	23.9000	0.10000	0.00781	23.6124

	ISO7-1/EN10226	Jianzhi standard
Turns of thread of external thread	±1 -- ±1 1/2	Only ±1
Turns of thread of internal thread	±1 1/4 --- ±1 1/2	±1

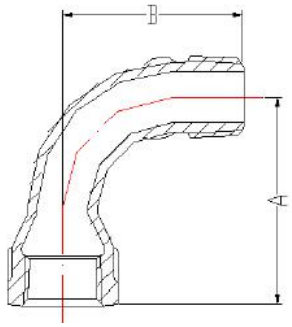
- Galvanization: According to ASTM A-153

Jianzhi pipe fitting can offer customer in black or galvanized finishing. The surface related mass of the zinc coating shall be not less than 500g/m^2, as an average of 5 fittings, this corresponds to a medium layer thickness of 70μm. Zinc coating on the internal surface of the fitting is continuous, the same thickness as external surface, with the exception of machined black internal thread. The zinc coating is free from zinc blisters, zinc burrs ,non-metallic remainders. The surface of the fittings is free of polycyclic aromatic hydrocarbons.

- Dimensions and tolerances : EN10242

Please check our product pages or download our production catalog.

Dimensions samples(mm)



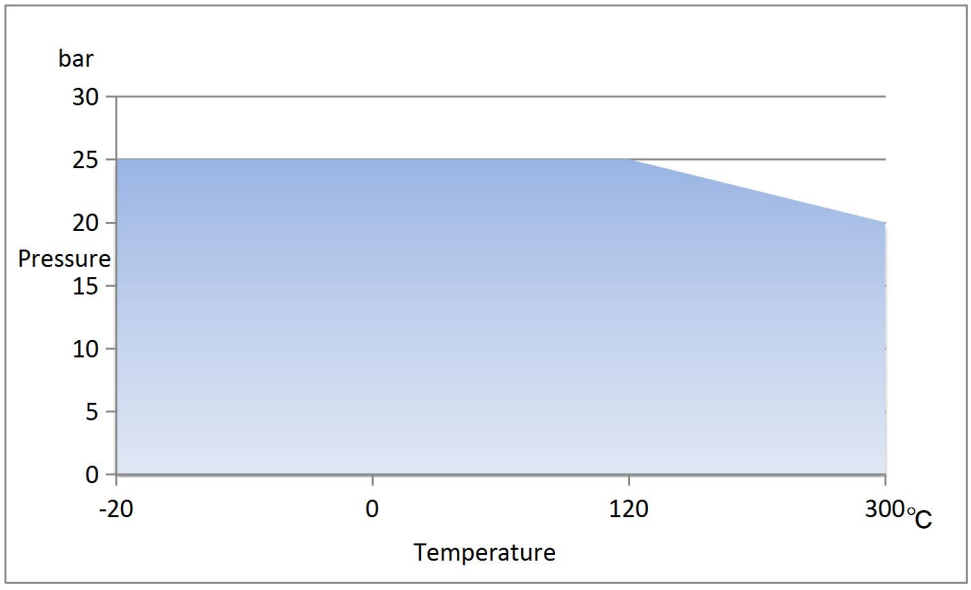
规格		A	B	规格		A	B
mm	in			mm	in		
10	3/8	48	42	40	1½	116	105
15	1/2	55	48	50	2	140	130
20	3/4	69	60	65	2½	176	165
25	1	85	75	80	3	205	190
32	1¼	105	95	100	4	260	245

Tolerance on length (mm)

Dimension	Tolerance
≤30	±1.5
>30≤50	±2.0
>50≤75	±2.5
>75≤100	±3.0
>100≤150	±3.5
>150≤200	±4.0
>200	±5.0

- Permissible working pressure and temperature

Jianzhi fittings of all sizes are suitable for the maximum permissible working pressure within the temperature ranges given in the following chart.



1bar = 100kPa =14.5PSI =0.1Mpa

- Test and inspection:

All Jianzhi pipe fittings are inspected strictly with the specifications of standard of

EN10242. Some points are higher than EN10242 to ensure our wonderful quality.

Air tightness test: higher 20% than EN10242, according EN10242 pipe fittings are test by one of the following methods

a) An internal hydrostatic pressure of not less than 20 bar.
b) An internal pneumatic pressure of not less than 5 bar.

Jianzhi adapt 6 bar pneumatic pressure, higher 20% than EN10242, to ensure each fittings with fantastic performance while using.

	EN10242	Jianzhi standard
Pneumatic pressure	5 bar / 0.5Mpa	6 bar / 0.6Mpa

- Marking:

All Jianzhi pipe fitting will mark as our brand. Each pipe fittings with this brand marking is ensured with trustable quality and our highest compensation standard.

- Quality assurance system: ISO 9001:2015
- Occupational health and safety management system: OHSAS 18001:2007
- Environmental management system: ISO 14001:2015

- Fitting size and normal size(DN)

Fitting size	Normal size (DN)
1/8	6
1/4	8
3/8	10
1/2	15
3/4	20
1	25
1 1/4	32
1 1/2	40
2	50
2 1/2	65
3	80
4	100
5	125
6	150