

Ductile Iron Grooved Fittings and Couplings

*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
60 years of
Foundry
Experience



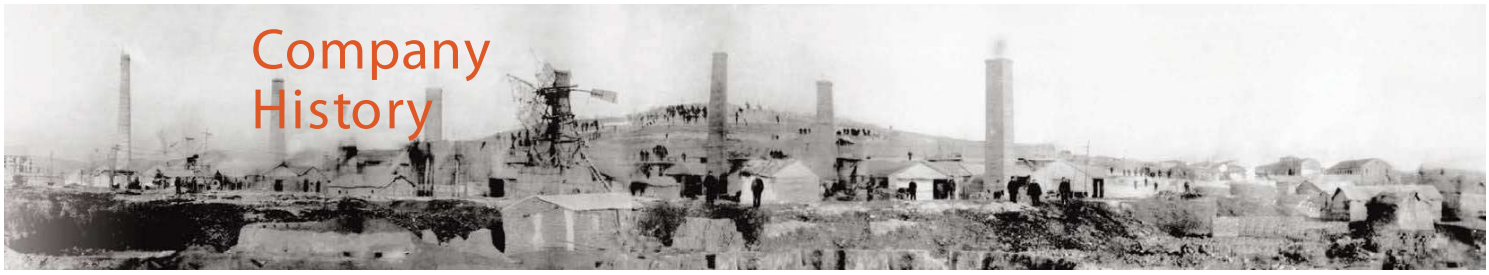
Company Profile

Meide Group is a high-tech enterprise specialized in supplying fittings and valves in fluid industry. The company has won more than 400 great honors, such as Single Champion Demonstration Enterprise, Green Manufacturing Enterprise, China's top 100 Light Industrial Enterprise, China's Leading Enterprise of Malleable Iron Pipe Fitting Production Base, National Enterprise with Good Creditworthiness and China's Famous Brand.

Inheriting the originality, and striving for excellence. "MECH" brand products are widely used in Burj Khalifa, dubai, new WTC in New York, Shanghai Tower, UHV transmission lines and other landmark buildings and projects such as Beijing-Shanghai high-speed railway. Adhering to the customer-centered product development and innovation concept, to meet and guide the growing needs of users, to provide safe & reliable products and smart & complete solutions for clients in fluid industry across the globe, Meide Group has become the industry leader.

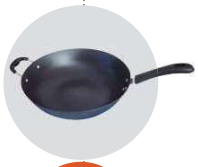
Using development innovation platform such as National Enterprise Technical Center and Post-Doctoral Research Center, Meide Group is promoting the transformation of technology innovation achievements into productive forces, has completed the transformation of production process from mechanization to automation and intelligence, management from experience to institutionalization and process, marketing is from selling products to offering solutions, steadily improve Meide Group's role in the global value chain.

Through the construction of three production bases, including Jinan, Linyi and Bangkok, Meide Group has formed a cross-regional, multi-base international development pattern. Meide Group never forgets the original intention, operates in compliance, keeps growing, insists on sharing development results with customers, employees, shareholders and the community, and strive to be a happy and respectable company.



Company History

1961 — Business Started from Grey Iron Pot



1970 — Malleable Iron Pipe Fittings



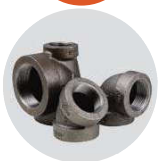
1987 — Export, Main Market: Southeast Asia



1990 — Conduit Body



1993 — Self Export, Developed US and European Market



1995 — Cast Iron Fittings

1997 — Steel Pipe Nipples Red Brass Pipe Nipples



1998 — Malleable Iron Pipe Clamps



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 1998



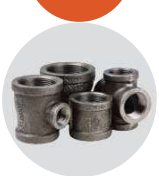
1999 — Pipe Hangers and Brackets



2000 — Ductile Iron Grooved Fittings and Couplings / Ball Valves



2001 — Ductile Iron Pipe Fittings



2002

2003 — Bronze Fittings



2004

2005

2006

2007 — Electric Power Fittings



2008

2009

2010

2011 — Valves



2012 — Extra-heavy Brass Pipe Nipples



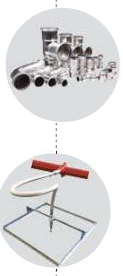
2014 — "MECH" Malleable Iron Pipe Fittings for Fire Protection



2018 — Anti-vibration bracket



2019 — Stainless Steel Pipe Fittings Fire Production Hose



State of the Art Equipment

High precision equipment is quality assurance.
Jinan Meide's 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



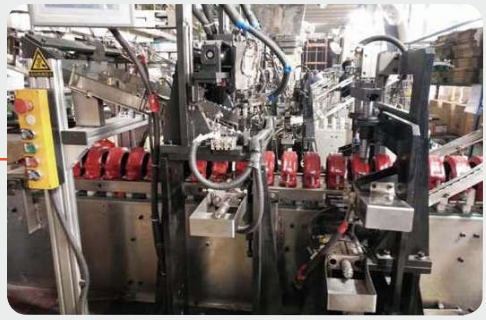
End Grinding Line



Electrophoretic Coating



Threading, Air Pressure Test, and Anti-rust Treatment



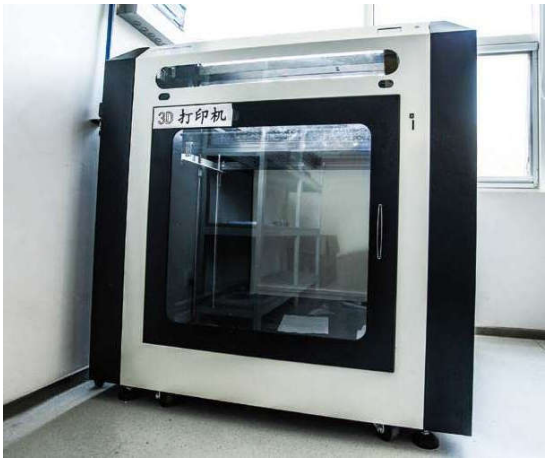
Assembling

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

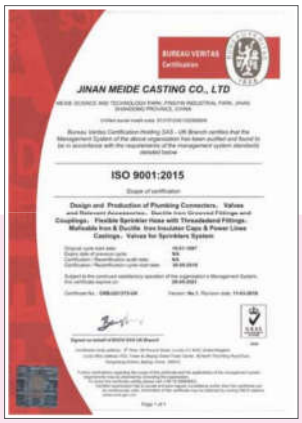


Sand Testing Instrument



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 Rigid Coupling with a Rated Working Pressure of 500 PSI (3445 kPa)
Model 1GS Rigid Coupling with a Rated Working Pressure of 350 PSI (2415 kPa)
Model 1N Flexible Coupling with a Rated Working Pressure of 500 PSI (3445 kPa)
Model 1NH Flexible Coupling with a Rated Working Pressure of 750 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"

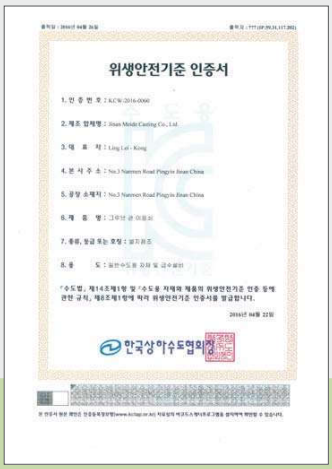
Approval Identification: 3058500
Approval Granted: September 23, 2016
Reissued: October 13, 2016

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

Said 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


위생안전기준 인증서

1. 인 증 번 호 : KCW-2016-0060
2. 제조 업체명 : Jinan Meide Casting Co., Ltd.
3. 대 표 자 : Ling Lei - King
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 관 이음쇠
7. 종류, 등급 또는 호칭 : 설치표준
8. 용 도 : 일반수도용 자재 및 급수설비

「수도법」 제14조제1항 및 「수도용 자재와 제품의 위생안전기준 인증 등에 관한 규칙」 제8조제1항에 따라 위생안전기준 인증서를 발급합니다.

2016년 04월 22일

한국상하수도협회장


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

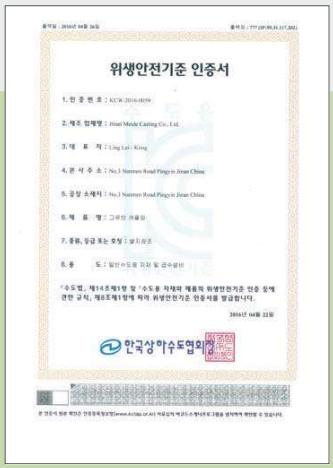
FM Approvals confirms that the items have been found to comply with the following draft standard:

FM Approvals Draft Standard Class Number 1920

Project Identifier: 3024517
Date of Approval: January 20, 2006

Richard B. Dutina
Group Manager, Hydraulics
Date January 20, 2006

FM Approvals
Member of the FM Global Group


위생안전기준 인증서

1. 인 증 번 호 : KCW-2016-0059
2. 제조 업체명 : Jinan Meide Casting Co., Ltd.
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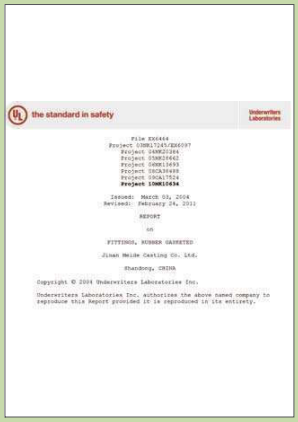
7. 종류, 등급 또는 호칭 : 설치표준
8. 용 도 : 일반수도용 자재 및 급수설비

「수도법」 제14조제1항 및 「수도용 자재와 제품의 위생안전기준 인증 등에 관한 규칙」 제8조제1항에 따라 위생안전기준 인증서를 발급합니다.

2016년 04월 22일

한국상하수도협회장


the standard in safety
Underwriters Laboratories

File EX6464
Project 10NK17245/EX6597
Project 10NK22384
Project 10NK20662
Project 10NK13693
Project 10CA30493
Project 10CA17524
Project 10NK10634

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

REPORT

on

FITTINGS, RUBBER GASKETED

Jinan Meide Casting Co. Ltd.

Shandong, CHINA

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Zertifikat Certificate

Anerkennung
von Bauteilen und Systemen
Approval
of Components and Systems

VdS

Inhaber der Anerkennung / Holder of the Approval:
Jinan Meide Casting Co., Ltd.
Meide Science and Technology Park,
Pingyin Industrial Park
CN -250400 Jinan, Jinan Shandong Province

Anerkennungs-Nr. / Approval No.: G 429020x
Gültig von / valid from: 28.08.2017
Gültig bis / valid until: 27.08.2021

Gegenstand der Anerkennung / Subject of the Approval:
Rohrkupplung/ Pipe coupling
"Fig. 10"

Verwendung / Use:
in ortsfesten Wasserlöschanlagen
in stationary water extinguishing systems

Grundlagen der Anerkennung / Basis of Approval:
VdS 2344 2014-07
VdS 2100-0to.2004-01

Köln, den 07.04.2017

DAkkS

Dr. Reinermann
Managing Director

i. V. Hinrichs
Head of Certification Body


Loss Prevention Certification Board

LPCB

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. 988a
Issue No. 01

Date of Issue 01 July 2010

This certificate is valid until withdrawn by LPCB.
To check the validity and the authenticity of the certificate please visit our website www.redbooks.net.com or contact us.

Signed on behalf of LPCB

B W Lywood

LPCB

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e-mail enquiries@redbooks.net.com www.redbooks.net.com

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BF007 Revision 1, 14 August 2009
Page 1 of 2
BRE Global Ltd. 2010

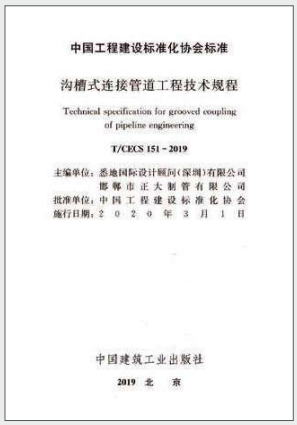

中国国家强制性产品认证证书

CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

CCC

CQC

A 0043705


中国工程建设标准化协会标准

沟槽式连接管道工程技术规程

Technical specification for grooved coupling of pipeline engineering

T/CECS 151 - 2019

主编单位：悉地国际设计顾问（深圳）有限公司
邯郸市正大制管有限公司
批准单位：中国工程建设标准化协会
施行日期：2020年3月1日

中国建筑工业出版社

2019 北 京


GB

中华人民共和国国家标准

GB/T 8259—2008
代替 GB/T 8259—1997

卡箍式柔性管接头
技术条件

Specification for flexible joints of housing

2008-12-31 发布
2009-12-01 实施

中华人民共和国国家质量监督检验检疫总局
中国国家标准化管理委员会 发布


GB

中华人民共和国国家标准

GB/T 8260—2008
代替 GB/T 8260—1997, GB/T 8261—1997

卡箍式柔性管接头
型式与尺寸

Types and dimensions of flexible joints of housing

2008-12-31 发布
2009-12-01 实施

中华人民共和国国家质量监督检验检疫总局
中国国家标准化管理委员会 发布


GB

中华人民共和国国家标准

GB/T 36019—2018

沟槽式管路连接件技术规范

Specification for grooved pipe fittings

2018-03-15 发布
2018-10-01 实施

中华人民共和国国家质量监督检验检疫总局
中国国家标准化管理委员会 发布

Ductile Iron Grooved Fittings and Couplings



1NH
Heavy-duty Flexible Coupling



1N
Standard Flexible Coupling



1N
Standard Flexible Coupling



1N
Standard Reducing Flexible Coupling



1NS
Light-duty Flexible Coupling



1NX
Slim Type Flexible Coupling



1G
Standard Rigid Coupling



1GS
Light-duty Rigid Coupling



1GH
Heavy duty Rigid Coupling



1GX
Slim Type Rigid Coupling



1GK
Angle Pad Coupling



1GKX
Slim Type Angle Pad Coupling



3H
Standard Wrench 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



90X
Slim Type 90°Elbow



91R
90° END-ALL Elbow



105
11.25° Elbow



110
22.5° Elbow



110X
Slim Type 22.5°Elbow



120
45° Elbow



120X
Slim Type 45°Elbow



130
Tee



130C
Reducing tee



130D
Reducing tee



130S
Light-duty Tee



130R
Reducing Tee



130R
Reducing Tee



130X
Slim Type Tee



130RX
Slim Type Reducing Tee



131R
Reducing Tee with Female Thread

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

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



131R
Reducing Tee with Female Thread



131RX
Slim Type Reducing Tee with Female Thread



180
Cross



180X
Slim Type Cross



180R
Reducing Cross



180RX
Slim Type Reducing Cross



181
Reducing Cross with Female Thread



181RX
Slim Type 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



3JX
Slim Type Mechanicai Tee Threaded Outet



4G
Mechanical Cross Grooved Outlet



4GS
Light-duty Mechanical Cross Grooved Outlet



4J
Mechanical Cross Threaded Outlet



4JS
Light-duty Mechanical Cross Threaded Outlet



220N
Grooved Concentric Reducer with Female Thread



230
Grooved Eccentric Reducer



230N
Grooved Eccentric Reducer with Female Thread



240
Grooved Concentric Reducer



240X
Slim Type Grooved Concentric Reducer



240N
Grooved Concentric Reducer with Female Thread



240NX
Slim Type 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

PRODUCT OVERVIEW

1. Design Standard

MECH brand grooved fittings are designed and manufactured in accordance with ASTM F1548, AWWA C606 and ISO 6182-12.2. Grooved couplings are in accordance with ASTM F1476 and EN 10311. For technical or quality requirements which are not specified in these standards, please contact our Business Engineers for details.

2. Product Features

Flexible couplings are mainly used for grooved pipe connections where adjacent pipe ends allow a certain amount of relative axial displacement, angular displacement and corresponding axial rotation.

Rigid couplings are for grooved pipeline connection. At the joint part, the adjacent pipe ends are not allowed to have relative axial displacement and angular displacement.

Mechanical tee is a saddle-shaped joint for connecting one side of a pipe in the middle of a straight pipe, the branch pipe is a threaded or grooved connection.

The grooved flange is used for the conversion of the grooved pipe connection to the flange connection.

Grooved fittings are used in conjunction with couplings to connect pipes and provide for pipe changes in direction, shunt, outside diameter changes, connection mode changes, or terminal plug & cap.

3. Material of The Housing

Ductile iron according to ASTM A536 Grade 65-45-12. International ductile iron specifications equivalent to SAE J434: D4512 or EN1563: EN-GJS-450-10 or JIS G5502: FCD450-10 or SABS 936/937: SG42. If the project needs other grades of ductile iron material, please communicate with our business engineer in advance to confirm.

4. Surface Treatment

- Standard: Electrophoretic coating
- Optional: Epoxy coating
- Optional: Hot-dip galvanizing
- Optional: Others would be available upon clients' detailed request

Note: please be sure to choose the proper surface treatment according to the corrosive environment and medium.

5. Gasket

Grade "E" EPDM with a green strip is for fire sprinkler systems. Grade "S" the silicone, is suitable for drinking water system. For other media and environment, please refer to guide for selection of rubber gaskets. Do not use in an incompatible media.

6. Bolts/Nuts

Oval neck track bolts and heavy hex nuts are available in American standard and metric systems on request. When applied to highly corrosive environment, please consult meide r&d or technical department.

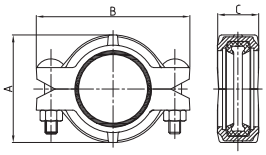
7. Pipe Material

Welded and seamless steel pipes are in accordance with ASME B36.10, ASTM A53-A53M, ISO 4200 and GB/T 21835.

1NH

Heavy-duty
Flexible Coupling





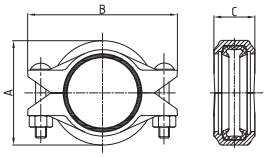
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions			Bolt Size	Certificate
					A mm/in	B mm/in	C mm/in	No.-Size mm/in	
50 2	60.3 2.375	750 5.17	14.8/3320	0-3.2 0-0.13	90 3.54	134 5.28	45 1.77	2-1/2X75 2-M12X76	UL FM
65 2½	73.0 2.875	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	139.7 5.500	750 5.17	79.2/17810	0-3.2 0-0.13	178 7.01	247 9.61	52 2.05	2-3/4X115 2-M20X115	UL
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
300 12	323.9 12.750	500 3.45	284.1/63868	0-3.2 0-0.13	385.2 15.165	477 18.780	66 2.598	2-7/8X140 2-M22X140	UL

1N

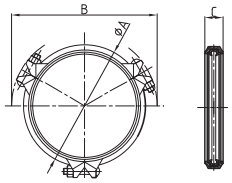
Standard Flexible Coupling

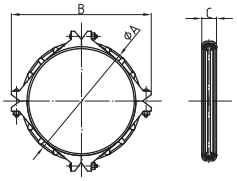










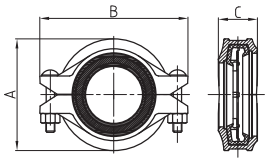


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions			Bolt Size	Certificate
					A mm/in	B mm/in	C mm/in	No.-Size mm/in	
25 1	33.7 1.327	500 3.45	3.0/680	0-1.6 0-0.06	55 2.16	92 3.62	42 1.65	2-3/8×55 2-M10×57	UL FM VdS LPCB
32 1¼	42.4 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	FM
200 8	219.1 8.625	500 3.45	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	FM
250 10	273.0 10.750	500 3.45	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	FM
300 12	323.9 12.750	500 3.45	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	UL
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	UL
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	UL
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	UL
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	UL
450 18	480.0 18.9	300 2.07	373.8/84110	0-3.2 0-0.13	533 20.98	628 24.72	78 3.07	3-7/8X140 3-M22X140	UL
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	UL
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	UL

1N

Standard Reducing Flexible Coupling



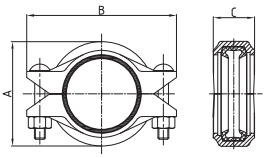


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions			Bolt Size	Certificate
					A mm/in	B mm/in	C mm/in	No.-Size mm/in	
50×25 2×1	60.3×33.7 2.375×1.315	360 2.48	5.9/1330	0-3.2 0-0.13	89 3.00	125.2 4.929	44 1.73	2-3/8×55 2-M10×57	UL
50×40 2×1½	60.3×48.3 2.375×1.900	360 2.48	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	360 2.48	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
65X65 2½X2½	76.1X73.0 3.000X2.875	300 2.07	9.4/2120	0-3.2 0-0.13	102.5 4.04	145 5.71	45 1.78	2-3/8X55 2-M10X57	——
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	360 2.48	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	360 2.48	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	360 2.48	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	360 2.48	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	360 2.48	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	UL FM
150×100 6×4	165.1×114.3 6.500×4.500	360 2.48	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	360 2.48	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
150×125 6×5	168.3×141.3 6.625×5.563	360 2.48	46.0/10340	0-3.2 0-0.13	210.25 8.278	274.83 10.820	51.9 2.043	2-3/4×115 2-M20×115	UL
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	UL FM
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	360 2.48	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

1NS

Light-duty Flexible Coupling



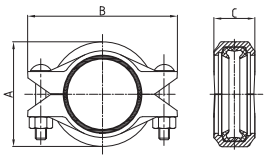


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions			Bolt Size	Certificate
					A mm/in	B mm/in	C mm/in	No.-Size mm/in	
80 3	88.9 3.500	300 2.07	12.8/2877	0-3.2 0-0.13	112.2 4.417	159 6.260	45.5 1.791	2-3/8X55 2-M10X57	UL
100 4	114.3 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
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
150 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
150 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
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

1NX

Slim Type Flexible Coupling





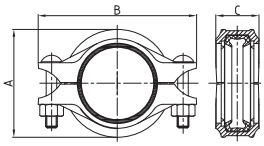
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions			Bolt Size	Certificate
			A mm/in	B mm/in	C mm/in	No.-Size mm/in	
65 2½	73.0 2½	363 2.5	94.5 3.720	136 5.354	44.5 1.752	2-3/8X55 2-M10X57	UL
65 2½	76.1 3.000	363 2.5	97.5 3.839	138 5.433	44.5 1.752	2-3/8X55 2-M10X57	——
80 3	88.9 3.500	363 2.5	110.4 4.346	152 5.984	45.5 1.791	2-3/8X55 2-M10X57	——
100 4	114.3 4.500	363 2.5	139 5.472	183 7.205	48 1.890	2-3/8X55 2-M10X57	——
150 6	165.1 6.500	363 2.5	194.1 7.642	249 9.803	50 1.969	2-1/2X70 2-M12X70	——
150 6	168.3 6.625	300 2.07	197 7.76	255 10.04	49.5 1.95	2-1/2X70 2-M12X70	UL
200 8	219.1 8.625	300 2.07	250 9.84	323 12.72	58.5 2.30	2-5/8X85 2-M16X85	UL
250 10	273.0 10.750	300 2.07	310 12.20	390 15.35	60 2.36	2-3/4X115 2-M20X115	UL FM

1G

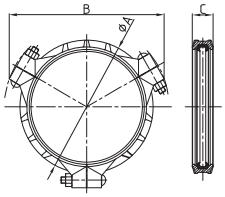
Standard
Rigid Coupling



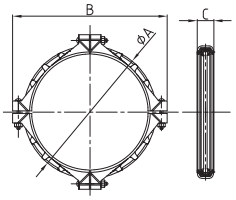




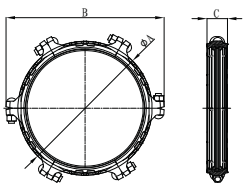










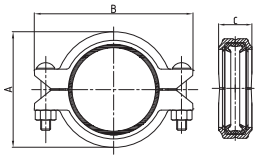


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions			Bolt Size	Certificate
					A mm/in	B mm/in	C mm/in	No.-Size mm/in	
25 1	33.7 1.327	500 3.45	3.0/680	0-1.6 0-0.06	59 2.33	100 3.94	44 1.74	2-3/8X55 2-M10X57	UL FM VdS LPCB
32 1¼	42.4 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	500 3.45	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	500 3.45	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	500 3.45	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
350 14	377.0 14.842	225 1.6	178.5/40160	0-3.2 0-0.13	435 17.13	535 21.05	72 2.84	3-7/8×140 3-M22×140	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	UL
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	UL
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	UL
600 24	630 24.80	225 1.6	498.5/112140	0-3.2 0-0.13	692 27.24	796 31.33	78 3.07	4-1×140	UL
700 28	711.2 28	225 1.6	635/142900	8-12 0.31-0.47	798 31.42	960 37.80	133 5.24	6-11/2X53/4	——
800 32	812.8 32	225 1.6	830/186700	8-12 0.31-0.47	900 35.43	1058 41.65	133 5.24	6-11/2X53/4	——

1GS

Light-duty Rigid Coupling



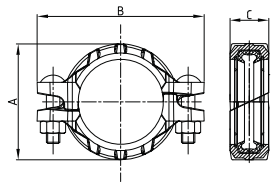


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions			Bolt Size	Certificate
					A mm/in	B mm/in	C mm/in	No.-Size mm/in	
80 3	88.9 3.500	350 2.41	15.0/3360	0-3.2 0-0.13	114 4.50	160 6.30	45 1.78	2-3/8X55 2-M10X57	UL FM VdS LPCB
100 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

1GH

Heavy duty Rigid Coupling



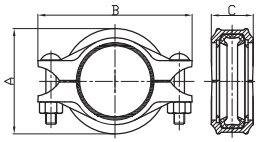


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions			Bolt Size	Certificate
			A mm/in	B mm/in	C mm/in	No.-Size mm/in	
50 2	60.3 2.375	750 5.17	88 3.46	136 5.35	45.5 1.79	2-1/2X75	UL
65 2½	73.0 2.875	750 5.17	101 3.98	150 5.91	45.5 1.79	2-1/2X75	UL
65 2½	76.1 3.000	750 5.17	104 4.09	155 6.10	45.5 1.79	2-1/2X75	UL
80 3	88.9 4.500	750 5.17	120.5 4.74	174 6.85	46.5 1.83	2-1/2X75	UL
100 4	114.3 4.500	750 5.17	150.5 5.93	217 8.54	50.5 1.99	2-5/8X80	UL
125 5	139.7 5.500	750 5.17	179 7.05	249 9.80	52 2.05	2-3/4X115	UL
125 5	141.3 5.563	750 5.17	180.5 7.11	250 9.84	51.5 2.03	2-3/4X115	UL
150 6	165.1 6.500	750 5.17	208 8.19	281 11.06	51.5 2.03	2-3/4X115	UL
150 6	168.3 6.625	750 5.17	211.5 8.33	285 11.22	52 2.05	2-3/4X115	UL
200 8	219.1 8.625	750 5.17	269 10.59	358 14.09	61 2.40	2-7/8X125	UL
250 10	273.0 10.750	750 5.17	326.5 12.85	420.7 16.56	63.5 2.50	2-7/8X125	UL
300 12	323.9 12.750	750 5.17	385 15.16	481 18.94	66 2.60	2-7/8X140	UL

1GX

Slim Type Rigid Coupling



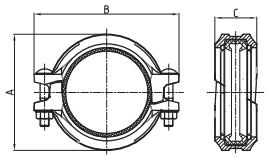


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions			Bolt Size	Certificate
			A mm/in	B mm/in	C mm/in	No.-Size mm/in	
32 11/4	42.4 1.669	300 2.07	65 2.56	103.5 4.07	44.5 1.75	2-3/8X55 2-M10X57	UL FM
40 11/2	48.3 1.900	300 2.07	70.8 2.79	108 4.25	44.5 1.75	2-3/8X55 2-M10X57	UL FM
50 2	60.3 2.375	300 2.07	82.5 3.25	129 5.08	44.5 1.75	2-3/8X55 2-M10X57	UL
65 2½	73.0 2.875	363 2.5	94.5 3.720	136 5.354	44 1.732	2-3/8X55 2-M10X57	UL
65 2½	76.1 3.000	300 2.07	98 3.86	138 5.43	44 1.73	2-3/8X55 2-M10X57	UL FM
80 3	88.9 3.500	300 2.07	110 4.33	152 5.98	45 1.77	2-3/8X55 2-M10X57	UL FM
100 4	108.0 4.250	300 2.07	130 5.12	174 6.85	47 1.85	2-3/8X55 2-M10X57	UL FM
100 4	114.3 4.500	300 2.07	140 5.51	183 7.20	47 1.85	2-3/8X55 2-M10X57	UL FM
125 5	133 5.250	300 2.07	160 6.30	212 8.35	49 1.93	2-1/2X70 2-M12X70	UL FM
125 5	139.7 5.500	300 2.07	165 6.50	217 8.54	49 1.93	2-1/2X70 2-M12X70	UL FM
150 6	159.0 6.250	300 2.07	186 7.32	238 9.37	50 1.97	2-1/2X70 2-M12X70	UL FM
150 6	165.1 6.500	300 2.07	195 7.68	247 9.72	50 1.97	2-1/2X70 2-M12X70	UL FM
200 8	219.1 8.625	300 2.07	251 9.88	316 12.44	58 2.28	2-5/8X80 2-M16X85	UL FM
250 10	273.0 10.750	300 2.07	311 12.24	384 15.12	57.5 2.26	2-3/4X115 2-M20X115	UL FM

1GK

Angle Pad Coupling



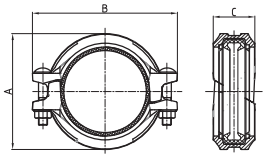


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions			Bolt Size	Certificate
					A mm/in	B mm/in	C mm/in	No.-Size mm/in	
32 1¼	42.4 1.669	500 3.45	4.8/1080	0-1.6 0-0.06	64 2.52	99 3.90	46.5 1.83	2-M10X57	UL FM
40 1½	48.3 1.900	500 3.45	6.3/1420	0-3.2 0-0.13	70 2.76	105 4.13	46.5 1.83	2-M10X57	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-M10X57	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-M10X63	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-M10X70	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-M12X76	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-M12X76	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-M12X76	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-M20X115	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 FM

1GKX

Slim Type Angle Pad Coupling



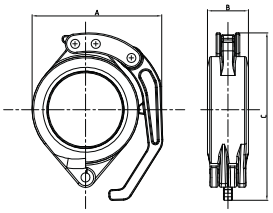


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions			Bolt Size	Certificate
			A mm/in	B mm/in	C mm/in	No.-Size mm/in	
100 4	114.3 4.500	300 2.07	140.5 5.53	177.5 6.99	46.5 1.83	2-3/8X60 2-M10X63	UL
150 6	165.1 6.500	300 2.07	195 7.68	240 9.45	49.5 1.95	2-1/2X70 2-M12X70	UL
200 8	219.1 8.625	300 2.07	252 9.92	319 12.56	58 2.28	2-5/8X85 2-M16X85	UL FM

3H

Standard Wrench Coupling



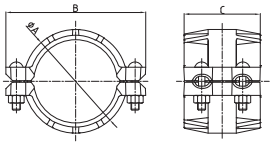


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Max. End Load kN/Lbs	Pipe End Separation mm/in	Dimensions		
					A mm/in	B mm/in	C mm/in
80 3	88.9 3.500	365 2.5	15.5/3490	0-3.2 0-0.13	143 5.63	45.5 1.79	180 7.09

H305

HDPE Coupling



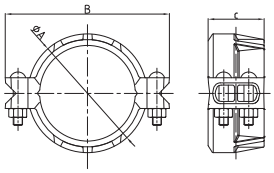


Nominal Size mm/in	Pipe O.D mm/in	Dimensions			Bolt Size
		A mm/in	B mm/in	C mm/in	No.-Size mm/in
50 2	60.3 2.375	86.5 3.406	133 5.24	116 4.567	4-1/2X70
80 3	88.9 3.5	118 4.65	165 6.5	116 4.567	4-1/2X75
100 4	114.3 4.5	148 5.827	202 7.953	146 5.75	4-1/2X75
150 6	168.3 6.625	203 7.99	273 10.75	149 5.87	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



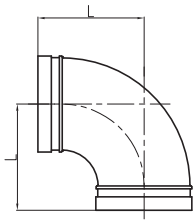


Nominal Size mm/in	Pipe O.D mm/in	Dimensions			Bolt Size
		A mm/in	B mm/in	C mm/in	No.-Size mm/in
50 2	60.3 2.375	86.5 3.406	147 5.787	79 3.11	4-1/2X70
80 3	88.9 3.5	116 4.567	176 6.929	79 3.11	4-1/2X75
100 4	114.3 4.5	148 5.827	209 8.228	95 3.75	4-1/2X75
150 6	168.3 6.625	202 7.95	280 11.02	95 3.74	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

90

90° Elbow





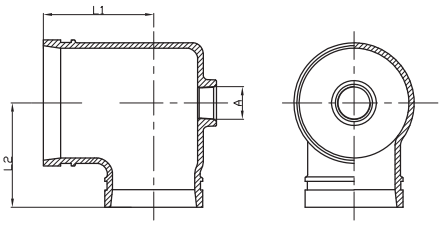
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
25 1	33.7 1.315	500 3.45	57 2.24	UL FM VdS LPCB
32 1¼	42.4 1.660	500 3.45	70 2.75	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	70 2.75	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	82.5 3.25	UL FM VdS LPCB
65 2½	73.0 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	108.0 4.250	500 3.45	127 5.00	——
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	159.0 6.250	500 3.45	165 6.50	——
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	Max 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

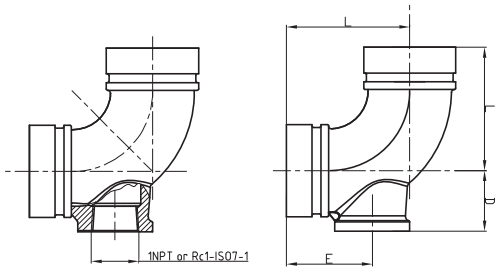


90C

90° Drain Elbow



Nominal Size mm/in	Pipe O.D mm/in	Max 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	____

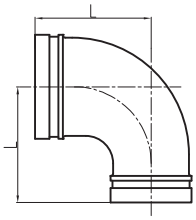


90R

90° Reducing Elbow



Nominal Size mm/in	Pipe O.D mm/in	Max 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

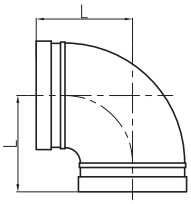


90S

Light-duty 90° Elbow



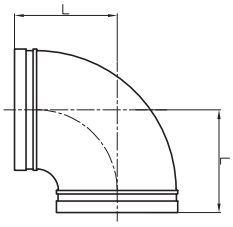
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
50 2	57.0 2.244	300 2.07	70 2.75	——
50 2	60.3 2.375	300 2.07	70 2.75	UL FM VdS LPCB
65 2½	73.0 2.875	300 2.07	76 3.00	UL FM
65 2½	76.1 3.000	300 2.07	76 3.00	UL FM VdS LPCB
80 3	88.9 3.500	300 2.07	85.5 3.37	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



90X

Slim Type 90°Elbow



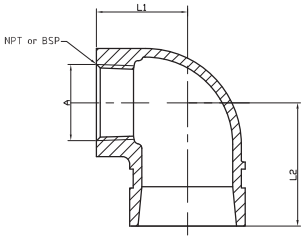


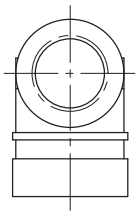
Nominal Size mm/in	Pipe O.D. mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
80 3	88.9 3.5	300 2.07	80.5 3.17	UL FM
100 4	108.0 4.250	300 2.07	92 3.62	UL FM
100 4	114.3 4.500	300 2.07	96 3.78	UL FM
125 5	133.0 5.250	300 2.07	109 4.29	UL FM
125 5	139.7 5.500	300 2.07	116 4.57	UL FM
125 5	141.3 5.563	300 2.07	116 4.57	——
150 6	159.0 6.250	300 2.07	121.5 4.78	UL FM
150 6	165.1 6.500	300 2.07	130 5.12	UL FM
150 6	168.3 6.625	300 2.07	130 5.12	UL FM
250 10	273.0 10.750	300 2.07	204 8.03	UL FM
300 12	323.9 12.750	300 2.07	220 8.66	UL FM

91R

90° END-ALL Elbow







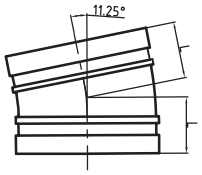
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions			Certificate
			A (NPT/BSP)	L1 mm/in	L2 mm/in	
32X15 11/4X1/2	42.4X21.3 1.660X0.825	500 3.45	1/2	35.1 1.382	44.5 1.752	UL FM
32X20 11/4X3/4	42.4X26.9 1.660X1.050	500 3.45	3/4	34.9 1.374	47.6 1.874	UL FM
32X25 11/4X1	42.4X33.7 1.660X1.315	500 3.45	1	38.1 1.5	51.6 2.031	UL FM
40X15 11/2X1/2	48.3X21.3 1.900X0.825	500 3.45	1/2	34.9 1.374	44.5 1.752	UL FM
40X20 11/2X3/4	48.3X26.9 1.900X1.050	500 3.45	3/4	34.9 1.374	47.6 1.874	UL FM
40X25 11/2X1	48.3X33.7 1.900X1.315	500 3.45	1	38.1 1.5	51.6 2.031	UL FM
50X15 2X1/2	60.3X21.3 2.375X0.825	500 3.45	1/2	41.4 1.63	44.5 1.752	UL FM
50X20 2X3/4	60.3X26.9 2.375X1.050	500 3.45	3/4	41.3 1.626	47.6 1.874	UL FM
50X25 2X1	60.3X33.7 2.375X1.315	500 3.45	1	44.5 1.752	51.6 2.031	UL FM
65X15 21/2X1/2	73.0X21.3 2.875X0.825	500 3.45	1/2	46 1.811	44.5 1.752	UL FM
65X20 21/2X3/4	73.0X26.9 2.875X1.050	500 3.45	3/4	46 1.811	47.6 1.874	UL FM
65X25 21/2X1	73.0X33.7 2.875X1.315	500 3.45	1	49.2 1.937	51.6 2.031	UL FM
65X25 21/2X1	76.1X33.7 2.996X1.327	500 3.45	1	49.2 1.94	51.6 2.03	——
80X20 3X3/4	88.9X26.9 3.500X1.050	500 3.45	3/4	60.3 2.374	52.4 2.063	UL FM
80X25 3X1	88.9X33.7 3.500X1.315	500 3.45	1	63.5 2.5	52.4 2.063	UL FM

105

11.25° Elbow





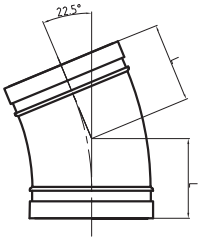


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
32 1 1/4	42.4 1.660	500 3.45	35 1.38	UL FM VdS
40 1 1/2	48.3 1.900	500 3.45	35 1.38	UL FM VdS
50 2	60.3 2.375	500 3.45	35 1.38	UL FM VdS LPCB
65 2 1/2	73.0 2.875	500 3.45	38 1.506	UL FM
65 2 1/2	76.1 3.000	500 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



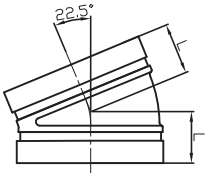


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
32 1¼	42.4 1.660	500 3.45	45 1.77	UL FM VdS
40 1½	48.3 1.900	500 3.45	45 1.77	UL FM VdS
50 2	60.3 2.375	500 3.45	48 1.89	UL FM VdS
65 2½	73.0 2.875	500 3.45	51 2.00	UL FM
65 2½	76.1 3.000	500 3.45	51 2.00	UL 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

110X

Slim Type 22.5°Elbow



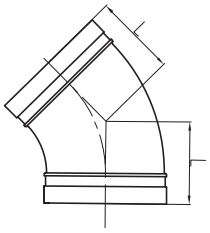


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
100 4	114.3 4.500	300 2.07	40 1.57	UL FM
150 6	159.0 6.250	300 2.07	45 1.77	UL FM
150 6	165.1 6.500	300 2.07	45 1.77	UL FM

120

45° Elbow



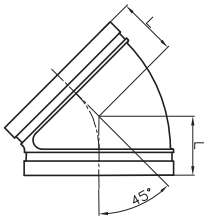


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
25 1	33.7 1.315	500 3.45	44.5 1.75	UL FM VdS LPCB
32 1¼	42.4 1.660	500 3.45	44.5 1.75	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	44.5 1.75	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	51 2.00	UL FM VdS LPCB
65 2½	73.0 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	UL FM
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	——

120X

Slim Type 45°Elbow



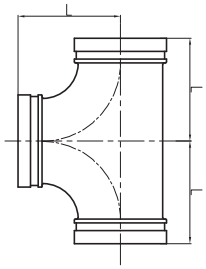


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
80 3	88.9 3.500	300 2.07	51 2.01	UL FM
100 4	108.0 4.250	300 2.07	52 2.05	UL FM
100 4	114.3 4.500	300 2.07	54 2.13	UL FM
125 5	139.7 5.500	300 2.07	60 2.36	UL FM
125 5	141.3 5.563	300 2.07	60 2.36	——
150 6	159.0 6.250	300 2.07	63 2.48	UL FM
150 6	165.1 6.500	300 2.07	65 2.56	UL FM
150 6	168.3 6.625	300 2.07	65 2.56	UL FM
200 8	219.1 8.625	300 2.07	80 3.15	UL FM
250 10	273.0 10.750	300 2.07	95 3.74	UL FM

130

Tee



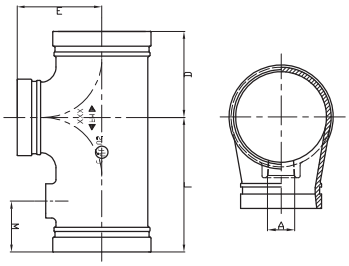


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
25 1	33.7 1.315	500 3.45	57 2.24	UL FM VdS LPCB
32 1¼	42.4 1.660	500 3.45	70 2.75	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	70 2.75	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	82.5 3.25	UL FM VdS LPCB
65 2½	73.0 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	108.0 4.250	500 3.45	127 5.00	——
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	159.0 6.250	500 3.45	165 6.50	——
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



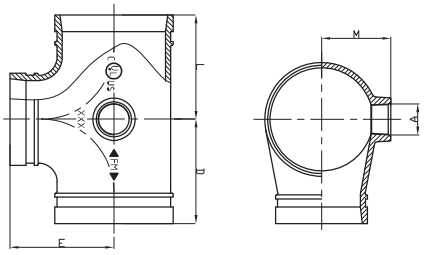


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions					Certificate
			A	L mm/in	D mm/in	E mm/in	M mm/in	
100X80X25 4X3X1	114.3X88.9X33.7 4.5X3.5X1.327	300 2.07	1-11.5NPT Rp1-ISO7/1	160 6.3	102 4.02	102 4.02	60 2.36	UL FM
150X80X25 6X3X1	165.1X88.9X33.7 6.5X3.5X1.327	300 2.07	1-11.5NPT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

130D

Reducing tee



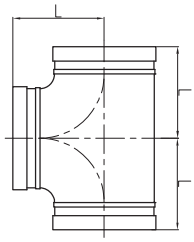


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions					Certificate
			A	L mm/in	D mm/in	E mm/in	M mm/in	
100X80X25 4X3X1	114.3X88.9X33.7 4.5X3.5X1.327	300 2.07	1-11.5NPT Rp1-ISO7/1	102 4.02	102 4.02	102 4.02	67 2.638	UL FM
150X80X25 6X3X1	165.1X88.9X33.7 6.5X3.5X1.327	300 2.07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

130S

Light-duty Tee



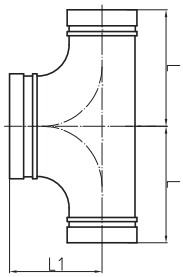


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
50 2	57.0 2.244	300 2.07	70 2.75	——
50 2	60.3 2.375	300 2.07	70 2.75	UL FM VdS LPCB
65 2½	73.0 2.875	300 2.07	76 3.00	UL FM
65 2½	76.1 3.000	300 2.07	76 3.00	UL FM VdS LPCB
80 3	88.9 3.500	300 2.07	85.5 3.37	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



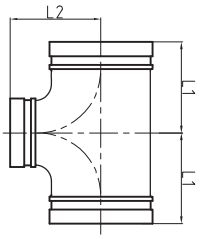


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Dimensions L 1 mm/in	Certificate
65×65×80 2½×2½×3	76.1×76.1×88.9 3.000×3.000×3.500	500 3.45	108 4.25	95 3.74	——
65×65×100 2½×2½×4	76.1×76.1×114.3 3.000×3.000×4.500	500 3.45	127 5.00	102 4.02	——
80×80×100 3×3×4	88.9×88.9×114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

130R

Reducing Tee



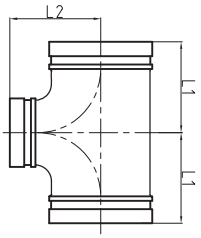


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
50×25 2×1	60.3×33.7 2.375×1.315	500 3.45	70 2.75	70 2.75	UL FM VdS LPCB
50×40 2×1½	60.3×48.3 2.375×1.900	500 3.45	70 2.75	70 2.75	UL FM VdS LPCB
65×40 2½×1½	73.0×48.3 2.875×1.900	500 3.45	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 4×21/2	108.0×73.0 4.250×2.875	500 3.45	101 3.98	101 3.98	UL FM
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
150×100 6×4	159.0×114.3 6.250×4.500	500 3.45	140 5.50	140 5.50	UL FM
150×125 6×5	159.0×133.0 6.250×5.250	500 3.45	140 5.50	140 5.50	UL FM

130R

Reducing Tee



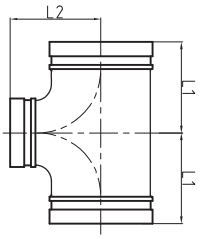


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
150×50 6×2	165.1×60.3 6.500×2.375	300 2.07	140 5.50	140 5.50	UL FM
150×65 6×2½	165.1×76.1 6.500×3.000	300 2.07	140 5.50	140 5.50	UL FM
150×80 6×3	165.1×88.9 6.500×3.500	300 2.07	140 5.50	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	FM
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	FM
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
219×65 8×21/2	219.1×73.0 8.625×2.875	300 207	175 6.89	175 6.89	UL FM
250×100 10×4	273.0×114.3 10.750×4.500	500 3.45	228.6 9.00	228.6 9.00	UL FM
250×150 10×6	273.0×159.0 10.750×6.250	500 3.45	229 9.00	229 9.00	——
250×150 10×6	273.0×165.1 10.750×6.500	300 2.07	229 9.00	229 9.00	FM
250×150 10×6	273.0×168.3 10.750×6.625	300 2.07	229 9.00	229 9.00	FM VdS
250×200 10×8	273.0×219.1 10.750×8.625	300 2.07	229 9.00	229 9.00	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	FM
300×150 12×6	323.9×168.3 12.750×6.625	300 2.07	254 10	254 10	FM
300×200 12×8	323.9×219.1 12.750×8.625	300 2.07	254 10	254 10	FM VdS
300×250 12×10	323.9×273.0 12.750×10.750	300 2.07	254 10	254 10	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	——
350×150 14×6	355.6×168.3 14.000×6.625	300 2.07	279 10.98	238 9.37	——

130R

Reducing Tee





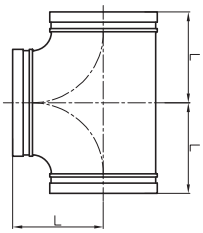
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
350×200 14×8	355.6×219.1 14.00×8.625	300 2.07	280 11.02	280 11.02	——
350×250 14×10	355.6×273.0 14.000×10.750	300 2.07	279 10.98	257 10.12	——
350×300 14×12	355.6×323.9 14.000×12.750	300 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.

130X

Slim Type Tee



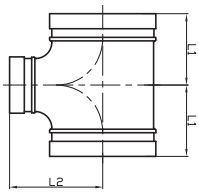


Nominal Size mm/in	Pipe O.D. mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
80 3	88.9 3.5	300 2.07	80.5 3.17	UL FM
100 4	108.0 4.25	300 2.07	92 3.62	UL FM
100 4	114.3 4.5	300 2.07	96 3.78	UL FM
125 5	133.0 5.250	300 2.07	109 4.29	UL FM
125 5	139.7 5.500	300 2.07	116 4.57	UL FM
125 5	141.3 5.563	300 2.07	116 4.57	——
150 6	159.0 6.500	300 2.07	121.5 4.78	UL FM
150 6	165.1 6.500	300 2.07	130 5.12	UL FM
150 6	168.3 6.625	300 2.07	130 5.12	UL FM
200 8	219.1 8.625	300 2.07	164 6.45	UL FM
250 10	273.0 10.750	300 2.07	204 8.03	UL FM
300 12	323.9 12.750	300 2.07	230 9.05	UL FM

130RX

Slim Type Reducing Tee



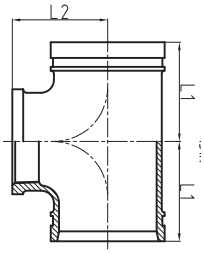


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L1 mm/in	Dimensions L2 mm/in	Certificate
80×65 3×2½	88.9×73.0 3.500×2.875	300 2.07	75.5 2.97	84.5 3.33	UL FM
80×65 3×2½	88.9×76.1 3.500×3.000	300 2.07	75.5 2.97	84.5 3.33	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	71 2.80	98 3.86	UL FM
100×65 4×2½	114.3×73.0 4.500×2.875	300 2.07	77.5 3.05	98 3.86	UL FM
100×65 4×2½	114.3×76.1 4.500×3.000	300 2.07	77.5 3.05	98 3.86	——
100×80 4×3	114.3×88.9 4.500×3.500	300 2.07	86.5 3.41	98 3.86	UL FM
125×100 5×4	139.7×114.3 5.500×4.500	300 2.07	100 3.94	116 4.57	UL FM
125×100 5×4	141.3×114.3 5.563×4.500	300 2.07	100 3.94	116 4.57	UL FM
150×80 6×3	159.0×88.9 6.250×3.500	300 2.07	86.5 3.41	120 4.72	UL FM
150×100 6×4	159.0×108.0 6.250×4.250	300 2.07	96 3.78	121.5 4.78	UL FM
150×100 6×4	159.0×114.3 6.250×4.500	300 2.07	100 3.94	121.5 4.78	UL FM
150×125 6×5	159.0×133.0 6.250×4.250	300 2.07	109 4.29	121.5 4.78	UL FM
150X125 6X5	159.0X133.0 6.250X5.250	300 2.07	109 4.29	121.5 4.78	UL FM
150×50 6×2	165.1×60.3 6.500×2.375	300 2.07	71 2.80	126 4.96	UL FM
150×65 6×2½	165.1×76.1 6.500×3.000	300 2.07	77.5 3.05	128 5.04	UL FM
150×80 6×3	165.1×88.9 6.500×3.500	300 2.07	86.5 3.41	128 5.04	UL FM
150×100 6×4	165.1×114.3 6.500×4.500	300 2.07	100 3.94	120 4.72	UL FM
150×125 6×5	165.1×139.7 6.500×5.500	300 2.07	116 4.57	130 5.12	UL FM
150×50 6×2	168.3×60.3 6.625×2.375	300 2.07	71 2.80	126 4.96	UL FM
150×65 6×2½	168.3×73.0 6.625×2.875	300 2.07	77.5 3.05	128 5.04	UL FM
150×65 6×2½	168.3×76.1 6.625×3.000	300 2.07	77.5 3.05	128 5.04	UL FM
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	86.5 3.41	128 5.04	UL FM
150×100 6×4	168.3×114.3 6.625×4.500	300 2.07	100 3.94	130 5.12	UL FM
150×125 6×5	168.3×139.7 6.625×5.500	300 2.07	116 4.57	130 5.12	UL FM
150×125 6×5	168.3×141.3 6.625×5.563	300 2.07	116 4.57	130 5.12	UL FM
200×65 8×2½	219.1×76.1 8.625×3.000	300 2.07	82 3.23	154 6.06	UL FM
200×80 8×3	219.1×88.9 8.625×3.500	300 2.07	91 3.58	154 6.06	UL FM
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	105 4.13	151 5.94	UL FM
200×125 8×5	219.1×133.0 8.625×5.250	300 2.07	118 4.65	158 6.22	——
200×125 8×5	219.1×139.7 8.625×5.500	300 2.07	120 4.72	158 6.22	UL FM
200×150 8×6	219.1×159.0 8.625×6.250	300 2.07	125.5 4.94	160 6.30	UL FM
200×150 8×6	219.1×165.1 8.625×6.500	300 2.07	134 5.28	160 6.30	UL FM
200×150 8×6	219.1×168.3 8.625×6.625	300 2.07	134 5.28	160 6.30	UL FM
250×150 10×6	273.0×159.0 10.750×6.250	300 2.07	136 5.35	187 7.36	UL FM
250×150 10×6	273.0×165.1 10.750×6.500	300 2.07	136 5.35	187 7.36	UL FM
250×150 10×6	273.0×168.3 10.750×6.625	300 2.07	136 5.35	187 7.36	UL FM
250×200 10×8	273.0×219.1 10.750×8.625	300 2.07	166 6.54	191 7.52	UL FM
300×100 12×4	323.9×114.3 12.750×4.500	300 2.07	136 5.35	214 8.43	UL FM
300×150 12×6	323.9×159.0 12.750×6.250	300 2.07	136 5.35	214 8.43	UL FM
300×150 12×6	323.9×165.1 12.750×6.500	300 2.07	136 5.35	213 8.39	UL FM
300×200 12×8	323.9×219.1 12.750×8.625	300 2.07	166 6.54	217 8.54	UL FM
300×250 12×10	323.9×273.0 12.750×10.750	300 2.07	194 7.64	218 8.58	UL FM

131R

Reducing Tee with Female Thread



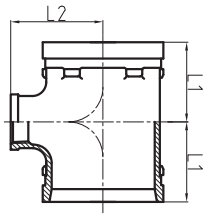


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
50×25 2×1	60.3×33.7 2.375×1.315	500 3.45	70 2.75	70 2.75	UL FM
50×32 2×1¼	60.3×42.4 2.375×1.660	500 3.45	70 2.75	70 2.75	UL FM
50×40 2×1½	60.3×48.3 2.375×1.900	500 3.45	70 2.75	70 2.75	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	UL FM
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



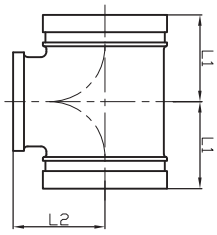


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
65×50 2½×2	73.0×60.3 2.875×2.375	500 3.45	76 3.00	76 3.00	UL FM
100×25 4×1	114.3×33.7 4.500×1.315	300 2.07	76 2.99	88 3.47	UL FM
100×32 4×1¼	114.3×42.4 4.500×1.660	300 2.07	76 2.99	88 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	FM
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	175 6.89	175 6.89	UL FM

131RX

Slim Type Reducing Tee with Female Thread



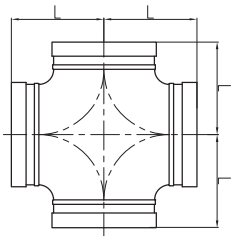


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L1 mm/in	Dimensions L2 mm/in	Certificate
50×25 2×1	60.3×33.7 2.375×1.315	300 2.07	58 2.28	55 2.17	UL FM
50×40 2×1½	60.3×48.3 2.375×1.900	300 2.07	63.5 2.50	53 2.09	UL FM
65×40 2½×1½	73.1×48.3 2.878×1.900	300 2.07	65.5 2.58	64.5 2.54	UL FM
65×50 2½×2	73.1×60 2.878×2.375	300 2.07	72.5 2.85	66 2.60	UL FM
65×40 2½×1½	73.0×48.3 2.875×1.900	300 2.07	65.5 2.58	64.5 2.54	UL FM
65×40 2½×1½	76.1×48.3 3.000×1.900	300 2.07	65.5 2.58	64.5 2.54	UL FM
65×50 2½×2	73.0×60.3 2.875×2.375	300 2.07	72.5 2.85	66 2.60	UL FM
65×50 2½×2	76.1×60 3.000×2.375	300 2.07	72.5 2.85	66 2.60	UL FM
80×25 3×1	88.9×33.7 3.500×1.315	300 2.07	58 2.28	68 2.68	UL FM
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	65 2.56	72 2.83	UL FM
80×50 3×2	88.9×60.3 3.500×2.375	300 2.07	72.5 2.86	72.5 2.86	UL FM
100×65 4×2½	108.0×76.1 4.250×3.000	300 2.07	83 3.27	88 3.46	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	76 2.99	85 3.35	UL FM
100×65 4×2½	114.3×76.1 4.500×3.000	300 2.07	80 3.15	85 3.35	UL FM
100×80 4×3	114.3×88.9 4.500×3.500	300 2.07	90.5 3.56	93 3.66	UL FM
150×50 6×2	165.1×60.3 6.500×2.375	300 2.07	75 2.95	105 4.13	UL FM
150×65 6×2½	165.1×76.1 6.500×3.000	300 2.07	86 3.39	121 4.76	UL FM
150×80 6×3	165.1×88.9 6.500×3.500	300 2.07	93 3.66	123 4.84	UL FM
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	93 3.66	123 4.84	UL FM
150×100 6×4	165.1×114.3 6.500×4.500	300 2.07	103.5 4.07	118 4.65	UL FM
150×50 6×2	168.3×60.3 6.625×2.375	300 2.07	75 2.95	105 4.13	UL FM
150×65 6×2½	168.3×76.1 6.625×3.000	300 2.07	86 3.39	121 4.76	UL FM
150×80 6×3	168.3×88.9 6.625×3.500	300 2.07	93 3.66	123 4.84	UL FM
150×100 6×4	168.3×114.3 6.625×4.500	300 2.07	103.5 4.07	118 4.65	UL FM
200×65 8×2½	219.1×76.1 8.625×3.000	300 2.07	88 3.46	137 5.39	UL FM
200×100 8×4	219.1×114.3 8.625×4.500	300 2.07	111 4.37	145 5.71	UL FM

180

Cross





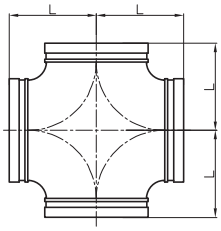
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
32 1¼	42.4 1.660	500 3.45	70 2.75	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	70 2.75	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	70 2.75	UL FM VdS LPCB
65 2½	73.0 2.875	500 3.45	76 3.00	UL FM
65 2½	76.1 3.000	500 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.

180X

Slim Type Cross



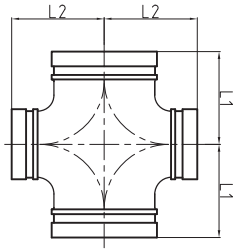


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
150 6	159.0 6.250	300 2.07	121.5 4.78	UL FM
150 6	165.1 6.500	300 2.07	130 5.12	UL FM
150 6	168.3 6.625	300 2.07	130 5.12	UL FM
200 8	219.1 8.625	300 2.07	164 6.45	UL FM

180R

Reducing Cross



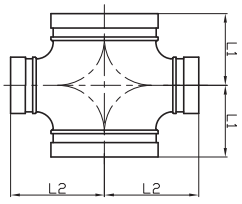


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
65×50 2½×2	76.1×60.3 3.000×2.375	500 3.45	76 3.00	76 3.00	UL FM
80×50 3×2	88.9×60.3 3.500×2.375	500 3.45	85.5 3.37	85.5 3.37	UL FM
100×50 4×2	114.3×60.3 4.500×2.375	500 3.45	101 3.98	101 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	219.1×108.0 8.625×4.250	500 3.45	175 6.89	175 6.89	——
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

180RX

Slim Type Reducing Cross



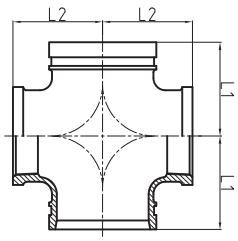


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L1 mm/in	Dimensions L2 mm/in	Certificate
150×100 6×4	165.1×114.3 6.500×4.500	300 2.07	100 3.94	130 5.12	UL FM
150×100 6×4	168.3×114.3 6.625×4.500	300 2.07	100 3.94	130 5.12	UL FM
200×150 8×6	219.1×159.0 8.625×6.250	300 2.07	125.5 4.94	160 6.30	——
200×150 8×6	219.1×165.1 8.625×6.500	300 2.07	134 5.27	160 6.30	UL FM
200×150 8×6	219.1×168.3 8.625×6.625	300 2.07	134 5.27	160 6.30	UL FM

181

Reducing Cross with Female Thread



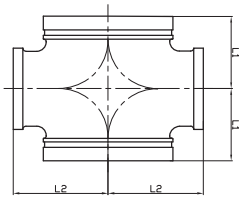


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L 1 mm/in	Dimensions L 2 mm/in	Certificate
65×50 2½×2	76.1×60.3 3.000×2.375	300 2.07	76 3.00	76 3.00	UL FM
80×32 3×1¼	88.9×42.4 3.500×1.660	300 2.07	108 4.25	108 4.25	——
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	85.5 3.37	85.5 3.37	UL FM
80×50 3×2	88.9×60.3 3.500×2.375	300 2.07	85.5 3.37	85.5 3.37	UL FM
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	UL FM
100×80 4×3	114.3×88.9 4.500×3.500	300 2.07	101 3.98	96 3.78	UL FM
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	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	165.1X 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	——

181RX

Slim Type Reducing Cross with Female Thread



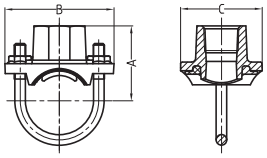


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L1 mm/in	Dimensions L2 mm/in	Certificate
150×80 6×3	165.1×88.9 6.500×3.500	300 2.07	93 3.66	123 4.84	UL FM
150X80 6X3	168.3X88.9 6.625X3.500	300 2.07	93 3.66	123 4.84	——

3L

U-Bolt Mechanical Tee



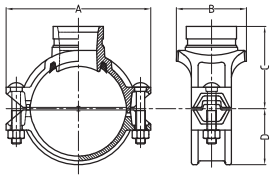


Nominal Size mm/in	Pipe O.D mm/in	Hole Dia mm/in +1.6,0/+0.063,0	Max Working Pressure PSI/MPa	Dimensions			U Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in		
32X15 1¼X1/2	42.4X21.3 1.660X0.825	30 1.18	300 2.07	54.4 2.14	88.9 3.50	57.2 2.25	3/8X73 M10X73	UL FM VdS
32X20 1¼X3/4	42.4X26.9 1.660X1.050	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	42.4X33.7 1.660X1.315	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	48.3X21.3 1.900X0.825	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	48.3X26.9 1.900X1.050	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	48.3X33.7 1.900X1.315	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	60.3X21.3 2.375X0.825	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	60.3X26.9 2.375X1.050	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	60.3X33.7 2.375X1.315	30 1.18	300 2.07	66.6 2.62	96.3 3.75	57.2 2.25	3/8X90 M10X90	UL FM VdS
50X32 2X11/4	60.3X42.4 2.375X1.660	45 1.75	300 2.07	66.6 2.62	120 4.72	76 3.00	1/2X52	——
65X15 2½X1/2	73.0X21.3 2.875X0.825	30 1.18	300 2.07	66.9 2.75	108.0 4.25	57.2 2.25	3/8X105 M10X105	UL FM
65X20 2½X3/4	73.0X26.9 2.875X1.050	30 1.18	300 2.07	66.9 2.75	108.0 4.25	57.2 2.25	3/8X105 M10X105	UL FM
65X25 2½X1	73.0X33.7 2.875X1.315	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	76.1X21.3 3.000X0.825	30 1.18	300 2.07	66.9 2.75	108.0 4.25	57.2 2.25	3/8X105 M10X105	UL FM VdS
65X20 76.1X3/4	76.1X26.9 3.000X1.050	30 1.18	300 2.07	66.9 2.75	108.0 4.25	57.2 2.25	3/8X105 M10X105	UL FM VdS
65X25 76.1X1	76.1X33.7 3.000X1.315	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	88.9X33.7 3.500X1.315	38 1.5	300 2.07	79 3.11	145 5.70	73 2.87	1/2X58	UL FM VdS
100X25 4X1	114.3X33.7 4.500X1.315	30 1.18	300 2.07	89 3.50	185 7.28	72 2.83	1/2X70	FM
100X32 4X11/4	114.3X42.4 4.500X1.660	51 2	300 2.07	95 3.74	185 7.28	85 3.35	1/2X70	FM
100X40 4X11/2	114.3X48.3 4.500X1.900	51 2	300 2.07	95 3.74	185 7.28	85 3.35	1/2X70	FM
150X25 6X1	168.3X33.7 6.500X1.315	38 1.5	300 2.07	124 4.88	254 10.0	75 2.95	5/8X102	FM
150X32 6X1	168.3X42.4 6.500X1.660	51 2	300 2.07	120 4.72	254 10.0	88 3.46	5/8X102	FM
150X40 6X1	168.3X48.3 6.500X1.900	57 2.24	300 2.07	120 4.72	254 10.0	88 3.46	5/8X102 M16X102	FM

3G

Mechanical Tee
Grooved Outlet



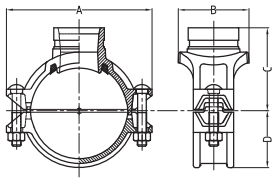


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
50×32 2×1¼	60.3×42.4 2.375×1.660	400 2.76	45 1.75	116 4.57	76 2.99	69.5 2.74	39 1.54	3/8×55 M10X57	UL FM VdS
50×40 2×1½	60.3×48.3 2.375×1.900	400 2.76	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	UL
65×32 2½×1¼	73.0×42.4 2.875×1.660	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	UL FM VdS LPCB
100×80 4×3	114.3×88.9 4.500×3.500	400 2.76	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	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	UL FM
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	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	400 2.76	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

3G

Mechanical Tee Grooved Outlet



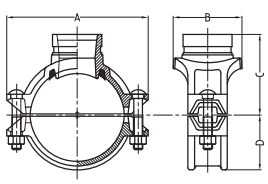


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions A mm/in	B mm/in	C mm/in	D mm/in	Bolt Size mm/in	Certificate
150×65 6×2½	168.3×73.0 6.625×2.875	400 2.76	70 2.75	247 9.72	112.5 4.43	135 5.32	98.5 3.88	5/8×105 M16X108	UL FM
150×65 6×2½	168.3×76.1 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	UL FM VdS LPCB
150×80 6×3	168.3×88.9 6.625×3.500	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	70 2.75	320 12.60	118 4.65	158 6.22	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	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	UL FM
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	UL FM
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



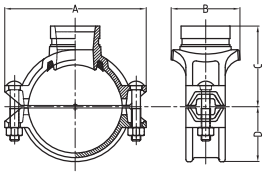


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions A mm/in	B mm/in	C mm/in	D mm/in	Bolt Size mm/in	Certificate
80×25 3×1	88.9×33.7 3.500×1.315	365 2.52	38 1.50	150 5.91	71.0 2.80	84 3.31	55.5 2.19	1/2×75 M12X76	UL FM
80×32 3×1¼	88.9×42.4 3.500×1.660	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
125×50 5×2	141.3×60.3 5.563×2.375	300 2.07	64 2.50	210 8.27	110 4.33	113 4.45	82 3.23	5/8×85	——

3GS

Light-duty Mechanical Tee Grooved Outlet



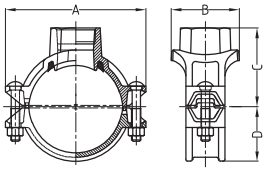


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
125×80 133.0×3	133.0×88.9 5.250×3.500	300 2.07	89 3.50	203 7.99	132 5.12	110 4.33	77.5 3.05	5/8×85 M16X85	UL FM
125×32 139.7×11/4	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
125×50 5×2	141.3×60.3 5.563×2.375	300 2.07	64 2.50	210 8.27	110 4.33	113 4.45	82 3.23	5/8X85	UL
125×65 5×2 1/2	141.3×73.0 5.563×2.875	300 2.07	70 2.75	209 8.23	109.5 4.31	113 4.45	82 3.23	5/8X85	UL
125×80 5×3	141.3×88.9 5.563×3.500	300 2.07	89 3.50	209 8.23	129 5.08	113 4.45	82 3.23	5/8X85	UL
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	——
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	UL FM
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	Max 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		
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	UL FM 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	UL FM VdS
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	UL FM 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	UL FM 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	UL 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	UL VdS
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	UL FM 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	UL FM 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	UL VdS
50×15 2×½	60.3×21.3 2.375×0.825	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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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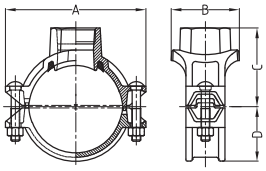
Mechanical Tee
Threaded Outlet





Nominal Size mm/in	Pipe O.D mm/in	Max 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		
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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	400 2.76	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	VdS LPCB
100×80 4×3	114.3×88.9 4.500×3.500	400 2.76	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	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	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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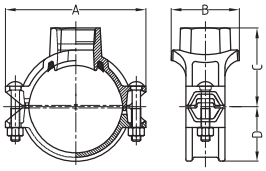
Mechanical Tee Threaded Outlet



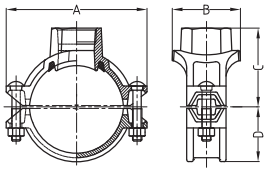


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
150×50 159.0×2	159.0×60.3 6.250×2.375	300 2.07	64 2.50	244 9.60	112.5 4.43	125 4.92	94 3.70	5/8×105 M16X108	UL FM
150×65 159.0×76.1	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 VdS LPCB
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
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
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
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
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
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	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	400 2.76	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 6.625×2.375	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	400 2.76	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 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	400 2.76	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	400 2.76	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

3JS

Light-duty Mechanical Tee Threaded Outlet



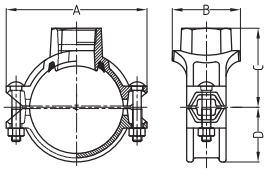


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
80×15 3×½	88.9×21.3 3.500×0.825	300 2.07	38 1.50	150 5.91	71.0 2.80	68 2.68	55.5 2.19	1/2×75 M12X76	UL FM
80×20 3×¾	88.9×26.9 3.500×1.050	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	400 2.76	51 2.00	210 8.27	91 3.58	105 4.13	82 3.23	5/8×85 M16X85	UL
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	UL

3JS

Light-duty Mechanical Tee Threaded Outlet



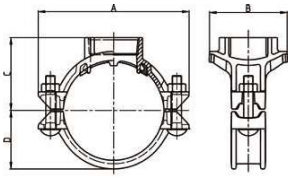


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
150×25 159.0×1	159.0×33.7 6.250×1.315	300 2.07	38 1.50	227 8.94	77 3.03	110 4.33	91 3.58	5/8×85 M16X85	UL FM
150×32 159.0×1¼	159.0×42.4 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	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	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

3JX

Slim Type
Mechanicai Tee
Threaded Outet



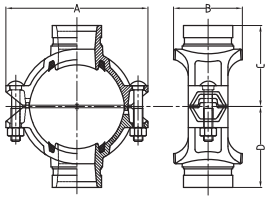


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
65×25 2½×1	73.0×33.7 2.875×1.315	300 2.07	38 1.50	130 5.12	68.5 2.70	60 2.36	44 1.73	3/8X60	UL
65×40 2½×1½	73.0×48.3 2.875×1.900	300 2.07	51 2.00	130 5.12	81 3.19	63 2.48	44 1.73	3/8X60	UL
65×25 76.1×1	76.1×33.7 3.000×1.315	300 2.07	38 1.50	132.5 5.22	68.5 2.70	60 2.36	46 1.81	3/8X60	UL
65×32 76.1×1¼	76.1×42.4 3.000×1.660	300 2.07	51 2.00	132.5 5.22	81 3.19	63 2.48	46 1.81	3/8X60	UL
80×25 3×1	88.9×33.7 3.500×1.315	300 2.07	38 1.50	144 5.67	69.5 2.74	66.5 2.62	52.5 2.07	3/8X60	UL
80×32 3×1¼	88.9×42.4 3.500×1.660	300 2.07	51 2.00	144 5.67	82 3.23	66.5 2.62	52.5 2.07	3/8X60	UL
80×40 3×1½	88.9×48.3 3.500×1.900	300 2.07	51 2.00	144 5.67	82 3.23	70 2.76	52.5 2.07	3/8X60	UL
80×50 3×2	88.9×60.3 3.500×2.375	300 2.07	64 2.50	144 5.67	96 3.78	72 2.83	52.5 2.07	3/8X60	UL
100×25 4×1	114.3×33.7 4.500×1.315	300 2.07	38 1.50	175 6.89	72 2.83	82.5 3.25	67 2.64	1/2×75	UL
100×32 4×1¼	114.3×42.4 4.500×1.660	300 2.07	51 2.00	175 6.89	84 3.31	82.5 3.25	67 2.64	1/2×75	UL
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	51 2.00	175 6.89	84 3.31	84.5 3.33	67 2.64	1/2×75	UL
100×50 4×2	114.3×60.3 4.500×2.375	300 2.07	64 2.50	175 6.89	97.5 3.84	84.5 3.33	67 2.64	1/2×75	UL
100×65 4×76.1	114.3×76.1 4.500×3.000	300 2.07	70 2.75	175 6.89	104.5 4.11	98 3.86	67 2.64	1/2×75	UL

4G

Mechanical Cross Grooved Outlet



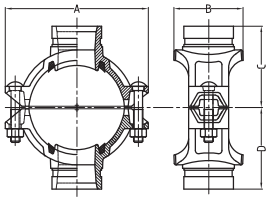


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
50X32 2X11/4	60.3X42.4 2.375X1.660	300 2.07	45 1.75	116 4.57	76 2.99	69.5 2.74	69.5 2.74	3/8×55 M10X57	UL FM
50X40 2X11/2	60.3X48.3 2.375X1.900	300 2.07	45 1.75	116 4.57	76 2.99	69.5 2.74	69.5 2.74	3/8×55 M10X57	UL FM
65X32 2½X1¼	73.0X42.4 2.875X1.669	300 2.07	51 2	144 5.67	84.5 3.33	75 2.95	75 2.95	1/2×70 M12X70	UL FM
65X25 2½X1	76.1X33.7 3.000X1.327	300 2.07	38 1.5	137 5.39	71 2.8	78 3.07	78 3.07	1/2×70 M12X70	UL FM
65X32 2½X1¼	76.1X42.4 3.000X1.669	300 2.07	51 2	137 5.39	84.5 3.33	78 3.07	78 3.07	1/2×70 M12X70	UL FM
80X25 3X1	88.9X33.7 3.500X1.327	300 2.07	38 1.5	152 5.98	72.5 2.85	84.5 3.33	84.5 3.33	1/2X75 M12X76	——
80X32 3X1¼	88.9X42.4 3.500X1.669	300 2.07	51 2	152 5.98	85.5 3.37	84.5 3.33	84.5 3.33	1/2×75 M12X76	UL FM
80X40 3X1½	88.9X48.3 3.500X1.900	300 2.07	51 2	152 5.98	85.5 3.37	84.5 3.33	84.5 3.33	1/2×75 M12X76	UL FM
80X50 3X2	88.9X60.3 3.500X2.375	300 2.07	64 2.50	152 5.98	98 3.86	84.5 3.33	84.5 3.33	1/2×75 M12X76	UL FM
100X25 4X1	114.3X33.7 4.500X1.327	300 2.07	38 1.5	188 7.4	78.4 3.09	102 4.02	102 4.02	1/2×75 M12X76	——
100X32 4X11/4	114.3X42.4 4.500X1.669	300 2.07	51 2.00	188 7.40	89 3.50	102 4.02	102 4.02	1/2×75 M12X76	UL FM
100X40 4X1½	114.3X48.3 4.500X1.900	300 2.07	51 2	188 7.4	89 3.5	102 4.02	102 4.02	1/2×75 M12X76	UL FM
100X50 4X2	114.3X60.3 4.500X2.375	300 2.07	64 2.5	188 7.4	104.5 4.11	102 4.02	102 4.02	1/2×75 M12X76	UL FM
100X65 4X76.1	114.3X76.1 4.500X3.000	300 2.07	70 2.75	188 7.40	104.5 4.11	102 4.02	102 4.02	1/2×75 M12X76	UL FM
100X80 4X3	114.3X88.9 4.500X3.500	300 2.07	89 3.50	188 7.40	128 5.03	102 4.02	102 4.02	1/2X75 M12X76	UL FM
125X50 5X2	139.7X60.3 5.500X2.375	300 2.07	64 2.5	221.5 8.72	112.5 4.43	118 4.65	118 4.65	5/8×85 M16X85	UL FM
125X65 5X2½	139.7X76.1 5.500X3.000	300 2.07	70 2.75	221.5 8.72	112.5 4.43	118 4.65	118 4.65	5/8×85 M16X85	——
125X80 139.7X3	139.7X88.9 5.500X3.500	300 2.07	89 3.50	221.5 8.720	132 5.20	118 4.65	118 4.65	5/8×85 M16X85	UL FM
125X100 139.7X4	139.7X114.3 5.500X4.500	300 2.07	114 4.50	221.5 8.720	160 6.30	125 4.92	125 4.92	5/8×85 M16X85	——
150X50 6X2	165.1X60.3 6.500X2.375	300 2.07	64 2.5	244 9.6	112.5 4.43	127 5	127 5	5/8X105	UL FM
150X65 6X2½	165.1X76.1 6.500X3.000	300 2.07	70 2.75	244 9.6	112.5 4.43	127 5	127 5	5/8×105 M16X108	UL FM
150X80 6X3	165.1X88.9 6.500X3.500	300 2.07	89 3.5	244 9.6	132 5.2	141 5.55	141 5.55	5/8×105 M16X108	UL FM
150X40 6X1½	168.3X48.3 6.625X1.900	300 2.07	51 2	247 9.72	95 3.74	128 5.04	128 5.04	5/8×105 M16X108	UL FM
150X50 6X2	168.3X60.3 6.625X2.375	300 2.07	64 2.5	247 9.72	114 4.49	134 5.28	134 5.28	5/8×105 M16X108	UL FM
150X65 6X2½	168.3X73.0 6.625X2.875	300 2.07	70 2.75	247 9.72	115 4.53	134 5.28	134 5.28	5/8×105 M16X108	UL FM
150X80 6X3	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	5/8×105 M16X108	UL FM
150X100 159.0X108.0	159.1X108.0 6.250X4.250	300 2.07	114 4.50	244 9.60	154 6.06	133 5.24	133 5.24	5/8×105 M16X108	——
150X100 159.0X4	159.1X114.3 6.250X4.500	300 2.07	114 4.50	244 9.60	159 6.26	125 4.92	125 4.92	5/8×105 M16X108	——
150X40 61/2ODX11/2	165.1X48.3 6.500X1.900	300 2.07	51 2.00	244 9.60	93 3.66	128.5 5.06	128.5 5.06	5/8×105 M16X108	——
150X100 61/2OD X4	165.1X114.3 6.500X4.500	300 2.07	114 4.50	244 9.60	154 6.06	135 5.32	135 5.32	5/8×105 M16X108	——
150X65 6X76.1	168.3X76.1 6.625X3.000	300 2.07	70 2.75	247 9.72	112.5 4.43	135 5.32	135 5.32	5/8×105 M16X108	——
150X100 6X4	168.3X114.3 6.625X4.500	300 2.07	114 4.50	247 9.72	160 6.30	138 5.43	138 5.43	5/8×105 M16X108	UL FM
200X50 8X2	219.1X60.3 8.625X2.375	300 2.07	64 2.5	320 12.6	118 4.65	158 6.22	158 6.22	3/4×115 M20X115	——
200X65 8X2½	219.1X76.1 8.625X3.000	300 2.07	70 2.75	320 12.6	118 4.65	158 6.22	158 6.22	3/4×115 M20X115	——
200X80 8X3	219.1X88.9 8.625X3.500	300 2.07	89 3.5	320 12.6	136.5 5.37	161 6.34	161 6.34	3/4×115 M20X115	——
200X100 8X4	219.1X108.0 8.625X4.250	300 2.07	114 4.50	320 12.60	162 6.38	161 6.34	161 6.34	3/4×115 M20X115	——
200X100 8X4	219.1X114.3 8.625X4.500	300 2.07	114 4.5	320 12.6	162 6.38	161 6.34	161 6.34	3/4×115 M20X115	——
250X65 10X2½	273.0X76.1 10.750X3.000	300 2.07	70 2.75	376 14.8	118 4.65	189 7.44	189 7.44	3/4×120 M20X115	——
250X80 10X3	273.0X88.9 10.750X3.500	300 2.07	89 3.5	376 14.8	136.5 5.37	189 7.44	189 7.44	3/4×120 M20X115	——
250X100 10X4	273.0X108.0 10.75X4.250	300 2.07	114 4.50	376 14.80	164 6.46	189 7.44	189 7.44	3/4×115 M20X115	——
250X100 10X4	273.0X114.3 10.750X4.500	300 2.07	114 4.5	376 14.8	164 6.46	189 7.44	189 7.44	3/4×120 M20X115	UL FM

4GS

Light-duty Mechanical Cross Grooved Outlet





Nominal Size mm/in	Pipe O.D mm/in	Max 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
80×50 3×2	88.9×60.3 3.500×2.375	300 2.07	64 2.50	150 5.91	98 3.86	84 2.19	84 2.19	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	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
100×65 4×21/2	114.3×73.0 4.500×2.875	300 2.07	70 2.75	178 7.01	103.5 4.07	98 3.86	98 3.86	1/2×75 M12X76
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	98 3.86	1/2×75 M12X76
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	98 3.86	1/2×75 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
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	113 4.45	5/8×85 M16X85
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	115 4.52	115 4.52	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
150×65 159.0×76.1	159.1X76.1 6.250X3.000	300 2.07	70 2.75	227 8.94	110 4.33	122.5 4.83	122.5 4.83	5/8×85 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
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	122.5 4.83	5/8×85 M16X108
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	122.5 4.83	5/8×85 M16X108
150×100 159.0×4	159.1×114.3 6.250×4.500	300 2.07	114 4.50	227 8.94	155 4.83	122.5 4.83	122.5 4.83	5/8×85 M16X108
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	124.5 4.90	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	126 4.96	5/8×105 M16X108
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	128 5.04	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
200×65 8×21/2	219.1×73.0 8.625×2.875	300 2.07	70 2.75	300 11.81	117 4.60	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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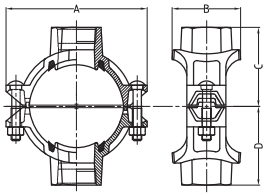
Mechanical Cross Threaded Outlet





Nominal Size mm/in	Pipe O.D mm/in	Max 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		
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	60 2.36	3/8×55 M10X57	UL FM
50×32 2×11/4	60.3×42.4 2.375×1.660	300 2.07	45 1.75	116 4.57	76 2.99	65 2.56	65 2.56	3/8×55 M10X57	UL FM
50×40 2×11/2	60.3×48.3 2.375×1.900	300 2.07	45 1.75	116 4.57	76 2.99	65 2.56	65 2.56	3/8×55 M10X57	UL FM
65×20 2½×¾	73.0×26.9 2.875×1.050	300 2.07	38 1.50	137 5.39	71 2.80	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	UL FM
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	UL FM
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	1/2×70 M12X70	UL FM
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	1/2×70 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	75 3.05	75 3.05	1/2×70 M12X70	UL FM
65×32 2½×1¼	76.1×42.4 3.000×1.669	300 2.07	51 2.00	137 5.39	84.5 3.33	75 3.05	75 3.05	1/2×70 M12X70	UL FM
65×40 21/2×11/2	73.0×48.3 2.875×1.900	300 2.07	51 2.00	137 5.39	84.5 3.33	73 2.87	73 2.87	1/2×70 M12X70	UL FM
65×40 21/2×11/2	76.1×48.3 3.000×1.900	300 2.07	51 2.00	137 5.39	84.5 3.33	75 2.95	75 2.95	1/2×70 M12X70	UL FM
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	1/2×75 M12X76	UL FM
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	1/2×75 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	1/2×75 M12X76	UL FM
80×32 3×1¼	88.9×42.4 3.500×1.669	300 2.07	51 2.00	152 5.98	85.5 3.37	80 3.15	80 3.15	1/2×75 M12X76	UL FM
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	80 3.15	1/2×75 M12X76	UL FM
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	80 3.15	1/2×75 M12X76	UL FM
100×25 108.0×1	108.0×33.7 4.250×1.315	300 2.07	38 1.50	172 6.77	78.5 3.09	87 3.43	87 3.43	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	89 3.50	87 3.43	87 3.43	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	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	1/2×75 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	1/2×75 M12X76	——
100×25 4×1	114.3×33.7 4.500×1.327	300 2.07	38 1.5	188 7.4	78.5 3.09	93 3.66	93 3.66	1/2×75 M12X76	UL FM
100×32 4×1¼	114.3×42.4 4.500×1.669	300 2.07	51 2.00	188 7.4	89 3.5	95 3.74	95 3.74	1/2×75 M12X76	UL FM
100×40 4×1½	114.3×48.3 4.500×1.900	300 2.07	51 2.00	188 7.4	89 3.5	97 3.82	97 3.82	1/2×75 M12X76	UL FM
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	1/2×75 M12X76	UL FM
100×65 108.0×21/2	108.0×76.1 4.250×3.000	300 2.07	70 2.75	172 6.77	106.5 4.19	100 3.94	100 3.94	1/2×75 M12X76	——
100×65 4×21/2	114.3×76.1 4.500×3.000	300 2.07	70 2.75	188 7.40	104.5 4.11	102 4.02	102 4.02	1/2×75 M12X76	——
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	102 4.02	1/2×75 M12X76	UL FM
125×32 133.0×11/4	133.0×42.4 5.250×1.660	300 2.07	51 2.00	209 8.23	93 3.66	105 4.13	105 4.13	5/8×85 M16X85	——
125×40 133.0×11/2	133.0×48.3 5.250×1.900	300 2.07	51 2.00	209 8.23	93 3.66	105 4.13	105 4.13	5/8×85 M16X85	——
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	5/8×85 M16X85	UL FM

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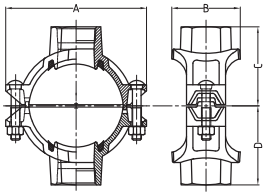
Mechanical Cross Threaded Outlet



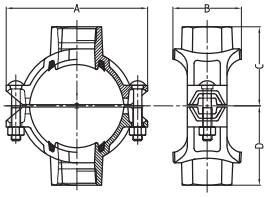


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in	Certificate
				A mm/in	B mm/in	C mm/in	D mm/in		
125×32 5×1¼	139.7×42.4 5.500×1.669	300 2.07	51 2.00	221.5 8.72	95 3.74	112 4.41	112 4.41	5/8×85 M16X85	UL FM
125×40 5×1½	139.7×48.3 5.500×1.900	300 2.07	51 2.00	221.5 8.72	95 3.74	112 4.41	112 4.41	5/8×85 M16X85	UL FM
125×50 5×2	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	115 4.53	5/8×85 M16X85	UL FM
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	5/8×85 M16X85	——
125×80 5×3	139.7×88.9 5.500×3.500	300 2.07	89 3.50	221.5 8.72	132 5.20	120 4.72	120 4.72	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	244 9.60	93 3.66	118 4.65	118 4.65	5/8×105 M16X108	——
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 1.50	244 9.6	78 3.07	110 4.33	110 4.33	5/8×105 M16X108	UL FM
150×20 6×¾	165.1×26.9 6.500×1.059	300 2.07	38 1.50	244 9.6	78 3.07	110 4.33	110 4.33	5/8×105 M16X108	——
150×25 6×1	165.1×33.7 6.500×1.327	300 2.07	38 1.50	244 9.6	78 3.07	118 4.65	118 4.65	5/8×105 M16X108	UL FM
150×32 6×1¼	165.1×42.4 6.500×1.669	300 2.07	51 2.00	244 9.6	93 3.66	118 4.65	118 4.65	5/8×105 M16X108	UL FM
150×40 6×1½	165.1×48.3 6.500×1.900	300 2.07	51 2.00	244 9.6	93 3.66	118 4.65	118 4.65	5/8×105 M16X108	UL FM
150×50 6×2	165.1×60.3 6.500×2.375	300 2.07	64 2.50	244 9.6	112.5 4.43	128.5 5.43	128.5 5.43	5/8×105 M16X108	UL FM
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	5/8×105 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	5/8×105 M16X108	UL FM
150×32 6×1¼	168.3×42.4 6.500×1.669	300 2.07	51 2.00	247 9.72	95 3.74	130 5.12	130 5.12	5/8×105 M16X108	UL FM
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 4.8	122 4.8	5/8×105 M16X108	UL FM
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	5/8×105 M16X108	UL FM
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	5/8×105 M16X108	UL FM
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	5/8×105 M16X108	UL FM
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	3/4×115 M20X115	UL FM
200×32 8×1¼	219.1×42.4 8.625×1.669	300 2.07	51 2.00	320 12.60	96.5 3.8	150 5.91	150 5.91	3/4×115 M20X115	——
200×40 8×1½	219.1×48.3 8.625×1.900	300 2.07	51 2.00	320 12.60	96.5 3.8	150 5.91	150 5.91	3/4×115 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	3/4×115 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	3/4×115 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	3/4×115 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	3/4×115 M20X115	——
250×40 10×1½	273.0×48.3 10.750×1.900	300 2.07	51 2.00	376 14.8	95.5 3.76	180 7.09	180 7.09	3/4×120 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	3/4×120 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	3/4×120 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	3/4×120 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	3/4×120 M20X115	——

4JS

Light-duty Mechanical Cross Threaded Outlet



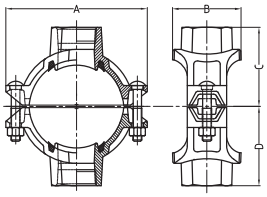


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in
				A mm/in	B mm/in	C mm/in	D mm/in	
80×15 3×½	88.9×21.3 3.500×0.825	300 2.07	38 1.50	150 5.91	71.0 2.80	68 2.68	68 2.68	1/2×75 M12X76
80×20 3×¾	88.9×26.9 3.500×1.050	300 2.07	38 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
100×65 4×21/2	108.0×76.1 4.500×3.000	300 2.07	70 2.75	172 6.77	103.5 4.07	97.5 3.84	97.5 3.84	1/2×75 M12X76
100×32 4×11/4	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
100×65 4X21/2	114.3×76.1 4.500×3.000	300 2.07	70 2.75	178 7.01	103.5 4.07	98 3.86	98 3.86	1/2×75 M12X76
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	98 3.86	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
125×80 133.0×3	133.0×88.9 5.250×3.500	300 2.07	89 3.50	203 7.99	132 5.20	110 4.33	110 4.33	5/8X85 M16X85
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	115 4.53	5/8X85 M16X85
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	118 4.65	5/8X85 M16X85

4JS

Light-duty Mechanical Cross Threaded Outlet



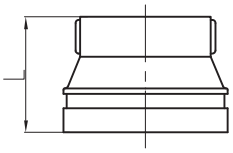


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Hole Dia mm/in +1.6,0/+0.063,0	Dimensions				Bolt Size mm/in
				A mm/in	B mm/in	C mm/in	D mm/in	
150×25 159.0×1	159.0×33.7 6.250×1.315	300 2.07	38 1.50	227 8.94	77 3.03	110 4.33	110 4.33	5/8×85 M16X85
150×32 159.0×1¼	159.0×42.4 6.250×1.660	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
150×100 159.0×4	159.0×114.3 6.250×4.500	300 2.07	114 4.50	227 8.94	155 6.10	127 5.00	127 5.00	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	130 5.12	130 5.12	5/8×105 M16X108
150×65 6×76.1	168.3×76.1 6.625×3.000	300 2.07	70 2.75	240 9.45	110.5 4.35	127 5.00	127 5.00	5/8×105 M16X108
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	130 5.12	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

220N

Grooved Concentric Reducer with Female Thread





Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
50 2	60.3 2.375	500 3.45	64 2.50	UL FM
65 2½	73.0 2.875	500 3.45	70 2.75	UL FM
80 3	88.9 3.500	500 3.45	70 2.75	UL FM
100 4	114.3 4.500	500 3.45	83 3.27	UL FM

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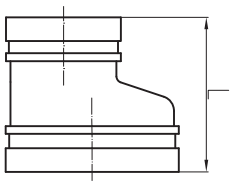
Grooved Eccentric Reducer





Nominal Size mm/in	Pipe O.D mm/in	Max 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 4X2$^{1}/_{2}$	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	219.1X159.0 8.625X6.250	300 2.07	215 8.50	UL FM
200X150 8X6	219.1X165.1 8.625X6.50	300 2.07	215 8.50	UL FM
200X150 8X6	219.1X168.3 8.625X6.625	300 2.07	215 8.50	UL FM
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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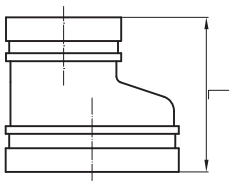
Grooved Eccentric Reducer



Nominal Size mm/in	Pipe O.D mm/in	Max 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.

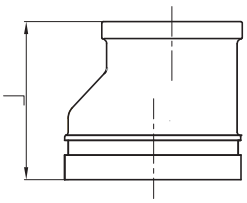


230N

Grooved Eccentric Reducer with Female Thread



Nominal Size mm/in	Pipe O.D mm/in	Max 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

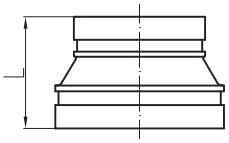


240

Grooved Concentric Reducer







Nominal Size mm/in	Pipe O.D mm/in	Max 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	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	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 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
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 VdS
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
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
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 LPCB
125X80 5X3	139.7X88.9 5.500X3.500	500 3.45	89 3.50	UL FM VdS

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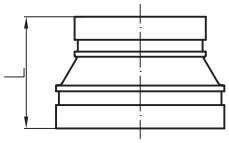
Grooved Concentric Reducer







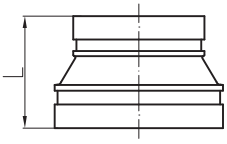
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
125X100 5X4	139.7X114.3 5.500X4.500	500 3.45	89 3.50	UL FM VdS
125X65 5X2½	141.3X73.0 5.563X2.875	500 3.45	89 3.50	UL FM VdS LPCB
125X80 5X3	141.3X88.9 5.563X3.500	500 3.45	89 3.50	UL FM
125X100 5X4	141.3X114.3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

240

Grooved Concentric Reducer







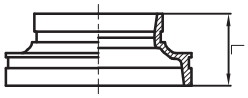
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
250X150 10X6	273.0X159.0 10.750X6.250	500 3.45	152 6.00	FM
250X150 10X6	273.0X165.1 10.750X6.500	500 3.45	152 6.00	FM
250X150 10X6	273.0X168.3 10.750X6.625	500 3.45	152 6.00	FM VdS
250X200 10X8	273.0X219.1 10.750X8.625	500 3.45	152 6.00	FM VdS
300X150 12X6	323.9X168.3 12.750X6.625	500 3.45	178 7.01	UL FM
300X200 12X8	323.9X219.1 12.750X8.625	500 3.45	178 7.00	FM VdS
300X250 12X10	323.9X273.0 12.750X10.750	500 3.45	178 7.00	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.

240X

Slim Type Grooved Concentric Reducer



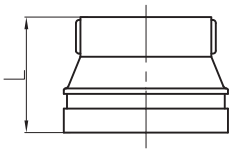


Nominal Size mm/in	Pipe O.D. mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
100X65 4X2½	114.3X76.1 4.500X3.000	300 2.07	57 2.25	UL FM
100X80 4X3	114.3X88.9 4.500X3.500	300 2.07	57 2.25	UL FM
125X100 5X4	139.7X114.3 5.500X4.500	300 2.07	60 2.36	UL FM
125X100 5X4	141.3X114.3 5.563X4.500	300 2.07	60 2.36	——
150X100 6X4	159.0X108 6.250X4.250	300 2.07	61 2.40	UL FM
150X100 6X4	159.0X114.3 6.250X4.500	300 2.07	61 2.40	UL FM
150X80 6X3	165.1X88.9 6.500X3.500	300 2.07	61 2.40	UL FM
150X100 6X4	165.1X114.3 6.500X4.500	300 2.07	64 2.50	UL FM
150X125 6X5	165.1X139.7 6.500X5.500	300 2.07	58 2.25	UL FM
150X80 6X3	168.3X88.9 6.625X3.500	300 2.07	61 2.40	——
150X100 6X4	168.3X114.3 6.625X4.500	300 2.07	61 2.40	UL FM
150X125 6X5	168.3X139.7 6.625X5.500	300 2.07	58 2.25	UL FM
150X125 6X5	168.3X141.3 6.625X5.563	300 2.07	58 2.25	——
200X100 8X4	219.1X114.3 8.625X4.500	300 2.07	66 2.60	UL FM
200X125 8X5	219.1X133.0 8.625X5.250	300 2.07	80 3.15	UL FM
200X150 8X6	219.1X165.1 8.625X6.500	300 2.07	66 2.60	UL FM
250X100 10X4	273.0X114.3 10.750X4.500	300 2.07	93 3.66	UL FM
250X200 10X8	273.0X219.1 10.750X8.625	300 2.07	77 3.03	UL FM
300X100 12X4	323.9X114.3 12.750X4.500	300 2.07	98 3.86	UL FM
300X150 12X6	323.9X159.0 12.750X6.250	300 2.07	98 3.86	UL FM
300X150 12X6	323.9X165.1 12.750X6.500	300 2.07	98 3.86	UL FM

240N

Grooved Concentric Reducer with Female Thread



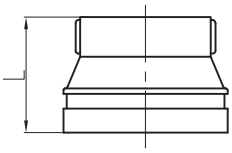


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
42X25 11/4X1	42.4X33.7 1.660X1.315	500 3.45	64 2.50	——
48X25 11/2X1	48.3X33.7 1.900X1.315	500 3.45	64 2.50	——
50X15 2X1/2	60.3X21.3 2.375X0.825	500 3.45	64 2.50	UL FM VdS
50X20 2X3/4	60.3X26.9 2.375X1.05	500 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	UL 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	UL FM 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	UL FM 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

240N

Grooved Concentric Reducer with Female Thread



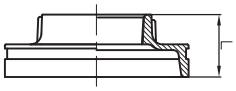


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
100X80 4X3	114.3X88.9 4.500X3.500	500 3.45	76 3.00	UL FM VdS LPCB
125X20 5X3/4	139.7X26.9 5.500X1.05	500 3.45	89	UL FM
125X40 5X1½	133.0X48.3 5.250X1.900	500 3.45	89 3.50	UL FM
125X40 5X2	133.0X60.3 5.250X2.375	500 3.45	89 3.50	FM
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	FM
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
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

240NX

Slim Type Grooved Concentric Reducer with Female Thread



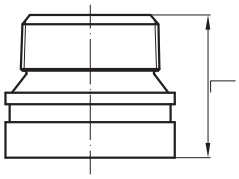


Nominal Size mm/in	Pipe O.D. mm/in	Max Working Pressure PSI/MPa	Dimenension L mm/in	Certificate
65X50 2½X2	76.1X60.3 3.000X2.375	300 2.07	47.5 1.87	UL FM
80X50 3X2	88.9X60.3 3.500X2.375	300 2.07	47.5 1.87	UL FM
80X65 3X2½	88.9X76.1 3.500X3.000	300 2.07	53 2.09	UL FM
100X65 4X2½	108.0X76.1 4.250X3.000	300 2.07	54 2.13	UL FM
100X80 4X3	108.0X88.9 4.250X3.500	300 2.07	56 2.20	UL FM
100X40 4X1½	114.3X48.3 4.500X1.900	300 2.07	48 1.89	UL FM
100X50 4X2	114.3X60.3 4.500X2.375	300 2.07	49 1.93	UL FM
100X65 4X2½	114.3X76.1 4.500X3.000	300 2.07	54 2.13	UL FM
100X80 4X3	114.3X88.9 4.500X3.500	300 2.07	56 2.20	UL FM
150X80 6X3	159.0X88.9 6.250X3.500	300 2.07	56 2.20	FM
150X100 6X4	159.0X114.3 6.250X4.500	300 2.07	57 2.24	FM
150X50 6X2	165.1X60.3 6.500X2.375	300 2.07	51 2.01	UL FM
150X65 6X2½	165.1X76.1 6.500X3.000	300 2.07	54 2.13	UL FM
150X80 6X3	165.1X88.9 6.500X3.500	300 2.07	56 2.20	UL FM
150X100 6X4	165.1X114.3 6.500X4.500	300 2.07	57 2.24	UL FM
200X25 8X1	219.1X33.7 8.625X1.315	300 2.07	80 3.15	UL FM

240W

Grooved Concentric Reducer with Male Thread



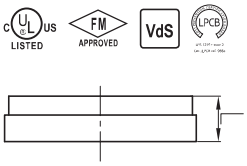


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
50X25 2X1	60.3X33.7 2.375X1.315	500 3.45	64 2.50	UL
50X32 2X1¼	60.3X42.4 2.375X1.660	500 3.45	64 2.50	UL
50X40 2X1½	60.3X48.3 2.375X1.900	500 3.45	64 2.50	UL
65X25 2½X1	73.0X33.7 2.875X1.315	500 3.45	64 2.50	UL
65X32 2½X1¼	73.0X42.4 2.875X1.660	500 3.45	64 2.50	UL
65X40 2½X1½	73.0X48.3 2.875X1.900	500 3.45	64 2.50	UL
65X50 2 1/2X2	73.0X60.3 2.875X2.375	500 3.45	64 2.50	UL FM
65X50 2 1/2X2	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
80X40 3X1½	88.9X48.3 3.500X1.900	500 3.45	64 2.50	UL
80X50 3X2	88.9X60.3 3.500X2.375	500 3.45	64 2.50	UL
80X65 3X2½	88.9X73.0 3.500X2.875	500 3.45	64 2.50	UL
100X25 4X1	114.3×33.7 4.500×1.315	500 3.45	76.1 3.000	UL
100X40 4X1½	114.3X48.3 4.500X1.900	500 3.45	76.1 3.000	UL
100X50 4X2	114.3X60.3 4.500X2.375	500 3.45	76 3.00	UL FM
100X65 4X2½	114.3X73.0 4.500X2.875	500 3.45	76.1 3.000	UL
100X80 4X3	114.3X88.9 4.500X3.500	500 3.45	76.1 3.000	UL

300

Cap





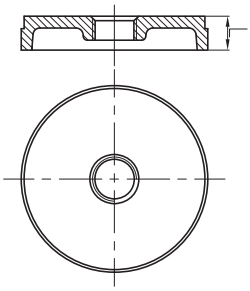
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
25 1	33.7 1.315	500 3.45	22.1 0.87	UL VdS LPCB
32 1¼	42.4 1.660	500 3.45	23.5 0.93	UL FM VdS LPCB
40 1½	48.3 1.900	500 3.45	23.5 0.93	UL FM VdS LPCB
50 2	60.3 2.375	500 3.45	23.5 0.93	UL FM VdS LPCB
65 2½	73.0 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
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
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
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
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	318.5 12.539	500 3.45	32 1.26	——
300 12	323.9 12.750	500 3.45	32 1.26	UL FM VdS LPCB
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.

300

Cap with Concentric Hole



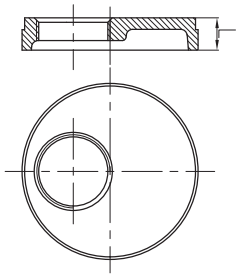


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
50X25 2X1	60.3X33.7 2.375X1.315	500 3.45	23.5 0.93	VdS
65X25 2½X1	76.1X33.7 3.000X1.315	500 3.45	24.5 0.96	——
65X40 2½X1½	76.1X48.3 3.000X1.900	500 3.45	23.5 0.925	UL
65X50 2½X2	76.1X60.3 3.000X2.375	500 3.45	24 0.94	VdS
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
80X50 3X2	88.9X60.3 3.500X2.375	500 3.45	23.5 0.925	UL VdS
100X15 4X1/2	114.3X21.3 4.500X0.825	500 3.45	27.0 1.06	UL
100X25 4X1	114.3X33.7 4.500X1.315	500 3.45	27.0 1.06	UL
100X40 4X1½	114.3X48.3 4.500X1.900	500 3.45	25.4 1.00	UL
100X50 4X2	114.3X60.3 4.500X2.375	500 3.45	25.4 1.00	UL
125X50 5X2	139.7X60.3 5.500X2.375	500 3.45	27 1.06	UL
150X15 6X1/2	165.1X21.3 6.500X0.825	500 3.45	27 1.06	UL
150X15 6X1/2	168.3X21.3 6.625X0.825	500 3.45	25.4 1.00	UL FM
150X25 6X1	159.0X33.7 6.250X1.315	500 3.45	27 1.06	——
150X25 6X1	165.1X33.7 6.500X1.315	500 3.45	27 1.06	UL
150X25 6X1	168.3X33.7 6.625X1.315	500 3.45	25.4 1.00	——
150X50 6X2	165.1X60.3 6.500X2.375	500 3.45	27 1.06	UL
150X40 6X11/2	168.3X48.3 6.625X1.900	500 3.45	27 1.06	UL
150X50 6X2	168.3X60.3 6.625X2.375	500 3.45	27 1.06	UL FM
200X25 8X1	219.1X33.7 8.625X1.315	500 3.45	30 1.18	UL FM

300PX

Cap with Eccentric Hole





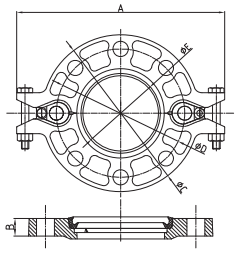
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions L mm/in	Certificate
65X25 21/2X1	76.1X33.7 3000X1.315	500 3.45	23.5 0.925	UL FM VdS
65X40 21/2X11/2	76.1X48.3 3.000X1.900	500 3.45	23.5 0.925	VdS
80X25 3X1	88.9X33.7 3.500X1.315	500 3.45	23.5 0.925	VdS
80X40 3X1½	88.9X48.3 3.500X1.900	500 3.45	23.5 0.925	UL FM VdS
80X50 3X2	88.9X60.3 3.500X2.375	500 3.45	23.5 0.925	UL FM VdS
100X25 4X1	114.3X33.7 4.500X1.315	500 3.45	27 1.06	UL FM
100X40 4X1½	114.3X48.3 4.500X1.900	500 3.45	25.4 1.00	UL FM VdS
100X50 4X2	114.3X60.3 4.500X2.375	500 3.45	25.4 1.00	UL FM VdS
125X25 5X1	139.7X33.7 5.500X1.315	500 3.45	27.3	——
125X40 5X1½	139.7X48.3 5.500X1.900	500 3.45	25.4 1.00	UL FM VdS
125X50 5X2	139.7X60.3 5.500X2.375	500 3.45	25.4 1.00	UL FM VdS
150X40 6X1½	165.1X48.3 6.500X1.900	500 3.45	25.4 1.00	UL FM
150X40 6X1½	168.3X48.3 6.625X1.900	500 3.45	25.4 1.00	UL FM VdS
150X50 6X2	168.3X60.3 6.625X2.375	500 3.45	25.4 1.00	UL FM VdS
200X40 8X1½	219.1X48.3 8.625X1.900	500 3.45	30.2 1.19	UL FM VdS
200X50 8X2	219.1X60.3 8.625X2.375	500 3.45	30.2 1.19	UL FM VdS
250X40 10X11/2	273.0X48.3 10.750X1.900	500 3.45	33.1	——
300X40 12X11/2	323.9X48.3 12.750X1.900	500 3.45	31.2	——

321E

BS.TABLE'E'

Grooved Flange

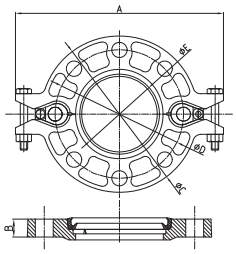




Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions					Bolt/Nut		Certificate
			A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	No.-SIZE mm/in		
50 2	60.3 2.375	300 2.07	211 8.31	18.5 0.73	150 5.91	114 4.49	57.5 2.26	2-M10X50	4-M16	UL FM
80 3	88.9 3.500	300 2.07	241 9.49	18.5 0.73	185 7.28	146 5.75	85.5 3.37	2-M10X50	4-M16	UL FM
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	UL FM
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	UL FM
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	UL FM
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	——

321
PN16
Grooved Flange

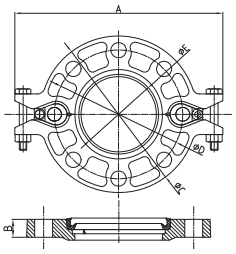




Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions					Bolt/Nut		Certificate
			A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	No.-SIZE mm/in		
40 1½	48.3 1.900	300 2.07	195 7.68	18.5 0.73	150 5.90	110 4.33	45.4 1.78	2-M10X50	4-M16	UL FM VdS LPCB
50 2	60.3 2.375	300 2.07	220 8.66	18.5 0.73	165 6.50	125 4.92	57.5 2.26	2-M10X50	4-M16	UL FM VdS LPCB
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 LPCB
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 LPCB
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 LPCB
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 VdS LPCB
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 LPCB
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 VdS LPCB
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 LPCB
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	UL
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

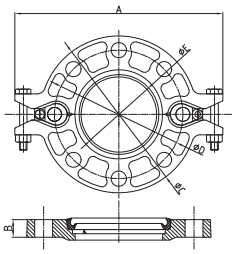




Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions					Bolt/Nut		Certificate
			A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	No.-SIZE mm/in		
100 108.0	108.0 4.250	362 2.5	290 11.41	21.5 0.85	230 9.06	190 7.48	104.5 4.11	2-M10X50	8-M20	——
150 165.1	165.1 6.500	362 2.5	365 14.37	21.5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

321A
ANSI 125/150
Grooved Flange

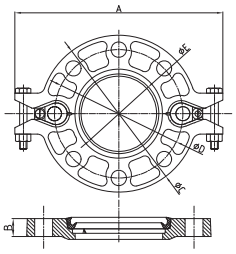




Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions					Bolt/Nut		Certificate
			A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	No.-SIZE mm/in		
50 2	60.3 2.375	300 2.07	206 8.11	19 0.75	152 5.98	121 4.76	57.5 2.26	2-M10X50	4-5/8	UL
65 2½	73.0 2.875	300 2.07	230 9.05	19 0.75	178 7.00	140 5.51	69.8 2.74	2-M10X50	4-5/8	UL
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
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
125 5	141.3 5.563	250 1.71	320 12.60	22 0.87	254 10.00	216 8.50	137.4 5.41	2-M12X65	8-3/4	UL
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	——
200 8	219.1 8,625	250 1.71	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
250 10	273.0 10.750	250 1.71	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
300 12	323.9 12.750	250 1.71	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
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	UL
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	——

321AH
ANSI 300
Grooved Flange

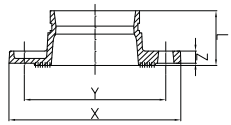


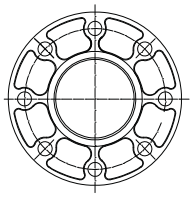


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions					Bolt/Nut		Certificate
			A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	No.-SIZE mm/in		
65 2½	73.0 2.875	500 3.45	244 9.61	24.6 0.97	190 7.48	149.2 5.87	69.1 2.72	2-M12X65	8-3/4	——
80 3	88.9 3.500	500 3.45	274 10.79	28 1.10	210 8.27	168.3 6.625	84.9 3.34	2-M12X65	8-3/4	UL
100 4	114.3 4.500	500 3.45	310 12.2	31.5 1.24	255 10.04	200 7.87	110.1 4.33	2-M12X65	8-3/4	UL
150 6	168.3 6.625	500 3.45	388 15.28	35.5 1.40	320 12.6	269.9 10.626	163.9 6.45	2-M12X65	12-3/4	UL
200 8	219.1 8.625	500 3.45	470.4 18.52	41 1.61	380 14.96	330.2 13	214.9 8.46	2-1/2X75	12-7/8	UL

321G
PN16
Adaptor Flange



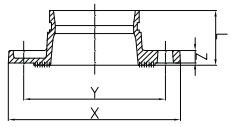


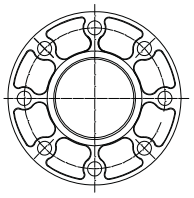


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm/in	
25 1	33.7 1.327	300 2.0	60.5 2.382	115 4.53	85 3.35	16 0.63	4-M12	UL FM VdS LPCB
32 1¼	42.4 1.669	300 2.0	60.5 2.382	140 5.51	100 3.94	16 0.63	4-M16	UL 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	57.0 2.244	300 2.07	65 2.559	165 6.50	125 4.92	16 0.63	4-M16	——
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	——
400 16	426.0 16.772	225 1.6	110 4.331	580 22.83	525 20.67	27 1.06	16-M27	——
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	Max Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm/in	
65 76.1	76.1 3.000	362 2.5	65 2.559	185 7.28	145 5.71	16 0.63	8-M16	——
80 3	88.9 3.500	362 2.5	65 2.559	200 7.87	160 6.30	16 0.63	8-M16	——
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
125 139.7	139.7 5.500	362 2.5	70 2.756	270 10.63	220 8.66	16 0.63	8-M24	——
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	——

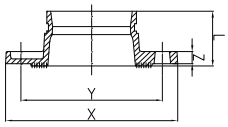
321GA

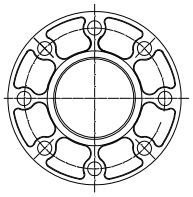
ANSI 125/150

Adaptor Flange

Class 125/150







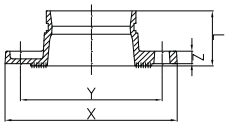
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm/in	
50 2	60.3 2.375	300 2.07	65 2.559	152 6.0	120.5 4.74	16 0.63	4-5/8	UL FM
65 2½	73.0 2.875	300 2.07	65 2.559	185 7.28	139.7 5.50	16 0.63	4-5/8	——
80 3	88.9 3.500	300 2.07	65 2.559	200 7.87	152.4 6.00	16 0.63	8-5/8	——
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	——
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	——

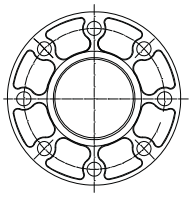
321GL

PN10

Adaptor Flange





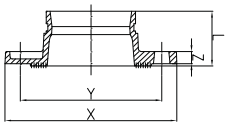


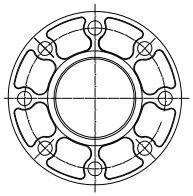
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm/in	
200 8	219.1 8.625	145 1.0	75 2.95	340 13.39	295 11.61	19 0.75	8-M20	FM
250 10	273.0 10.750	145 1.0	85 3.346	405 15.94	350 13.78	21 0.83	12-M20	FM
300 12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

321G
BS.TABLE 'E'
Adaptor Flange



FM APPROVED

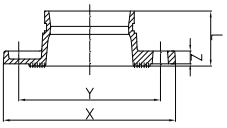


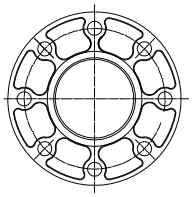


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm/in	
50 2	60.3 2.375	225 1.6	65 2.56	152 5.98	114 4.49	16 0.63	4-M16	——
65 76.1	76.1 3.000	225 1.6	70 2.756	165 6.50	127 5.00	16 0.63	4-M16	——
80 3	88.9 3.500	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	——
150 165.1	165.1 6.500	225 1.6	70 2.756	280 11.02	235 9.25	21 0.71	8-M20	——
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



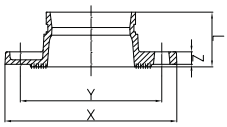


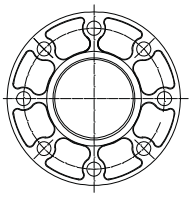


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm/in	
65 2½	76.3 3.00	145 1.0	65 2.559	175 6.89	140 5.51	18 0.71	4-M16	——
80 3	89.1 3.50	145 1.0	65 2.559	185 7.28	150 5.91	18 0.71	8- M16	——
100 4	114.3 4.50	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



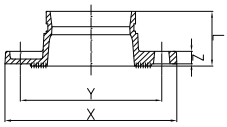


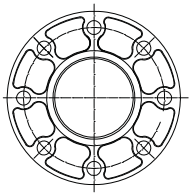


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm/in	
80 3	88.9 3.500	225 1.6	65 2.559	200 7.87	160 6.30	17 0.67	8-M20	——
100 4	114.3 4.500	225 1.6	70 2.756	225 8.86	185 7.28	19 0.75	8-M20	——
150 165.1	165.1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

321GJ
JIS 20K
Adaptor Flange





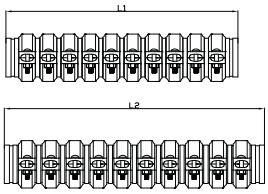


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/MPa	Dimensions				Bolt/Nut	Certificate
			L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm/in	
100 4	114.3 4.500	300 2.0	70 2.756	225 8.86	185 7.28	19 0.75	8-M20	——
150 165.1	165.1 6.500	300 2.0	70 2.756	305 12.00	260 10.236	21 0.827	12-M22	——

EJ-1N

Expansion Joint



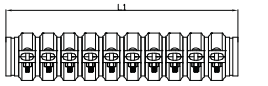


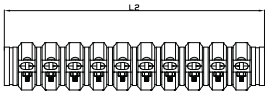
Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/Mpa	Movement mm/in	L 1 mm/in	L 2 mm/in
25 1	33.4 1.315	300 2.07	2.6 0.1	170 6.69	172.6 6.79
25 1	33.4 1.315	300 2.07	5.2 0.2	226.50 8.92	231.7 9.12
25 1	33.4 1.315	300 2.07	7.8 0.31	284 11.18	291.8 11.49
25 1	33.4 1.315	300 2.07	10.4 0.41	340.5 13.41	350.9 13.82
25 1	33.4 1.315	300 2.07	13 0.51	397 15.63	410 16.14
25 1	33.4 1.315	300 2.07	15.6 0.61	453.5 17.85	469.1 18.46
25 1	33.4 1.315	300 2.07	18.2 0.72	510 20.08	528.2 20.8
25 1	33.4 1.315	300 2.07	20.8 0.82	567.5 22.34	588.3 23.16
25 1	33.4 1.315	300 2.07	23.4 0.92	624 24.57	647.4 25.49
25 1	33.4 1.315	300 2.07	26 1.02	680.5 26.79	706.5 27.81
25 1	33.4 1.315	300 2.07	28.6 1.13	737 29.01	765.6 30.14
25 1	33.4 1.315	300 2.07	31.2 1.23	793.5 31.24	824.7 32.47
32 11/4	42.4 1.669	300 2.07	3.5 0.14	170.75 6.72	174.25 6.86
32 11/4	42.4 1.669	300 2.07	7 0.28	227.5 8.96	234.5 9.24
32 11/4	42.4 1.669	300 2.07	10.5 0.41	285.25 11.2	295.75 11.61
32 11/4	42.4 1.669	300 2.07	14 0.55	342 13.47	356 14.02
32 11/4	42.4 1.669	300 2.07	17.5 0.69	398.75 15.7	416.25 16.39
32 11/4	42.4 1.669	300 2.07	21 0.83	455.5 17.93	476.5 18.76
32 11/4	42.4 1.669	300 2.07	24.5 0.96	512.25 20.17	536.75 21.13
32 11/4	42.4 1.669	300 2.07	28 1.1	570 22.44	598 23.54
32 11/4	42.4 1.669	300 2.07	31.5 1.24	625.75 24.64	657.25 25.88
32 11/4	42.4 1.669	300 2.07	35 1.38	683.5 26.91	718.5 28.29
32 11/4	42.4 1.669	300 2.07	38.5 1.52	740.25 29.15	778.75 30.67
32 11/4	42.4 1.669	300 2.07	42 1.65	797 31.38	839 33.03
40 11/2	48.3 1.902	300 2.07	3.8 0.15	170.5 6.71	174.3 6.86
40 11/2	48.3 1.902	300 2.07	7.6 0.3	227.00 8.94	234.6 9.24
40 11/2	48.3 1.902	300 2.07	11.4 0.45	283.5 11.16	294.9 11.61
40 11/2	48.3 1.902	300 2.07	15.2 0.6	340.00 13.39	355.2 13.99
40 11/2	48.3 1.902	300 2.07	19 0.75	396.50 15.61	415.5 16.36
40 11/2	48.3 1.902	300 2.07	22.8 0.9	453.00 17.84	475.8 18.74
40 11/2	48.3 1.902	300 2.07	26.6 1.05	509.50 20.06	536.1 21.11
40 11/2	48.3 1.902	300 2.07	30.4 1.2	566.00 22.28	596.4 23.48
40 11/2	48.3 1.902	300 2.07	34.2 1.35	623.50 24.55	657.7 25.9
40 11/2	48.3 1.902	300 2.07	38 1.5	679.00 26.73	717 28.23
40 11/2	48.3 1.902	300 2.07	41.8 1.65	735.50 28.96	777.3 30.61
40 11/2	48.3 1.902	300 2.07	45.6 1.8	792.00 31.18	837.6 32.98
50 2	60.3 2.374	300 2.07	3.5 0.14	170.5 6.71	174 6.85
50 2	60.3 2.374	300 2.07	7 0.28	227.00 8.94	234 9.22
50 2	60.3 2.374	300 2.07	10.5 0.41	283.5 11.16	294 11.57

EJ-1N

Expansion Joint





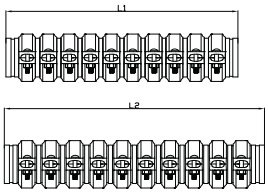


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/Mpa	Movement mm/in	L 1 mm/in	L 2 mm/in
50 2	60.3 2.374	300 2.07	14 0.55	340.00 13.39	354 13.94
50 2	60.3 2.374	300 2.07	17.5 0.69	396.50 15.61	414 16.3
50 2	60.3 2.374	300 2.07	21 0.83	453.00 17.84	474 18.67
50 2	60.3 2.374	300 2.07	24.5 0.96	509.50 20.06	534 21.02
50 2	60.3 2.374	300 2.07	28 1.1	566.00 22.28	594 23.38
50 2	60.3 2.374	300 2.07	31.5 1.24	623.50 24.55	655 25.79
50 2	60.3 2.374	300 2.07	35 1.38	679.00 26.73	714 28.11
50 2	60.3 2.374	300 2.07	38.5 1.52	735.50 28.96	774 30.48
50 2	60.3 2.374	300 2.07	42 1.65	792.00 31.18	834 32.83
65 21/2	76.1 2.996	300 2.07	4 0.16	171 6.73	175 6.89
65 21/2	76.1 2.996	300 2.07	8 0.31	227.5 8.96	235.5 9.27
65 21/2	76.1 2.996	300 2.07	12 0.47	284.5 11.20	296.5 11.67
65 21/2	76.1 2.996	300 2.07	16 0.63	341 13.43	357 14.06
65 21/2	76.1 2.996	300 2.07	20 0.79	398 15.67	418 16.46
65 21/2	76.1 2.996	300 2.07	24 0.94	454.5 17.89	478.5 18.83
65 21/2	76.1 2.996	300 2.07	28 1.1	511.5 20.14	539.5 21.24
65 21/2	76.1 2.996	300 2.07	32 1.26	568 22.36	600 23.62
65 21/2	76.1 2.996	300 2.07	36 1.42	626 24.65	662 26.07
65 21/2	76.1 2.996	300 2.07	40 1.57	681.5 26.83	721.5 28.4
65 21/2	76.1 2.996	300 2.07	44 1.73	738.5 29.08	782.5 30.81
65 21/2	76.1 2.996	300 2.07	48 1.89	795 31.3	843 33.19
80 3	88.9 3.5	300 2.07	3.7 0.15	170.5 6.71	174.2 6.86
80 3	88.9 3.5	300 2.07	7.4 0.29	227.00 8.94	234.4 9.23
80 3	88.9 3.5	300 2.07	11.1 0.44	283.5 11.16	294.6 11.6
80 3	88.9 3.5	300 2.07	14.8 0.58	340.00 13.39	354.8 13.97
80 3	88.9 3.5	300 2.07	18.5 0.73	396.50 15.61	415 16.34
80 3	88.9 3.5	300 2.07	22.2 0.87	453.00 17.84	475.2 18.71
80 3	88.9 3.5	300 2.07	25.9 1.02	509.50 20.06	535.4 21.08
80 3	88.9 3.5	300 2.07	29.6 1.17	566.00 22.28	595.6 23.45
80 3	88.9 3.5	300 2.07	33.3 1.31	623.50 24.55	656.8 25.86
80 3	88.9 3.5	300 2.07	37 1.46	679.00 26.73	716 28.19
80 3	88.9 3.5	300 2.07	40.7 1.6	735.50 28.96	776.2 30.56
80 3	88.9 3.5	300 2.07	44.4 1.75	792.00 31.18	836.4 32.93
100 4	114.3 4.5	300 2.07	6.4 0.25	193.75 7.63	200.15 7.88
100 4	114.3 4.5	300 2.07	12.8 0.5	258.00 10.16	270.8 10.66
100 4	114.3 4.5	300 2.07	19.2 0.76	322.25 12.69	341.45 13.45
100 4	114.3 4.5	300 2.07	25.6 1.01	386.50 15.22	412.1 16.23
100 4	114.3 4.5	300 2.07	32 1.26	450.75 17.75	482.75 19.01
100 4	114.3 4.5	300 2.07	38.4 1.51	515.00 20.28	553.4 21.79

EJ-1N

Expansion Joint



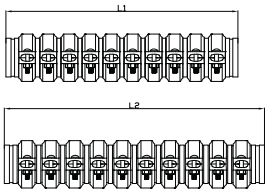


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/Mpa	Movement mm/in	L 1 mm/in	L 2 mm/in
100 4	114.3 4.5	300 2.07	44.8 1.76	579.25 22.81	624.05 24.57
100 4	114.3 4.5	300 2.07	51.2 2.02	643.50 25.34	694.7 27.36
100 4	114.3 4.5	300 2.07	57.6 2.27	707.75 27.86	765.35 30.13
100 4	114.3 4.5	300 2.07	64 2.52	772.00 30.39	836 32.91
100 4	114.3 4.5	300 2.07	70.4 2.77	836.25 32.92	906.65 35.69
100 4	114.3 4.5	300 2.07	76.8 3.02	900.50 35.45	977.3 38.47
125 5	139.7 5.5	300 2.07	5.7 0.22	193.75 7.63	199.45 7.85
125 5	139.7 5.5	300 2.07	11.4 0.45	258.00 10.16	269.4 10.61
125 5	139.7 5.5	300 2.07	17.1 0.67	322.25 12.69	339.35 13.36
125 5	139.7 5.5	300 2.07	22.8 0.9	386.50 15.22	409.3 16.12
125 5	139.7 5.5	300 2.07	28.5 1.12	450.75 17.75	479.25 18.87
125 5	139.7 5.5	300 2.07	34.2 1.35	514.00 20.24	548.2 21.59
125 5	139.7 5.5	300 2.07	39.9 1.57	579.25 22.81	619.15 24.38
125 5	139.7 5.5	300 2.07	45.6 1.8	643.50 25.34	689.1 27.14
125 5	139.7 5.5	300 2.07	51.3 2.02	707.75 27.86	759.05 29.88
125 5	139.7 5.5	300 2.07	57 2.24	772.00 30.39	829 32.63
125 5	139.7 5.5	300 2.07	62.7 2.47	836.25 32.92	898.95 35.39
125 5	139.7 5.5	300 2.07	68.4 2.69	900.50 35.45	968.9 38.14
150 6	165.1 4.5	300 2.07	6 0.24	193.75 7.63	199.75 7.87
150 6	165.1 4.5	300 2.07	12 0.47	258.00 10.16	270 10.63
150 6	165.1 4.5	300 2.07	18 0.71	322.25 12.69	340.25 13.4
150 6	165.1 4.5	300 2.07	24 0.94	386.50 15.22	410.5 16.16
150 6	165.1 4.5	300 2.07	30 1.18	450.75 17.75	480.75 18.93
150 6	165.1 4.5	300 2.07	36 1.42	514.00 20.24	550 21.66
150 6	165.1 4.5	300 2.07	42 1.65	579.25 22.81	621.25 24.46
150 6	165.1 4.5	300 2.07	48 1.89	643.50 25.34	691.5 27.23
150 6	165.1 4.5	300 2.07	54 2.13	707.75 27.86	761.75 29.99
150 6	165.1 4.5	300 2.07	60 2.36	772.00 30.39	832 32.75
150 6	165.1 4.5	300 2.07	66 2.6	836.25 32.92	902.25 35.52
150 6	165.1 4.5	300 2.07	72 2.83	900.50 35.45	972.5 38.28
150 6	168.3 6.626	300 2.07	6.2 0.24	226.75 8.93	232.95 9.17
150 6	168.3 6.626	300 2.07	12.4 0.49	302 11.89	314.4 12.38
150 6	168.3 6.626	300 2.07	18.6 0.73	377.25 14.85	395.85 15.58
150 6	168.3 6.626	300 2.07	24.8 0.98	452.5 17.82	477.3 18.8
150 6	168.3 6.626	300 2.07	31 1.22	527.75 20.78	558.75 22
150 6	168.3 6.626	300 2.07	37.2 1.46	602.5 23.72	639.7 25.18
150 6	168.3 6.626	300 2.07	43.4 1.71	678.25 26.7	721.65 28.41
150 6	168.3 6.626	300 2.07	49.6 1.95	753.5 29.67	803.1 31.62
150 6	168.3 6.626	300 2.07	55.8 2.2	828.75 32.63	884.55 34.83

EJ-1N

Expansion Joint



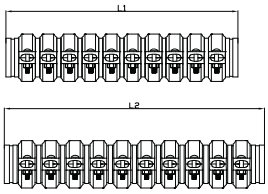


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/Mpa	Movement mm/in	L 1 mm/in	L 2 mm/in
150 6	168.3 6.626	300 2.07	62 2.44	904 35.59	966 38.03
150 6	168.3 6.626	300 2.07	68.2 2.69	979.25 38.55	1047.45 41.24
150 6	168.3 6.626	300 2.07	74.4 2.93	1054.5 41.52	1128.9 44.45
200 8	219.1 8.626	300 2.07	6.3 0.25	226.75 8.93	233.05 9.18
200 8	219.1 8.626	300 2.07	12.6 0.5	302 11.89	314.6 12.39
200 8	219.1 8.626	300 2.07	18.9 0.74	377.25 14.85	396.15 15.59
200 8	219.1 8.626	300 2.07	25.2 0.99	452.5 17.82	477.7 18.81
200 8	219.1 8.626	300 2.07	31.5 1.24	527.75 20.78	559.25 22.02
200 8	219.1 8.626	300 2.07	37.8 1.49	603 23.74	640.8 25.23
200 8	219.1 8.626	300 2.07	44.1 1.74	678.25 26.7	722.35 28.44
200 8	219.1 8.626	300 2.07	50.4 1.98	753.5 29.67	803.9 31.65
200 8	219.1 8.626	300 2.07	56.7 2.23	828.75 32.63	885.45 34.86
200 8	219.1 8.626	300 2.07	63 2.48	904 35.59	967 38.07
200 8	219.1 8.626	300 2.07	69.3 2.73	979.25 38.55	1048.55 41.28
200 8	219.1 8.626	300 2.07	75.6 2.98	1054.5 41.52	1130.1 44.5
250 10	273 10.748	300 2.07	6.3 0.25	226.5 8.92	232.8 9.17
250 10	273 10.748	300 2.07	12.6 0.5	301.5 11.87	314.1 12.37
250 10	273 10.748	300 2.07	18.9 0.74	376.5 14.82	395.4 15.56
250 10	273 10.748	300 2.07	25.2 0.99	451.5 17.78	476.7 18.77
250 10	273 10.748	300 2.07	31.5 1.24	526.5 20.73	558 21.97
250 10	273 10.748	300 2.07	37.8 1.49	601.5 23.68	639.3 25.17
250 10	273 10.748	300 2.07	44.1 1.74	676.5 26.63	720.6 28.37
250 10	273 10.748	300 2.07	50.4 1.98	751.5 29.59	801.9 31.57
250 10	273 10.748	300 2.07	56.7 2.23	826.5 32.54	883.2 34.77
250 10	273 10.748	300 2.07	63 2.48	901.5 35.49	964.5 37.97
250 10	273 10.748	300 2.07	69.3 2.73	976.5 38.44	1045.8 41.17
250 10	273 10.748	300 2.07	75.6 2.98	1051.5 41.4	1127.1 44.38
300 12	323.9 12.752	300 2.07	6.7 0.26	227.5 8.96	234.2 .22
300 12	323.9 12.752	300 2.07	13.4 0.53	303. 11.93	316.4 12.46
300 12	323.9 12.752	300 2.07	20.1 0.79	378.5 14.9	398.6 15.69
300 12	323.9 12.752	300 2.07	26.8 1.06	454 17.87	480.8 18.93
300 12	323.9 12.752	300 2.07	33.5 1.32	529.5 20.85	563 22.17
300 12	323.9 12.752	300 2.07	40.2 1.58	603.5 23.76	643.7 25.34
300 12	323.9 12.752	300 2.07	46.9 1.85	680.5 26.79	727.4 28.64
300 12	323.9 12.752	300 2.07	53.6 2.11	756 29.76	809.6 31.87
300 12	323.9 12.752	300 2.07	60.3 2.37	831.5 32.74	891.8 35.11
300 12	323.9 12.752	300 2.07	67 2.64	907 35.71	974 38.35
300 12	323.9 12.752	300 2.07	73.7 2.9	982.5 38.68	1056.2 41.58
300 12	323.9 12.752	300 2.07	80.4 3.17	1058 41.65	1138.4 44.82

EJ-1NS

Expansion Joint



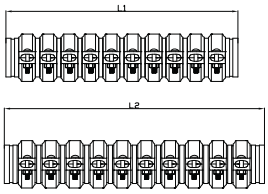


Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/Mpa	Movement mm/in	L 1 mm/in	L 2 mm/in
100 4	114.3 4.5	300 2.07	5.7 0.22	193.25 7.61	198.95 7.83
100 4	114.3 4.5	300 2.07	11.4 0.45	257.00 10.12	268.4 10.57
100 4	114.3 4.5	300 2.07	17.1 0.67	321.25 12.65	338.35 13.32
100 4	114.3 4.5	300 2.07	22.8 0.9	385.00 15.16	407.8 16.06
100 4	114.3 4.5	300 2.07	28.5 1.12	449.25 17.69	477.75 18.81
100 4	114.3 4.5	300 2.07	34.2 1.35	513.50 20.22	547.7 21.57
100 4	114.3 4.5	300 2.07	39.9 1.57	577.25 22.73	617.15 24.3
100 4	114.3 4.5	300 2.07	45.6 1.8	641.00 25.24	686.6 27.04
100 4	114.3 4.5	300 2.07	51.3 2.02	705.25 27.77	756.55 29.79
100 4	114.3 4.5	300 2.07	57 2.24	769.00 30.28	826 32.52
100 4	114.3 4.5	300 2.07	62.7 2.47	833.25 32.80	895.95 35.27
100 4	114.3 4.5	300 2.07	68.4 2.69	897.00 35.32	965.4 38.01
125 5	139.7 5.5	300 2.07	5.7 0.22	193.25 7.61	198.95 7.83
125 5	139.7 5.5	300 2.07	11.4 0.45	257.00 10.12	268.4 10.57
125 5	139.7 5.5	300 2.07	17.1 0.67	321.25 12.65	338.35 13.32
125 5	139.7 5.5	300 2.07	22.8 0.9	385.00 15.16	407.8 16.06
125 5	139.7 5.5	300 2.07	28.5 1.12	449.25 17.69	477.75 18.81
125 5	139.7 5.5	300 2.07	34.2 1.35	513.50 20.22	547.7 21.57
125 5	139.7 5.5	300 2.07	39.9 1.57	577.25 22.73	617.15 24.3
125 5	139.7 5.5	300 2.07	45.6 1.8	641.00 25.24	686.6 27.04
125 5	139.7 5.5	300 2.07	51.3 2.02	705.25 27.77	756.55 29.79
125 5	139.7 5.5	300 2.07	57 2.24	769.00 30.28	826 32.52
125 5	139.7 5.5	300 2.07	62.7 2.47	833.25 32.80	895.95 35.27
125 5	139.7 5.5	300 2.07	68.4 2.69	897.00 35.32	965.4 38.01
150 6	165.1 4.5	300 2.07	5.7 0.22	193.25 7.61	198.95 7.83
150 6	165.1 4.5	300 2.07	11.4 0.45	257.00 10.12	268.4 10.57
150 6	165.1 4.5	300 2.07	17.1 0.67	321.25 12.65	338.35 13.32
150 6	165.1 4.5	300 2.07	22.8 0.9	385.00 15.16	407.8 16.06
150 6	165.1 4.5	300 2.07	28.5 1.12	449.25 17.69	477.75 18.81
150 6	165.1 4.5	300 2.07	34.2 1.35	513.50 20.22	547.7 21.57

EJ-1NS

Expansion Joint





Nominal Size mm/in	Pipe O.D mm/in	Max Working Pressure PSI/Mpa	Movement mm/in	L 1 mm/in	L 2 mm/in
150 6	165.1 4.5	300 2.07	39.9 1.57	577.25 22.73	617.15 24.3
150 6	165.1 4.5	300 2.07	45.6 1.8	641.00 25.24	686.6 27.04
150 6	165.1 4.5	300 2.07	51.3 2.02	705.25 27.77	756.55 29.79
150 6	165.1 4.5	300 2.07	57 2.24	769.00 30.28	826 32.52
150 6	165.1 4.5	300 2.07	62.7 2.47	833.25 32.80	895.95 35.27
150 6	165.1 4.5	300 2.07	68.4 2.69	897.00 35.32	965.4 38.01
150 6	168.3 6.626	300 2.07	5.7 0.22	226.25 8.91	231.95 9.13
150 6	168.3 6.626	300 2.07	11.4 0.45	301.00 11.85	312.4 12.3
150 6	168.3 6.626	300 2.07	17.1 0.67	376.25 14.81	393.35 15.48
150 6	168.3 6.626	300 2.07	22.8 0.9	451.00 17.76	473.8 18.66
150 6	168.3 6.626	300 2.07	28.5 1.12	526.25 20.72	554.75 21.84
150 6	168.3 6.626	300 2.07	34.2 1.35	601.00 23.66	635.2 25.01
150 6	168.3 6.626	300 2.07	39.9 1.57	676.25 26.62	716.15 28.19
150 6	168.3 6.626	300 2.07	45.6 1.8	751.00 29.57	796.6 31.37
150 6	168.3 6.626	300 2.07	51.3 2.02	826.25 32.53	877.55 34.55
150 6	168.3 6.626	300 2.07	57 2.24	901.00 35.47	958 37.71
150 6	168.3 6.626	300 2.07	62.7 2.47	976.25 38.44	1038.95 40.91
150 6	168.3 6.626	300 2.07	68.4 2.69	1051.00 41.38	1119.4 44.07
250 10	273 10.748	300 2.07	6.7 0.26	227.00 8.94	233.7 9.2
250 10	273 10.748	300 2.07	13.4 0.53	302.00 11.89	315.4 12.42
250 10	273 10.748	300 2.07	20.1 0.79	377.50 14.86	397.6 15.65
250 10	273 10.748	300 2.07	26.8 1.06	452.50 17.81	479.3 18.87
250 10	273 10.748	300 2.07	33.5 1.32	528.00 20.79	561.5 22.11
250 10	273 10.748	300 2.07	40.2 1.58	603.00 23.74	643.2 25.32
250 10	273 10.748	300 2.07	46.9 1.85	678.50 26.71	725.4 28.56
250 10	273 10.748	300 2.07	53.6 2.11	753.5 29.67	807.1 31.78
250 10	273 10.748	300 2,07	60.3 2,37	829.00 32,64	889.3 35,01
250 10	273 10.748	300 2.07	67 2.64	904.00 35.59	971 38.23
250 10	273 10.748	300 2.07	73.7 2.9	979.5 38.56	1053.2 41.46
250 10	273 10.748	300 2.07	80.4 3.17	1054.5 41.51	1134.9 44.68

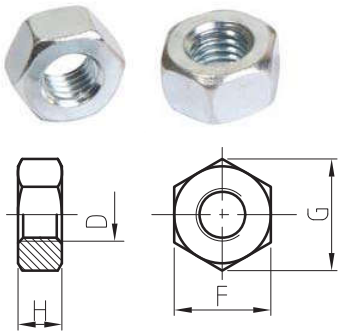
Guide for Selection of Rubber Gaskets






Gasket	Name	Environment Temperature Range	General Service Recommendations	Color Mark
E	EPDM	-34 ~ +110℃ (-30 ~ +230 ℉)	Recommended for cold water service within the specified temperature range plus a variety of dilute acids (base), oil-free air and many chemical services (excluding hydrocarbons). UL classified in accordance with ANSI/NSF 61 or cold+86 ℉ (+30℃) and hot +180 ℉ (+82℃) potable water service. NOT COMPATIBLE FOR USE WITH PETROLEUM SERVICES, STEAM SERVICES OR CONTINUOUS HOT WATER SERVICES.	Black with Green Strip
S	Silicone	-40 ~ +177℃ (-40 ~ +350 ℉)	Recommended for high temperature dry air and some high temperature chemical products, drinking water etc.	White
D	NBR	-29 ~ +82℃ (-20 ~ +180 ℉)	Recommended for petroleum products, vegetable and mineral oils within the specified temperature range. NOT RECOMMENDED FOR HOT WATER SERVICES OR STEAM SERVICES.	Black with Orange Strip
F	Fluororubber	–7 ~ +149℃ (+20 ~ +300 ℉)	Recommended for many oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons. NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.	Black with Blue Strip
LD	Neoprene	–34 ~ +82℃ (–30 ~ +180 ℉)	Recommended for hot lubricants, sea water and certain chemicals. Good ozone resistance. Hard for combustion.	Black with Yellow Strip

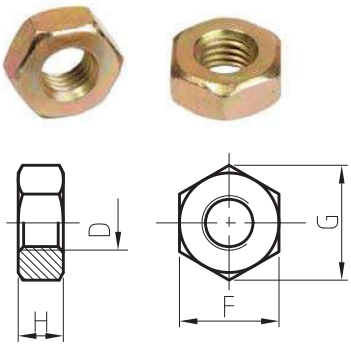
ANSI Heavy Hex Nut



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

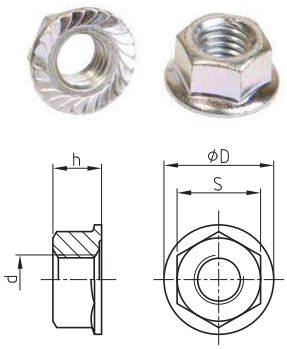
Metric Heavy Hex Nut



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

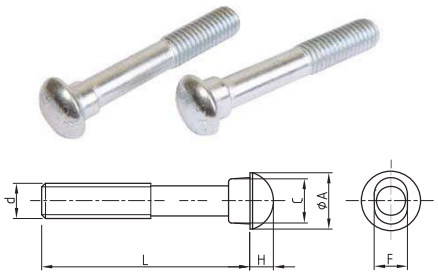
Hexagon Flange Nut



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

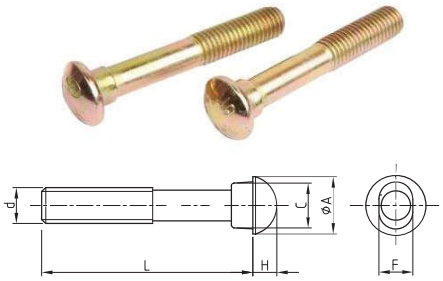
ANSI Oval Neck Track Bolt



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

Bolt Torque

As below is the recommended bolt torque for common sizes of bolts. Please use factory provided bolts and nuts for the installation.

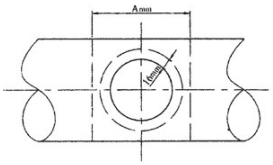
ANSI Rated Bolt Torque		
Bolt size	Rated bolt torque*	
Inch	Lb-Ft	(N.m)
3/8	30-45	40-60
1/2	80-100	110-135
5/8	100-130	135-175
3/4	130-180	175-245
7/8	180-240	245-325

Metric Rated Bolt Torque		
Bolt size	Rated bolt torque*	
Inch	Lb-Ft	(N.m)
M10	30-45	40-60
M12	80-100	110-135
M16	100-130	135-175
M20	130-180	175-245
M22	180-240	245-325

Hole Diameter of pipe



Hole—cutting Machine



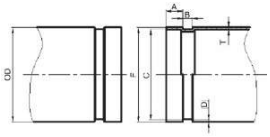
Run Nominal Sine mm/in	Outlet Nominal Size mm/in	Hole Dia. +3.2,0+0.13,0 mm/in	Run Nominal Size mm/in	Outlet Nominal Size mm/in	Hole Dia. +3.2,0+0.13,0 mm/in	Run Nominal Size mm/in	Outlet Nominal Size mm/in	Hole Dia. +3.2,0+0.13,0 mm/in
25 1"/33.7	10 3/8	23.5 0.925 A89	80 3"/88.9	15 1/2	38 1.50 A89	150 159.0 165.1 6"/168.3	15 1/2	38 1.50 A89
	15 1/2			20 3/4			20 3/4	
	20 3/4			25 1			25 1	
	25 1			32 11/4	51 2.00 A102		32 11/4	51 2.00 A102
32 11/4"/42.4	10 3/8	30 1.18 A89		40 11/2			40 11/2	
	15 1/2			50 2	64 2.50 A114		50 2	64 2.50 A114
	20 3/4		100 108.0 4"/114.3	15 1/2	38 1.50 A89		65 21/2/76	70 2.75 A120
	25 1			20 3/4			80 3	89 3.50 A140
40 11/2"/48.3	10 3/8	30 1.18 A89		25 1			100 108.0/4	114 4.50 A165
	15 1/2			32 11/4	51 2.00 A102	200 8"/219.1 250 10"/273.0	25 1	38 1.50 A89
	20 3/4			40 11/2			32 11/4	51 2.00 A102
	25 1			50 2	64 2.50 A114		40 11/2	
50 2"/60.3	15 1/2	38 1.50 A89		65 21/2/76	70 2.75 A120		50 2	64 2.50 A114
	20 3/4			80 3	89 3.50 A140		65 21/2/76	70 2.75 A120
	25 1		125 133.0 139.7 5"/141.3	15 1/2	38 1.50 A89		80 3	89 3.50 A140
	32 11/4	45 1.75 A102		20 3/4			100 108.0/4	114 4.50 A165
	40 11/2			25 1				
65 21/2"/73.0 76.1	15 1/2	38 1.50 A89		32 11/4	51 2.00 A102			
	20 3/4			40 11/2				
	25 1			50 2	64 2.50 A114			
	32 11/4	51 2.00 A102		65 21/2/76	70 2.75 A120			
	40 11/2			80 3	89 3.50 A140			

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

Roll Groove Dimensions

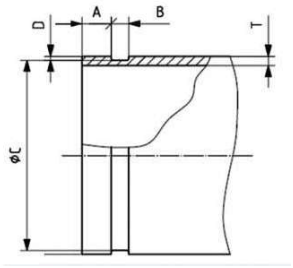


Roll Grooving Machine



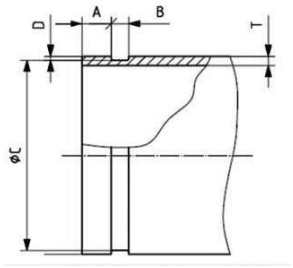
Nominal Size mm/in	Pipe OD			Gasket seat A ±0.76/±0.03 mm/in	Groove Width B ±0.76/±0.03 mm/in	Groove Dia C		Groove Depth D(ref) mm/in	MaxAllow Flare Dia F mm/in	Min.Allow wall thickness T mm/in
	Basic mm/in	Tolerence mm/in				Basic mm/in	Tolerence mm/in			
25 1	33.7 1.327	+0.41 +0.016	-0.68 -0.026	15.88 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

Cut Groove



Nominal Size mm/in	Pipe O.D.			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	Min.Allow wall thicknessT 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	7.93 0.312	30.23 1.19	-0.38 -0.015	1.7 0.069	3.3 0.129
32 1 1/4	42.4 1.669	0.5 0.02	-0.6 -0.023	15.88 0.625	7.93 0.312	38.99 1.535	-0.38 -0.015	1.7 0.069	3.5 0.138
40 1½	48.3 1.9	0.44 0.017	-0.52 -0.02	15.88 0.625	7.93 0.312	45.09 1.775	-0.38 -0.015	1.6 0.063	3.68 0.145
50 2	60.3 2.375	0.61 0.024	-0.61 -0.024	15.88 0.625	7.93 0.312	57.15 2.25	-0.38 -0.015	1.6 0.063	3.91 0.154
65 2½	73 2.875	0.74 0.029	-0.74 -0.029	15.88 0.625	7.93 0.312	69.09 2.72	-0.46 -0.018	1.98 0.078	4.78 0.188
65 2½	76.1 3	0.76 0.03	-0.76 -0.03	15.88 0.625	7.93 0.312	72.26 2.845	-0.46 -0.018	1.99 0.078	4.78 0.188
80 3	88.9 3.5	0.89 0.035	-0.79 -0.031	15.88 0.625	7.93 0.312	84.94 3.344	-0.46 -0.018	1.98 0.078	4.78 0.188
100 4	108 4.25	1.07 0.042	-0.79 -0.031	15.88 0.625	9.53 0.375	103.73 4.084	-0.51 -0.02	2.11 0.083	5.16 0.203
100 4	114.3 4.5	1.14 0.045	-0.79 -0.031	15.88 0.625	9.53 0.375	110.08 4.334	-0.51 -0.02	2.11 0.083	5.16 0.203
125 5	133 5.25	1.32 0.052	-0.79 -0.031	15.88 0.625	9.53 0.375	129.13 5.084	-0.51 -0.02	2.11 0.083	5.16 0.203
125 5	139.7 5.5	1.4 0.055	-0.79 -0.031	15.88 0.625	9.53 0.375	135.48 5.334	-0.51 -0.02	2.11 0.083	5.16 0.203
125 5	141.3 5.563	1.42 0.056	-0.79 -0.031	15.88 0.625	9.53 0.375	137.03 5.395	-0.56 -0.022	2.13 0.084	5.16 0.203
150 6	159 6.25	1.6 0.063	-0.79 -0.031	15.88 0.625	9.53 0.375	154.5 6.083	-0.56 -0.022	2.16 0.085	5.56 0.219
150 6	165.1 6.5	1.6 0.063	-0.79 -0.031	15.88 0.625	9.53 0.375	160.8 6.33	-0.56 -0.022	2.16 0.085	5.56 0.219
150 6	168.3 6.625	1.6 0.063	-0.79 -0.031	15.88 0.625	9.53 0.375	163.96 6.455	-0.56 -0.022	2.16 0.085	5.56 0.219
200A 8	216.3 8.516	1.6 0.063	-0.79 -0.031	19.05 0.75	11.11 0.438	211.6 8.331	-0.64 -0.025	2.35 0.093	6.05 0.238

Cut Groove



Nominal Size mm/in	Pipe O.D.			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	Min.Allow wall thicknessT mm/in
	Basic mm/in	Tolerence mm/in				Basic mm/in	Tolerence mm/in		
200 8	219.1 8.625	1.6 0.063	-0.79 -0.031	19.05 0.75	11.11 0.438	214.4 8.441	-0.64 -0.025	2.34 0.092	6.05 0.238
250A 10	267.4 10.528	1.6 0.063	-0.79 -0.031	19.05 0.75	12.7 0.5	262.6 10.339	-0.69 -0.027	2.4 0.095	6.35 0.25
250 10	273 10.75	1.6 0.063	-0.79 -0.031	19.05 0.75	12.7 0.5	268.28 10.562	-0.69 -0.027	2.39 0.094	6.35 0.25
300A 12	318.5 12.539	1.6 0.063	-0.79 -0.031	19.05 0.75	12.7 0.5	312.9 12.319	-0.76 -0.03	2.77 0.109	7.09 0.279
300 12	323.9 12.75	1.6 0.063	-0.79 -0.031	19.05 0.75	12.7 0.5	318.29 12.531	-0.76 -0.03	2.77 0.109	7.09 0.279
350 14	355.6 14	1.6 0.063	-0.79 -0.031	23.83 0.938	12.7 0.5	350.04 13.781	-0.76 -0.03	2.77 0.109	7.14 0.281
350 14	377 14.842	1.6 0.063	-0.79 -0.031	23.83 0.938	12.7 0.5	371.44 14.623	-0.76 -0.03	2.77 0.109	7.14 0.281
400 16	406.4 16	1.6 0.063	-0.79 -0.031	23.83 0.938	12.7 0.5	400.84 15.781	-0.76 -0.03	2.77 0.109	7.92 0.312
400 16	426 16.772	1.6 0.063	-0.79 -0.031	23.83 0.938	12.7 0.5	420.46 16.553	-0.76 -0.03	2.77 0.109	7.92 0.312
450 18	457.2 18	1.6 0.063	-0.79 -0.031	25.4 1	12.7 0.5	451.64 17.781	-0.76 -0.03	2.77 0.109	7.92 0.312
450 18	480 18.897	1.6 0.063	-0.79 -0.031	25.4 1	12.7 0.5	469 18.465	-0.76 -0.03	5.5 0.216	7.92 0.312
500 20	508 20	1.6 0.063	-0.79 -0.031	25.4 1	12.7 0.5	502.44 19.781	-0.76 -0.03	2.77 0.109	7.92 0.312
500 20	530 20.866	1.6 0.063	-0.79 -0.031	25.4 1	12.7 0.5	522 20.55	-0.76 -0.03	4 0.157	7.92 0.312
600 24	609.6 24	1.6 0.063	-0.79 -0.031	25.4 1	14.3 0.563	600.9 23.656	0.76 -0.03	4.35 0.172	9.5 0.375
600 24	630 24.803	1.6 0.063	-0.79 -0.031	25.4 1	14.3 0.563	620.9 24.445	0.76 -0.03	4.55 0.179	9.5 0.375

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	--	--	--	--

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

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.



7 c. Assembly completed-Angle Pad Coupling

For Angle Pad 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.



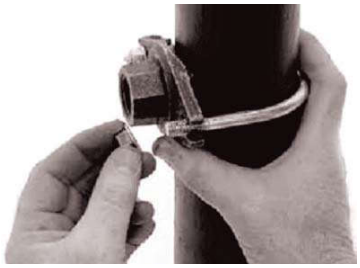
2.Remove burrs

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



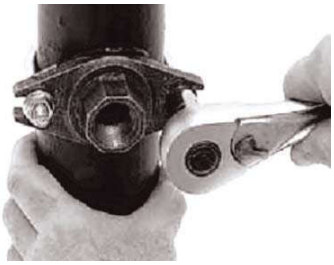
3.Gasket installation

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.



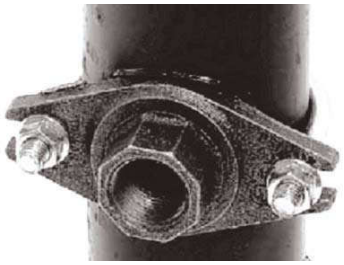
4.Alignment

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



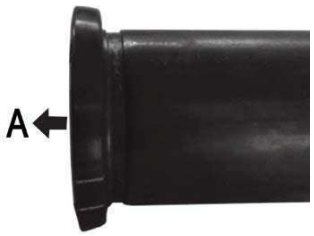
1.Pipe preparation

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.



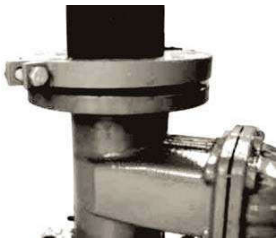
4.Housing installation

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.

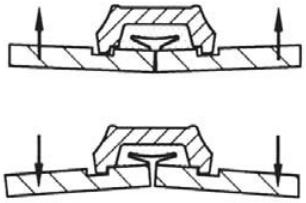
Caution
Proper torquing of bolts is required to obtain specified performance. - Over torquing the bolts may result in damage to the bolt and / or casting which could result in pipe joint separation. - Under torquing the bolts may result in lower pressure retention capabilities, lower bend load capabilities,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

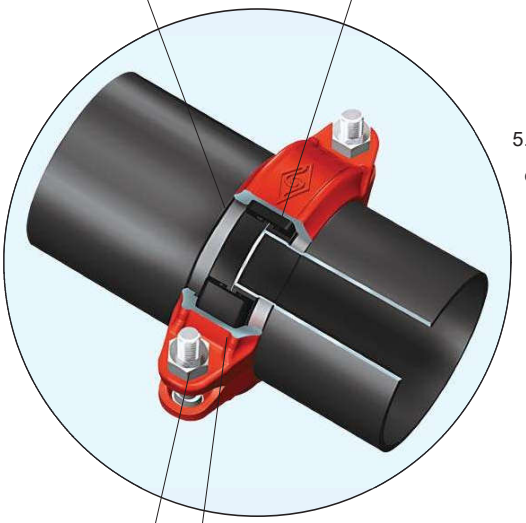
※ Self-lubricating rubber rings do not need to be lubricated

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

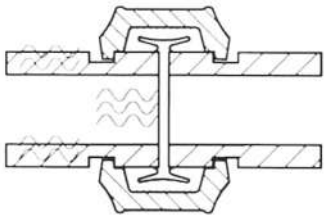
1.A flexible coupling accommodates pipe deflection and or non-alignment as below: If nominal diameter <DN200, deflection angle is ≥1° ; If nominal diameter ≥DN200, deflection angle is ≥0.5° but <1° .



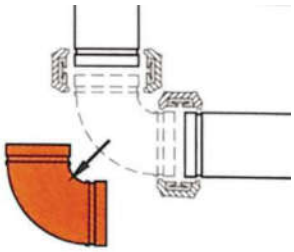


2.The C-shaped rubber gasket provides excellent self-sealing capabilities in both low and high pressure service as well as under certain vacuum conditions.

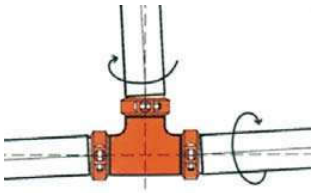
3.The design and construction of the coupling with elastomeric gaskets can provide significant noise and vibration absorption as well as seismic stress.



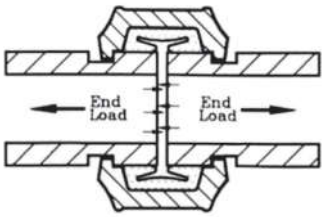
4.With the removal of just a few bolts you can easily access the system for cleaning, maintenance, changes or system expansion.



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



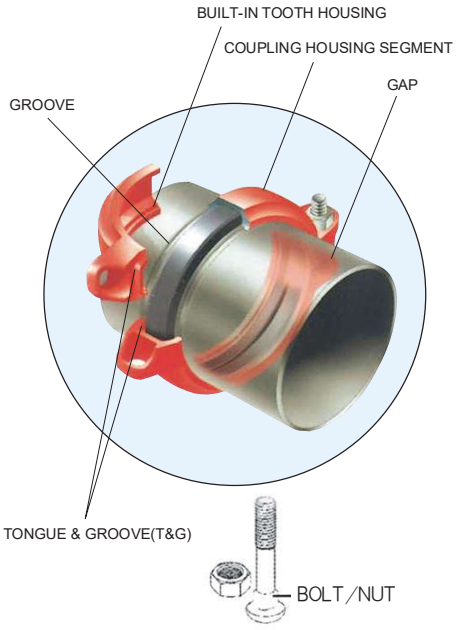
6.Coupling keys engage the full circumference of the grooves and provide significant pressure and end load restraint against pipe movement from internal and external forces.



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.



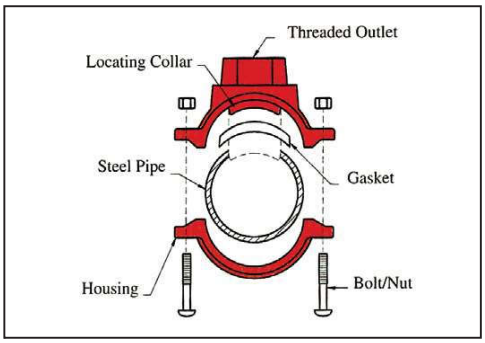
3.The T&G mechanism features a slight offset at the foot of the coupling halves which serve to protect the gasket from exposure.

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.

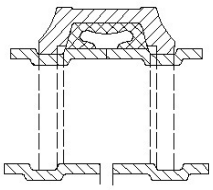




Movement

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.

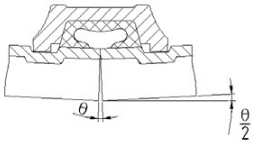
1.Linear Movement



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 (CUT)	0-4.0MM	0-6.4MM
movement (Roll)	0-3MM	0-5MM

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%

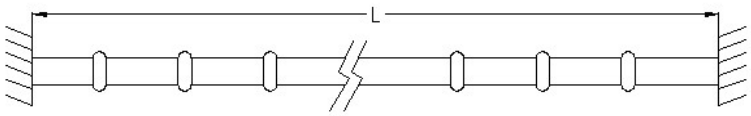
Flexible Couplings: Linear Movement and Angular Movement

Size		Linear Movement	Angular Movement	
Inch	mm	mm	Degree	mm/m
1	33.7	2	2º-45′	48
1 1/4	42.4	2	2º-10′	38
1 1/2	48.3	3.2	1º-54′	33
2	60.3	3.2	1º-31′	26
2 1/2	73	3.2	1º-27′	25
2 1/2	76.1	3.2	1º-12′	21
3	88.9	3.2	1º-02′	18
4	108	3.2	1º-51′	32
4	114.3	3.2	1º-36′	28
5	133	3.2	1º-41′	30
5	139.7	3.2	1º-19′	23
5	141.3	3.2	1º-03′	18
6	159	3.2	1º-18′	23
6	165.1	3.2	1º-05′	20
6	168.3	3.2	1º-05′	19
8	219.1	3.2	0º-50′	15
10	273	3.2	0º-40′	12
12	323.9	3.2	0º-34′	10

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℃
- Maximum working temperature = 55℃

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 (℃)	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

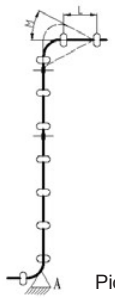
Riser Design

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**



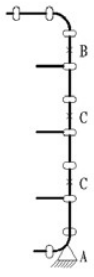
Picture 1

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

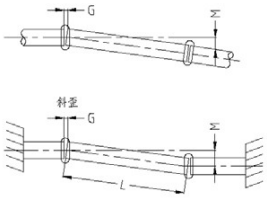
Install the riser with the predetermined gap method. Anchor the pipe at or near the base with a pressure thrust anchor “A” capable of supporting the full pressure thrust, weight of pipe and the fluid column. Anchor at “B” with an anchor capable of withstanding full pressure thrust at the top of the riser 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 Sinθ

θ=Sin-1（G÷D）

M=（G÷D）×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)

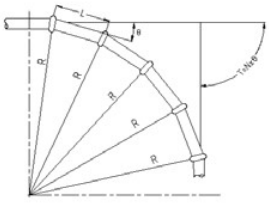
D = Pipe Outside Diameter (Inches)

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 x Sin(θ/2))

L = 2 x R x Sin(θ/2)

N = T / θ

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.

Supporting and Protection of A Grooved-End Pipe System

Supporting and protection of a grooved-end pipe system refers to the general term for fixing, supporting, anti-vibration, anti-corrosion, and thermal insulation measures taken to ensure the quality, safety and service life of the pipe system.

- **Design, construction and acceptance requirements for pipeline fixing and supporting**

1. Design of pipe support and hanger

Pipe supports and hangers for grooved-connection pipeline engineering should be strengthened. Supports and hangers should be provided on both sides of joints and also on both sides of upstream and downstream connection joints of pipe fittings such as tees, crosses, elbows and reducers.

Fixed supports and hangers should be installed in following positions of grooved-connection pipeline engineering:

1.1 The bottom of the inlet vertical-pipe.

1.2 The bottom where the pipe turns and redirects to the elbow.

1.3 The tee or cross position of outgoing branch pipe of vertical pipe.

1.4 The position of the riser that needs to support the weight of the riser due to its long free length.

1.5 The part where the outgoing branch pipe of horizontal pipe is connected to pipe fittings such as branch pipe joints, tees, crosses, elbows, etc.

1.6 The part where the pipeline is equipped with a compensator to control the pipeline expansion and contraction.

1.7 Other parts of the pipeline that need special reinforcement.

2. Construction and acceptance of pipe support and hanger

2.1 Supports and hangers should be installed firmly according to design requirements, and their installation positions are correct.

2.2 The installation of supports and hangers should be controlled by following regulations:

2.2.1 When the floor height is not greater than 5m, one vertical-pipe support and hanger shall be installed on each floor. When the floor height is greater than 5m, there should be no less than 2 on each floor. When there is no branch pipe on the vertical pipe, the installation height of the support and hanger should be 1.20~1.60m from the ground.

2.2.2 One support and hanger shall be provided for each straight section of the horizontal pipe. The allowable spacing of the support and hanger shall not be greater than provisions in the following table.

Table 1- Allowable spacing of non-insulating horizontal-pipe support and hanger (m)

Nominal Size (mm)	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Max. Span Between Supports (m)	3.7	3.7	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6

Notes: for insulating pipes, the distance between support and hanger should be reduced correspondingly according to the influence of the weight of the insulating material installed on the pipe.

Supporting and Protection of A Grooved-End Pipe System

2.3 The horizontal-pipe supports and hangers shall be arranged on both sides of joints and also on both sides of upstream and downstream connection joints of pipe fittings. The net distance between the support and hanger and the joint should not be less than 150mm, and should not be greater than 300mm.

2.4 During pipeline installation, supports and hangers should be fixed and adjusted in time, and temporary supports and hangers should not be used. The support and hanger should be in close contact with the pipe. The sliding surface of the sliding bracket should be clean and flat, and there should be facilities to prevent falling off.

2.5 The installation of supports and hangers shall meet the elevation requirements of pipeline installation.

3. Other requirements of the support and hanger shall be implemented in accordance with the NFPA 13, Standard for the Installation of Sprinkler Systems, 2019 edition.

- **The minimum requirements for pipeline design, installation, shockproof, anti-corrosion, and antifreeze shall be implemented in accordance with the following standards:**

1. NFPA 13, Standard for the Installation of Sprinkler Systems, 2019 edition.
2. NFPA 13R, Standard for the Installation of Sprinkler Systems in Low-Rise Residential Occupancies, 2019 edition.
3. NFPA 14, Standard for the Installation of Standpipe and Hose Systems, 2016 edition.
4. NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection, 2007 edition.
5. NFPA 24, Standard for the Installation of Private Fire Service Mains and Their Appurtenances, 2019 edition.
6. ASME B31.1, Power Piping, 2020 edition.
7. ASME B31.3, Process Piping, 2018 edition.
8. ASME B31.9, Building Services Piping, 2017 edition.

- **The inspection, test and maintenance of the pipeline shall be carried out with reference to NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2020 edition.**

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.

● As for the maximum working pressure which listed above, please refer to the corresponding certificates.

Notifications

WARNING



- Read and understand all instructions before attempting to install, adjust, maintain or remove any piping products.
- Depressurize and drain the piping system before attempting to install, adjust, maintain or remove any piping products.
- Please wear protective glasses, safety helmet and foot protective equipment.
- Failure to follow these instructions could result in death or serious personal injury and property damage.

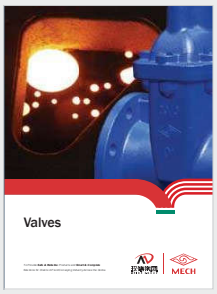
Reference Materials

- I-JM-Grooved fitting: Installation Instructions for grooved fittings and couplings

MECH FLOW SUPPLIES

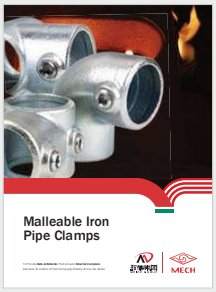


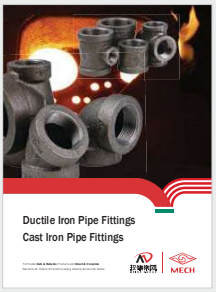


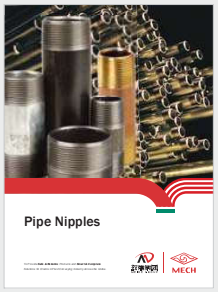












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Industrial Park Pingyin, Jinan, China 250400

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Http://www.meide-casting.com

UPDATED 03/2022

Letter of Certification

To whom it may concern:

We issue this letter to confirm that all items and the product dimension data which are in MECH Grooved Fittings & Couplings catalog representing both types of Painted color in Orange or Red as well as for the Hot Dipped Galvanized, our control the average minimum of Hot Dipped Galvanized is 63-70 microns is achieved. We use this catalog one for all internationally.

Jinan Meide Casting Co., Ltd

2020.09.01

玫德集团有限公司

山东省济南市平阴县玫瑰镇玫德街1号

统一社会信用代码：91370124613225093N

必维认证集团认证控股有限公司英国分公司
确证上述单位的管理体系已经评审
并确认符合下列管理体系标准全部适用条款的要求

ISO 9001:2015

体系覆盖范围

管路连接件、阀门及相关配置、消防管接件、不锈钢金属软管、玛钢和球墨铸铁绝缘子钢帽及电力线路铸件、自动喷水灭火系统用阀门的设计、生产

最初认证周期起始日期:	10-01-1997
上一周期的到期日:	NA
认证/再认证审核日期:	NA
认证/再认证周期开始日期:	09-01-2024
在证书持有者之管理体系持续符合要求的运行条件下，本证书至下述日期有效:	29-05-2027

证书编号：CN047453　　版本号：1　　发证日期：09-01-2024

UKAS MANAGEMENT SYSTEMS
0008

认证机构地址：*5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom*
当地办公室地址:必维认证（北京）有限公司，中国北京市东城区东长安街1号东方广场西一办公楼9层902室，邮编：100738

需进一步澄清本证书范围和有效状态，以及此管理体系要求的适用性，请电：+86 10 59683888

获证组织必须定期接受监督审核并经审核合格此证书方继续有效。本证书信息可在国家认证认可监督管理委员会官方网站（www.cnca.gov.cn）上查询。

Bureau Veritas Certification

JINAN MEIDE CASTING CO., LTD.

NO.1 MEIDE STREET, MEIGUI TOWN, PINGYIN COUNTY, JINAN, SHANDONG, 250400,P.R. CHINA

Unified social credit code: 91370124613225093N

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015

Scope of certification

DESIGN AND PRODUCTION OF PLUMBING CONNECTERS， VALVES AND RELEVANT ACCESSORIES，DUCTILE IRON GROOVED FITTINGS AND COUPLINGS，STAINLESS STEEL METAL FLEXIBLE HOSE，MALLEABLE IRON & DUCTILE IRON INSULATOR CAPS & POWER LINES CASTINGS，VALVES FOR SPRINKLERS SYSTEM

Original Cycle Start Date:	**10-01-1997**
Expiry date of previous cycle:	**NA**
Certification / Recertification Audit date:	**NA**
Certification/Recertification Cycle Start Date:	**09-01-2024**
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	**29-05-2027**

Certificate No.: **CN047453** Version: **1** Issue date: **09-01-2024**

UKAS MANAGEMENT SYSTEMS
0008

Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom
Local Office: Bureau Veritas Certification (Beijing) Co., Ltd, Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call : +86 10 59683888

Certified organisation has to accept and pass regular surveillance audits, then this certificate can be continuously valid. Information of this certificate may be obtained by visiting CNCA website (www.cnca.gov.cn).

BUREAU VERITAS

Bureau Veritas Certification

玫德集团有限公司

山东省济南市平阴县玫瑰镇玫德街 1 号

统一社会信用代码：91370124613225093N

必维认证集团认证控股有限公司
确证上述单位的管理体系已经评审
并确认符合下列管理体系标准全部适用条款的要求

ISO 9001:2015

体系覆盖范围

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最初认证周期起始日期：10-01-1997
上一周期的到期日：NA
认证/再认证审核日期：NA
本次认证/再认证周期起始日期：09-01-2024

在证书持有者之管理体系持续符合要求的运行条件下，本证书至下述日期有效：
29-05-2027

证书号：CNBJ322598-A　　版本号：No.1，发证日期：09-01-2024

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17021-1
MANAGEMENT SYSTEMS CERTIFICATION BODY

必维认证集团认证控股有限公司
授权代表

认证机构地址：Tour Alto 4 Place des Saisons 92400 Courbevoie, France
当地办公室地址：必维认证（北京）有限公司，中国北京市东城区东长安街 1 号东方广场西一办公楼 9 层 902 室，邮编：100738

需进一步澄清本证书范围和有效状态，以及此管理体系要求的适用性，请电：+86 10 59683888
获证组织必须定期接受监督审核并经审核合格此证书方继续有效。本证书信息可在国家认证认可监督管理委员会官方网站(www.cnca.gov.cn)上查询。

Bureau Veritas Certification

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Unified social credit code: 91370124613225093N

Bureau Veritas Certification Holding SAS certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015

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Original cycle start date:	**10-01-1997**
Expiry date of previous cycle:	**NA**
Certification / Recertification audit date:	**NA**
Certification / Recertification cycle start date:	**09-01-2024**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **29-05-2027**

Certificate No.: **CNBJ322598-A** Version: **No.1**, Issue date: **09-01-2024**

ANAB
ANSI National Accreditation Board
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MANAGEMENT SYSTEMS CERTIFICATION BODY

Signed on behalf of BVCH SAS

Certification body address: Tour Alto 4 Place des Saisons 92400 Courbevoie, France
Local office address: Bureau Veritas Certification (Beijing) Co., Ltd, Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738

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BUREAU VERITAS

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ISO 14001:2015

体 系 覆 盖 范 围

管路连接件、阀门及相关配置、消防管接件、不锈钢金属软管、玛钢和球墨铸铁绝缘子钢帽及电力线路铸件、自动喷水灭火系统用阀门的设计、生产

最初认证周期起始日期：	07-07-2010
上一周期的到期日：	NA
认证/再认证审核日期：	NA
本次认证/再认证周期起始日期：	09-01-2024

在证书持有者之管理体系持续符合要求的运行条件下，本证书至下述日期有效：
10-03-2027

证书号：CNBJ322599-A　　版本号：No.1，发证日期：09-01-2024

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授权代表

认证机构地址：Tour Alto 4 Place des Saisons 92400 Courbevoie, France
当地办公室地址：必维认证（北京）有限公司，中国北京市东城区东长安街 1 号东方广场西 办公楼 9 层 902 室，邮编：100738

需进一步澄清本证书范围和有效状态，以及此管理体系要求的适用性，请电：+86 10 59683888
获证组织必须定期接受监督审核并经审核合格此证书方继续有效。本证书信息可在国家认证认可监督管理委员会官方网站(www.cnca.gov.cn)上查询。

Bureau Veritas Certification

JINAN MEIDE CASTING CO., LTD.

NO.1 MEIDE STREET, MEIGUI TOWN, PINGYIN COUNTY, JINAN, SHANDONG, 250400, P.R. CHINA

Unified social credit code: 91370124613225093N

Bureau Veritas Certification Holding SAS certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 14001:2015

Scope of certification

DESIGN AND PRODUCTION OF PLUMBING CONNECTERS, VALVES AND RELEVANT ACCESSORIES, DUCTILE IRON GROOVED FITTINGS AND COUPLINGS, STAINLESS STEEL METAL FLEXIBLE HOSE, MALLEABLE IRON & DUCTILE IRON INSULATOR CAPS & POWER LINES CASTINGS, VALVES FOR SPRINKLERS SYSTEM

Original cycle start date:	**07-07-2010**
Expiry date of previous cycle:	**NA**
Certification / Recertification audit date:	**NA**
Certification / Recertification cycle start date:	**09-01-2024**

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **10-03-2027**

Certificate No.: **CNBJ322599-A** Version: **No.1**, Issue date: **09-01-2024**

ANAB
ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17021-1
MANAGEMENT SYSTEMS CERTIFICATION BODY

Signed on behalf of BVCH SAS

Certification body address: Tour Alto 4 Place des Saisons 92400 Courbevoie, France
Local office address: Bureau Veritas Certification (Beijing) Co., Ltd, Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, China. 100738

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +86 10 59683888
Certified organisation has to accept and pass regular surveillance audits, then this certificate can be continuously valid.
Information of this certificate may be obtained by visiting CNCA website (www.cnca.gov.cn).

Bureau Veritas Certification

玫德集团有限公司

山东省济南市平阴县玫瑰镇玫德街1号

统一社会信用代码：91370124613225093N

必维认证集团认证控股有限公司英国分公司
确证上述单位的管理体系已经评审
并确认符合下列管理体系标准全部适用条款的要求

ISO 45001:2018

体系覆盖范围

管路连接件、阀门及相关配置、消防管接件、不锈钢金属软管、玛钢和球墨铸铁绝缘子钢帽及电力线路铸件、自动喷水灭火系统用阀门的设计、生产

最初认证周期起始日期:	07-01-2019
上一周期的到期日:	NA
认证/再认证审核日期:	NA
认证/再认证周期开始日期:	28-12-2021

在组织的管理体系持续符合要求运行的情况下，本证书有效期至 06-01-2025

证书编号: CN039130　　版本号: 2　　发证日期:25-12-2022

UKAS MANAGEMENT SYSTEMS
0008

认证机构地址： 5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom

当地办公室：北京市东城区东长安街1号东方广场东方经贸城西一办公楼9层02室，邮编：100738

需进一步澄清本证书范围和有效状态，以及此管理体系要求的适用性，请电：+86 10 59683888

获证组织必须定期接受监督审核并经审核合格此证书方继续有效。本证书信息可在国家认证认可监督管理委员会官方网站（www.cnca.gov.cn）上查询。

扫描全能王 创建

Bureau Veritas Certification

JINAN MEIDE CASTING CO., LTD.

NO.1 MEIDE STREET, MEIGUI TOWN, PINGYIN COUNTY, JINAN, SHANDONG, 250400,P.R. CHINA

Unified social credit code:91370124613225093N

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 45001:2018

Scope of certification

DESIGN AND PRODUCTION OF PLUMBING CONNECTERS , VALVES AND RELEVANT ACCESSORIES , DUCTILE IRON GROOVED FITTINGS AND COUPLINGS , STAINLESS STEEL METAL FLEXIBLE HOSE , MALLEABLE IRON & DUCTILE IRON INSULATOR CAPS & POWER LINES CASTINGS , VALVES FOR SPRINKLERS SYSTEM

Original Cycle Start Date:	07-01-2019
Expiry date of previous cycle:	NA
Certification / Recertification Audit date:	NA
Certification/Recertification Cycle Start Date:	28-12-2021
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	06-01-2025

Certificate No.: CN039130 Version: 2 Issue Date:25-12-2022

UKAS MANAGEMENT SYSTEMS

0008

Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom

Local Office: Room 02, 9 / F, West Office Building 1, Oriental Economic and Trade City, Oriental Plaza, No.1 East Chang'an Street, Dongcheng District, Beijing, P.R.C. 100738

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +86 10 59683888

Certified organisation has to accept and pass regular surveillance audits, then this certificate can be continuously valid. Information of this certificate may be obtained by visiting CNCA website (www.cnca.gov.cn).

扫描全能王 创建

PICC 中国人民保险

创立于1949，服务涵盖保险全类别及投资、健康、养老多板块，机构县域覆盖100%。

中国人民财产保险股份有限公司

限在山东省销售

鲁：370021000008993

产品责任保险（1995版） 保险单

PRODUCTS LIABILITY INSURANCE POLICY SCHEDULE

保单号码 Policy No：PZA202337010000000028

中国人民财产保险股份有限公司（以下简称“本公司”）按照本保险单的约定，在本保险单明内，负责赔偿在本保险单明细表中列明的被保险人依法对第三者应承担的经济赔偿责任，特立本保险单为凭。

PICC Property and Casualty Company Limited (herein after called "The Company") undertakes that subject to the terms and conditions contained herein or endorsed hereon the Company shall indemnify the Insured for the Legal Liability incurred by the insured during the period of insurance stated in the Schedule in the manner and to the extent hereinafter provided.

投保人信息/Policy Holder

投保人名称/Applicant：JINAN MEIDE CASTING CO., LTD

被保险人信息/The Insured Information

被保险人名称 Name：JINAN MEIDE CASTING CO., LTD

被保险人地址Address： MEIDE INDUSTRIAL SCIENCE AND TECHNOLOGY CITY, JINAN, SHANDONG, CHINA

被保险人营业性质 Nature of Business：生产和销售商 Manufacturer and seller

承保区域 Territory of Coverage：世界范围（包含美、加地区） Worldwide

保障内容 /Protection Information

产品名称及规格型号 Description and Model	数量 Quantity	销售额 Turnover USD	承保区域 Territory of Coverage
球铁沟槽管件（用于水、油气管路 Ductile iron grooved fittings		20,000,000.00	世界范围（包含美、加地区） Worldwide

责任限额和免赔额/Limits of liability&Deductible

每次事故赔偿限额：USD2,000,000.00
Limits of Indemnity For Any One Accident
每次事故每人人身伤亡赔偿限额：
Limits of Indemnity of Bodily Injury (Any One Accident) for Each Person
每次事故财产损失赔偿限额：
Limits of Indemnity (Property Damage) for Any One Accident
累计赔偿限额：USD10,000,000.00
Aggregate Limits of Indemnity
每次事故免赔额：USD10,000.00
Deductible (Any One Accident)
*每次事故：指不论一次事故或一个事件引起的一系列事故。
The words"ANY ONE ACCIDENT"shall mean any one accident or series of accidents arising out of one event.

保险费/The Premium

预收保险费 Deposit Premium：（大写）美元 伍万肆仟元整 USD54,000.00

最低保险费 Minimum Premium：（大写）美元 伍万肆仟元整 USD54,000.00

其中：不含税保险费：365666.63元，增值税：21939.97元；

保险费率 Premium Rate：2.70‰

付费日期 Date of Payment：2023年11月09日

追溯期 /Retroactive Date

2018年11月14日

保险期限

自2023年11月09日零时起至2024年11月08日二十四时止。

Period of Insurance

from11/09/2023at0:00 To 11/08/2024at24:00 .

司法管辖 /Jurisdiction

世界范围（包含美、加地区）

Worldwide

中国人民财产保险股份有限公司 济南市分公司 保单专用章(3)

第三联 被保险人留存

保单附页

注：本单证仅作为非车险通用全打保单的附页使用，单独使用无效。

尊敬的客户：您可通过本公司网站（www.e-picc.com.cn）、95518客服电话或附近的营业网点查询保险单信息。若对查询结果有异议，请通过以上三种渠道联系本公司。

PICC 中国人民保险

创立于1949，服务涵盖保险全类别及投资、健康、养老多板块，机构县域覆盖100%。

中国人民财产保险股份有限公司

鲁：37002100008994

特别约定清单

保单号::PZAI202337010000000028

特别约定：

1、保险人已就合同中责任免除条款作明确说明，投保人对此无异议。

2、被保险人本年度投保的所有出口产品在保单项下保险计赔偿限额为1000万美元，超出部分，保险人不再承担赔偿责任。

3、本次仅承保出口的球铸铁管件产品（不含燃气管路连接）

4、迈克牌或客户指定的商标

5、自2023年 04 月07日0时至2023年 11 月08日24时，未出险，此期间发生的保险事故保险公司不承担赔偿责任。

6、投保产品与其他产品应能明确区分.

7、Warranted that the insured products are in full compliance to mandatory/voluntary safety standard and other applicable regulations where the products distributed to.

8、Subject to clean experience in past years other than the reported in mainland China;

9、Costs within the limit of liability subject to deductible.

10、Absolute Pollution Exclusion.

11、Absolute Asbestos Exclusion.

12、War and Terrorism Exclusion.

13、Efficacy exclusion.

14、Nuclear exclusion.

15、Lead Exclusion Clause.

16、Silica Exclusion Clsuse.

17、Punitive/Exemplary damage exclusion.

免赔额

每次事故绝对免赔额1万美元或损失金额的10%.两者以高者为准.

Claim Made Basis Clause

It is hereby agreed and amended:

1. This insurance apply to "bodily injury" and "property damage" resulting from an occurrence which first commences on and after the retroactive date desiquated in schedule, only if:

(1)A claim for damage because of "bodily injury" and "property damage" is first made in writing against any insured during the policy period and

(2)Any insured did not know or could not have reasonably foreseen such occurrence at the effective date of this Policy.

2. As used in this endorsement:

(1)"A claim" by a person or organization seeking damage will be deemed to have been made when written notice of such claim is received by any insured or by the Company, whichever comes first.

中国人民财产保险股份有限公司 济南市分公司 保单专用章(鲁)

第三联 被保险人留存

注：本单证仅作为非车险通用全打保单的附页使用，单独使用无效。

限在山东省销售

鲁：370021000008995

(2) "All claim" for damage because of "bodily injury" to the same person as a result of an occurrence, will be deemed to have been made at the time the first of those claims is made against any insured;
(3) "All claim" for damage because of "property damaged" causing loss to the same person or organization as a result of an occurrence, will be deemed to have made at the time the first of those claim is made against any insured.

中国人民财产保险股份有限公司 济南市分公司 保单专用章（3）

第三联 被保险人留存

保单附页

注：本单证仅作为非车险通用全打保单的附页使用，单独使用无效。

Pipe Fittings

These fittings are suitable for interconnecting piping, valves and other components in both wet and dry automatic sprinkler systems. Installation should be according to applicable sprinkler system fabrication rules. These rules limit the minimum size of sprinkler piping to 1 in., nominal. FM Approved pipe fittings of smaller sizes are intended for use as valve trim, gauge connections, and for other peripheral service. The water flow path of the sprinkler system cannot be designed using smaller sizes than 1 in., nominal. Unless otherwise noted in the listing, these fittings have 175 psi (1205 kPa) rated working pressure.

Threaded connections on fittings can be made to FM Approved threadable thinwall pipe or to Schedule 40 pipe. Refer to the "Steel Pipe" listings for a summary of the various types of FM Approved steel pipe suitable for threading or grooving."

The fittings manufacturer's installation instructions must be observed in all cases. When connections are made to FM Approved pipe, the pipe manufacturer's installation instructions must also be followed.

Unless otherwise stated below, the maximum ambient temperature to which these fittings should be subjected is 225°F (107°C).

Pipe Fittings

Jinan Meide, Pipe Fittings

Product Specification

Model No	Description	End Connection	Nominal Pipe Size, in	Rated Working Pressure		Remarks
				psi	(kPa)	
1#	90° Bend	Male BSP X Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
1#	90° Bend	Male BSP X Female BSP	6	300	(2065)	c
1#	90° Bend	Male BSP X Female BSP	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
1#	90° Bend	Male BSP X Female BSP	6	450	(3100)	e
1A	90° Bend Short	Male BSP X Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 4	500	(3445)	c
1A	90° Bend Short	Male BSP X Female BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
2#	90° Bend	Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
2#	90° Bend	Female BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
2A	90° Bend Short	Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	c
2A	90° Bend Short	Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
2AF	90° Bend Short	Female BSP	1/4, 1/2, 3/4, 1, 1 1/4, 1 1/2	500	(3445)	e
3#	90° Bend	Male BSP	1/2, 3/4, 1, 1 1/3, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c

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3#	90° Bend	Male BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
40	45° Bend	Male BSP X Female BSP	1/2, 3/4, 1, 1 1/3, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
40	45° Bend	Male BSP X Female BSP	6	300	(2065)	c
40	45° Bend	Male BSP X Female BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
40	45° Bend	Male BSP X Female BSP	6	450	(3100)	e
41	45° Bend	Female BSP	1/2, 3/4, 1, 1 1/3, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
41	45° Bend	Female BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
85	Crossover	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	c
85	Crossover	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
90	90° Elbow	Grooved	1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12	500	(3445)	b
90	90° Elbow	Grooved	76, 139.7, 165 mm	500	(3445)	b
90	90° Elbow	Grooved	1 76, 133 mm	500	(3445)	b
90	90° Elbow	Grooved	267.4, 318.5 mm	300	(2065)	b
90	90° Elbow	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
90	90° Elbow	NPT	5, 6	300	(2065)	a
90	90° Elbow	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
90	90° Elbow	BSP	5, 6	300	(2065)	c
90	90° Elbow	BSP	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5	500	(3445)	e
90	90° Elbow	BSP	6	450	(3100)	e
90X	90° Elbow	Grooved	3, 4, 6, 10, 12 108, 133, 140, 159, 165 mm	300	(2065)	b
90C	90° Reducing Elbow	Grooved	114.3 x 88.9 x 33.7 mm 165.1 x 88.9 x 33.7 mm	300	(2065)	b
90R	90° Reducing Elbow	NPT	1/2 x 1/4, 3/8 3/4 x 1/4, 3/8, 1/2 1 x 1/4 x 3/8, 1/2, 3/4 1 1/4 x 3/8, 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 3 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2 4 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	a

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90R	90° Reducing Elbow	BSP	1/2 x 1/4, 3/8 3/4 x 1/4, 3/8, 1/2 1 x 1/4 x 3/8, 1/2, 3/4 1 1/4 x 3/8, 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 3 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2 4 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	c
90R	90° Reducing Elbow	BSP	6 x 4	300	(2065)	c
90R	90° Reducing Elbow	BSP	3/8 x 1/4 1/2 x 1/4, 3/8 3/4 x 3/8, 1/2 1 x 3/8, 1/2, 3/4 1 1/4 x 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1, 1 1/2, 2 3 x 1 1/2, 2, 2 1/2 4 x 2 1/2, 3	500	(3445)	e
90R	90° Reducing Elbow	Grooved	6 x 4 88.9 x 76.1 mm 114.3 x 76.1, 88.9 mm 165.1 x 114.3 mm	500	(3445)	b
90S	90° Short Radius Elbow	Grooved	2, 2 1/2, 3, 4, 5, 6, 8 76, 139.1, 165mm	300	(2065)	b
90S	90° Short Radius Elbow	Grooved	108, 159, 216.3 mm	300	(2065)	b
90S	90° Short Radius Elbow	Grooved	114, 165 mm	365	(2515)	b
90U	Return Bend	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
91R	90°Reducing Elbow	Grooved x NPT	42.4 x 21.3, 26.7, 33.7 mm 48.3 x 21.3, 26.7, 33.7 mm 60.3 x 21.3, 26.7, 33.7 mm 73 x 21.3, 26.7, 33.7 mm 88.9 x 26.7, 33.7 mm	500	(3445)	b
91R	90°Reducing Elbow	Grooved x BSP	42.4 x 21.3, 26.7, 33.7 mm 48.3 x 21.3, 26.7, 33.7 mm 60.3 x 21.3, 26.7, 33.7 mm 73 x 21.3, 26.7, 33.7 mm 88.9 x 26.7, 33.7 mm	500	(3445)	b
92	90° Street Elbow	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2 2 1/2, 3, 4	500	(3445)	a
92	90° Street Elbow	NPT	6	300	(2065)	a
92	90° Street Elbow	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2 2 1/2, 3, 4	500	(3445)	c
92	90° Street Elbow	BSP	6	300	(2065)	c
92	90° Street Elbow	BSP	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
92R	90° Reducing Street Elbow	BSP	3/4 x 1/2 1 x 3/4	500	(3445)	c
92R	90° Reducing Street Elbow	BSP	1/2 x 3/8 3/4 x 3/8, 1/2, 1 1 x 3/4 1 1/4 x 1 1 1/2 x 1, 1 1/4	500	(3445)	e

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94	90° Elbow	Male BSP	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
95	Union Elbow, Flat Seat without gasket	Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	c
95	Union Elbow, Flat Seat without gasket	Female BSP	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	e
95D	Union Elbow, Flat Seat with gasket	Female BSP	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	e
96	Union Elbow, Conical Joint Iron to Iron	Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	c
96	Union Elbow, Conical Joint Iron to Iron	Female BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	e
97	Union Elbow, Flat Seat without gasket	Male BSP X Female BSP	1 1/2	500	(3445)	c
97	Union Elbow, Flat Seat without gasket	Male BSP X Female BSP	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	e
98	Union Elbow, Conical Joint Iron to Iron	Male BSP X Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	c
98	Union Elbow, Conical Joint Iron to Iron	Male BSP X Female BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	e
105	11.25° Elbow	Grooved	1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 6 76.1, 108, 139.7, 159, 165.1 mm	500	(3445)	b
105	11.25° Elbow	Grooved	8	300	(2065)	b
110	22.5° Elbow	Grooved	1 1/4, 1 1/2, 2, 3, 4, 6 73, 76.1, 108, 139.7, 159, 165.1 mm	500	(3445)	b
110	22.5° Elbow	Grooved	8	300	(2065)	b
110X	22.5° Elbow	Grooved	4 159, 165 mm	300	(2065)	b
120	45° Elbow	Grooved	1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 165 mm	500	(3445)	b
120	45° Elbow	Grooved	1 108, 133, 139.7, 159 mm	500	(3445)	b
120	45° Elbow	Grooved	216.3, 267.4, 318.5 mm	300	(2065)	b
120	45° Elbow	NPT	1/2, 3/4, 1, 1 1/4, 1 12, 2 2 1/2, 3, 4	500	(3445)	a
120	45° Elbow	NPT	5, 6	300	(2065)	a
120	45° Elbow	BSP	1/2, 3/4, 1, 1 1/4, 1 12, 2 2 1/2, 3, 4	500	(3445)	c
120	45° Elbow	BSP	5, 6	300	(2065)	c
120	45° Elbow	BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
120	45° Elbow	BSP	6	450	(3100)	e
120X	45° Elbow	Grooved	3, 4, 6, 8, 10 108, 140, 159, 165 mm	300	(2065)	b
121	45° Street Elbow	NPT	1/2, 3/4, 1, 1 1/4, 1 12, 2 2 1/2, 3, 4	500	(3445)	a

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121	45° Street Elbow	BSP	1/2, 3/4, 1, 1 1/4, 1 12, 2 2 1/2, 3, 4	500	(3445)	c
121	45° Street Elbow	BSP	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	e
130	Equal Tee	Grooved	1 1/4, 1 1/2,, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12 76/1. 165 mm	500	(3445)	b
130	Equal Tee	Grooved	1 76, 133, 139.7 mm	500	(3445)	b
130	Equal Tee	Grooved	267.4 mm	300	(2065)	b
130	Equal Tee	NPT	1/2, 3/4, 1, 1 1/4, 1 12, 2 2 1/2, 3, 4	500	(3445)	a
130	Equal Tee	NPT	5, 6	300	(2065)	a
130	Equal Tee	BSP	1/2, 3/4, 1, 1 1/4, 1 12, 2 2 1/2, 3, 4	500	(3445)	c
130	Equal Tee	BSP	5, 6	300	(2065)	c
130X	Equal Tee	Grooved	3, 4, 6, 8, 10, 12 108, 133, 140, 159, 165 mm	300	(2065)	b
130C	Reducing Tee	Grooved	114.3 x 88.9 x 33.7 mm 165.1 x 88.9 x 33.7 mm	300	(2065)	b
130D	Reducing Tee	Grooved	114.3 x 88.9 x 33.7 mm 165.1 x 88.9 x 33.7 mm	300	(2065)	b
130R	Reducing Tee	Grooved	2 x 1 1/2 3 x 1, 1 1/2, 2, 2 1/2 4 x 1, 2, 2 1/2, 3 5 x 1 1/2, 2, 2 1/2, 3, 4 6 x 2, 2 1/2, 3, 4, 5 8 x 2, 3, 4, 5, 6	500	(3445)	b
130R	Reducing Tee	Grooved	2 x 1 2 1/2 x 1 1/2, 2 3 x 1 1/4 4 x 1 1/2 60 x 48 mm 76.1 x 42.4, 48.3, 60.3 mm 88.9 x 48, 60, 73, 76.1 mm 108 x 60.3, 73, 88.9 mm 114.3 x 34, 60, 73, 76.1, 88.9 mm 133 x 60.3, 76.1, 108, 114.3 mm 139.7 x 48.3, 60.3, 76.1, 88.9, 114.3 141 x 114.3 mm 159 x 60.3, 76.1, 88.9, 114.3, 133 mm 168 x 60, 73, 89, 114, 141 mm	500	(3445)	b
130R	Reducing Tee	Grooved	10 x 6, 8 12 x 8, 10 165.1 x 60.3, 76.1, 88.9, 114.3, 133, 139.7, 159 mm 168.3 x 76.1, 139.7 mm 216.3 x 114.3, 165.1 mm 219.1 x 60, 73, 76.1, 89, 108, 114.3, 133, 139.7, 141.3, 159, 165.1, 168 mm 273 x 165.1 mm 323.9 x 165.1, 168.3 mm	300	(2065)	b

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130R	Reducing Tee	NPT	1/2 x 1/2 x 1/4, 3/8 1/2 x 1/4 x 1/2 1/2 x 3/8 x 1/2 3/4 x 3/4 x 1/4, 3/8, 1/2 3/4 x 1/2 x 1/2 x 3/4 1 x 1 x 1/4, 3/8, 1/2, 3/4 1 x 1/2 x 1/2, 3/4, 1 1 x 3/4 x 1/2, 3/4, 1 1 1/4 x 1/2 x 1/2, 3/4, 1, 1 1/4 1 1/4 x 3/4 x 3/4, 1, 1 1/4 1 1/4 x 1 x 1/2, 3/4, 1, 1 1/4, 1 1/2 1 1/4 x 1 1/4 x 3/8, 1/2, 3/4, 1 1 1/2 x 1/2 x 3/4, 1 1/2 1 1/2 x 3/4 x 1/2, 3/4, 1, 1 1/4, 1 1/2 1 1/2 x 1 x 1/2, 3/4, 1, 1 1/4, 1 1/2 1 1/2 x 1 1/4 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 1 1/2 x 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 1/2 x 2 2 x 3/4 x 2 2 x 1 x 1, 1 1/2, 2 2 x 1 1/4 x 1, 1 1/4, 1 1/2, 2 2 x 1 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 2 x 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1 1/2 x 2, 2 1/2 2 1/2 x 2 x 2, 2 1/2 2 1/2 x 2 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 3 x 2 x 2, 3 3 x 3 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2 4 x 4 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	a
130R	Reducing Tee	BSP	1/2 x 1/4, 3/8 3/4 x 1/4, 3/8, 1/2 1 x 1/4, 3/8, 1/2, 3/4 1 1/4 x 3/8, 1/2, 3/4, 1 1 1/2 x 3/8, 1/2, 3/4, 1, 1 1/4 2 x 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 3/4, 1/2, 1, 1 1/4, 1 1/2, 2 3 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2 4 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3 1/2 x 1/2 x 3/4, 1 3/4 x 3/4 x 1, 1 1/4 1 x 1 x 1 1/4 x 1 1/2, 2, 2 1/2 1 1/4 x 1 1/4 x 1 1/2, 2 1 1/2 x 1 1/2 x 2, 2 1/2 2 x 2 x 2 1/2 2 1/2 x 2 1/2 x 3, 4 3/4, 1 x 1/2 x 1/2 1 1/4, 1 1/2 x 3/4 x 3/4 1 1/4 x 1/2 x 1/2 1 1/4 , 1 1/2, 2 x 1 x 1 1 1/2, 2 x 1 1/4 x 1 1/4 2 x 1 1/2 x 1 1/2 2 1/2, 3 x 2 x 2 3/4 x 1/2 x 3/4 1 x 1/2 x 1, 1 x 3/4 x 1, 1 x 1/4 x 1 1 1/4 x 1/2 x 1 1/4, 1 1/4, 1 1/4	500	(3445)	c

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			x 3/4 x 1 1/4, 1 1/4 x 1 x 1 1/4 1 1/2 x 1/2 x 1 1/2, 1 1/2 x 3/4 x 1 1/2, 1 1/2 x 1 x 1 1/2, 1 1/2 x 1 1/4 x 1 1/2 2 x 1/2 x 2, 2 x 3/4 x 2, 2 x 1 x 2, 2 x 1 1/4 x 2, 2 x 1 1/2 x 2 2 1/2 x 1 1/2 x 2 1/2, 2 1/2 x 2 x 2 1/2 3/4 x 1/2 x 1, 1 x 1/2 x 3/4, 1 x 3/4 x 1/2 1 1/4 x 1/2 x 3/4, 1 1 1/4 x 3/4 x 1/2, 1 1 1/4 x 1 x 1/2, 3/4 1 1/2 x 3/4 x 1, 1 1/4 1 1/2 x 1 x 1/2, 1 1/4 1 1/2 x 1 1/4 x 1/2, 3/4, 2 2 x 1 x 1 1/2 2 x 1 1/4 x 1, 1 1/22 x 1 1/2 x 3/4, 1, 1 1/4 2 1/2 x 2 x 1/2, 1, 1 1/4			
130R	Reducing Tee	BSP	6 x 2, 3, 4	300	(2065)	c
130R	Reducing Tee	BSP	3/8 x 3/8 x 1/4, 1/2 1/2 x 3/8 x 3/8, 1/2 1/2 x 1/2 x 1/4, 3/8, 3/4, 1 3/4 x 3/8 x 3/4 3/4 x 1/2 x 1/2, 3/4, 1 3/4 x 3/4 x 1/4, 3/8, 1/2, 1 1 x 3/8 x 1 1 x 1/2 x 1/2, 3/4, 1 1 x 3/4 x 1/2, 3/4, 1 1 x 1 x 1/4, 3/8, 1/2, 3/4, 1 1/4, 1 1/2 1 1/4 x 1/2 x 3/4, 1, 1 1/4 1 1/4 x 3/4 x 1/2, 3/4, 1, 1 1/4 1 1/4 x 1 x 1/2, 3/4, 1, 1 1/4, 1 1/2 1 1/4 x 1 1/4 x 3/8, 1/2, 3/4, 1, 1 1/2, 2 1 1/2 x 1/2 x 1, 1 1/4, 1 1/2 1 1/2 x 3/4 x 1, 1 1/4, 1 1/2 1 1/2 x 1 x 1/2, 3/4, 1, 1 1/4, 1 1/2 1 1/2 x 1 1/4 x 1/2, 3/4, 1, 1 1/4, 1 1/2 1 1/2 x 1 1/2 x 1/2, 3/4, 1, 1 1/4, 2 2 x 1/2 x 1 1/2, 2 2 x 3/4 x 1 1/2, 2 2 x 1 x 1 1/2, 2 2 x 1 1/4 x 1 1/4, 1 1/2, 2 2 x 1 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 2 x 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 2 x 2 2 1/2 x 2 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 3 x 2 x 2 3 x 3 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2 4 x 4 x 1, 1 1/4, 1 1/2, 2, 2 1/2, 3 5 x 5 x 4	500	(3445)	e
130R	Reducing Tee	BSP	6 x 6 x 4	450	(3100)	e

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130R	Bullhead Tee	NPT	3/8 x 3/8 x 1/2 1/2 x 1/2 x 3/4, 1 3/4 x 3/4 x 1 1 x 1 x 1 1/4, 1 1/2, 2 1 1/4 x 1 1/4 x 1 1/2, 2 1 1/2 x 1 1/2 x 2 2 x 2 x 2 1/2	500	(3445)	a
130RX	Reducing Tee	Grooved	3 x 2 1/2 3 x 76 mm 4 x 2, 2 1/2, 3 5 x 4 6 x 2, 2 1/2, 3, 4, 5 6 x 76, 140 mm 8 x 3, 4, 6 8 x 76, 140, 159, 165 mm 10 x 6, 8 10 x 159, 165 mm 12 x 4, 8, 10 12 x 159 165 mm 140 mm x 4 159 mm x 3, 4 159 mm x 108, 133 mm 165 mm x 2, 3, 4 165 mm x 76, 140 mm	300	(2065)	b
130S	Short Radius Tee	Grooved	2, 2 1/2, 3, 4, 5, 6, 8 76, 139.7, 165 mm	300	(2065)	b
130S	Short Radius Tee	Grooved	108, 159, 216.3 mm	300	(2065)	b
130S	Short Radius Tee	Grooved	114, 165 mm	365	(2515)	b
131	Equal Tee	Grooved	3, 4, 6	300	(2065)	b
131	Equal Tee	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	c
131	Equal Tee	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
131R	Reducing Tee	Grooved	2 x 1, 1 1/4, 1 1/2 2 1/2 x 1, 1 1/4, 1 1/2, 2 3 x 1, 1 1/4, 1 1/2, 2 4 x 1, 1 1/4, 1 1/2, 2, 3 6 x 2, 3 8 x 2, 3, 4 76.1 x 33.7, 42.4, 48.3, 60.3 mm 88.9 x 76.1 mm 108 x 60.3, 76.1, 88.9 mm 114.3 x 76.1 mm 133 x 60.3, 76.1, 88.9 mm 139.7 x 33.7, 42.4, 48.3, 60.3, 76.1, 88.9 mm 159 x 60.3, 76.1, 88.9 mm 165.1 x 33.7, 42.4, 48.3, 60.3, 76.1, 88.9, 114.3 mm 168.3 x 76.1 mm 219.1 x 76.1 mm	300	(2065)	b
131RX	Reducing Tee	NPT	2 x 1, 1 1/2 2 1/2 x 1 1/2, 2 3 x 1, 1 1/2, 2 4 x 2, 3 4 x 76 mm 6 x 2, 3, 4 6 x 76 mm 8 x 4 8 x 76 mm 76 mm x 1 1/2, 2 108 mm x 76 165 mm x 2, 3, 4	300	(2065)	b

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			165 mm x 76 mm			
131RX	Reducing Tee	BSP	2 x 1, 1 1/2 2 1/2 x 1 1/2, 2 3 x 1, 1 1/2, 2 4 x 2, 3 4 x 76 mm 6 x 2, 3, 4 6 x 76 mm 8 x 4 8 x 76 mm 76 mm x 1 1/2, 2 108 mm x 76 165 mm x 2, 3, 4 165 mm x 76 mm	300	(2065)	b
132	Twin Elbow	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
133	Equal Tee	Female BSP X Female BSP X Male BSP	3/8, 1/2, 3/4, 1	500	(3445)	e
134	Service Tee	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	a
134	Service Tee	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	c
134	Service Tee	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
134R	Service Tee Reducing	BSP	2 x 1 1/2 2 1/2 x 2 3 x 2 1/2	500	(3445)	c
135	Equal Tee	Male BSP	1/2, 3/4, 1	500	(3445)	e
165	Lateral Y Branch	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
165	Lateral Y Branch	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
165	Lateral Y Branch	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
180	Equal Cross	Grooved	1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 165 mm	500	(3445)	b
180	Equal Cross	Grooved	60, 73, 76, 89, 108, 114, 139.7, 141, 159, 165, 168 mm	500	(3445)	b
180	Equal Cross	Grooved	219 mm	300	(2065)	b
180	Equal Cross	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
180	Equal Cross	NPT	5, 6	300	(2065)	a
180	Equal Cross	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
180	Equal Cross	BSP	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
180X	Equal Cross	Grooved	6, 8 159, 165mm	300	(2065)	b
180R	Reducing Cross	Grooved	3 x 2 4 x 2, 3 8 x 2, 4 76.1 x 60.3 mm 139.7 x 114.3 mm 159 x 114.3 mm 165.1 x 60.3, 76.1, 88.9, 114.3 mm	500	(3445)	b

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180R	Reducing Cross	Grooved	219.1, 139.7, 159, 165.1 mm	300	(2065)	b
180R	Reducing Cross	NPT	3/4 x 1/2 1 x 3/4 1 1/4 x 3/4, 1 1 1/2 x 3/4, 1, 1 1/4 2 x 3/4, 1, 1 1/4, 1 1/2 2 x 1/2 x 1, 1 1/4, 1 1/2, 2 3 x 1, 1 1/4, 1 1/2, 2, 2 1/2 4 x 2 1/2, 3	500	(3445)	a
180R	Reducing Cross	BSP	3/4 x 1/2 1 1/2 x 3/4 1 1/4 x 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 3/4, 1, 1 1/4, 1 1/2 2 x 1/2 x 1, 1 1/4, 1 1/2, 2 3 x 3/4, 1, 1 1/4, 1 1/2, 2 4 x 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	c
180R	Reducing Cross	BSP	3/4 x 1/2, 1 x 1/2	500	(3445)	e
180RX	Reducing Cros	Grooved	6 x 4 8 x 6 165 mm x 114 mm 219 mm x 165 mm	300	(2065)	b
181	Reducing Cross	Grooved	3 x 1 1/2, 2 4 x 1, 1 1/4, 1 1/2, 2, 3 4 x 76.1 mm 76.1 x 60.3 mm 165.1 x 48.3, 60.3 mm	300	(2065)	b
181RX	Reducing Cross	NPT	165 mm x 89 mm	300	(2065)	b
181RX	Reducing Cross	BSP	165 mm x 89 mm	300	(2065)	b
220	Coupling	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
220	Coupling	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
220	Coupling	BSP	5, 6	300	(2065)	c
230	Eccentric Reducer	Grooved	4 x 2, 3 6 x 3, 4 8 x 4, 6 88.9 x 60.3 mm 108 x 76.1, 88.9 mm 114.3 x 76.1 mm 139.7 x 114.3 mm 159 x 108, 114.3 mm 165.1 x 88.9, 114.3, 139.7 mm 168.3 x 139.7, 141.3 mm 219.1 x 159, 165.1 mm	300	(2065)	b
230	Eccentric Reducer	Grooved	219 x 168 mm 273 x 219 mm	365	(2515)	b
230N	Eccentric Reducer	Grooved x Female NPT	108 x 76.1 mm 114.3 x 76.1 mm 139.7 x 88.9 mm 165.1 x 88.9 mm	300	(2065)	b
240	Reducing Socket	NPT	1/2 x 3/8 3/4 x 3/8, 1/2 1 x 3/8, 1/2, 3/4 1 1/4 x 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1 1/2, 2 3 x 1 1/2, 2, 2 1/2	500	(3445)	a

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			4 x 2, 3			
240	Reducing Socket	BSP	1/2 x 1/4, 3/8 3/4 x 1/4, 3/8, 1/2 1 x 1/4, 3/8, 1/2, 3/4 1 1/4 x 1/4, 3/8, 1/2, 3/4, 1 1 1/2 x /4, 3/8, 1/2, 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 3 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2	500	(3445)	c
240	Reducing Socket	BSP	1/4 x 1/8 3/8 x 1/8, 1/4 1/2 x 1/4, 3/8 3/4 x 1/4, 3/8, 1/2 1 x 3/8, 1/2, 3/4 1 1/4 x 3/8, 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 3 x 1, 1 1/4, 1 1/2 4 x 1 1/2, 2, 2 1/2, 3	500	(3445)	e
240	Concentric Reducer	Grooved	2 x 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1, 1 1/4, 1 1/2, 2 3 x 3/4, 1, 1 1/2, 2, 2 1/2 4 x 1, 1 1/2, 2, 2 1/2, 3 5 x 3, 4 6 x 1, 2, 2 1/2, 3, 4, 5 8 x 2 1/2, 3, 4, 5, 6	500	(3445)	b
240	Concentric Reducer	Grooved	1 1/4 x 1 1 1/2 x 1, 1 1/2 4 x 1 1/4 5 x 2 1/2 76 x 34, 42, 48, 60 mm 89 x 42, 76 mm 108 x 60.3, 73, 76, 89 mm 114.3 x 76.1 mm 133 x 108, 114.3 mm 139.7 x 60.3, 76.1, 88.9, 114.3 mm 141 x 76, 89, 114 mm 159 x 60.3, 76.1, 88.9, 108, 114.3, 133 mm 165.1 x 60.3, 76.1, 88.9, 108, 114.3, 139.7 mm 168.3 x 76.1, 139.7 mm	500	(3445)	b
240	Concentric Reducer	Grooved	216.3 x 114.3, 165.1 mm 219.1 x 108, 139.7, 159, 165.1 mm 273 x 159, 165.1, 168.3, 219.1 mm 322.9 x 219.1, 273 mm	300	(2065)	b
240X	Concentric Reducer	Grooved	4 x 3 6 x 4 8 x 4 10 x 4, 8 12 x 4 114 mm x 76 mm 140 mm x 114 mm 159 mm x 108, 114 mm 165 mm x 89, 114, 140 mm 168 mm x 140 mm 219 mm x 133, 165 mm	300	(2065)	b

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			324 mm x 159, 165 mm			
240N	Reducing Socket	NPT	1 x 3/4	300	(2065)	c
240N	Concentric Reducer	Grooved x Female NPT	1 x 1/2 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1, 1 1/4, 1 1/2, 2 3 x 3/4, 1, 1 1/2, 1 1/4, 2, 2 1/2 4 x 1, 1 1/2, 1 1/4, 2, 2 1/2, 3 5 x 3, 4 6 x 2, 2 1/2, 3, 4, 5 8 x 2 1/2, 3, 4, 5, 6	500	(3445)	b
240N	Concentric Reducer	Grooved x Female NPT	4 x 1/2, 3/4, 1 1/2 8 x 1 1/2, 2 76 x 21, 27, 34, 42, 48, 60 mm 89 x 21, 76 mm 108 x 34, 42, 48, 60, 76, 89 mm 114 x 76 mm 133 x 48, 60, 76, 89 mm 139.7 x 27, 34, 42, 48, 60, 76, 89, 114 mm 141.3 x 89, 114 mm 159 x 27, 34, 42, 48, 60, 76, 89, 114 mm 165 x 21, 27, 34, 42, 48, 60, 76, 89, 114 mm 219 x 76 mm	500	(3445)	b
240NX	Concentric Reducer	NPT	3 x 2 4 x 1 1/2, 2, 3 4 x 76 mm 8 x 1 76 mm x 60 mm 89 mm x 76 mm 108 mm x 76, 89 mm 159 mm x 89, 114 mm 165 mm x 60, 76, 89, 114 mm	300	(2065)	b
240NX	Concentric Reducer	BSP	3 x 2 4 x 1 1/2, 2, 3 4 x 76 mm 8 x 1 76 mm x 60 mm 89 mm x 76 mm 108 mm x 76, 89 mm 159 mm x 89, 114 mm 165 mm x 60, 76, 89, 114 mm	300	(2065)	b
240W	Concentric Reducer	Grooved x NPT	2 x 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1, 1 1/4, 1 1/2, 2 3 x 3/4, 1, 1 1/2, 2, 2 1/2 4 x 1, 1 1/2, 2, 2 1/2, 3 5 x 3, 4 6 x 2, 2 1/2, 3, 4, 5 8 x 2 1/2, 3, 4, 5, 6	500	(3445)	b
240W	Concentric Reducer	Grooved x NPT	76 x 60 mm 89 x 76	500	(3445)	b
241	Bushing	NPT	1/2 x 1/4, 3/8 3/4 x 3/8, 1/2 1 x 1/2, 3/4 1 1/4 x 1/2, 3/4, 1 1 1/2 x 3/8, 1/2, 3/4, 1, 1 1/4 2 x 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 3 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2	500	(3445)	a

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			3 1/2 x 2 1/2, 3 4 x 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 3 1/2			
241	Bushing	NPT	5 x 2, 3, 4 6 x 2, 2 1/2, 3, 3 1/2, 4, 5	300	(2065)	a
241	Bushing	BSP	1/2 x 1/4, 3/8 3/4 x 1/4, 3/8, 1/2 1 x 1/4, 3/8, 1/2, 3/4 1 1/4 x 1/4, 3/8, 1/2, 3/4, 1 1 1/2 x 1/4, 3/8, 1/2, 3/4, 1, 1 1/4 2 x 1/4, 3/8, 1, 1 1/4, 1 1/2 2 1/2 x 1/2, 3/4, 1 1/2, 2 3 x 2, 2 1/2 3 1/2 x 3 4 x 3/4, 1, 1 1/4, 1 1/2, 3	500	(3445)	c
241	Bushing	BSP	5 x 3, 4 6 x 2, 2 1/2, 5	300	(2065)	c
241	Bushing	BSP	1/4 x 1/8 3/8 x 1/8, 1/4 1/2 x 1/8, 1/4, 3/8 3/4 x 1/8, 1/4, 3/8, 1/2 1 x 1/4, 3/8, 1/2, 3/4 1 1/4 x 3/8, 1/2, 3/4, 1 1 1/2 x 1/4, 3/8, 1/2, 3/4, 1, 1 1/4 2 x 1, 1 1/4, 1 1/2 2 1/2 x 1/2, 3/4, 1 1/2, 2 3 x 1/2, 2, 2 1/2 4 x 1, 1 1/4, 1 1/2, 2, 3 5 x 4	500	(3445)	e
241	Bushing	BSP	6 x 5	450	(3100)	e
241D	Bushing	BSP	2 x 1/2, 3/4 2 1/2 x 1, 1 1/4 3 x 1/2, 3/4, 1, 1 1/4, 1 1/2 4 x 2, 2 1/2	500	(3445)	c
241D	Bushing	BSP	6 x 3, 4	300	(2065)	c
241D	Bushing	BSP	1 x 1/2 2 x 1/2, 3/4 2 1/2 x 1, 1 1/4 3 x 1/2, 3/4, 1, 1 1/4, 1 1/2 4 x 2, 2 1/2	500	(3445)	e
241D	Bushing	BSP	6 x 3, 4	450	(3100)	e
245	Hex Nipple Reducing	BSP	1/2 x 1/4, 3/8 3/4 x 1/4, 3/8, 1/2 1 x 1/2, 3/4 1 1/4 x 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1, 1 1/4, 1 1/2 3 x 1 1/2, 2, 2 1/2 4 x 2, 4 x 2 1/2, 4 x 3	500	(3445)	c
245	Hex Nipple Reducing	BSP	1/4 x 1/8 3/8 x 1/8, 1/4 1/2 x 1/4, 3/8 3/4 x 1/4, 3/8, 1/2 1 x 1/2, 3/4 1 1/4 x 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1, 1 1/4, 1 1/2, 2	500	(3445)	e

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			3 x 1 1/2, 2, 2 1/2 4 x 2, 2 1/2, 3			
246	Extension Reducing	Male BSP X Female BSP	1/2 x 1/4, 3/8 3/4 x 3/8, 1/2 1 x 1/2, 3/4 1 1/4 x 1/2, 3/4, 1 1 1/2, 3/4, 1, 1 1/4 2 x 1, 1 1/4, 1 1/2	500	(3445)	c
246	Extension Reducing	Male BSP X Female BSP	1/4 x 1/8 3/8 x 1/4 1/2 x 1/4, 3/8 3/4 x 3/8, 1/2 1 x 1/2, 3/4 1 1/4 x 1/2, 3/4, 1 1 1/2 x 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1 1/2, 2 3 x 2, 2 1/2	500	(3445)	e
270	Socket	BSP Parallel Threads	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
270	Socket	BSP Parallel Threads	6	300	(2065)	c
271	Socket	BSP Right and Left Threads	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	c
271	Socket	BSP Right and Left Threads	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	e
280	Hex Nipple	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2	500	(3445)	a
280	Hex Nipple	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
280	Hex Nipple	BSP	5, 6	300	(2065)	c
280	Hex Nipple	BSP	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5	500	(3445)	e
280	Hex Nipple	BSP	6	450	(3100)	e
281	Hex Nipple	BSP Right and Left Threads	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
290	Plug, Sq. Hd., Beaded	BSP	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
291	Plug, Sq. Hd.	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
291	Plug, Sq. Hd.	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
291	Plug, Sq. Hd.	BSP	6	300	(2065)	c
291	Plug, Sq. Hd.	BSP	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
291	Plug, Sq. Hd.	BSP	6	450	(3100)	e
291-4	Plug, Cross Slotted	NPT	4	500	(3445)	a
291-4	Plug, Cross Slotted	NPT	5, 6	300	(2065)	a
291N	Plug, Sq. Socket	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
291N	Plug, Sq. Socket	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	c

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291S	Plug, Solid Sq.	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
291S	Plug, Solid Sq.	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
300	End Cap	Grooved	1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 165 mm	500	(3445)	a
300	End Cap	Grooved	1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 89, 114, 140, 165 mm	500	(3445)	b
300	End Cap	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
300	End Cap	NPT	5, 6	300	(2065)	a
300	End Cap	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
300	End Cap	BSP	5, 6	300	(2065)	c
300	End Cap	BSP	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
300	End Cap with BSP threaded outlet	Grooved x BSP	168 x 21, 60 mm 219 x 34 mm	500	(3445)	b
300PX	End Cap with BSP threaded outlet	Grooved x BSP	73 x 34 mm 76 x 34 mm 89 x 48, 60 mm 114 x 34, 48, 60 mm 140 x 48, 60 mm 165 x 48 mm 168 x 48, 60 mm	500	(3445)	b
300PX	End Cap with BSP threaded outlet	Grooved x BSP	219 x 48, 60 mm	300	(2065)	b
301	Round Cap	BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
310	Locknut	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
312	Backnut	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 4	500	(3445)	c
321	Flange Adapter	Flanged x NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	a
321-4	Flange Adapter	Flanged x BSP	1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
321-4	Flange Adapter	Flanged x BSP	6	300	(2065)	a
321-6	Flange Adapter	Flanged x BSP	1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
321-6	Flange Adapter	Flanged x BSP	6	300	(2065)	a
321G	Flange Adapter	Flanged x Grooved	2, 2 1/2, 3, 4, 5, 6, 8 76.1, 165 mm	500	(3445)	b
321G	Flange Adapter	Flanged x Grooved	1, 1 1/4, 1 1/2, 10, 12 108, 133, 139.7, 159, 219, 273 mm	300	(2065)	b
321G	Flange Adapter	Flanged x Grooved	60, 73, 76.1, 89, 114 mm	365	(2515)	b
321G	Flange Adapter	Flanged x Grooved	139.7, 141.3, 165, 168, 324 mm	225	(1550)	b
321GA	Flange Adapter	Flanged x Grooved	2, 4, 8, 10	300	(2065)	b
321GH	Flange Adapter	Flanged x Grooved	4, 8 108, 159, 165 mm	365	(2515)	b
321H	Flange Adapter	Flanged x BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a

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321N	Flange Adapter	Flanged x BSP	2	500	(3445)	a
321P	Flange Adapter	Flanged x BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
321P	Flange Adapter	Flanged x BSP	5, 6	300	(2065)	a
321PW	Flange Adapter	Flanged x BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
321PW	Flange Adapter	Flanged x BSP	5, 6	300	(2065)	a
321TD	Flange Adapter	Flanged x BSP	1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
321TD	Flange Adapter	Flanged x BSP	6	300	(2065)	a
321W	Flange Adapter	Flanged x BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
330	Union Flat Seat without gasket	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
330	Union Flat Seat without gasket	BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
330D	Union Flat Seat with gasket, hex	BSP	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
331	Union Flat Seat without gasket	Male BSP X Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
331	Union Flat Seat without gasket	Male BSP X Female BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
331D	Union Flat Seat with gasket, hex	Male BSP X Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
340	Union Conical Joint Iron to Iron	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
340	Union Conical Joint Iron to Iron	BSP	1/8, 1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
340F	Union Nut	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
341	Union Conical Joint Iron to Iron	Male BSP X Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
341	Union Conical Joint Iron to Iron	Male BSP X Female BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
342	Union Conical Joint Brass to Iron	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
342	Union Conical Joint Brass to Iron	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	c
342	Union Conical Joint Brass to Iron	BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
344	Union Taper Seat	Male BSP	1/4, 3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
345	Union Flat Seat	Male BSP X Female BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	e
346	Union Flat Seat	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	e
471	Flanged Base Elbow	BSP	3/8, 1/2, 3/4, 1	500	(3445)	e

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526	Extension	BSP	1/2	500	(3445)	c
526	Extension	BSP	3/8 x 30, 40,100 1/2 x 30, 40 3/4 x 40	500	(3445)	e
529	Extension	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	a
529A	Extension Long	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	c
529A	Extension Long	BSP	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
529X	Extension Short	BSP	1/2	500	(3445)	c
531	Coupling	BSP	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	e
596	Plug, Sq. Socket	BSP	3/4, 1, 1 1/4, 1 1/2	500	(3445)	e
1090	90° Elbow Plain	BSP	1/2, 3/4, 1, 1 1/4, 2	500	(3445)	c
1130	Equal Tee Plain	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	c
1220	Socket Plain	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	c
1221	Side Outlet Elbow	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	a
1221	Side Outlet Elbow	BSP	1/2, 3/4, 1, 1 1/4, 2	500	(3445)	c
1221	Side Outlet Elbow	BSP	3/8, 1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	e
1223	Side Outlet Tee	BSP	1/2, 3/4, 1	500	(3445)	c
1223	Side Outlet Tee	BSP	1/2, 3/4, 1, 1 1/4	500	(3445)	e
2220	Wye	BSP	3/8, 1/2, 3/4, 1	500	(3445)	e
9015	Blk. Drinking Nipple	BSP	1/2	500	(3445)	e
9030	Blk. Drinking Nipple	BSP	1/2, 3/4, 3/4 x 1/2	500	(3445)	e
9045	Blk. Drinking Nipple	BSP	1/2, 3/4	500	(3445)	e
T330	Union Flat Seat	BSP	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3	500	(3445)	e
35C	Cap	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2	500	(3445)	b
35CP	Straight Coupling	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2	500	(3445)	b
35E	90° Elbow	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	b
35F	45° Elbow	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2	500	(3445)	b
35HB	Bushings	NPT	1 x 1/2, 3/4 1 1/4 x 3/4, 1 1 1/2 x 1, 1 1/4 2 x 1, 1 1/4, 1 1/2	500	(3445)	b
35RC	Concentric Reducer	NPT	1 x 1/2, 3/4 1 1/4 x 3/4, 1 1 1/2 x 1, 1 1/4 2 x 1, 1 1/4, 1 1/2	500	(3445)	b
35RE	90° Reducing Elbow	NPT	3/4 x 1/2 1 x 1/2, 3/4 1 1/4 x 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 1 1/2, 2 3 x 3/4	500	(3445)	b

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35RT	Reducing Tee	NPT	3/4 x 3/4 x 1/2, 1 3/4 x 1/2 x 3/4, 1/2 1 x 1 x 1/2, 3/4, 1 1/4, 1 1/2 1 x 3/4 x 3/4, 1 1 x 1/2 x 1 1 1/4 x 1 1/4 x 1/2, 3/4, 1, 1 1/2, 2 1 1/4 x 1 x 1/2, 3/4, 1, 1 1/4, 1 1/2 1 1/4 x 3/4 x 1 1/4 1 1/4 x 1/2 x 1 1/4 1 x 1/2 x 1 1/2 x 1/2, 3/4, 1, 1 1/3, 1 1/2, 2 1 1/2 x 1 x 1/2, 3/4, 1, 1 1/4, 1 1/2 1 1/2 x 3/4 x 1 1/4, 1 1/2 1 1/2 x 1/2 x 1 1/4, 1 1/2 2 x 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 1/2 2 x 1 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 2 x 1 1/4 x 2 2 x 1 x 2 2 1/2 x 2 1/2 x 3/4, 1, 1 1/4, 1 1/2 2, 3	500	(3445)	b
35RX	Reducing Cross	NPT	1 1/4 x 1 1 1/2 x 1 2 x 1	500	(3445)	b
35SP	Square Head Pipe Plug	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	500	(3445)	b
35T	Equal Tee	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	500	(3445)	b
35U	Union	NPT	1, 1 1/4, 1 1/2, 2	500	(3445)	b
35X	Cross	NPT	1, 1 1/4, 1 1/2, 2	500	(3445)	b
37E	90° Elbow	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	300	(2065)	g
37F	45° Elbow	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	300	(2065)	g
37RC	Concentric Reducer	NPT	1 x 1/2, 3/4 1 1/4 x 1 2 x 3/4, 1	300	(2065)	g
37RE	90° Reducing Elbow	NPT	3/4 x 1/2 1 x 1/2, 3/4 1 1/4 x 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1, 1 1/4 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2 2 1/2 x 3/4, 1, 1 1/4, 1 1/2, 2 3 x 2	300	(2065)	g
			3/4 x 3/4 x 1 1 x 1/2 x 1/2, 3/4, 1 1 x 3/4 x 1/2, 3/4, 1 1 x 1 x 1/2, 3/4, 1 1/4, 1 1/2 1 x 1 1/4 x 1 1 1/4 x 1 1/4 x 1/2, 3/4, 1, 1 1/2, 2 1 1/4 x 1 x 1/2, 3/4, 1, 1 1/4, 1 1/2 1 1/4 x 3/4 x 1 1/4 1 1/4 x 1/2 x 1 1/4 1 1/2 x 1 1/2 x 1/2, 3/4, 1, 1, 1 1/4, 2			

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37RT	Reducing Tee	NPT	1 1/2 x 1 1/4 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 1 1/2 x 1 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 1 1/2 x 3/4 x 1 1/4, 1 1/2 1 1/2 x 1/2 x 1 1/4, 1 1/2 2 x 2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2 2 x 1 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2 2 x 1 1/4 x 1/2, 1, 1 1/4, 1 1/2, 2 2 x 1 x 3/4, 1, 1 1/4, 1 1/2, 2 2 x 1/2 x 2 2 x 2 x 2 1/2 2 1/2 x 2 1/2 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 2 x 1 1/4 x 2 1/2 2 x 1 x 2 1/2 2 x 3/4 x 2 1/2 2 1/2 x 1/2 x 2, 2 1/2 3 x 3 x 1 1/4, 1 1/2, 2	300	(2065)	g
37T	Equal Tee	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	300	(2065)	g
37X	Equal Cross	NPT	1, 1 1/4, 1 1/2, 2	300	(2065)	g
37RX	Reducing Cross	NPT	1 1/4 x 1 1 1/2 x 1 2 x 1	300	(2065)	g
37SP	Plug, Solid Sq.	NPT	1/2, 3/4, 1, 1 1/4, 1 1/2, 2	300	(2065)	g

Remarks:
a. Malleable Iron Fittings, ASME B16.3
b. Ductile Iron Fittings
c. Malleable Iron Fittings, BS EN 10242
d. Steel Fittings
e. Malleable Iron Fittings, DIN EN 10242, threads per ISO 7-1, available in black and galvanized per ISO 1460
f. Malleable Iron Fittings
g. Cast Iron Fittings

Company Name:	Jinan Meide Casting Co Ltd
Company Address:	Meide Science and Technology Park, Pingyin Industrial Park, Jinan, 250400 China
Company Website:	http://meide-casting.com
New/Updated Product Listing:	No
Listing Country:	China
Certification Type:	FM Approved
Class of Work:	1920-Coupling & Fitting, All Type

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Grooved Couplings or Fittings

Grooved couplings are used to join pipe and fittings in both wet and dry sprinkler systems. Unless otherwise noted, these couplings are intended to provide some flexibil piping systems. Typical applications are in sprinkler risers, in feed mains passing through walls from one building area to another, in locations subject to earthquakes, in discharge line from aboveground pump suction tanks, in new connections to existing feed mains and in air or water fire service lines subject to excessive vibration or diff alignment.

Unless otherwise noted, these couplings are limited to use with rolled or cut groove-ended pipe, valves and fittings, at a minimum rated working pressure of 175 psi (120 kPa) and are suitable for aboveground service. Higher rated pressures are noted in the text of the listing. Selection of pipe schedules for use with grooved pipe couplings should be made according to applicable FM Global Property Loss Prevention Data Sheets installation standards. These pipe schedules determine system pressure ratin and may take precedence over the higher rated working pressures listed for some couplings.

Installation must be made according to the manufacturer's instructions and requirements. Where couplings are used to join FM Approved pipe, the pipe manufacturer's installation instructions and requirements must also be observed. Grooves should be made according to ANSI/AWWA C606 (latest edition), "Grooved and Shouldered Joints", unless otherwise specified.

FM Approved grooved pipe couplings joining steel pipe may be used in underground service, subject to the installation restrictions placed upon the pipe and to the coupl manufacturer's recommendations and requirements.

Unless otherwise stated in the listing, these couplings have been evaluated for a maximum ambient temperature of 225°F (107°C), suitable for use in normal warehouse protection. For special applications, temperatures, or environments, the manufacturer's recommendations and requirements are to be followed.

Grooved Couplings, Standard-Rigid

These couplings join pipe, valves or fittings having equal diameters.

Model 1GS

	Rated Working Pressures for Model 1GS Rigid Coupling by Pipe a, b, c, d, e																		
	Nominal Pipe Size																		
Pipe Description	***1 (33.7)***	***1-1/4 (42.7)***	***1-1/2 (48.3)***	***2 (60.3)***	***2-1/2 (73.1)***	***(76.1)***	***3 (88.9)***	***(108)***	***4 (114.3)***	***(133)***	***(139.7)***	***5 (141.3)***	***(159)***	***(165.1)***	***6 (168.3)***	***(216.3)***	***8 (219.1)***	***(267)***	***10 (273)***
Schedule 40, Cut Groove				300 (2070)	300 (2070)		350 (2415)		350 (2415)		350 (2415)	350 (2415)		350 (2415)	350 (2415)		350 (2415)		300 (2070)
Schedule 40, Roll Groove				300 (2070)	300 (2070)		350 (2415)		350 (2415)		350 (2415)	350 (2415)		350 (2415)	350 (2415)		350 (2415)		300 (2070)
Schedule 30, Cut Groove																			
Schedule 30, Rolled Groove				300 (2070)	300 (2070)		350 (2415)		350 (2415)		350 (2415)	350 (2415)		350 (2415)	350 (2415)		350 (2415)		
Thinwall Pipes, Rolled Groove																			
Schedule 10, Rolled Groove				300 (2070)	300 (2070)		350 (2415)		350 (2415)		350 (2415)	350 (2415)		350 (2415)	350 (2415)				
0.188" Wall, Rolled Groove																	350 (2415)		300 (2070)
Schedule 10, Swage Groove																			
Lightwall Pipes, Rolled Groove																			
Lightwall Pipes, Swage Groove																			
Schedule 5 Pipe, Rolled Groove																			
EN 10220 (ISO 4200), Cut Groove																			

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Thickness F				300 (2070)	300 (2070)	300 (2070)	350 (2415)	300 (2070)	350 (2415)		350 (2415)	350 (2415)	300 (2070)	350 (2415)	350 (2415)	300 (2070)	350 (2415)		
Thickness G				300 (2070)	300 (2070)	300 (2070)	350 (2415)	300 (2070)	350 (2415)		350 (2415)	350 (2415)	300 (2070)	350 (2415)	350 (2415)	300 (2070)	350 (2415)		
EN 10220 (ISO 4200), Rolled Groove																			
Thickness D								300 (2070)	350 (2415)		350 (2415)	350 (2415)	300 (2070)	350 (2415)	350 (2415)	300 (2070)	350 (2415)		
Thickness E				300 (2070)			350 (2415)	300 (2070)	350 (2415)		350 (2415)	350 (2415)	300 (2070)	350 (2415)	350 (2415)	300 (2070)	350 (2415)		
Thickness F				300 (2070)	300 (2070)	300 (2070)	350 (2415)	300 (2070)	350 (2415)		350 (2415)	350 (2415)	300 (2070)	350 (2415)	350 (2415)	300 (2070)	350 (2415)		
Thickness G				300 (2070)	300 (2070)	300 (2070)	350 (2415)	300 (2070)	350 (2415)		350 (2415)	350 (2415)	300 (2070)	350 (2415)	350 (2415)	300 (2070)	350 (2415)		
EN 10255 (BS 1387) Medium, Rolled Groove				300 (2070)		300 (2070)	350 (2415)		350 (2415)		350 (2415)			350 (2415)					
EN 10255 (BS 1387) Heavy, Rolled Groove				300 (2070)		300 (2070)	350 (2415)		350 (2415)		350 (2415)			350 (2415)					
Chinese Standard GB/T 3092, Regular Rolled Groove				300 (2070)	300 (2070)	300 (2070)	350 (2415)	300 (2070)	350 (2415)		350 (2415)	350 (2415)		350 (2415)	350 (2415)		350 (2415)		
Chinese Standard GB/T 3092, Extra Heavy Rolled Groove				300 (2070)	300 (2070)	300 (2070)	350 (2415)	300 (2070)	350 (2415)		350 (2415)	350 (2415)		350 (2415)	350 (2415)		350 (2415)		

Remarks:
a.) Minimum schedule cut groove pipe to be joined: 6 inch or smaller, Schedule 40; 8 inch or larger, Schedule 30
b.) Minimum schedule rolled groove pipe to be joined: 6 inch or smaller, Schedule 10; 8, 10 or 12 inch - 0.188 inch (4.78 mm) wall
c.) All couplings in table above, Approved when supplied with an EDPM gasket using standard gasket lubricant or dry lubricant
d.) Available with a red painted, epoxy painted or hot dip galvanized surface finish
e.) Electroplate Zinc Coating and Hot dip Galvanize coating available on bolt and nut assembly.

Company Name:	Jinan Meide Casting Co Ltd
Company Address:	Meide Science and Technology Park, Pingyin Industrial Park, Jinan, 250400 China
Company Website:	http://meide-casting.com
New/Updated Product Listing:	No
Listing Country:	China
Certification Type:	FM Approved
Class of Work:	1920-Coupling & Fitting, All Type

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Grooved Couplings or Fittings

Grooved couplings are used to join pipe and fittings in both wet and dry sprinkler systems. Unless otherwise noted, these couplings are intended to provide some flexibility in piping systems. Typical applications are in sprinkler risers, in feed mains passing through walls from one building area to another, in locations subject to earthquakes, in the discharge line from aboveground pump suction t in new connections to existing feed mains and in air or water fire service lines subject to excessive vibration or difficult alignment.
Unless otherwise noted, these couplings are limited to use with rolled or cut groove-ended pipe, valves and fittings, at a minimum rated working pressure of 175 psi (1205 kPa) and are suitable for aboveground service. Higher rated pressures are noted in the text of the listing. Selection of pipe schedules for use with grooved pipe couplings should be made according to applicable FM Global Property Loss Prevention Data Sheets installation standards. These pipe schedules determine system pressure ratings and may take precedence over the higher rated working pressures listed for s couplings.
Installation must be made according to the manufacturer's instructions and requirements. Where couplings are used to join FM Approved pipe, the pipe manufacturer's installation instructions and requirements must also be observed. Grooves should be made according to ANSI/AWWA C606 (latest edition), "Grooved and Shouldered Joints", unless otherwise specified.
FM Approved grooved pipe couplings joining steel pipe may be used in underground service, subject to the installation restrictions placed upon the pipe and to the coupling manufacturer's recommendations and requirements.
Unless otherwise stated in the listing, these couplings have been evaluated for a maximum ambient temperature of 225°F (107°C), suitable for use in normal warehouse protection. For special applications, temperatures, or environments, the manufacturer's recommendations and requirements are to be followed.

Grooved Couplings, Standard-Rigid

These couplings join pipe, valves or fittings having equal diameters.

Model 1GX

Pipe Description	Rated Working Pressures for Model 1GX Rigid Coupling by Pipe a, b, c, d, e																		
	Nominal Pipe Size																		
	1 (33.7)	1-1/4 (42.7)	1-1/2 (48.3)	2 (60.3)	2-1/2 (73.1)	(76.1)	3 (88.9)	(108)	4 (114.3)	(133)	(139.7)	5 (141.3)	(159)	(165.1)	6 (168.3)	(216.3)	8 (219.1)	(267.4)	10 (273)
Schedule 40, Cut Groove		300 (2070)	300 (2070)			300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)		300 (2070)	300 (2070)			300 (2070)		300 (2070)
Schedule 40, Roll Groove		300 (2070)	300 (2070)			300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)		300 (2070)	300 (2070)			300 (2070)		300 (2070)
Schedule 30, Cut Groove																			
Schedule 30, Rolled Groove																			
Thinwall Pipes, Rolled Groove																			
Schedule 10, Rolled Groove		300 (2070)	300 (2070)			300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)		300 (2070)	300 (2070)					
0.188" Wall, Rolled Groove																	300 (2070)		300 (2070)
Lightwall Pipes, Rolled Groove																			
Schedule 5 Pipe, Rolled Groove																			

Remarks:
a.) Minimum schedule cut groove pipe to be joined: 6 inch or smaller, Schedule 40; 8 inch or larger, Schedule 30
b.) Minimum schedule rolled groove pipe to be joined: 6 inch or smaller, Schedule 10; 8 or 10 inch - 0.188 inch (5 mm) wall; 12 inch – 0.250 in. wall
c.) All couplings in table above, Approved when supplied with a Grade E EDPM gasket using standard gasket lubricant
d.) Available with a black painted or hot dip galvanized finish
e.) Electroplate Zinc Coating and Hot dip Galvanize coating available on bolt and nut assembly.

Company Name:	Jinan Meide Casting Co Ltd
Company Address:	Meide Science and Technology Park, Pingyin Industrial Park, Jinan, 250400 China
Company Website:	http://meide-casting.com
New/Updated Product Listing:	No
Listing Country:	China
Certification Type:	FM Approved
Class of Work:	1920-Coupling & Fitting, All Type

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Grooved Couplings or Fittings

Grooved couplings are used to join pipe and fittings in both wet and dry sprinkler systems. Unless otherwise noted, these couplings are intended to provide some flexibility in piping systems. Typical applications are in sprinkler risers, in feed mains passing through walls from one building area to another, in locations subject to earthquakes, in the discharge line from aboveground pump suction tanks, in new connections to existing feed mains and in air or water fire service lines subject to excessive vibration or difficult alignment.

Unless otherwise noted, these couplings are limited to use with rolled or cut groove-ended pipe, valves and fittings, at a minimum rated working pressure of 175 psi (1205 kPa) and are suitable for aboveground service. Higher rated pressures are noted in the text of the listing. Selection of pipe schedules for use with grooved pipe couplings should be made according to applicable FM Global Property Loss Prevention Data Sheets installation standards. These pipe schedules determine system pressure ratings and may take precedence over the higher rated working pressures listed for some couplings.

Installation must be made according to the manufacturer's instructions and requirements. Where couplings are used to join FM Approved pipe, the pipe manufacturer's installation instructions and requirements must also be observed. Grooves should be made according to ANSI/AWWA C606 (latest edition), "Grooved and Shouldered Joints", unless otherwise specified.

FM Approved grooved pipe couplings joining steel pipe may be used in underground service, subject to the installation restrictions placed upon the pipe and to the coupling manufacturer's recommendations and requirements.

Unless otherwise stated in the listing, these couplings have been evaluated for a maximum ambient temperature of 225°F (107°C), suitable for use in normal warehouse protection. For special applications, temperatures, or environments, the manufacturer's recommendations and requirements are to be followed.

Grooved Couplings, Standard-Rigid

These couplings join pipe, valves or fittings having equal diameters.

Model R10

Pipe Description	*Rated Working Pressures for Model R10 Rigid Coupling by Pipe [c]*																			
	Nominal Pipe Size																			
	1 (33.7)	*1-1/4 (42.7)*	*1-1/2 (48.3)*	*2 (60.3)*	*2-1/2 (73.1)*	*(76.1)*	*3 (88.9)*	*(108)*	*4 (114.3)*	*(133)*	*(139.7)*	*5 (141.3)*	*(159)*	*(165.1)*	*6 (168.3)*	*(216.3)*	*8 (219.1)*	*(267)*	*10 (273)*	*(318)*
Schedule 40, Cut Groove																				
Schedule 40, Roll Groove																				
Schedule 30, Cut Groove																				
Schedule 30, Rolled Groove																				
Thinwall Pipes, Rolled Groove																				
Schedule 10, Rolled Groove																				
Schedule 10, Swage Groove																				
Lightwall Pipes, Rolled Groove																				
Lightwall Pipes, Swage Groove																				
Schedule 5 Pipe, Rolled Groove																				
JIS G3452, Cut Groove				300 (2070)		300 (2070)	300 (2070)		300 (2070)		300 (2070)			300 (2070)		300 (2070)		300 (2070)		300 (2070)
JIS G3452, Rolled Groove				300 (2070)		300 (2070)	300 (2070)		300 (2070)		300 (2070)			300 (2070)		300 (2070)		300 (2070)		300 (2070)

Remarks: *a.) Minimum schedule cut groove pipe to be joined: 6 inch or smaller, Schedule 40; 8 inch or larger, Schedule 30*
b.) Minimum schedule rolled groove pipe to be joined: 6 inch or smaller, Schedule 10; 8, 10 or 12 inch - 0.188 inch (4.78 mm) wall
c.) All couplings in table above, Approved when supplied with an EDPM gasket using standard gasket lubricant

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Company Name:	Jinan Meide Casting Co Ltd
Company Address:	Meide Science and Technology Park, Pingyin Industrial Park, Jinan, 250400 China
Company Website:	http://meide-casting.com
New/Updated Product Listing:	No
Listing Country:	China
Certification Type:	FM Approved
Class of Work:	1920-Coupling & Fitting, All Type

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Grooved Couplings or Fittings

Grooved couplings are used to join pipe and fittings in both wet and dry sprinkler systems. Unless otherwise noted, these couplings are intended to provide some flexibi piping systems. Typical applications are in sprinkler risers, in feed mains passing through walls from one building area to another, in locations subject to earthquakes, ir discharge line from aboveground pump suction tanks, in new connections to existing feed mains and in air or water fire service lines subject to excessive vibration or dif alignment.

Unless otherwise noted, these couplings are limited to use with rolled or cut groove-ended pipe, valves and fittings, at a minimum rated working pressure of 175 psi (12 kPa) and are suitable for aboveground service. Higher rated pressures are noted in the text of the listing. Selection of pipe schedules for use with grooved pipe couplinç should be made according to applicable FM Global Property Loss Prevention Data Sheets installation standards. These pipe schedules determine system pressure ratii and may take precedence over the higher rated working pressures listed for some couplings.

Installation must be made according to the manufacturer's instructions and requirements. Where couplings are used to join FM Approved pipe, the pipe manufacturer's installation instructions and requirements must also be observed. Grooves should be made according to ANSI/AWWA C606 (latest edition), "Grooved and Shouldered Joints", unless otherwise specified.

FM Approved grooved pipe couplings joining steel pipe may be used in underground service, subject to the installation restrictions placed upon the pipe and to the coup manufacturer's recommendations and requirements.

Unless otherwise stated in the listing, these couplings have been evaluated for a maximum ambient temperature of 225°F (107°C), suitable for use in normal warehous protection. For special applications, temperatures, or environments, the manufacturer's recommendations and requirements are to be followed.

Grooved Couplings, Standard-Rigid

These couplings join pipe, valves or fittings having equal diameters.

Model R20

Pipe Description	Rated Working Pressures for Model R20 Rigid Coupling by Pipe [a, b, c]																		
	Nominal Pipe Size																		
	1 (33.7)	1-1/4 (42.7)	1-1/2 (48.3)	2 (60.3)	2-1/2 (73.1)	(76.1)	3 (88.9)	(108)	4 (114.3)	(133)	(139.7)	5 (141.3)	(159)	(165.1)	6 (168.3)	(216.3)	8 (219.1)	(267)	10 (273)
Schedule 40, Cut Groove		500 (3450)	500 (3450)	500 (3450)			500 (3450)		500 (3450)										
Schedule 40, Roll Groove		500 (3450)	500 (3450)	500 (3450)			500 (3450)		500 (3450)										
Schedule 30, Cut Groove																			
Schedule 30, Rolled Groove																			
Thinwall Pipes, Rolled Groove																			
Schedule 10, Rolled Groove		500 (3450)	500 (3450)	500 (3450)			500 (3450)		500 (3450)										
0.188" Wall, Rolled Groove																			
Schedule 10, Swage Groove																			
Lightwall Pipes, Rolled Groove																			
Lightwall Pipes, Swage Groove																			
Schedule 5 Pipe, Rolled Groove																			
EN 10220 (ISO 4200), Cut Groove																			
Thickness D		500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		300 (2070)			300 (2070)		300 (2070)			

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Thickness E		500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		300 (2070)			300 (2070)		300 (2070)			
Thickness F		500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		300 (2070)			300 (2070)		300 (2070)			
EN 10220 (ISO 4200), Rolled Groove																			
Thickness D									500 (3450)		300 (2070)			300 (2070)					
Thickness E				500 (3450)			500 (3450)		500 (3450)		300 (2070)			300 (2070)		300 (2070)			
Thickness F		500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		300 (2070)			300 (2070)		300 (2070)			
Thickness G		500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		300 (2070)			300 (2070)		300 (2070)			
EN 10255 (BS 1387) Medium, Rolled Groove		500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		300 (2070)			300 (2070)					
EN 10255 (BS 1387) Heavy, Rolled Groove		500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		300 (2070)			300 (2070)					
Chinese Standard GB/T 3091, Rolled Groove		500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		300 (2070)			300 (2070)		300 (2070)			
JIS G3454, Cut Groove				500 (3450)		500 (3450)	500 (3450)		500 (3450)		500 (3450)			500 (3450)		500 (3450)		500 (3450)	
JIS G3454, Rolled Groove				500 (3450)		500 (3450)	500 (3450)		500 (3450)		500 (3450)			500 (3450)		500 (3450)		500 (3450)	

Remarks: *a.) Minimum schedule cut groove pipe to be joined: 6 inch or smaller, Schedule 40; 8 inch or larger, Schedule 30*
b.) Minimum schedule rolled groove pipe to be joined: 6 inch or smaller, Schedule 10; 8, 10 or 12 inch - 0.188 inch (4.78 mm) wall
c.) All couplings in table above, Approved when supplied with an EDPM gasket using standard gasket lubricant or dry lubricant

Company Name:	Jinan Meide Casting Co Ltd
Company Address:	Meide Science and Technology Park, Pingyin Industrial Park, Jinan, 250400 China
Company Website:	http://meide-casting.com
New/Updated Product Listing:	No
Listing Country:	China
Certification Type:	FM Approved
Class of Work:	1920-Coupling & Fitting, All Type

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Grooved Couplings or Fittings

Grooved couplings are used to join pipe and fittings in both wet and dry sprinkler systems. Unless otherwise noted, these couplings are intended to provide some flexibility in piping systems. Typical applications are in sprinkler risers, in feed mains passing through walls from one building area to another, in locations subject to earthquakes, in the discharge line from aboveground pump suction tanks in new connections to existing feed mains and in air or water fire service lines subject to excessive vibration or difficult alignment.

Unless otherwise noted, these couplings are limited to use with rolled or cut groove-ended pipe, valves and fittings, at a minimum rated working pressure of 175 psi (1205 kPa) and are suitable for aboveground service. Higher rated pressures are noted in the text of the listing. Selection of pipe schedules for use with grooved pipe couplings should be made according to applicable FM Global Property Loss Prevention Data Sheets installation standards. These pipe schedules determine system pressure ratings and may take precedence over the higher rated working pressures listed for som couplings.

Installation must be made according to the manufacturer's instructions and requirements. Where couplings are used to join FM Approved pipe, the pipe manufacturer's installation instructions and requirements must also be observed. Grooves should be made according to ANSI/AWWA C606 (latest edition), "Grooved and Shouldered Joints", unless otherwise specified.

FM Approved grooved pipe couplings joining steel pipe may be used in underground service, subject to the installation restrictions placed upon the pipe and to the coupling manufacturer's recommendations and requirements.

Unless otherwise stated in the listing, these couplings have been evaluated for a maximum ambient temperature of 225°F (107°C), suitable for use in normal warehouse protection. For special applications, temperatures, or environments, the manufacturer's recommendations and requirements are to be followed.

Grooved Couplings, Standard-Flexible

These couplings join pipe, valves or fittings having equal nominal-sized diameters.

Model 1NH

Rated Working Pressures for Model 1G Rigid Coupling by Pipe a, b, c, e

	Nominal Pipe Size																							
Pipe Description	***1 (33.7)***	***1-1/4 (42.7)***	***1-1/2 (48.3)***	***2 (60.3)***	***2-1/2 (73.1)***	***(76.1)***	***3 (88.9)***	***(108)***	***4 (114.3)***	***(133)***	***(139.7)***	***5 (141.3)***	***(159)***	***(165.1)***	***6 (168.3)***	***(216.3)***	***8 (219.1)***	***(267)***	***10 (273)***	***(318)***	***12 (323.9)***	***(356)***	***(377)***	***(406)***
Schedule 40, Cut Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)		300 (2070)		300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)
Schedule 40, Roll Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)		300 (2070)		300 (2070)		300 (2070)			
Schedule 30, Cut Groove																	300 (2070)		300 (2070)		300 (2070)			
Schedule 30, Rolled Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)		300 (2070)		300 (2070)		300 (2070)			
Thinwall Pipes, Rolled Groove																								
Schedule 10, Rolled Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)									
0.188" Wall, Rolled Groove																	300 (2070)		300 (2070)		300 (2070)			
Schedule 10, Swage Groove																								
Lightwall Pipes, Rolled Groove																								
Lightwall Pipes, Swage Groove																								
Schedule 5 Pipe, Rolled Groove																								
EN 10220 (ISO 4200), Cut Groove																								
Thickness F		500 (3445)		750 (5170)	750 (5170)	750 (5170)	750 (5170)	300 (2070)	750 (5170)	300 (2070)	750 (5170)	750 (5170)	300 (2070)	750 (5170)	750 (5170)	300 (2070)	750 (5170)		300 (2070)		300 (2070)			
Thickness G	500 (3445)	500 (3445)	500 (3445)	750 (5170)	750 (5170)	750 (5170)	750 (5170)	300 (2070)	750 (5170)	300 (2070)	750 (5170)	750 (5170)	300 (2070)	750 (5170)	750 (5170)	300 (2070)	750 (5170)		300 (2070)		300 (2070)			
EN 10220 (ISO 4200), Rolled Groove																								
Thickness D								300 (2070)	500 (3445)		500 (3445)	500 (3445)	300 (2070)	500 (3445)	500 (3445)	300 (2070)	300 (2070)		300 (2070)		300 (2070)			
Thickness E				500 (3445)		500 (3445)	500 (3445)	300 (2070)	500 (3445)		500 (3445)	500 (3445)	300 (2070)	500 (3445)	500 (3445)	300 (2070)	300 (2070)		300 (2070)		300 (2070)			
Thickness F	500 (3445)	500 (3445)	500 (3445)	750 (5170)	750 (5170)	750 (5170)	750 (5170)	300 (2070)	750 (5170)		500 (3445)	750 (5170)	300 (2070)	750 (5170)	750 (5170)	300 (2070)	750 (5170)		300 (2070)		300 (2070)			

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Thickness G	500 (3445)	500 (3445)	500 (3445)	750 (5170)	750 (5170)	750 (5170)	750 (5170)	300 (2070)	750 (5170)		500 (3445)	750 (5170)	300 (2070)	750 (5170)	750 (5170)	300 (2070)	750 (5170)		300 (2070)		300 (2070)			
EN 10255 (BS 1387) Medium, Rolled Groove	500 (3445)	500 (3445)	500 (3445)	500 (3445)		500 (3445)	500 (3445)		500 (3445)		500 (3445)			500 (3445)										
EN 10255 (BS 1387) Heavy, Rolled Groove	500 (3445)	500 (3445)	500 (3445)	750 (5170)		500 (3445)	500 (3445)		500 (3445)		500 (3445)			500 (3445)										
Chinese Standard GB/T 3092, Regular Rolled Groove	500 (3445)	500 (3445)	500 (3445)	500 (3445)	500 (3445)	500 (3445)	500 (3445)	300 (2070)	500 (3445)		500 (3445)	500 (3445)		500 (3445)	500 (3445)		300 (2070)		300 (2070)		300 (2070)			
Chinese Standard GB/T 3092, Extra Heavy Rolled Groove	500 (3445)	500 (3445)	500 (3445)	750 (5170)	500 (3445)	500 (3445)	500 (3445)	300 (2070)	500 (3445)		500 (3445)	500 (3445)		500 (3445)	500 (3445)		300 (2070)		300 (2070)		300 (2070)			

Remarks:
a.) Minimum schedule cut groove pipe to be joined: 6 inch or smaller, Schedule 40; 8 inch or larger, Schedule 30
b.) Minimum schedule rolled groove pipe to be joined: 6 inch or smaller, Schedule 10; 8, 10 or 12 inch - 0.188 inch (4.78 mm) wall
c.) All couplings in table above, Approved when supplied with an EDPM gasket using standard gasket lubricant or dry lubricant
e.) Electroplate Zinc Coating and Hot dip Galvanize coating available on bolt and nut assembly.

Company Name:	Jinan Meide Casting Co Ltd
Company Address:	Meide Science and Technology Park, Pingyin Industrial Park, Jinan, 250400 China
Company Website:	http://meide-casting.com
New/Updated Product Listing:	No
Listing Country:	China
Certification Type:	FM Approved
Class of Work:	1920-Coupling & Fitting, All Type

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Grooved Couplings or Fittings

Grooved couplings are used to join pipe and fittings in both wet and dry sprinkler systems. Unless otherwise noted, these couplings are intended to provide some flexib piping systems. Typical applications are in sprinkler risers, in feed mains passing through walls from one building area to another, in locations subject to earthquakes, ir discharge line from aboveground pump suction tanks, in new connections to existing feed mains and in air or water fire service lines subject to excessive vibration or di alignment.

Unless otherwise noted, these couplings are limited to use with rolled or cut groove-ended pipe, valves and fittings, at a minimum rated working pressure of 175 psi (12 kPa) and are suitable for aboveground service. Higher rated pressures are noted in the text of the listing. Selection of pipe schedules for use with grooved pipe couplin should be made according to applicable FM Global Property Loss Prevention Data Sheets installation standards. These pipe schedules determine system pressure rati and may take precedence over the higher rated working pressures listed for some couplings.

Installation must be made according to the manufacturer's instructions and requirements. Where couplings are used to join FM Approved pipe, the pipe manufacturer's installation instructions and requirements must also be observed. Grooves should be made according to ANSI/AWWA C606 (latest edition), "Grooved and Shouldered Joints", unless otherwise specified.

FM Approved grooved pipe couplings joining steel pipe may be used in underground service, subject to the installation restrictions placed upon the pipe and to the coup manufacturer's recommendations and requirements.

Unless otherwise stated in the listing, these couplings have been evaluated for a maximum ambient temperature of 225°F (107°C), suitable for use in normal warehous protection. For special applications, temperatures, or environments, the manufacturer's recommendations and requirements are to be followed.

Grooved Couplings, Standard-Flexible

These couplings join pipe, valves or fittings having equal nominal-sized diameters.

Model 1NX

Pipe Description	Rated Working Pressures for Model 1NX Rigid Coupling by Pipe a, b, c, d, e																		
	Nominal Pipe Size																		
	1 (33.7)	1-1/4 (42.7)	1-1/2 (48.3)	2 (60.3)	2-1/2 (73.1)	(76.1)	3 (88.9)	(108)	4 (114.3)	(133)	(139.7)	5 (141.3)	(159)	(165.1)	6 (168.3)	(216.3)	8 (219.1)	(267.4)	10 (273)
Schedule 40, Cut Groove																			300 (2070)
Schedule 40, Roll Groove																			300 (2070)
Schedule 30, Cut Groove																			
Schedule 30, Rolled Groove																			
Thinwall Pipes, Rolled Groove																			
Schedule 10, Rolled Groove																			
0.188" Wall, Rolled Groove																			300 (2070)
Lightwall Pipes, Rolled Groove																			
Schedule 5 Pipe, Rolled Groove																			

Remarks:
a.) Minimum schedule cut groove pipe to be joined: 6 inch or smaller, Schedule 40; 8 inch or larger, Schedule 30
b.) Minimum schedule rolled groove pipe to be joined: 6 inch or smaller, Schedule 10; 8 or 10 inch - 0.188 inch (5 mm) wall; 12 inch – 0.250 in. wall
c.) All couplings in table above, Approved when supplied with a Grade E EDPM gasket using standard gasket lubricant
d.) Available with a black painted or hot dip galvanized finish
e.) Electroplate Zinc Coating and Hot dip Galvanize coating available on bolt and nut assembly.

Company Name:	Jinan Meide Casting Co Ltd
Company Address:	Meide Science and Technology Park, Pingyin Industrial Park, Jinan, 250400 China
Company Website:	http://meide-casting.com

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New/Updated Product Listing:	No
Listing Country:	China
Certification Type:	FM Approved
Class of Work:	1920-Coupling & Fitting, All Type

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Model 1N

Product Description

Pipe Description	*Rated Working Pressures for Model 1N Flexible Coupling by Pipe* [a, b, c, e, f, g, h]																				
	Nominal Pipe Size																				
	1 (33.7)	*1-1/4 (42.4)*	*1-1/2 (48.3)*	*2 (60.3)*	*2-1/2 (73.0)*	*(76.1)*	*3 (88.9)*	*(108)*	*4 (114.3)*	*(133)*	*(139.7)*	*5 (141.3)*	*(159)*	*(165.1)*	*6 (168.3)*	*(216.3)*	*8 (219.1)*	*(267)*	*10 (273)*	*(318)*	*12 (323.9)*
Schedule 40, Cut Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)		300 (2070)		300 (2070)		300 (2070)
Schedule 40, Roll Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)		300 (2070)		300 (2070)		300 (2070)
Schedule 30, Cut Groove																	300 (2070)		300 (2070)		300 (2070)
Schedule 30, Rolled Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)		300 (2070)		300 (2070)		300 (2070)
Thinwall Pipes, Rolled Groove																					
Schedule 10, Rolled Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)						
0.188" Wall, Rolled Groove																	300 (2070)		300 (2070)		300 (2070)
Lightwall Pipes, Rolled Groove																					
Thai Premium Pipe's Schedule 7	300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)		300 (2070)		300 (2070)												
Schedule 5 Pipe, Rolled Groove																					
EN 10220 (ISO 4200), Cut Groove																					
Thickness F		500 (3450)		500 (3450)			500 (3450)		500 (3450)		500 (3450)				500 (3450)		300 (2070)		300 (2070)		300 (2070)
Thickness G	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		500 (3450)				500 (3450)		300 (2070)		300 (2070)		300 (2070)
EN 10220 (ISO 4200), Rolled Groove																					
Thickness D							500 (3450)		500 (3450)		500 (3450)				500 (3450)		300 (2070)		300 (2070)		300 (2070)
Thickness E		500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		500 (3450)				500 (3450)		300 (2070)		300 (2070)		300 (2070)
Thickness F	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		500 (3450)				500 (3450)		300 (2070)		300 (2070)		300 (2070)
Thickness G	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		500 (3450)				500 (3450)		300 (2070)		300 (2070)		300 (2070)
EN 10255 (BS 1387) Medium, Rolled Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		500 (3450)			500 (3450)							
EN 10255 (BS 1387) Heavy, Rolled Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		500 (3450)			500 (3450)							
Chinese Standard GB/T 3091 Regular, Rolled Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		500 (3450)			500 (3450)			300 (2070)				
Chinese Standard GB/T 3091 Heavy, Rolled Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)	500 (3450)		500 (3450)		500 (3450)			500 (3450)			300 (2070)				
JIS G3452, Cut Groove																300 (2070)		300 (2070)		300 (2070)	
JIS G3452, Rolled Groove																300 (2070)		300 (2070)		300 (2070)	

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Remarks:	*a.) Minimum schedule cut groove pipe to be joined: 6 inch or smaller, Schedule 40; 8 inch or larger, Schedule 30* *b.) Minimum schedule rolled groove pipe to be joined: 6 inch or smaller, Schedule 10; 8, 10 or 12 inch - 0.188 inch (4.78 mm) wall* *c.) All couplings in table above, Approved when supplied with an EDPM gasket using standard gasket lubricant or dry lubricant* *e.) Electroplate Zinc Coating and Hot dip Galvanized coating available on bolt and nut assembly* *f.) FM Approved with a painted finish in the following colors – black, orange, green blue, copper and red* *g.) FM Approved with a galvanized surface finish* *h.) FM Approved with an epoxy finish in the following colors – blue, black, red, white, silver, grey and yellow*

Details

Category	Grooved Couplings, Standard-Flexible
Class of Work	1920 - Coupling & Fitting, All Type
Approval Standard	FM 1920 - Pipe Couplings and Fittings for Aboveground Fire Protection Systems
Certification Type	FM Approved
Listing Country	China

Company

Jinan Meide Casting Co Ltd
No.1 Meide Street, Meigui Town, Pingyin County, Jinan City, China
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Pipes/Fittings/Couplings | Aboveground Pipe and Fittings | Grooved Couplings, Standard-Rigid

Model 1G

Product Description

Pipe Description	Rated Working Pressures for Model 1G Rigid Coupling by Pipe [a, b, c, e, f, g, h]																								
	Nominal Pipe Size																								
	1 (33.7)	1-1/4 (42.4)	1-1/2 (48.3)	2 (60.3)	2-1/2 (73.0)	(76.1)	3 (88.9)	(108)	4 (114.3)	(133)	(139.7)	5 (141.3)	(159)	(165.1)	6 (168.3)	(216.3)	8 (219.1)	(267)	10 (273)	(318)	12 (323.9)	(356)	(377)	(406)	(426)
Schedule 40, Cut Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)		300 (2070)		300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)
Schedule 40, Roll Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)		300 (2070)		300 (2070)		300 (2070)				
Schedule 30, Cut Groove																	300 (2070)		300 (2070)		300 (2070)				
Schedule 30, Rolled Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)		300 (2070)		300 (2070)		300 (2070)				
Thinwall Pipes, Rolled Groove																									
Schedule 10, Rolled Groove	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)	500 (3450)		500 (3450)		500 (3450)	500 (3450)		500 (3450)	500 (3450)										
0.188" Wall, Rolled Groove																	300 (2070)		300 (2070)		300 (2070)				
Lightwall Pipes, Rolled Groove																									
Thai Premium Pipe's Schedule 7	300 (2070)	300 (2070)	300 (2070)	300 (2070)	300 (2070)		300 (2070)		300 (2070)																
Schedule 5 Pipe, Rolled Groove																									
EN 10220 (ISO 4200), Cut Groove																									
Thickness F				500 (3445)			500 (3445)		500 (3445)						500 (3445)		300 (2070)		300 (2070)						
Thickness G	500 (3445)	500 (3445)	500 (3445)	500 (3445)		500 (3445)	500 (3445)		500 (3445)		500 (3445)				500 (3445)		300 (2070)		300 (2070)		300 (2070)				
EN 10220 (ISO 4200), Rolled Groove																									
Thickness D							500 (3445)		500 (3445)		500 (3445)				500 (3445)		300 (2070)		300 (2070)		300 (2070)				
Thickness E		500 (3445)	500 (3445)	500 (3445)		500 (3445)	500 (3445)		500 (3445)		500 (3445)				500 (3445)		300 (2070)		300 (2070)		300 (2070)				
Thickness F	500 (3445)	500 (3445)	500 (3445)	500 (3445)		500 (3445)	500 (3445)		500 (3445)		500 (3445)				500 (3445)		300 (2070)		300 (2070)		300 (2070)				
Thickness G	500 (3445)	500 (3445)	500 (3445)	500 (3445)		500 (3445)	500 (3445)		500 (3445)		500 (3445)				500 (3445)		300 (2070)		300 (2070)		300 (2070)				

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EN 10255 (BS 1387) Medium, Rolled Groove	500 (3445)	500 (3445)	500 (3445)	500 (3445)		500 (3445)	500 (3445)		500 (3445)		500 (3445)			500 (3445)											
EN 10255 (BS 1387) Heavy, Rolled Groove	500 (3445)	500 (3445)	500 (3445)	500 (3445)		500 (3445)	500 (3445)		500 (3445)		500 (3445)			500 (3445)											
Chinese Standard GB/T 3091, Regular Rolled Groove	500 (3445)	500 (3445)	500 (3445)	500 (3445)		500 (3445)	500 (3445)		500 (3445)		500 (3445)			500 (3445)			300 (2070)								
Chinese Standard GB/T 3091, Heavy Rolled Groove	500 (3445)	500 (3445)	500 (3445)	500 (3445)		500 (3445)	500 (3445)		500 (3445)		500 (3445)			500 (3445)			300 (2070)								
Remarks:	*a.) Minimum schedule cut groove pipe to be joined: 6 inch or smaller, Schedule 40; 8 inch or larger, Schedule 30* *b.) Minimum schedule rolled groove pipe to be joined: 6 inch or smaller, Schedule 10; 8, 10 or 12 inch - 0.188 inch (4.78 mm) wall* *c.) All couplings in table above, Approved when supplied with an EDPM gasket using standard gasket lubricant or dry lubricant* *e.) Electroplate Zinc Coating and Hot dip Galvanized coating available on bolt and nut assembly.* *f.) FM Approved with a painted finish in the following colors – black, orange, green blue, copper and red* *g.) FM Approved with a galvanized surface finish* *h.) FM Approved with an epoxy finish in the following colors – blue, black, red, white, silver, grey and yellow*																								

Details

Category	Grooved Couplings, Standard-Rigid
Class of Work	1920 - Coupling & Fitting, All Type
Approval Standard	FM 1920 - Pipe Couplings and Fittings for Aboveground Fire Protection Systems
Certification Type	FM Approved
Listing Country	China

Company

Jinan Meide Casting Co Ltd
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http://meide-casting.com

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Grooved Couplings or Fittings

Grooved couplings are used to join pipe and fittings in both wet and dry sprinkler systems. Unless otherwise noted, these couplings are intended to provide some flexibility in piping systems. Typical applications are in sprinkler risers, in feed mains passing through walls from one building area to another, in locations subject to earthquakes, in the discharge line from aboveground pump suction tanks, in new connections to existing feed mains and in air or water fire service lines subject to excessive vibration or difficult alignment. Unless otherwise noted, these couplings are limited to use with rolled or cut groove-ended pipe, valves and fittings, at a minimum rated working pressure of 175 psi (1205 kPa) and are suitable for aboveground service. Higher rated pressures are noted in the text of the listing. Selection of pipe schedules for use with grooved pipe couplings should be made according to applicable FM Global Property Loss Prevention Data Sheets installation standards. These pipe schedules determine system pressure ratings and may take precedence over the higher rated working pressures listed for some couplings.
Installation must be made according to the manufacturer's instructions and requirements. Where couplings are used to join FM Approved pipe, the pipe manufacturer's installation instructions and requirements must also be observed. Grooves should be made according to ANSI/AWWA C606 (latest edition), "Grooved and Shouldered Joints", unless otherwise specified.
FM Approved grooved pipe couplings joining steel pipe may be used in underground service, subject to the installation restrictions placed upon the pipe and to the coupling manufacturer's recommendations and requirements.
Unless otherwise stated in the listing, these couplings have been evaluated for a maximum ambient temperature of 225°F (107°C), suitable for use in normal warehouse protection. For special applications, temperatures, or environments, the manufacturer's recommendations and requirements are to be followed.

Grooved Couplings, Reducing-Flexible

These couplings join pipe, valves or fittings having different nominal pipe diameters.

Fig. 1N

Product Specification

Model No	End Connection	Nominal Pipe Size, in	Rated Working Pressure		Remarks
			psi	(kPa)	
1N	Cut Groove Rolled Groove	2 x 1 1/2 2 1/2 x 1, 2 3 x 1, 2, 2 1/2 4 x 1, 2 4 x 2 1/2, 3 6 x 3, 4 8 x 6	300	(2065)	a, b, c, d, e
1N	Cut Groove Rolled Groove	76.1 x 33.7, 1 1/2, 2 3 x 76.1 4 x 76.1 165 x 3, 4 6 x 165 8 x 165	300	(2065)	a, b, c, d, e

Remarks:
a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller – Schedule 40; 8 in. NPS and larger – Schedule 30.
b. Minimum schedule rolled groove pipe to be joined: 6 in. NPS and smaller – Schedule 10S; 8 in. NPS and larger 0.188 in. (5 mm) wall.
c. Approved when supplied with EPDM gasket.
d. Approved for use with GB/T3092 regular and extra heavy pipe, ISO 4200, and BS 1387 medium and heavy pipe.
e. Electroplate Zinc Coating and Hot dip Galvanize coating available on bolt and nut assembly.

Company Name:	Jinan Meide Casting Co Ltd
Company Address:	Meide Science and Technology Park, Pingyin Industrial Park, Jinan, 250400 China
Company Website:	http://meide-casting.com
New/Updated Product Listing:	No
Listing Country:	China
Certification Type:	FM Approved
Class of Work:	1920-Coupling & Fitting, All Type

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Grooved Couplings or Fittings

Grooved couplings are used to join pipe and fittings in both wet and dry sprinkler systems. Unless otherwise noted, these couplings are intended to provide some flexibility in piping systems. Typical applications are in sprinkler risers, in feed mains passing through walls from one building area to another, in locations subject to earthquakes, in the discharge line from aboveground pump suction tanks, in new connections to existing feed mains and in air or water fire service lines subject to excessive vibration or difficult alignment. Unless otherwise noted, these couplings are limited to use with rolled or cut groove-ended pipe, valves and fittings, at a minimum rated working pressure of 175 psi (1205 kPa) and are suitable for aboveground service. Higher rated pressures are noted in the text of the listing. Selection of pipe schedules for use with grooved pipe couplings should be made according to applicable FM Global Property Loss Prevention Data Sheets installation standards. These pipe schedules determine system pressure ratings and may take precedence over the higher rated working pressures listed for some couplings.
Installation must be made according to the manufacturer's instructions and requirements. Where couplings are used to join FM Approved pipe, the pipe manufacturer's installation instructions and requirements must also be observed. Grooves should be made according to ANSI/AWWA C606 (latest edition), "Grooved and Shouldered Joints", unless otherwise specified.
FM Approved grooved pipe couplings joining steel pipe may be used in underground service, subject to the installation restrictions placed upon the pipe and to the coupling manufacturer's recommendations and requirements.
Unless otherwise stated in the listing, these couplings have been evaluated for a maximum ambient temperature of 225°F (107°C), suitable for use in normal warehouse protection. For special applications, temperatures, or environments, the manufacturer's recommendations and requirements are to be followed.

Grooved Split Flanges-Flexible

Split Flanged-These fittings join pipe, valves or fittings having equal diameters.

Models 321, 321S, 321HS, 321E

Product Specification

Model No	Description	Nominal Pipe Size, in	Rated Working Pressure		Remarks
			psi	(kPa)	
321	Split Flange	1 1/2, 2, 2 1/2, 3, 4, 5, 6, 8, 10, 12 76.1, 108, 133, 139, 159, 165 mm	300	(2065)	a, b, c, d, e
321S	Split Flange	48, 60, 76, 89, 108, 114 mm	365	(2515)	a, b, c, d, e
321S	Split Flange	133, 140, 159, 165, 168 mm	225	(1550)	a, b, c, d, e
321HS	Split Flange	108 mm	365	(2515)	a, b, c, e, f
321HS	Split Flange	165 mm	225	(1550)	a, b, c, e, f
321E	Split Flange	60, 89, 114, 165, 219 mm	300	(2065)	a, b, c, d

Remarks:
a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller - Schedule 40; 8 in. NPS and larger - Schedule 30.
b. Minimum schedule rolled groove pipe to be joined: 6 in. NPS and smaller - Schedule 10S; 8 in. NPS and larger 0.188 in. (5 mm) wall.
c. Approved when supplied with EPDM gasket.
d. Approved when supplied with an ISO PN10 bolt pattern.
e. Approved when used with GB/T3092 regular and extra heavy pipe, ISO 4200, and BS 1387 Medium and Heavy pipe.
f. Approved when supplied with an ISO PN25 bolt pattern.

Company Name:	Jinan Meide Casting Co Ltd
Company Address:	Meide Science and Technology Park, Pingyin Industrial Park, Jinan, 250400 China
Company Website:	http://meide-casting.com
New/Updated Product Listing:	No
Listing Country:	China
Certification Type:	FM Approved
Class of Work:	1920-Coupling & Fitting, All Type

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Pipe Fittings

These fittings are suitable for interconnecting piping, valves and other components in both wet and dry automatic sprinkler systems. Installation should be according to applicable sprinkler system fabrication rules. These rules limit the minimum size of sprinkler piping to 1 in., nominal. FM Approved pipe fittings of smaller sizes are intended for use as valve trim, gauge connections, and for other peripheral service. The water flow path of the sprinkler system cannot be designed using smaller sizes than 1 in., nominal. Unless otherwise noted in the listing, these fittings have 175 psi (1205 kPa) rated working pressure.

Threaded connections on fittings can be made to FM Approved threadable thinwall pipe or to Schedule 40 pipe. Refer to the "Steel Pipe" listings for a summary of the various types of FM Approved steel pipe suitable for threading or grooving."

The fittings manufacturer's installation instructions must be observed in all cases. When connections are made to FM Approved pipe, the pipe manufacturer's installation instructions must also be followed.

Unless otherwise stated below, the maximum ambient temperature to which these fittings should be subjected is 225°F (107°C).

Fittings, Side Outlet, Rigid

These fittings allow installation of a perpendicular branch line of reduced size, while joining inline pipes of equal diameters. These fittings bolt over a hole in the run pipe, and allow installation of a perpendicular branch line of reduced size. The maximum branch line size is one pipe size reduced from the run pipe size.

Models 3G, 3GS, 3L, 3J, 3JS, 4G, 4J, 4JG

Product Specification

Model No	Description	Nominal Pipe Size, in	Rated Working Pressure		Remarks
			psi	(kPa)	
3G	Mechanical Tee, Grooved Outlet	2 x 1 1/4, 1 1/2 2 1/2 x 1 1/4, 1 1/2 76 x 1, 1 1/4, 1 1/2 3 x 1, 1 1/4, 1 1/2, 2 4 x 1, 1 1/4, 1 1/2, 2, 2 1/2, 76, 3 133 x 3, 139.7 x 1 1/4, 1 1/2, 2, 2 1/2, 3, 4 159 x 2, 108, 4 5 x 1 1/4, 1 1/2, 2, 2 1/2, 3 165 x 2, 2 1/2, 3, 4 6 x 1 1/4, 1 1/2, 2, 2 1/2, 76, 3, 4 8 x 2, 2, 2 1/2, 76, 3, 108, 4 10 x 76, 3, 108, 4	300	(2065)	a, c, e
3GS	Mechanical Tee, Grooved Outlet	89 x 34, 42, 48, 60 mm	365	(2515)	a, c, e
3GS	Mechanical Tee, Grooved Outlet	114 x 34, 42, 48, 60, 73, 76, 89 mm 133 x 89 mm 140 x 42, 48, 60, 76, 89 mm 159 x 108, 89, 114 mm 165 x 42, 48, 60, 76, 89, 108, 114 mm 168 x 42, 48, 60, 73, 76, 89, 114 mm 219 x 60, 73, 76, 89, 108, 114 mm	300	(2065)	a, c, e
3L	Mechanical Tee, Grooved Outlet	1 1/4 x 1/2, 3/4, 1 1 1/2 x 1/2, 3/4, 1 2 x 1/2, 3/4, 1 2 1/2 x 1/2, 3/4, 1 76 x 1/2, 3/4, 1 3 x 1 4 x 1, 1 1/4, 1 1/2 6 x 1, 1 1/4, 1 1/2	300	(2065)	a, c, e

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3J	Mechanical Tee, Threaded Outlet	1 x 1/2 1 1/4 x 1/2 1 1/2 x 1/2 2 x 1/2, 3/4 2 1/2 x 1/2, 3/4 3 x 1/2, 3/4 76 x 1/2, 3/4 4 x 1/2, 3/4 108 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 76 133 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2, 76, 3 139 x 1/2, 3/4 , 4 159 x 1/2, 3/4, 1, 1 1/4, 1 1/2, 2 219 x 1, 1 1/4, 1 1/2, 2, 2 1/2, 76, 3, 4 10 x 1 1/2, 2, 76, 3, 4	300	(2065)	a, b, c, e
3J	Mechanical Tee, Threaded Outlet	2 x 1, 1 1/4, 1 1/2 2 1/2 x 1, 1 1/4, 1 1/2 76 x 1, 1 1/4, 1 1/2 3 x 1, 1 1/4, 1 1/2, 2 4 x 1, 1 1/4, 1 1/2, 2, 2 1/2, 3 139.7 x 1, 1 1/4, 1 1/2, 2 5 x 1 1/4, 1 1/2, 2, 2 1/2, 3 165 x 1, 1 1/4, 1 1/2, 2, 2 1/2, 3 6 x 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	300	(2065)	a, b, c, e
3JS	Mechanical Tee, Threaded Outlet	89 x 21, 27, 34, 42, 48, 60 mm	365	(2515)	a, b, c, d, e
3JS	Mechanical Tee, Threaded Outlet	114 x 21, 27, 34, 42, 48, 60, 73, 76, 89 mm 168 x 34, 42, 48, 60, 73, 76, 89, 114 mm 219 x 34, 42, 48, 60, 73, 76, 89, 114 mm	300	(2065)	a, b, c, d, e
3JS	Mechanical Tee, Threaded Outlet	108 x 21, 27, 34, 42, 48, 60, 76 mm 133 x 21, 27, 34, 42, 48, 60, 76, 89 mm 140 x 21, 27, 34, 42, 48, 60, 76, 89, 114 mm 159 x 21, 27, 34, 42, 48, 60, 76, 89, 114 mm 165 x 21, 27, 34, 42, 48, 60, 76, 89, 114 mm	300	(2065)	a, c, d, e
4G	Mechanical Cross, Grooved Outlet	2 x 1 1/4, 1 1/2 2 1/2 x 1 1/4, 1 1/2 76 x 1 1/4, 1 1/2 3 x 1 1/4, 1 1/2, 2 4 x 1 1/4, 1 1/2, 2, 2 1/2, 3 139.7 x 2, 2 1/2, 3 5 x 1 1/4, 1 1/2, 2, 2 1/2, 3 165 x 2, 2 1/2, 3 6 x 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	300	(2065)	a, c, e
4J	Mechanical Cross, Threaded Outlet	2 x 1, 1 1/4, 1 1/2 2 1/2 x 1, 1 1/4, 1 1/2 76 x 1, 1 1/4, 1 1/2 3 x 1, 1 1/4, 1 1/2, 2 4 x 1, 1 1/4, 1 1/2, 2, 2 1/2, 3 139.7 x 1, 1 1/4, 1 1/2, 2, 2 1/2, 3 5 x 1 1/4, 1 1/2, 2, 2 1/2, 3 165 x 1, 1 1/4, 1 1/2, 2, 2 1/2, 3 6 x 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	300	(2065)	a, b, c, e

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4JG	Mechanical Cross, Grooved x Threaded Outlet	2 x 1, 1 1/4, 1 1/2 2 1/2 x 1, 1 1/4, 1 1/2 76 x 1, 1 1/4, 1 1/2 3 x 1 1/4, 1 1/2, 2 4 x 1 1/4, 1 1/2, 2, 2 1/2, 3 139.7 x 2, 2 1/2, 3 5 x 1 1/4, 1 1/2, 2, 2 1/2, 3 165 x 2, 2 1/2, 3 6 x 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	300	(2065)	a, b, c, e

Remarks:
a. For use on Schedule 10 and heavier steel sprinkler pipe.
b. Approved when supplied with NPT female threads.
c. Approved when supplied with EPDM gasket.
d. Approved when supplied with BSP or DIN female threads.
e. Electroplate Zinc Coating and Hot dip Galvanize coating available on bolt and nut assembly.

Company Name:	Jinan Meide Casting Co Ltd
Company Address:	Meide Science and Technology Park, Pingyin Industrial Park, Jinan, 250400 China
Company Website:	http://meide-casting.com
New/Updated Product Listing:	No
Listing Country:	China
Certification Type:	FM Approved
Class of Work:	1920-Coupling & Fitting, All Type

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VIZA.EX6097 - Fittings, Grooved and Plain End

Fittings, Grooved and Plain End

JINAN MEIDE CASTING CO LTD
Meide Science and Technology Park
Pingyin Industrial Park
JINAN, SHANDONG 250400 China

EX6097

See General Information for Fittings, Grooved and Plain End

The following fittings are intended for use with Listed Jinan Meide (EX6464) rubber gasketed fittings.

Grooved

Model	Type	Size In.	Rated Pressure (psig)
90	90 Degree Elbow	1-1/4, 1-1/2, 2, 2-1/2, 3 OD, 3, 4, 5, 5-1/2 OD, 6, 6-1/2 OD, 8	500
90	90 Degree Elbow	33.7mm, 76.1mm	500
90	90 Degree Elbow	133.0mm, 267.4mm, 318.5mm	300
90	90 Degree Elbow	10	500
90	90 Degree Elbow	12	500
90C	90 Degree Elbow	114.3mm x 88.9mm x 33.7mm, 165.1mm x 88.9mm x 33.7mm	300
E1	90 Degree Elbow	1-1/4, 1-1/2, 2, 2-1/2, 3 OD, 3, 4, 5, 5-1/2 OD, 6, 6-1/2 OD, 8	500
E1	90 Degree Elbow	33.7mm, 76.1mm	500
E1	90 Degree Elbow	133.0mm, 267.4mm, 318.5mm	300
E1	90 Degree Elbow	10	300
E1	90 Degree Elbow	12	225
EH	90 Degree Elbow	114.3mm x 88.9mm x 33.7mm; 165.1mm x 88.9mm x 33.7mm	300
90S	90 Degree Short Elbow	2, 2-1/2, 3 OD, 3, 4, 5-1/2 OD, 6, 6-1/2 OD, 8	300
90S	90 Degree Short Elbow	108.0mm, 141.3mm	500
90S	90 Degree Short Elbow	114.3mm, 165.1mm	365
90S	90 Degree Short Elbow	159.0mm, 216.3mm	300
EL	90 Degree Short Elbow	2, 2-1/2, 3 OD, 3, 4, 5-1/2 OD, 6, 6-1/2 OD, 8	300
EL	90 Degree Short Elbow	108.0mm	500
EL	90 Degree Short Elbow	159.0mm, 216.3mm	300

EL	90 Degree Short Elbow	114.3mm, 165.1mm	365
90R	90 Degree Reducing Elbow	88.9 x 76.1mm;	300
		114.3 x 76.1mm, 88.9mm;	
		165.1 x 114.3mm;	
		168.3 x 114.3mm	
90R	90 Degree Reducing Elbow	4x3	500
91R	90 Degree Reducing Elbow	1-1/4 x 1/2, 3/4, 1;	500
		1-1/2 x 1/2, 3/4, 1;	
		2 x 1/2, 3/4, 1;	
		2-1/2 x 1/2, 3/4, 1;	
		3 x 3/4, 1	
ER	90 Degree Reducing Elbow	88.9 x 76.1mm	300
		114.3 x 76.1mm, 88.9mm;	
		165.1 x 114.3mm;	
		168.3 x 114.3mm	
ER	90 Degree Reducing Elbow	4 x 3	500
EE	90 Degree Reducing Elbow	1-1/4 x 1/2, 3/4, 1;	500
		1-1/2 x 1/2, 3/4, 1;	
		2 x 1/2, 3/4, 1;	
		2-1/2 x 1/2, 3/4, 1;	
		3 x 3/4, 1	
105	11.25 Degree Elbow	42.4mm, 48.3mm, 60.3mm, 73mm, 76.1mm, 88.9mm, 114.3mm, 168.3mm 219.3mm	500
105	11.25 Degree Elbow	108.0mm 139.7mm, 159.0mm, 165.1mm	300
E2	11.25 Degree Elbow	42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm	500
E2	11.25 Degree Elbow	108.0mm, 114.3mm, 139.7mm, 159.0mm, 165.1mm, 168.3mm, 219.1mm	300
110	22.5 Degree Elbow	42.4mm, 48.3mm, 60.3mm, 73.0mm, 76.1mm, 88.9mm, 114.3mm, 168.3mm, 219.1mm	500
110	22.5 Degree Elbow	108.0mm, 139.7mm, 159.0mm, 165.1mm	300
E3	22.5 Degree Elbow	42.4mm, 48.3mm, 60.3mm, 73.0mm, 76.1mm, 88.9mm	500
E3	22.5 Degree Elbow	108.0mm, 114.3mm, 139.7mm, 159.0mm, 165.1mm, 168.3mm, 219.1mm	300
120	45 Degree Elbow	1-1/4, 1-1/2, 2, 2-1/2, 3 OD, 3, 4, 5-1/4OD, 5, 6, 6-1/2 OD, 8, 10, 12	500
120	45 Degree Elbow	33.7mm	500
120	45 Degree Elbow	108.0mm, 139.7mm, 159.0mm, 216.3mm, 267.4mm, 318.5mm	300

E4	45 Degree Elbow	1-1/4, 1-1/2, 2, 2-1/2, 3 OD, 3, 4, 5, 6, 6-1/2 OD, 8, 10, 12	500
E4	45 Degree Elbow	33.7mm	500
E4	45 Degree Elbow	108.0mm, 139.7mm, 159.0mm, 216.3mm, 267.4mm, 318.5mm	300
130	Tee	1-1/4, 1-1/2, 2, 2-1/2, 3 OD, 3, 4, 5, 6, 6-1/2 OD, 8, 10, 12	500
130	Tee	33.7mm, 76.1mm	500
130	Tee	133.0mm, 139.7mm, 267.4mm	300
130R	Reducing Tee	2 x 1-1/2;	500
		3 x 1, 1-1/2, 2, 2-1/2;	
		4 x 1, 2, 2-1/2, 3;	
		5 x 1-1/2, 2, 2-1/2, 3, 4;	
		6 x 2, 2-1/2, 3, 4, 5;	
		8 x 2, 2-1/2, 3, 4, 5, 6;	
		12 x 6	
130R	Reducing Tee	60.3 x 33.7mm, 48.3mm	500
		73.0 x 48.3mm, 60.3mm;	
		76.1 x 42.4mm, 48.3mm, 60.3mm;	
		88.9 x 42.4mm, 48.3mm, 60.3mm, 73.0mm	
		216.3 x 114.3mm	
130R	Reducing Tee	114.3 x 33.7mm, 60.3mm, 73.0mm, 88.9mm;	365
		141.3 x 88.9mm, 114.3mm;	
		168.3 x 60.3mm, 73.0mm, 88.9mm, 114.3mm, 141.3mm	
130R	Reducing Tee	88.9 x 76.1mm;	300
		108.0 x 60.3mm, 73.0mm, 88.9mm;	
		114.3 x 48.3mm, 76.1mm;	
		133.0 x 60.3mm, 76.1mm, 108.0mm, 114.3mm;	
		139.7 x 48.3mm, 60.3mm, 76.1mm, 88.9mm, 114.3mm;	
		159.0 x 60.3mm, 76.1mm, 88.9mm, 108.0mm, 114.3mm, 133.0mm;	
		165.1 x 60.3mm, 76.1mm, 88.9mm, 114.3mm, 133.0mm, 139.7mm, 159.0mm;	
		168.3 x 76.1mm, 139.7mm;	
		216.3 x 165.1mm;	
		219.1 x 60.3mm, 76.1mm, 88.9mm, 108.0mm, 114.3mm, 133.0mm, 139.7mm, 141.3mm, 159.0mm, 165.1mm; 168.3mm	
		273.0 x 165.1mm, 168.3mm, 219.1mm;	

		323.9 x 165.1mm, 219.1mm, 273.0mm	
T	Tee	1-1/4, 1-1/2, 2, 2-1/2, 3 OD, 3, 4, 5, 6, 6-1/2 OD, 8, 10, 12	500
T	Tee	33.7mm, 76.1mm	500
T	Tee	133.0mm, 139.7mm, 267.4mm	300
RT	Reducing Tee	2 x 1-1/2	500
		3 x 1, 1-1/2, 2, 2-1/2	
		4 x 1, 2, 2-1/2, 3;	
		5 x 2, 3, 4;	
		6 x 2, 2-1/2, 3, 4, 5;	
		8 x 2, 3, 4, 5, 6	
RT	Reducing Tee	60.3 x 33.7mm, 48.3mm	500
		73.0 x 48.3mm, 60.3mm;	
		76.1 x 42.4mm, 48.3mm, 60.3mm;	
		88.9 x 42.4mm, 48.3mm, 60.3mm, 73.0mm	
RT	Reducing Tee	114.3 x 33.7mm, 60.3mm, 73.0mm, 88.9mm;	365
		141.3 x 88.9mm, 114.3mm;	
		168.3 x 60.3mm, 73.0mm, 88.9mm, 114.3mm, 141.3mm	
RT	Reducing Tee	88.9 x 76.1mm;	300
		108.0 x 60.3mm, 73.0mm, 88.9mm;	
		114.3 x 48.3mm, 76.1mm;	
		133.0 x 60.3mm, 76.1mm, 108.0mm, 114.3mm;	
		139.7 x 48.3mm, 60.3mm, 76.1mm, 88.9mm, 114.3mm;	
		159.0 x 60.3mm, 76.1mm, 88.9mm, 108.0mm, 114.3mm, 133.0mm;	
		165.1 x 60.3mm, 76.1mm, 88.9mm, 114.3mm, 133.0mm, 139.7mm, 159.0mm;	
		168.3 x 76.1mm, 139.7mm;	
		216.3 x 165.1mm;	
		219.1 x 60.3mm, 76.1mm, 88.9mm, 108.0mm, 114.3mm, 133.0mm, 139.7mm, 141.3mm, 159.0mm, 165.1mm; 168.3mm	
		273.0 x 165.1mm, 168.3mm, 219.1mm;	
		323.9 x 165.1mm, 219.1mm, 273.0mm	
130C	Reducing Tee, Grooved	114.3mm x 88.9mm x 33.7mm, 165.1mm x 88.9mm x 33.7mm	300
130D	Reducing Tee, Grooved	114.3mm x 88.9mm x 33.7mm, 165.1mm x 88.9mm x 33.7mm	300
TH	Reducing Tee, Grooved	114.3mm x 88.9mm x 33.7mm; 165.1mm x 88.9mm x 33.7mm	300

TV	Reducing Tee, Grooved	114.3mm x 88.9mm x 33.7mm; 165.1mm x 88.9mm x 33.7mm	300
130S	Short Tee	2, 2-1/2, 3 OD, 3, 4, 5-1/2 OD, 6, 6-1/2 OD, 8	300
130S	Short Tee	108.0mm, 141.3mm	500
130S	Short Tee	114.3mm, 165.1mm	365
130S	Short Tee	159.0mm, 216.3mm	300
TL	Short Tee	2, 2-1/2, 3 OD, 3, 4, 5-1/2 OD, 6, 6-1/2 OD, 8	300
TL	Short Tee	108.0mm	500
TL	Short Tee	114.3mm, 165.1mm	365
TL	Short Tee	159.0mm, 216.3mm	300
131	Tee	88.9mm, 114.3mm, 168.3mm	300
131R	Reducing Tee	60.3 x 33.7mm, 48.3mm;	500
		73.0 x 33.7mm, 42.4mm;	
		76.1 x 33.7mm, 42.4mm, 48.3mm, 60.3mm;	
		88.9 x 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm	
131R	Reducing Tee	108.0 x 60.3mm, 76.1mm, 88.9mm;	300
		114.3 x 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
		133.0 x 60.3mm, 76.1mm, 88.9mm;	
		139.7 x 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
		159.0 x 60.3mm, 76.1mm, 88.9mm;	
		165.1 x 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm, 114.3mm;	
		168.3 x 60.3mm, 76.1mm, 88.9mm	
T1	Tee	88.9mm, 114.3mm, 168.3mm	300
TT	Reducing Tee	60.3 x 33.7mm, 48.3mm;	500
		73.0 x 33.7mm, 42.4mm;	
		76.1 x 33.7mm, 42.4mm, 48.3mm, 60.3mm;	
		88.9 x 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm	
TT	Reducing Tee	108.0 x 60.3mm, 76.1mm, 88.9mm;	300
		114.3 x 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
		133.0 x 60.3mm, 76.1mm, 88.9mm;	
		139.7 x 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
		159.0 x 60.3mm, 76.1mm, 88.9mm;	
		165.1 x 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm, 114.3mm;	
		168.3 x 60.3mm, 76.1mm, 88.9mm	

131R	Reducing Tee, Threaded	2 x 1-1/4;	500
		2-1/2 x 1-1/2, 2	
TT	Reducing Tee, Threaded	2 x 1-1/4;	500
		2-1/2 x 1-1/2, 2	
180	Cross	1-1/4, 1-1/2, 2, 2-1/2, 3 OD, 3, 4, 5, 6, 6-1/2 OD, 8, 10, 12	500
180	Cross	60.3mm, 73.0mm, 76.1mm, 88.9mm, 114.3mm, 141.3mm, 165.1mm	365
180	Cross	108.0mm, 139.7mm, 159.0mm, 168.3mm, 219.1mm	300
180R	Reducing Cross	88.9 x 60.3mm	500
180R	Reducing Cross	114.3 x 60.3mm, 88.9mm;	300
		139.7 x 114.3mm;	
		159.0 x 108.0mm;	
		165.1 x 60.3mm, 76.1mm, 88.9mm, 114.3mm;	
		219.1 x 60.3mm, 114.3mm, 139.7mm, 159.0mm, 165.1mm	
180R	Reducing Cross	3OD x 2;	500
		6x2	
RX	Reducing Cross	3OD x 2;	500
		6x2	
C	Cross	1-1/4, 1-1/2, 2, 2-1/2, 3 OD, 3, 4, 5, 6, 6-1/2 OD, 8, 10, 12	500
C	Cross	60.3mm, 73.0mm, 76.1mm, 88.9mm, 114.3mm, 141.3mm, 165.1mm	365
C	Cross	108.0mm, 139.7mm, 159.0mm, 168.3mm, 219.1mm	300
RX	Reducing Cross	88.9 x 60.3mm	500
RX	Reducing Cross	114.3 x 60.3mm, 88.9mm;	300
		139.7 x 114.3mm;	
		159.0 x 108.0mm;	
		165.1 x 60.3mm, 76.1mm, 88.9mm, 114.3mm;	
		219.1 x 60.3mm, 114.3mm, 139.7mm, 159.0mm, 165.1mm	
181	Cross	114.3 x 33.7mm, 42.4mm, 48.3mm, 60.3mm;	300
		165.1 x 60.3mm	
181	Reducing Cross, Threaded	3OD x 2;	500
		3 x 1-1/2, 2;	
		4 x 3OD, 3;	
		6-1/2OD x 1-1/2	
CTR	Cross	114.3 x 33.7mm, 42.4mm, 48.3mm, 60.3mm;	300

		165.1 x 60.3mm	
230	Grooved Eccentric Reducer	88.9 x 60.3mm;	500
		108.0 x 76.1mm, 88.9mm;	
		114.3 x 60.3mm, 88.9mm	
		168.3 x 141.3mm;	
		219.1 x 159.0mm, 165.1mm, 168.3mm	
230	Grooved Eccentric Reducer	114.3 x 76.1mm;	300
		139.7 x 114.3mm;	
		159.0 x 108.0mm, 114.3mm;	
		165.1 x 88.9mm, 114.3mm, 139.7mm;	
		168.3 x 88.9mm, 114.3mm, 139.7mm;	
		219.1 x 114.3mm, 168.3mm;	
		273.1 x 219.1mm	
RE	Grooved Eccentric Reducer	88.9 x 60.3mm;	500
		108.0 x 76.1mm, 88.9mm;	
		114.3 x 60.3mm, 88.9mm	
RE	Grooved Eccentric Reducer	114.3 x 76.1mm;	300
		139.7 x 114.3mm;	
		159.0 x 108.0mm, 114.3mm;	
		165.1 x 88.9mm, 114.3mm, 139.7mm;	
		168.3 x 88.9mm, 114.3mm, 139.7mm;	
		219.1 x 114.3mm, 168.3mm;	
		273.1 x 219.1mm	
230N	Grooved Eccentric Reducer With Male Thread	108.0 x 76.1mm	500
230N	Grooved Eccentric Reducer With Male Thread	114.3 x 76.1mm;	300
		139.7 x 88.9mm;	
		165.1 x 88.9mm	
RE1	Grooved Eccentric Reducer With Male Thread	108.0 x 76.1mm	500
RE1	Grooved Eccentric Reducer With Male Thread	114.3 x 76.1mm	300
		139.7 x 88.9mm	
		165.1 x 88.9mm	

240	Grooved Concentric Reducer	2 x 3/4, 1, 1-1/4, 1-1/2;	500
		2-1/2 x 1, 1-1/4, 1-1/2, 2;	
		3 x 3/4, 1, 1-1/2, 2, 2-1/2;	
		4 x 1, 1-1/2, 2, 2-1/2, 3;	
		5 x 3, 4;	
		6 x 1, 2, 2-1/2, 3, 4, 5;	
		8 x 2-1/2, 3, 4, 5, 6	
		10 x 6, 8;	
		12 x 6, 8, 10	
240	Grooved Concentric Reducer	42.4 x 33.7mm;	500
		48.3 x 33.7mm, 42.4mm;	
		76.1 x 33.7mm, 42.4mm, 48.3mm, 60.3mm;	
		88.9 x 76.1mm;	
		108.0 x 60.3mm, 73.0mm, 88.9mm;	
		141.3 x 76.1mm;	
		165.1 x 108mm;	
		219.1 x 108mm	
240	Grooved Concentric Reducer	88.9 x 42.4mm;	365
		133.0 x 108.0mm, 114.3mm;	
		139.7 x 60.3mm;	
		141.3 x 88.9mm, 114.3mm	
240	Grooved Concentric Reducer	108.0 x 76.1mm;	300
		114.3 x 42.4mm, 76.1mm;	
		139.7 x 76.1mm, 88.9mm, 114.3mm;	
		141.3 x 73.0mm;	
		159.0 x 60.3mm, 76.1mm, 88.9mm, 108.0mm, 114.3mm, 133.0mm;	
		165.1 x 60.3mm, 76.1mm, 88.9mm, 114.3mm, 139.7mm;	
		168.3 x 76.1mm, 139.7mm;	
		216.3 x 114.3mm, 165.1mm;	
		219.1 x 108.0mm, 139.7mm, 159.0mm, 165.1mm;	
		273.0 x 159.0mm, 165.1mm,;	
RC	Grooved Concentric Reducer	2 x 3/4, 1, 1-1/4, 1-1/2;	500
		2-1/2 x 1, 1-1/4, 1-1/2, 2;	

		3 x 3/4, 1, 1-1/2, 2, 2-1/2;	
		4 x 1, 1-1/2, 2, 2-1/2, 3;	
		5 x 3, 4;	
		6 x 1, 2, 2-1/2, 3, 4, 5;	
		8 x 2-1/2, 3, 4, 5, 6	
RC	Grooved Concentric Reducer	42.4 x 33.7mm;	500
		48.3 x 33.7mm, 42.4mm;	
		76.1 x 42.4mm, 48.3mm, 60.3mm;	
		88.9 x 76.1mm;	
		108.0 x 60.3mm, 73.0mm	
RC	Grooved Concentric Reducer	88.9 x 42.4mm;	365
		133.0 x 108.0mm, 114.3mm;	
		139.7 x 60.3mm;	
		141.3 x 88.9mm, 114.3mm	
RC	Grooved Concentric Reducer	108.0 x 76.1mm;	300
		114.3 x 42.4mm, 76.1mm;	
		139.7 x 76.1mm, 88.9mm, 114.3mm;	
		141.3 x 73.0mm;	
		159.0 x 60.3mm, 76.1mm, 88.9mm, 108.0mm, 114.3mm, 133.0mm;	
		165.1 x 60.3mm, 76.1mm, 88.9mm, 114.3mm, 139.7mm;	
		168.3 x 76.1mm, 139.7mm;	
		216.3 x 114.3mm, 165.1mm;	
		219.1 x 108.0mm, 139.7mm, 159.0mm, 165.1mm;	
		273.0 x 159.0mm, 165.1mm, 168.3mm, 219.1mm;	
		323.9 x 219.1mm, 273.0mm	
240N	Concentric Reducer - FNPT	1 x 1/2;	500
		2 x 1/2, 3/4, 1, 1-1/4, 1-1/2;	
		2-1/2 x 1, 1-1/4, 1-1/2, 2;	
		3 x 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2;	
		4 x 1, 1-1/2, 2, 2-1/2, 3;	
		5 x 3, 4;	
		6 x 1, 2, 2-1/2, 3, 4, 5;	
		8 x 2-1/2, 3, 4, 5, 6	

240N	Concentric Reducer With Female Thread	76.1 x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm	500
		139.7 x 60.3mm, 88.9mm;	
		159.0 x 76.1mm	
240N	Concentric Reducer With Female Thread	88.9 x 21.3mm;	365
		133.0 x 48.3mm, 76.1mm;	
		139.7 x 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm, 114.3mm;	
		141.3 x 88.9mm, 114.3mm	
240N	Concentric Reducer With Female Thread	88.9 x 42.4mm, 76.1mm;	300
		108.0 x 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1 mm, 88.9mm;	
		114.3 x 21.3 mm, 26.9mm, 42.4mm, 76.1 mm;	
		159.0 x 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 88.9mm, 114.3mm;	
		165.1 x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm, 114.3mm;	
		219.1 x 48.3mm, 60.3mm, 76.1mm	
RC1	Concentric Reducer - FNPT	2 x 3/4, 1, 1-1/4, 1-1/2;	500
		2-1/2 x 1, 1-1/4, 1-1/2, 2;	
		3 x 3/4, 1, 1-1/2, 2, 2-1/2;	
		4 x 1, 1-1/2, 2, 2-1/2, 3;	
		5 x 3, 4;	
		6 x 1, 2, 2-1/2, 3, 4, 5;	
		8 x 2-1/2, 3, 4, 5, 6	
RC1	Concentric Reducer With Female Thread	76.1 x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm	500
RC1	Concentric Reducer With Female Thread	88.9 x 21.3mm	365
		133.0 x 48.3mm, 76.1mm;	
		139.7 x 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm, 114.3mm	
		141.3 x 88.9mm, 114.3mm	
RC1	Concentric Reducer With Female Thread	88.9 x 42.4mm, 76.1mm;	300
		108.0 x 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1 mm, 88.9mm;	
		114.3 x 21.3 mm, 26.9mm, 42.4mm, 76.1 mm;	

		159.0 x 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 88.9mm, 114.3mm;	
		165.1 x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm, 114.3mm;	
		219.1 x 48.3mm, 60.3mm, 76.1mm	
240W	Concentric Reducer - MNPT	2 x 3/4, 1, 1-1/4, 1-1/2;	500
		2-1/2 x 1, 1-1/4, 1-1/2, 2;	
		3 x 3/4, 1, 1-1/2, 2, 2-1/2;	
		4 x 1, 1-1/2, 2, 2-1/2, 3;	
		5 x 3, 4;	
		6 x 1, 2, 2-1/2, 3, 4, 5;	
		8 x 2-1/2, 3, 4, 5, 6	
240W	Concentric Reducer - MNPT	76.1 x 60.3mm	500
		88.9 x 76.1mm	
240W	Concentric Reducer - FNPT	2 x 1, 1-1/4, 1-1/2; 2-1/2 x 1, 1-1/4, 1-1/2; 3 x 1-1/2, 2, 2-1/2; 4 x 1, 1-1/2, 2-1/2, 3	500
RC2	Concentric Reducer - MNPT	2 x 3/4, 1, 1-1/4, 1-1/2;	500
		2-1/2 x 1, 1-1/4, 1-1/2, 2;	
		3 x 3/4, 1, 1-1/2, 2, 2-1/2;	
		4 x 1, 1-1/2, 2, 2-1/2, 3;	
		5 x 3, 4;	
		6 x 1, 2, 2-1/2, 3, 4, 5;	
		8 x 2-1/2, 3, 4, 5, 6	
RC2	Concentric Reducer - MNPT	76.1 x 60.3mm	500
300	Cap	1-1/4, 1-1/2, 2, 2-1/2, 3 OD, 3, 4, 5, 5-1/2 OD, 6, 6-1/2 OD, 8, 10, 12	500
300	Cap	33.7mm	500
300	Cap	108.0mm, 133.0mm, 139.7mm, 159.0mm, 216.3mm	300
300	Cap	76.1 x 48.3mm	500
		168.3 x 21.3mm, 60.3mm;	
		219.1 x 33.7mm	
300	Cap	88.9 x 60.3mm;	365
		114.3 x 60.3mm;	
		139.7 x 60.3mm;	
		165.1 x 60.3mm	

300	Cap	88.9 x 21.3mm, 33,7mm, 48.3mm;	300
		114.3 x 21.3mm, 33.7mm, 48.3mm;	
		165.1 x 21.3mm, 33.7mm;	
		168.3 x 48.3mm	
300PX	Cap	2-1/2 x 1;	500
		3OD x 1;	
		4 x 1	
300PX	Cap	88.9 x 48.3mm, 60.3mm;	365
		114.3 x 48.3mm, 60.3mm;	
		139.7 x 48.3mm, 60.3mm;	
		165.1 x 48.3mm;	
		168.3 x 48.3mm, 60.3mm	
300PX	Cap	219.1 x 48.3mm, 60.3mm	300
CP	Cap	1-1/4, 1-1/2, 2, 2-1/2, 3 OD, 3, 4, 5, 5-1/2 OD, 6, 6-1/2 OD, 8, 10, 12	500
CP	Cap	33.7mm	500
CP	Cap	108.0mm, 133.0mm, 139.7mm, 159.0mm, 216.3mm	300
CP	Cap	76.1 x 48.3mm	500
CP	Cap	88.9 x 60.3mm;	365
		114.3 x 60.3mm;	
		139.7 x 60.3mm;	
		165.1 x 60.3mm	
CP	Cap	88.9 x 21.3mm, 33,7mm, 48.3mm;	300
		114.3 x 21.3mm, 33.7mm, 48.3mm;	
		165.1 x 21.3mm, 33.7mm;	
		168.3 x 48.3mm	
CP2	Cap	88.9 x 48.3mm, 60.3mm;	365
		114.3 x 48.3mm, 60.3mm;	
		139.7 x 48.3mm, 60.3mm;	
		165.1 x 48.3mm;	
		168.3 x 48.3mm, 60.3mm	
CP2	Cap	219.1 x 48.3mm, 60.3mm	300
CP2	Cap	2-1/2 x 1; 3OD x 1; 4 x 1	
321G	Flange Adapter	2, 2-1/2, 3 OD, 3, 4, 5, 5-1/2 OD, 6, 6-1/2 OD, 8	300

321G	Flange Adapter	10, 12	225
321G	Flange Adapter	33.7mm, 42.4mm, 48.3mm, 60.3mm, 73.0mm, 76.1mm, 88.9mm, 108.0mm, 114.3mm, 133.0mm, 139.7mm, 141.3mm, 159.0mm, 165.1mm, 168.3mm	300
321G	Flange Adapter	219.1mm, 273.1mm, 323.9mm	225
321GE	Flange Adapter	2, 3OD, 3, 8, 10	300
AF16E	Flange Adapter	2, 3OD, 3, 8, 10	300
321GA	Flange Adapter	2, 4, 8, 10	300
AFA	Flange Adapter	2, 4, 8, 10	300
321GH	Flange Adapter	159.0mm	300
321GH	Flange Adapter	4-1/4OD(108mm), 4, 6-1/2OD(165.1mm), 8	365
321GL	Flange Adapter	219.1mm, 273.0mm	225
AF16	Flange Adapter	2, 2-1/2, 3 OD, 3, 4, 5-1/2OD, 5, 6, 6-1/2 OD, 8	
AF16	Flange Adapter	10, 12	
AF16	Flange Adapter	33.7mm, 42.4mm, 48.3mm, 60.3mm, 73.0mm, 76.1mm, 88.9mm, 108.0mm, 114.3mm, 133.0mm, 139.7mm, 141.3mm, 159.0mm, 165.1mm, 168.3mm	300
AF16	Flange Adapter	219.1mm, 273.1mm, 323.9mm	225
AF25	Flange Adapter	159.0mm	300
AF25	Flange Adapter	4-1/4OD(108mm), 4, 6-1/2OD(165.1mm), 8	365
AF10	Flange Adapter	219.1mm, 273.0mm	225
90X	90 Degree Short Elbow	3, 4-1/4OD, 4, 5-1/4OD, 5-1/2OD, 6-1/4OD, 6-1/2OD, 6, 10, 12	300
E1X	90 Degree Short Elbow	3, 4-1/4OD, 4, 5-1/4OD, 5-1/2OD, 6-1/4OD, 6-1/2OD, 6, 10, 12	300
110X	22.5 Degree Short Elbow	4, 6-1/4OD, 6-1/2OD	300
E3X	22.5 Degree Short Elbow	4, 6-1/4OD, 6-1/2OD	300
120X	45 Degree Short Elbow	3, 4-1/4OD, 4, 5-1/2OD, 6-1/4OD, 6-1/2OD, 6, 8, 10	300
E4X	45 Degree Short Elbow	3, 4-1/4OD, 4, 5-1/2OD, 6-1/4OD, 6-1/2OD, 6, 8, 10	300
130X	Short Tee	3, 4-1/4OD, 4, 5-1/4OD, 5-1/2OD, 6-1/4OD, 6-1/2OD, 6, 8, 10, 12	300
TX	Short Tee	3, 4-1/4OD, 4, 5-1/4OD, 5-1/2OD, 6-1/4OD, 6-1/2OD, 6, 8, 10, 12	300
130R	Reducing Tee	10 x 4	500
130RX	Short Reducing Tee, Grooved	3 x 2-1/2, 3OD;	300
		4 x 2, 2-1/2, 3;	
		5-1/2OD x 4;	
		5 x 4;	

		6-1/4OD x 3, 4-1/4OD, 4, 5-1/4OD;	
		6-1/2OD x 2, 3OD, 3, 4, 5-1/2OD;	
		6 x 2, 2-1/2, 3OD, 3, 4, 5-1/2OD, 5;	
		8 x 3OD, 3, 4, 5-1/2OD, 6-1/4OD, 6-1/2OD, 6;	
		10 x 6-1/4OD, 6-1/2OD, 6, 8;	
		12 x 4, 6-1/4OD, 6-1/2OD, 8, 10	
131RX	Short Reducing Tee, Threaded	2 x 1, 1-1/2;	300
		2-1/2 x 1-1/2, 2;	
		3OD x 1-1/2, 2;	
		3 x 1, 1-1/2, 2;	
		4-1/4OD x 3OD;	
		4 x 2, 3OD, 3;	
		6-1/2OD x 2, 3OD, 3, 4;	
		6 x 2, 3OD, 3, 4;	
		8 x 3OD, 4	
RTX	Short Reducing Tee, Grooved	3 x 2-1/2, 3OD;	300
		4 x 2, 2-1/2, 3;	
		5-1/2OD x 4;	
		5 x 4;	
		6-1/4OD x 3, 4-1/4OD, 4, 5-1/4OD;	
		6-1/2OD x 2, 3OD, 3, 4, 5-1/2OD;	
		6 x 2, 2-1/2, 3OD, 3, 4, 5-1/2OD, 5;	
		8 x 3OD, 3, 4, 5-1/2OD, 6-1/4OD, 6-1/2OD, 6;	
		10 x 6-1/4OD, 6-1/2OD, 6, 8;	
		12 x 4, 6-1/4OD, 6-1/2OD, 8, 10	
T1X	Short Reducing Tee, Threaded	2 x 1, 1-1/2;	300
		2-1/2 x 1-1/2, 2;	
		3OD x 1-1/2, 2;	
		3 x 1, 1-1/2, 2;	
		4-1/4OD x 3OD;	
		4 x 2, 3OD, 3;	
		6-1/2OD x 2, 3OD, 3, 4;	

		6 x 2, 3OD, 3, 4;	
		8 x 3OD, 4	
180X	Short Cross	6-1/4OD, 6-1/2OD, 6, 8	300
CX	Short Cross	6-1/4OD, 6-1/2OD, 6, 8	300
180RX	Short Reducing Cross, Grooved	6-1/2OD x 4;	300
		6 x 4;	
		8 x 6-1/2OD, 6	
CRX	Short Reducing Cross, Grooved	6-1/2OD x 4;	300
		6 x 4;	
		8 x 6-1/2OD, 6	
181RX	Short Reducing Cross, Threaded	6-1/2OD x 3	300
CTRX	Short Reducing Cross, Threaded	6-1/2OD x 3	300
240NX	Short Concentric Reducer With Female Thread	3OD x 2;	300
		3 x 2, 3OD;	
		4-1/4OD x 3OD, 3;	
		4 x 1-1/2, 2, 3OD, 3;	
		6-1/2OD x 2, 3OD, 3, 4;	
		8 x 1	
RCNX	Short Concentric Reducer With Female Thread	3OD x 2;	300
		3 x 2, 3OD;	
		4-1/4OD x 3OD, 3;	
		4 x 1-1/2, 2, 3OD, 3;	
		6-1/2OD x 2, 3OD, 3, 4;	
		8 x 1	
240X	Short Grooved Concentric Reducer	4 x 3OD, 3;	300
		5-1/2OD x 4;	
		6-1/4OD x 4-1/4OD, 4;	
		6-1/2OD x 3, 4, 5-1/2OD;	
		6 x 4, 5-1/2OD;	

		8 x 4, 5-1/4OD, 6-1/2OD;	
		10 x 4, 8;	
		12 x 4, 6-1/4OD, 6-1/2OD	
RCX	Short Grooved Concentric Reducer	4 x 3OD, 3;	300
		5-1/2OD x 4;	
		6-1/4OD x 4-1/4OD, 4;	
		6-1/2OD x 3, 4, 5-1/2OD;	
		6 x 4, 5-1/2OD;	
		8 x 4, 5-1/4OD, 6-1/2OD;	
		10 x 4, 8;	
		12 x 4, 6-1/4OD, 6-1/2OD	
220N	PAINTED GROOVED x FEMALE ADAPTER	2, 2-1/2, 3, 4	500

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Last Updated on 2021-05-04

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VIZM.EX6464 - Fittings, Rubber Gasketed

Fittings, Rubber Gasketed

JINAN MEIDE CASTING CO LTD
Meide Science and Technology Park
Pingyin Industrial Park
JINAN, SHANDONG 250400 China

EX6464

Coupling

Model	Groove Type	Pipe	Size (in.)	Rated Pressure (psig)
1G	Rolled	10	1-1/4, 1-1/2, 2-1/2	500
1G	Rolled	10	2, 3, 4, 5, 6	500
1G	Rolled	10	8	500
1G	Rolled	10	10, 12	500
1G	Rolled	1387-10	3 OD, 6-1/2 OD	300
1G	Rolled	1387-M	5-1/2 OD	450
1G	Rolled, Cut	40	1-1/4, 1-1/2	500
1G	Rolled, Cut	40	2, 2-1/2, 3, 4, 5, 6	500
1G	Rolled, Cut	40	8	500
1G	Rolled, Cut	40	10, 12	500
1G	Rolled, Cut	1387-40	3 OD, 6-1/2 OD	300
1G	Rolled, Cut	1387-H	5-1/2 OD	450
1G	Rolled, Cut	4200	33.7 / 3.2mm, 108.0 / 4.0mm	500
1G	Rolled, Cut	4200	133.0 / 5.4mm, 159.0 / 4.0mm	300
1G	Rolled, Cut	3454-20	267.4 / 6.4mm, 318.5 / 6.4mm	225
1G	Rolled, Cut	4200	355.6 / 6.3mm, 406.4 / 6.3mm	175
1GS	Rolled	10	4	365

1GS	Rolled	10	3, 6, 8, 10	300
1GS	Rolled	40	3, 4, 6, 8, 10	300
1GS	Rolled	1387-M	3 OD, 5-1/2 OD, 6-1/2 OD	300
1GS	Rolled	1387-H	3 OD, 5-1/2 OD, 6-1/2 OD	300
1GS	Rolled, Cut	4200	108.0 / 4.0mm, 141.3 / 6.3mm, 159.0 / 4.0mm	300
1GS	Rolled, Cut	3454-20	216.3 / 6.4mm	300
1GK	Rolled, Cut	4200 E	1-1/4, 1-1/2, 2	500
1GK	Rolled, Cut	4200 E	3, 4	300
1GK	Rolled, Cut	4200 E	76.1mm	300
1GK	Rolled, Cut	4200 D	139.7mm	300
1GK	Rolled, Cut	1387-M	165.1mm	300
1GK	Rolled, Cut	3454-20	216.3mm	300
1GK	Rolled	10	2-1/2	500
1GK	Rolled	10	6, 8, 10	300
1GK	Rolled, Cut	40	2-1/2	500
1GK	Rolled, Cut	40	6, 8, 10	300
1GX	Rolled	10	1-1/4, 1-1/2, 3, 4, 8, 10	300
1GX	Rolled, Cut	40	1-1/4, 1-1/2, 3, 4, 8, 10	300
1GX	Rolled	GB/T 21835	3OD(4.5mm), 4-1/4OD(5.4mm) 5-1/4OD(5.6mm), 5-1/2OD(5.6mm) 6-1/4OD(6.3mm), 6-1/2OD(6.3mm)	300
1GX	Rolled	10	1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 8, 10	363
1GX	Rolled, Cut	40	1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 8, 10	363
1GX	Rolled, Cut	GB/T 21835	3OD(4.5mm), 4-1/4OD(5.4mm), 5-1/4OD(5.6mm), 5-1/2OD(5.6mm), 6-1/4OD(6.3mm), 6-1/2OD(6.3mm)	363
1GH	Rolled	10	2, 2-1/2, 3, 4, 5, 6, 8	750
1GH	Rolled, cut	40	2, 2-1/2, 3, 4, 5, 6, 8	750

1GH	Rolled, cut	T21835	3OD(5.0mm), 5-1/2OD (6.3mm), 6-1/2OD(7.1mm)	750
1GH	Rolled	10	10, 12	750
1GH	Rolled, cut	40	10, 12	750
R1X	Rolled	10	1-1/4, 1-1/2, 3, 4, 8, 10	300
R1X	Rolled, Cut	40	1-1/4, 1-1/2, 3, 4, 8, 10	300
R1X	Rolled	GB/T 21835	3OD(4.5mm), 4-1/4OD(5.4mm) 5-1/4OD(5.6mm), 5-1/2OD(5.6mm) 6-1/4OD(6.3mm), 6-1/2OD(6.3mm)	300
1GKX	Rolled	10	4, 8	300
1GKX	Rolled, Cut	40	4, 8	300
1GKX	Rolled	GB/T 21835	6-1/2OD(6.3mm)	300
R1KX	Rolled	10	4, 8	300
R1KX	Rolled, Cut	40	4, 8	300
R1KX	Rolled	GB/T 21835	6-1/2OD(6.3mm)	300
1GT	Rolled	10	2, 3, 4	300
1GT	Rolled, Cut	40	2, 3, 4	300
1GT	Rolled, Cut	4200	3OD(4.5mm), 5-1/2OD(5mm)	300
1GT	Rolled, Cut	10255-M	6-1/2OD	300
1GT	Rolled, Cut	3454-20	216.3mm	300
1GT	Rolled, Cut	3454-40	216.3mm	300
R1T	Rolled	10	2, 3, 4	300
R1T	Rolled, Cut	40	2, 3, 4	300
R1T	Rolled, Cut	4200	3OD(4.5mm), 5-1/2OD(5mm)	300
R1T	Rolled, Cut	10255-M	6-1/2OD	300
R1T	Rolled, Cut	3454-20	216.3mm	300

R1T	Rolled, Cut	3454-40	216.3mm	300
R10	Rolled, Cut	3452-SPP SGP	2, 76.1mm, 3, 4, 139.7mm, 165.1mm, 216.3mm, 267.4mm, 318.5mm	300
R2K	Rolled, Cut	3452-SPP SGP	2, 76.1mm, 3, 4, 139.7mm, 165.1mm, 216.3mm, 267.4mm, 318.5mm	300
R20	Rolled, Cut	3454-40	2, 76.1mm, 3, 4, 139.7mm, 165.1mm, 216.3mm, 267.4mm, 318.5mm	500
R1KSK	Rolled, Cut	3454-40	2, 76.1mm, 3, 4, 139.7mm, 165.1mm, 216.3mm, 267.4mm, 318.5mm	500
R1	Rolled	10	1-1/4, 1-1/2, 2-1/2	500
R1	Rolled	10	2, 3, 4, 5, 6	300
R1	Rolled	10	8	450
R1	Rolled	10	10, 12	300
R1	Rolled	1387-10	3 OD, 6-1/2 OD	300
R1	Rolled	1387-M	5-1/2 OD	450
R1	Rolled, Cut	40	1-1/4, 1-1/2	500
R1	Rolled, Cut	40	2, 2-1/2, 3, 4, 5, 6	300
R1	Rolled, Cut	40	8	450
R1	Rolled, Cut	40	10, 12	400
R1	Rolled, Cut	1387-40	3 OD, 6-1/2 OD	300
R1	Rolled, Cut	1387-H	5-1/2 OD	450
R1	Rolled, Cut	4200	33.7 / 3.2mm, 108.0 / 4.0mm	500
R1	Rolled, Cut	4200	133.0 / 5.4mm, 159.0 / 4.0mm	300
R1	Rolled, Cut	3454-20	267.4 / 6.4mm, 318.5 / 6.4mm	225
R1	Rolled, Cut	4200	355.6 / 6.3mm, 406.4 / 6.3mm	175
R11	Rolled	10	4	365
R11	Rolled	10	3, 6, 8	300
R11	Rolled	40	3, 4, 6, 8	300
R11	Rolled	1387-M	3 OD, 5-1/2 OD, 6-1/2 OD	300

R11	Rolled	1387-H	3 OD, 5-1/2 OD, 6-1/2 OD	300
R11	Rolled, Cut	4200	108.0 / 4.0mm, 141.3 / 6.3mm, 159.0 / 4.0mm	300
R11	Rolled, Cut	3454-20	216.3 / 6.4mm	300
R2	Rolled, Cut	4200 E	1-1/4, 1-1/2, 2	500
R2	Rolled, Cut	4200 E	3, 4	300
R2	Rolled, Cut	4200 E	76.1mm	300
R2	Rolled, Cut	4200 D	139.7mm	300
R2	Rolled, Cut	1387-M	165.1mm	300
R2	Rolled, Cut	3454-20	216.3mm	300
R2	Rolled	10	2-1/2	500
R2	Rolled	10	6, 8, 10	300
R2	Rolled, Cut	40	2-1/2	500
R2	Rolled, Cut	40	6, 8, 10	300

Flexible coupling

Model	Groove Type	Pipe	Size (in.)	Rated Pressure (psig)
1N	Rolled	10	2, 2-1/2, 3, 4, 5	300
1N	Rolled	10	1-1/4, 1-1/2, 6, 8	500
1N	Rolled	1387-10	3 OD, 6-1/2 OD	300
1N	Rolled	1387-M	5-1/2 OD	450
1N	Rolled	1387-M, 10	3 OD x 1-1/2, 2; 3 x 3 OD; 4 x 3 OD; 8 x 6-1/2 OD	300
1N	Rolled	EN10255-M	88.9mm x 60.3mm; 114.3mm x 60.3mm, 88.9mm; 165.1mm x 114.3mm;	360
1N	Rolled, Cut	40	2, 2-1/2, 3, 4, 5	300
1N	Rolled, Cut	40	1-1/4, 1-1/2, 6, 8	500

1N	Rolled, Cut	1387-40	3 OD, 6-1/2 OD	300
1N	Rolled, Cut	1387-H	5-1/2 OD	450
1N	Rolled, Cut	1387-H, 40	3 OD x 1-1/2, 2; 3 x 3 OD; 4 x 3 OD; 8 x 6-1/2 OD	300
1N	Rolled	EN10255-H	88.9mm x 60.3mm; 114.3mm x 60.3mm, 88.9mm; 165.1mm x 114.3mm;	360
1N	Rolled, cut	10, 40	2-1/2 x 2; 3 x 2, 2-1/2; 4 x 2, 2-1/2, 3; 5 x 4;6 x 4, 5; 8 x 6	360
1N	Rolled, Cut	4200	33.7 / 3.2mm, 108.0 / 4.0mm	500
1N	Rolled, Cut	4200	133.0 / 5.4mm, 159.0 / 4.0mm	300
1N	Rolled, Cut	4200	73.0 / 3.2 x 33.7 / 3.2mm; 76.1 / 3.6 x 33.7 / 3.2mm; 88.9 / 3.2 x 33.7 / 3.2mm; 114.3 / 3.6 x 33.7 / 3.2mm; 168.3 / 4.0 x 88.9 / 3.2mm	300
1N	Rolled, cut	4200	60.3mm(4.0mm) x 33.7(3.2mm), 48.3mm(4.0mm); 219.1mm(5.0mm) x 168.3mm(5.0mm)	360
1N	Rolled, Cut	4200	273.0 / 6.3mm, 323.9 / 6.3mm	500
F1	Rolled, Cut	3452-SPP SGP	216.3mm, 267.4mm, 318.5mm	300
C1K	Rolled, Cut	3452-SPP SGP	216.3mm, 267.4mm, 318.5mm	300
1NH	Rolled, Cut	4200	60.3 / 3.2mm, 73.0 / 3.2mm, 76.1 / 3.6mm, 88.9 / 3.2mm, 114.3 / 3.6mm, 141.3 / 6.3mm	750
1NH	Rolled, Cut	4200	168.3 / 4.0mm, 219.1 / 5.0mm	750
1NH	Rolled, Cut	EN10255-M	139.7mm, 165.1 / 5.0mm	750
1NH	Rolled	10	12	500
1NH	Rolled, Cut	40	12	500
1NH	Rolled	10	2, 2-1/2, 3, 4, 5, 6, 8	750

1NH	Rolled, Cut	40	2, 2-1/2, 3, 4, 5, 6, 8	750
1NX	Rolled, Cut	10, 40	2-1/2	300
1NX	Rolled	10	6, 8, 10	300
1NX	Rolled, Cut	40	6, 8, 10	300
C1X	Rolled	10	6, 8, 10	300
C1X	Rolled, Cut	40	6, 8, 10	300
1N	Rolled, Cut	10, 40	6 x 6-1/2OD(6.3mm)	300
1N	Rolled	GB/T 21835	6-1/2OD(6.3mm) x 3;	300
1N	Rolled, Cut	GB/T 21835	3OD(4.5mm) x 2-1/2(4.5mm)	300
1NT	Rolled	10	2, 3, 4	300
1NT	Rolled Cut	40	2, 3, 4	300
1NT	Rolled Cut	4200	3OD(4.5mm), 5-1/2OD(5mm), 6-1/2OD(6.3mm)	300
1NT	Rolled Cut	3452	216.3 mm	300
1NS	Rolled Cut	10, 40	3, 4, 6, 10	300
1NS	Rolled Cut	GB/T 21835	5-1/2OD(5.6mm), 6-1/2OD(6.3mm)	300
1NS	Rolled Cut	10, 40	6 x 4	300
C1T	Rolled	10	2, 3, 4	300
C1T	Rolled Cut	40	2, 3, 4	300
C1T	Rolled Cut	4200	3OD(4.5mm), 5-1/2OD(5mm), 6-1/2OD(6.3mm)	300
C1T	Rolled Cut	3452	216.3 mm	300
C1	Rolled	10	1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 5, 6	300
C1	Rolled	10	8	450
C1	Rolled	1387-10	3 OD, 6-1/2 OD	300
C1	Rolled	1387-M	5-1/2 OD	450

C1	Rolled	1387-M, 10	2-1/2 x 2; 3 OD x 1-1/2, 2; 3 x 2, 2-1/2, 3 OD; 4 x 2, 2-1/2, 3 OD, 3; 6-1/2 OD x 4; 6 x 4; 8 x 6-1/2 OD, 6	300
C1	Rolled, Cut	40	1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 5, 6	300
C1	Rolled, Cut	40	8	450
C1	Rolled, Cut	1387-40	3 OD, 6-1/2 OD	300
C1	Rolled, Cut	1387-H	5-1/2 OD	450
C1	Rolled, Cut	1387-H, 40	2-1/2 x 2; 3 OD x 1-1/2, 2; 3 x 2, 2-1/2, 3 OD; 4 x 2, 2-1/2, 3 OD, 3; 6-1/2 OD x 4; 6 x 4; 8 x 6-1/2 OD, 6	300
C1	Rolled, Cut	4200	33.7 / 3.2mm, 108.0 / 4.0mm	500
C1	Rolled, Cut	4200	133.0 / 5.4mm, 159.0 / 4.0mm	300
C1	Rolled, Cut	4200	60.3 / 3.2 x 48.3 / 4.0mm; 73.0 / 3.2 x 33.7 / 3.2mm; 76.1 / 3.6 x 33.7 / 3.2mm; 88.9 / 3.2 x 33.7 / 3.2mm; 114.3 / 3.6 x 33.7 / 3.2mm; 168.3 / 4.0 x 88.9 / 3.2mm	300
C1	Rolled, Cut	4200	273.0 / 6.3mm, 323.9 / 6.3mm	225
CH	Rolled, Cut	4200	60.3 / 3.2mm, 73.0 / 3.2mm, 76.1 / 3.6mm, 88.9 / 3.2mm, 114.3 / 3.6mm, 141.3 / 6.3mm	500
CH	Rolled, Cut	4200	168.3 / 4.0mm, 219.1 / 5.0mm	300
CH	Rolled, Cut	1387 M	165.1 / 5.0mm	300

Flange adapter

Model	Groove Type	Pipe	Size (in.)	Rated Pressure (psig)
321	Rolled	10	2, 2-1/2, 3, 4, 5, 6, 8	300
321	Rolled	1387-10	3OD, 6-1/2 OD	300
321	Rolled	10	10, 12	225
321	Rolled, Cut	40	2, 2-1/2, 3, 4, 5, 6, 8	300
321	Rolled, Cut	1387-40	3OD, 6-1/2 OD	300
321	Rolled, Cut	40	10, 12	225
321	Rolled, Cut	4200	48.3 / 4.0mm, 108.0 / 3.6mm	300
321	Rolled, Cut	4200	133.0 / 3.2mm, 139.7 / 3.6mm, 159.0 / 4.5mm	225
321A	Rolled	10	2, 2-1/2, 3, 4	300
321A	Rolled, cut	10, 40	5	250

321A	Rolled, Cut	4200	219.1 / 5.0mm, 273.0 / 6.3mm, 323.9 / 6.3mm	250
321AS	Rolled	10	2, 2-1/2, 3	300
321AS	Rolled	10	4, 5	225
GFAS	Rolled	10	2, 2-1/2, 3	300
GFAS	Rolled	10	4, 5	225
321H	Rolled, Cut	1387-M	165.1mm	225
321HS	Rolled, Cut	4200	108.0 / 3.6mm	365
321HS	Rolled, Cut	1387-M	165.1mm	225
GFHS	Rolled, Cut	4200	108.0 / 3.6mm	365
GFHS	Rolled, Cut	1387-M	165.1mm	225
321S	Rolled	10	1-1/2, 2, 3, 4	300
321S	Rolled	10	6	225
321S	Rolled, Cut	4200	76.1 / 2.9mm, 108.0 / 3.6mm, 133.0 / 3.2mm	300
321S	Rolled, Cut	4200	139.7 / 3.6mm, 159.0 / 4.5mm	225
321S	Rolled, Cut	1387-M	165.1mm	225
GFS	Rolled	10	1-1/2, 2, 3, 4	300
GFS	Rolled	10	6	225
GFS	Rolled, Cut	4200	76.1 / 2.9mm, 108.0 / 3.6mm, 133.0 / 3.2mm	300
GFS	Rolled, Cut	4200	139.7 / 3.6mm, 159.0 / 4.5mm	225
GFS	Rolled, Cut	1387-M	165.1mm	225
321E	Rolled	10	2, 3, 4, 8	300
321E	Rolled, Cut	40	2, 3, 4, 8	300
321E	Rolled	GB/T 21835	6-1/2OD(6.3mm)	300
GFE	Rolled	10	2, 3, 4, 8	300
GFE	Rolled, Cut	40	2, 3, 4, 8	300
GFE	Rolled	GB/T 21835	6-1/2OD(6.3mm)	300
GF16	Rolled	10	2, 2-1/2, 3, 4, 5, 6, 8	300
GF16	Rolled	1387-10	3OD, 6-1/2 OD	300
GF16	Rolled	10	10, 12	225
GF16	Rolled, Cut	40	2, 2-1/2, 3, 4, 5, 6, 8	300
GF16	Rolled, Cut	1387-40	3OD, 6-1/2 OD	300
GF16	Rolled, Cut	40	10, 12	225
GF16	Rolled, Cut	4200	48.3 / 4.0mm, 108.0 / 3.6mm	300

GF16	Rolled, Cut	4200	133.0 / 3.2mm, 139.7 / 3.6mm, 159.0 / 4.5mm	225
GFA	Rolled	10	2, 2-1/2, 3, 4	300
GFA	Rolled, Cut	4200	219.1 / 5.0mm, 273.0 / 6.3mm, 323.9 / 6.3mm	175
GF25	Rolled, Cut	1387-M	165.1mm	225

Side outlet

Model	Outlet Type	Pipe	Size (in.)	Rated Pressure (psig)
3G	Grooved	10, 40	3 x 2;	300
			4 x 2, 3OD;	
			5 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6 x 1-1/4, 2, 3OD;	
			10 x 3OD, 3	
3G	Grooved	1387-M, 1387-H	3 OD x 1-1/4, 1-1/2;	300
			5-1/2 OD x 2, 2-1/2, 3;	
			6-1/2 OD x 2, 2-1/2, 3	
3G	Grooved	10, 40	3 x 1;	300
			4 x 1;	
			8 x 76.1mm, 3, 108.0mm, 4	
3G	Grooved	10, 40	2 x 1-1/4, 1-1/2; 2-1/2 x 1-1/4, 1-1/2; 3 x 1-1/4, 1-1/2; 4 x 1-1/4, 1-1/2, 2-1/2, 3; 6 x 1-1/2, 2-1/2, 3, 4; 8 x 2, 2-1/2	400
3G	Grooved	4200	76.1 / 3.6 x 33.7 / 3.2mm;	300
			133.0 / 3.2mm x 88.9mm;	
			139.7 / 3.6mm x 42.4mm, 48.3mm;	
			273.0 / 6.3 x 108.0 / 4.0mm, 114.3 / 3.6mm	
3G	Grooved	4200	139.7 / 3.6mm x 114.3mm;	175
			159.0 / 4.5mm x 108.0mm, 114.3mm	
3G	Grooved	1387-M	165.1 x 114.3mm	225
3G	Grooved	GB/T 21835	6-1/4OD(6.3mm) x 2	300
3GS	Grooved	10, 40	3 x 1, 1-1/4, 1-1/2, 2;	300
			4 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3;	

			5 x 2;	
			6 x 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3;	
			8 x 2, 2-1/2, 76.1mm, 3, 108.0mm, 4	
3GS	Grooved	10, 40	6 x 4	225
3GS	Grooved	10, 40	5 x 2-1/2, 3	400
3GS	Grooved	4200	133.0 / 3.2mm x 88.9mm;	300
			139.7 / 3.6mm x 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm	
3GS	Grooved	4200	139.7 / 3.6mm x 114.3mm;	175
			159.0 / 4.5mm x 108.0mm, 114.3mm	
3GS	Grooved	1387-M	165.1 x 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm	300
3GS	Grooved	1387-M	165.1 x 108.0mm, 114.3mm	225
3GS	Grooved	GB/T 21835	6-1/4OD(6.3mm) x 3	300
3J	Threaded	10, 40	1 x 1/2;	300
			1-1/4 x 1/2, 3/4;	
			1-1/2 x 1/2, 3/4	
			3 x 2;	
			4 x 2;	
			5 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6 x 1-1/4, 2, 3	
3J	Threaded	1387-M, 1387-H	3 OD x 1, 1-1/4, 1-1/2;	300
			5-1/2 OD x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6-1/2 OD x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	
3J	Threaded	10, 40	8 x 1, 1-1/4, 1-1/2, 2-1/2, 76.1mm, 3, 4	300
3J	Threaded	10, 40	2 x 1, 1-1/4, 1-1/2; 2-1/2 x 1, 1-1/4, 1-1/2; 3 x 1/2, 3/4, 1, 1-1/4, 1-1/2; 4 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2-1/2, 3; 6 x 1-1/2, 2-1/2, 4; 8 x 2	400
3J	Threaded	4200	273.0 / 6.3 x 114.3 / 3.6mm	225
3J	Threaded	4200	139.7 / 3.6mm x 114.3mm;	175
			159.0 / 4.5mm x 114.3mm	
3J	Threaded	4200	76.1 / 3.6 x 21.3 / 2.8mm, 26.9 / 2.9mm;	300

			108.0 / 3.6mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm;	
			133.0 / 3.2mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
			139.7 / 3.6mm x 21.3mm, 26.9mm;	
			159.0 / 4.5mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
			273.0 x 48.3 / 4.0mm, 60.3 / 3.2mm, 76.1 / 3.6mm, 88.9 / 3.2mm	
3J	Threaded	4200	60.3mm(3.2mm) x 21.3mm(2.8mm), 26.9mm(2.9mm); 73.0mm(3.2mm) x 21.3mm(2.8mm), 26.9mm(2.9mm);	400
3J	Threaded	1387-M	165.1 x 21.3mm, 26.9mm	300
3J	Threaded	1387-M	165.1 x 114.3mm	225
3JS	Threaded	10, 40	3 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2;	300
			4 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3;	
			5 x 2;	
			6 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3;	
			8 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3, 4	
3JS	Threaded	10, 40	6 x 4	225
3JS	Threaded	4200	108.0 / 3.6mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm;	300
			133.0 / 3.2mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
			139.7 / 3.6mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
			159.0 / 4.5mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm	
3JS	Threaded	4200	139.7 / 3.6mm x 114.3mm;	175
			159.0 / 4.5mm x 114.3mm	
3JS	Threaded	1387-M	165.1 x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm	300
3JS	Threaded	1387-M	165.1 x 114.3mm	225
3JS	Threaded	10, 40	5 x 1-1/2	400
3JX	Threaded	10, 40	2-1/2 x 1, 1-1/2; 3 x 1, 1-1/4, 1-1/2, 2; 4 x 1, 1-1/4, 1-1/2, 2, 3OD	300
3JX	Threaded	GB/T 21835	3OD(4.5mm) x 1, 1-1/4	300

MT3X	Threaded	10, 40	2-1/2 x 1, 1-1/2; 3 x 1, 1-1/4, 1-1/2, 2; 4 x 1, 1-1/4, 1-1/2, 2, 3OD	300
MT3X	Threaded	GB/T 21835	3OD(4.5mm) x 1, 1-1/4	300
3L	Threaded	4200	42.4 / 3.6 x 21.3 / 2.8mm, 26.9 / 2.9mm, 33.7 / 3.2mm;	300
			48.3 / 4.0 x 21.3 / 2.8mm, 26.9 / 2.9mm, 33.7 / 3.2mm;	
			60.3 / 3.2 x 21.3 / 2.8mm, 26.9 / 2.9mm, 33.7 / 3.2mm;	
			73.0 / 3.2 x 21.3 / 2.8mm, 26.9 / 2.9mm, 33.7 / 3.2mm;	
			76.1 / 3.6 x 21.3 / 2.8mm, 26.9 / 2.9mm, 33.7 / 3.2mm;	
			88.9 / 3.2 x 33.7 / 3.2mm	
4G	Grooved	10, 40	2 x 1-1/4, 1-1/2;	300
			2-1/2 x 1-1/4, 1-1/2;	
			3 x 1-1/4, 1-1/2, 2;	
			4 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			5 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	
4G	Grooved	1387-M, 1387-H	3 OD x 1-1/4, 1-1/2;	300
			5-1/2 OD x 2, 2-1/2, 3;	
			6-1/2 OD x 2, 2-1/2, 3	
4J	Threaded	10, 40	2 x 1, 1-1/4, 1-1/2;	300
			2-1/2 x 1, 1-1/4, 1-1/2;	
			3 x 1, 1-1/4, 1-1/2, 2;	
			4 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			5 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	
4J	Threaded	1387-M, 1387-H	3 OD x 1, 1-1/4, 1-1/2;	300
			5-1/2 OD x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6-1/2 OD x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	
4JG	Threaded and Grooved	10, 40	2 x 1-1/4, 1-1/2;	300
			2-1/2 x 1-1/4, 1-1/2;	
			3 x 1-1/4, 1-1/2, 2;	
			4 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	

			5 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	
4JG	Threaded and Grooved	1387-M, 1387-H	3 OD x 1-1/4, 1-1/2;	300
			5-1/2 OD x 2, 2-1/2, 3;	
			6-1/2 OD x 2, 2-1/2, 3	
MT2	Grooved	10, 40	2 x 1-1/4, 1-1/2;	300
			2-1/2 x 1-1/4, 1-1/2;	
			3 x 1-1/4, 1-1/2, 2;	
			4 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			5 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	
MT2	Grooved	1387-M, 1387-H	3 OD x 1-1/4, 1-1/2;	300
			5-1/2 OD x 2, 2-1/2, 3;	
			6-1/2 OD x 2, 2-1/2, 3	
MT2	Grooved	10, 40	3 x 1;	300
			4 x 1;	
			8 x 2, 2-1/2, 76.1mm, 3, 108.0mm, 4	
MT2	Grooved	4200	76.1 / 3.6 x 33.7 / 3.2mm;	300
			133.0 / 3.2mm x 88.9mm;	
			139.7 / 3.6mm x 42.4mm, 48.3mm;	
			273.0 / 6.3 x 108.0 / 4.0mm, 114.3 / 3.6mm	
MT2	Grooved	4200	139.7 / 3.6mm x 114.3mm;	175
			159.0 / 4.5mm x 108.0mm, 114.3mm	
MT2	Grooved	1387-M	165.1 x 114.3mm	225
MTL2	Grooved	10, 40	3 x 1, 1-1/4, 1-1/2, 2;	300
			4 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3;	
			6 x 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3;	
			8 x 2, 2-1/2, 76.1mm, 3, 108.0mm, 4	
MTL2	Grooved	10, 40	6 x 4	225
MTL2	Grooved	4200	133.0 / 3.2mm x 88.9mm;	300
			139.7 / 3.6mm x 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm	
MTL2	Grooved	4200	139.7 / 3.6mm x 114.3mm;	175

			159.0 / 4.5mm x 108.0mm, 114.3mm	
MTL2	Grooved	1387-M	165.1 x 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm	300
MTL2	Grooved	1387-M	165.1 x 108.0mm, 114.3mm	225
MTL2	Grooved	GB/T 21835	6-1/4OD(6.3mm) x 3	300
MT3	Grooved	10, 40	2 x 1, 1-1/4, 1-1/2;	300
			2-1/2 x 1, 1-1/4, 1-1/2;	
			3 x 1, 1-1/4, 1-1/2, 2;	
			4 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			5 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	
MT3	Threaded	1387-M, 1387-H	3 OD x 1, 1-1/4, 1-1/2;	300
			5-1/2 OD x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6-1/2 OD x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	
MT3	Threaded	10, 40	3 x 1/2, 3/4;	300
			4 x 1/2, 3/4;	
			8 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3, 4	
MT3	Threaded	4200	273.0 / 6.3 x 114.3 / 3.6mm	225
MT3	Threaded	4200	139.7 / 3.6mm x 114.3mm;	175
			159.0 / 4.5mm x 114.3mm	
MT3	Threaded	4200	60.3 / 3.2 x 21.3 / 2.8mm, 26.9 / 2.9mm;	300
			73.0 / 3.2 x 21.3 / 2.8mm, 26.9 / 2.9mm;	
			76.1 / 3.6 x 21.3 / 2.8mm, 26.9 / 2.9mm;	
			108.0 / 3.6mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm;	
			133.0 / 3.2mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
			139.7 / 3.6mm x 21.3mm, 26.9mm;	
			159.0 / 4.5mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
			273.0 x 48.3 / 4.0mm, 60.3 / 3.2mm, 76.1 / 3.6mm, 88.9 / 3.2mm	
MT3	Threaded	1387-M	165.1 x 21.3mm, 26.9mm	300
MT3	Threaded	1387-M	165.1 x 114.3mm	225
MTL3	Threaded	10, 40	3 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2;	300

			4 x 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3;	
			6 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3;	
			8 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 76.1mm, 3, 4	
MTL3	Threaded	10	6 x 4	225
MTL3	Threaded	4200	108.0 / 3.6mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm;	300
			133.0 / 3.2mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
			139.7 / 3.6mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm;	
			159.0 / 4.5mm x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm	
MTL3	Threaded	4200	139.7 / 3.6mm x 114.3mm;	175
			159.0 / 4.5mm x 114.3mm	
MTL3	Threaded	1387-M	165.1 x 21.3mm, 26.9mm, 33.7mm, 42.4mm, 48.3mm, 60.3mm, 76.1mm, 88.9mm	300
MTL3	Threaded	1387-M	165.1 x 114.3mm	225
MT1	Threaded	4200	42.4 / 3.6 x 21.3 / 2.8mm, 26.9 / 2.9mm, 33.7 / 3.2mm;	300
			48.3 / 4.0 x 21.3 / 2.8mm, 26.9 / 2.9mm, 33.7 / 3.2mm;	
			60.3 / 3.2 x 21.3 / 2.8mm, 26.9 / 2.9mm, 33.7 / 3.2mm;	
			73.0 / 3.2 x 21.3 / 2.8mm, 26.9 / 2.9mm, 33.7 / 3.2mm;	
			76.1 / 3.6 x 21.3 / 2.8mm, 26.9 / 2.9mm, 33.7 / 3.2mm;	
			88.9 / 3.2 x 33.7 / 3.2mm	
MT22	Grooved	10, 40	2 x 1-1/4, 1-1/2;	300
			2-1/2 x 1-1/4, 1-1/2;	
			3 x 1-1/4, 1-1/2, 2;	
			4 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			5 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	
MT22	Grooved	1387-M, 1387-H	3 OD x 1-1/4, 1-1/2;	300
			5-1/2 OD x 2, 2-1/2, 3;	
			6-1/2 OD x 2, 2-1/2, 3	
MT33	Threaded	10, 40	2 x 1, 1-1/4, 1-1/2;	300
			2-1/2 x 1, 1-1/4, 1-1/2;	
			3 x 1, 1-1/4, 1-1/2, 2;	

			4 x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			5 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	
MT33	Threaded	1387-M, 1387-H	3 OD x 1, 1-1/4, 1-1/2;	300
			5-1/2 OD x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6-1/2 OD x 1, 1-1/4, 1-1/2, 2, 2-1/2, 3	
MT23	Threaded and Grooved	10, 40	2 x 1-1/4, 1-1/2;	300
			2-1/2 x 1-1/4, 1-1/2;	
			3 x 1-1/4, 1-1/2, 2;	
			4 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			5 x 1-1/4, 1-1/2, 2, 2-1/2, 3;	
			6 x 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	
MT23	Threaded and Grooved	1387-M, 1387-H	3 OD x 1-1/4, 1-1/2;	300
			5-1/2 OD x 2, 2-1/2, 3;	
			6-1/2 OD x 2, 2-1/2, 3	

The fittings are suitable for use in dry pipe systems for temperatures to -40 F with the exception of Model 1GK, 1GX, 1GKX, 1NX, 321E, 1NT, 1GT.

Model 3J, 3JS, 3L, MT3, MTL3 and MT1 in the 1/2 in. and 3/4 in. nominal outlet sizes are intended for direct connection to sprinklers.

Models 3J, 3JS, 3JX, 4J, MT3, MTL3 and MT33 in the 1 in. nominal outlet sizes are intended for direct connection to sprinklers.

Models 3G, 3GS, 3J, 3JS, 3JX, 3L, 4G, 4J, 4JG, MT2, MTL2, MT3, MTL3, MT1, MT22, MT33 and MT23 in the 1 in. and larger nominal outlet sizes are intended for connection to system piping.

10 refers to Schedule 10 steel pipe.

40 refers to Schedule 40 steel pipe in accordance with NFPA 13.

1387-10 refers to BS 1387 Schedule 10 steel pipe

1387-40 refers to BS 1387 Schedule 40 steel pipe

1387-M refers to BS 1387 medium steel pipe

1387-H refers to BS 1387 heavy steel pipe

EN 10255-M refers to medium thickness steel pipe manufactured in accordance with BS EN 10255

EN 10255-H refers to heavy thickness steel pipe manufactured in accordance with BS EN 10255

4200 refers to ISO 4200 Group 1 steel pipe

4200 D refers to ISO 4200 Group 1 Type D steel pipe

4200 E refers to ISO 4200 Group 1 Type E steel pipe

3454-20 refers to JIS G3454 Schedule 20 steel pipe

3452-SPP SGP refers to JIS G3452 steel pipe.

3452 refers to JIS G3452 steel pipe.

3454-40 refers to JIS G3454 Schedule 40 steel pipe.

GB/T 21835 refers to steel pipe manufactured in according with GB/T 21835.

10255-M refers to EN 10255 M series steel pipe.

Trademark and/or Tradename: , ,

Last Updated on 2021-07-01

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FM Approvals

Pipes/Fittings/Couplings | Aboveground Pipe and Fittings | Grooved Couplings, Reducing-Flexible

Fig. 1N

Product Description

Model No	End Connection	Nominal Pipe Size, in	Rated Working Pressure		Remarks
			psi	(kPa)	
1N	Cut Groove Rolled Groove	2 x 1-1/2 2-1/2 x 1, 2 76.1 mm x 1, 1-1/2, 2 3 x 1, 2, 2-1/2, 76.1 mm 4 x 1, 2, 2-1/2, 76.1 mm, 3 165.1 mm x 3, 4 6 x 3, 4, 165.1 mm 8 x 165.1 mm, 6	300	(2065)	a, b, c, j, k, l, m
1N	Rolled Groove	2 x 1-1/2 76.1 mm x 1, 1-1/2, 2 3 x 1, 2, 2-1/2, 76.1 mm 4 x 1, 2, 2-1/2, 76.1 mm, 3 165.1 mm x 3, 4 8 x 165.1 mm, 6	300	(2065)	c, d, j, k, l, m
1N	Rolled Groove	2 x 1-1/2 76.1 mm x 1, 1-1/2, 2 3 x 1, 2, 2-1/2, 76.1 mm 4 x 1, 2, 2-1/2, 76.1 mm, 3 165.1 mm x 4	300	(2065)	c, e, j, k, l, m
1N	Cut Groove	76.1 mm x 1, 1-1/2, 2	300	(2065)	c, i, j, k, l, m
1N	Cut Groove	2 x 1-1/2 3 x 1, 2, 2-1/2, 76.1 mm 4 x 1, 2, 2-1/2, 76.1 mm, 3 6 x 3, 4 8 x 165.1 mm, 6	300	(2065)	c, h, i, j, k, l, m
1N	Rolled Groove	3 x 1, 2, 2-1/2, 76.1 mm 4 x 1, 2, 2-1/2, 76.1 mm, 3 6 x 3, 4 8 x 165.1 mm, 6	300	(2065)	c, f, j, k, l, m
1N	Rolled Groove	2 x 1-1/2 76.1 mm x 1, 1-1/2, 2 3 x 1, 2, 2-1/2, 76.1 mm 4 x 1, 2, 2-1/2, 76.1 mm, 3 6 x 3, 4 8 x 165.1 mm, 6	300	(2065)	c, g, h, i, j, k, l, m

FM Approvals

Remarks:

a. Minimum schedule cut groove pipe to be joined: 6 in. NPS and smaller – Schedule 40; 8 in. NPS and larger – Schedule 30.
b. Minimum schedule rolled groove pipe to be joined: 6 in. NPS and smaller – Schedule 10S; 8 in. NPS and larger 0.188 in. (5 mm) wall.
c. Approved when supplied with EPDM gasket.
d. Approved for use with GB/T 3091 Regular and Heavy pipe
e. Approved for use with EN 10255 Medium and Heavy pipe
f. Approved for use with ISO 4200 Thickness D pipe
g. Approved for use with ISO 4200 Thickness E pipe
h. Approved for use with ISO 4200 Thickness F pipe
i. Approved for use with ISO 4200 Thickness G pipe
j. Electroplate Zinc Coating and Hot dip Galvanized coating available on bolt and nut assembly.
k. FM Approved with a painted finish in the following colors – black, orange, green blue, copper and red
l. FM Approved with a galvanized surface finish
m. FM Approved with an epoxy finish in the following colors – blue, black, red, white, silver, grey and yellow

Details

Category	Grooved Couplings, Reducing-Flexible
Class of Work	1920 - Coupling & Fitting, All Type
Approval Standard	FM 1920 - Pipe Couplings and Fittings for Aboveground Fire Protection Systems
Certification Type	FM Approved
Listing Country	China

Company

Jinan Meide Casting Co Ltd
No.1 Meide Street, Meigui Town, Pingyin County, Jinan City, China
http://meide-casting.com

UL Product iQ®

Model 1N

File Number: EX6464

COMPANY

JINAN MEIDE CASTING CO LTD
Meide Science and Technology Park
Pingyin Industrial Park
JINAN, Shandong 250400 China

MODEL INFO

1N
Flexible coupling

COUPLINGS, FLANGE ADAPTERS

Outlet Type	Pipe Type	Size, NPS (unless otherwise indicated)	Rated Pressure, psig (kPa)
Grooved, Rolled	Sch. 10 x JIS G3454 Sch. 20	8 x 216.3mm, 10 x 267.4mm, 12 x 318.5mm	300 (2068)
Grooved, Cut	Sch. 40 x JIS G3454 Sch. 20	8 x 216.3mm, 10 x 267.4mm, 12 x 318.5mm	300 (2068)
Grooved, Rolled	Sch. 10 x JIS G3454 Sch. 40	8 x 216.3mm, 10 x 267.4mm, 12 x 318.5mm	300 (2068)

COUPLINGS, FLANGE ADAPTERS

Outlet Type	Pipe Type	Size, NPS (unless otherwise indicated)	Rated Pressure, psig (kPa)
Grooved, Cut	Sch. 40 x JIS G3454 Sch. 40	8 x 216.3mm, 10 x 267.4mm, 12 x 318.5mm	300 (2068)
Grooved, Rolled	Sch. 10	2, 2-1/2, 3, 4, 5	300 (2068)
Grooved, Rolled	Sch. 10	1-1/4, 1-1/2, 6, 8	500 (3447)
Grooved, Rolled	BS 1387 Sch. 10	3 OD, 6-1/2 OD	300 (2068)
Grooved, Rolled	BS 1387 (M)	5-1/2 OD	450 (3102)
Grooved, Rolled	BS 1387 (M), Sch. 10	2-1/2 x 2, 3 OD x 1-1/2, 2, 3 x 2, 2-1/2, 3 OD, 4 x 2, 2-1/2, 3 OD, 3, 6-1/2 OD x 4, 6 x 4, 8 x 6-1/2 OD, 6	300 (2068)
Grooved, Rolled	EN 10255 (M)	88.9mm x 60.3mm, 114.3mm x 60.3mm, 88.9mm, 165.1mm x 114.3mm	360 (2482)
Grooved, Cut, Grooved, Rolled	Sch. 40	2, 2-1/2, 3, 4, 5	300 (2068)
Grooved, Cut, Grooved, Rolled	Sch. 40	1-1/4, 1-1/2, 6, 8	500 (3447)
Grooved, Cut, Grooved, Rolled	BS 1387 Sch. 40	3 OD, 6-1/2 OD	300 (2068)
Grooved, Cut, Grooved, Rolled	BS 1387 (H)	5-1/2 OD	450 (3102)

COUPLINGS, FLANGE ADAPTERS

Outlet Type	Pipe Type	Size, NPS (unless otherwise indicated)	Rated Pressure, psig (kPa)
Grooved, Cut, Grooved, Rolled	BS 1387 (H), Sch. 40	2-1/2 x 2, 3 OD x 1-1/2, 2, 3 x 2, 2-1/2, 3 OD, 4 x 2, 2-1/2, 3 OD, 3, 6-1/2 OD x 4, 6 x 4, 8 x 6-1/2 OD, 6	300 (2068)
Grooved, Rolled	EN 10255 (H)	88.9mm x 60.3mm, 114.3mm x 60.3mm, 88.9mm, 165.1mm x 114.3mm	360 (2482)
Grooved, Rolled	Sch. 10	2-1/2 x 2, 3 x 2, 2-1/2, 4 x 2, 2-1/2, 3, 5 x 4, 6 x 4, 5, 8 x 6	360 (2482)
Grooved, Cut, Grooved, Rolled	Sch. 40	2-1/2 x 2, 3 x 2, 2-1/2, 4 x 2, 2-1/2, 3, 5 x 4, 6 x 4, 5, 8 x 6	360 (2482)
Grooved, Cut, Grooved, Rolled	ISO 4200	33.7 / 3.2mm, 108.0 / 4.0mm	500 (3447)
Grooved, Cut, Grooved, Rolled	ISO 4200	133.0 / 5.4mm, 159.0 / 4.0mm	300 (2068)
Grooved, Cut, Grooved, Rolled	ISO 4200	73.0 / 3.2mm x 33.7 / 3.2mm, 76.1 / 3.6mm x 33.7 / 3.2mm, 88.9 / 3.2mm x 33.7 / 3.2mm, 114.3 / 3.6mm x 33.7 / 3.2mm, 168.3 / 4.0mm x 88.9 / 3.2mm	300 (2068)
Grooved, Cut, Grooved, Rolled	ISO 4200	60.3mm(4.0mm) x 33.7(3.2mm), 48.3mm(4.0mm), 219.1mm(5.0mm) x 168.3mm(5.0mm)	360 (2482)
Grooved, Cut, Grooved, Rolled	ISO 4200	273.0 / 6.3mm, 323.9 / 6.3mm	500 (3447)
Grooved, Rolled	Sch. 10	6 x 6-1/2OD(6.3mm)	300 (2068)

COUPLINGS, FLANGE ADAPTERS

Outlet Type	Pipe Type	Size, NPS (unless otherwise indicated)	Rated Pressure, psig (kPa)
Grooved, Cut, Grooved, Rolled	Sch. 40	6 x 6-1/2OD(6.3mm)	300 (2068)
Grooved, Rolled	GB/T 21835	6-1/2OD(6.3mm) x 3	300 (2068)
Grooved, Cut, Grooved, Rolled	GB/T 21835	3OD(4.5mm) x 2-1/2(4.5mm)	300 (2068)
Grooved, Rolled	Sch. 10	14, 16, 18, 20, 24	300 (2068)
Grooved, Cut, Grooved, Rolled	Sch. 40	14, 16, 18, 20, 24	300 (2068)

NOTES

Notes
Suitable for use in dry pipe systems for temperatures to -40 F

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MECH
Grooved Coupling Fittings

PROJECT REFERENCE



PROJECT :OLYMPIC NATIONAL CONVENTION CENTRE

LOCATION : BEIJING , CHINA

MECH
Grooved Coupling Fittings

PROJECT REFERENCE



PROJECT : RESORT WORLD SENTOSA

LOCATION : SINGAPORE

MECH
Grooved Coupling Fittings

PROJECT REFERENCE



PROJECT : MARINA BAY SAND

LOCATION : SINGAPORE



GM

Serviced

Apartment



Renaissance
Bangkok
Ratchaprasong
Hotel



Suncall
Precision
Factory



Suncall
Precision
Factory



Thai metal industry



Bangkok Insurance Building


โรงงาน 3 แม่ครัว



Securities and Exchange Commission Tower



อาคาร

เฉลิมพระเกียรติ 50 พรรษา

โรงพยาบาลทันตกรรม

คณะทันตแพทยศาสตร์



อาคารวิทยกิตติ์ จุฬาลงกรณ์



BTS

รถไฟฟ้าสายสีม่วง

PROJECT REFERENCE

Item	Project Name	Location	Brand	Year
1	รถไฟฟ้าสายสีน้ำเงิน ส่วนต่อขยาย	บางซื่อ - บางแค	MECH	2018
2	รถไฟฟ้าสายสีเขียวใต้ ส่วนต่อขยาย	แบริ่ง - สมุทรปราการ	MECH	2017
3	รถไฟฟ้าสายสีม่วง	บางซื่อ - บางใหญ่	MECH	2016
4	อาคารนวัตกรรมการศึกษาราชภัฏจันทรเกษม	รัชดาภิเษก	MECH	2014
5	อาคารศูนย์เรียนรวมราชภัฏจันทรเกษม	รัชดาภิเษก	MECH	2014
6	งานซ่อมอาคารวิทยกิตติ์	สยามสแควร์	MECH	2014
7	โรงงาน Ligman lighting	ฉะเชิงเทรา	MECH	2014
8	อาคารกรุงเทพประกันภัย	ถนนสาทร	MECH	2014
9	โรงพยาบาลสงขลานครินทร์	สงขลา	MECH	2013
10	โรงงาน LAY โรจนะ	อยุธยา	MECH	2013
11	โรงงาน NST Textile	อ้อมน้อย	MECH	2013
12	โรงพยาบาลอุดรธานี	อุดรธานี	MECH	2013
13	Yamu	Phuket	MECH	2012
14	Bayer	ระยอง	MECH	2012
15	AJ Plast	แหลมฉบัง	MECH	2012
16	บ้านสุโขทัย ป่าตอง	ภูเก็ต	MECH	2012
17	Novotel express ป่าตอง	ภูเก็ต	MECH	2012
18	โรงงาน Pepsi Co	นิคมอุสาหกรรม อมตะ ซิตี้	MECH	2011
19	Astro	แจ้งวัฒนะ	MECH	2011
20	CP Frozen	ปทุมธานี	MECH	2011
21	Kao	ชลบุรี	MECH	2011
22	ศูนย์มะเร็งลพบุรี	ลพบุรี	MECH	2011
23	อาคารกรมควบคุมโรค	กรุงเทพมหานคร	MECH	2011
24	โรงพยาบาลเกษมราษฎร์ แจ้งวัฒนะ	ถนนแจ้งวัฒนะ	MECH	2011
25	โรงงานไทยเมททอล	จ.สมุทรปราการ	MECH	2011
26	โรงแรมเบสท์ เวสเทอร์น	สุขุมวิท ซอย 1	MECH	2011
27	สุโขทัย อเวนิว	จ.ภูเก็ต	MECH	2010
28	โรงพยาบาลระยอง	ระยอง	MECH	2010
29	โรงพยาบาลฉะเชิงเทรา	ฉะเชิงเทรา	MECH	2010
30	อาคารศูนย์มะเร็ง ลพบุรี	ลพบุรี	MECH	2010
31	โรงงานพรีซิชั่น พลาสติก	นิคมอุตสาหกรรมโรจนะ	MECH	2010
32	โรงงานเบนไมเยอร์	ลาดกระบัง	MECH	2010
33	โครงการซิส อิสกาน่า	จ.เชียงใหม่	MECH	2010
34	อาคารมหานครยิปซั่ม	ถนนศรีอยุธยา	MECH	2010
35	โครงการจิ๊กซอว์ 2	จ.เชียงใหม่	MECH	2010