yinuo ®
一 诺

SOUTH OF GUOJIATUN VILAGE,
GUOJIATUN YUTIAN YUDONG CASTING CO., LTD
ADD:TOWN,YUTIAN COUNTRY,TANGSHAN CITY HEBEI PROVINCE
Tel：0086 15175630633；0315-6136616
Website ： www.yinuo-pipefittings.com
E-mail：yinuopipefitting@163.com

www.yinuo-pipefittings.com

COMPANY PROFILE

YUTIAN YUDONG CASTING Co.,Ltd was

founded in 1990, for more than 25 years, the band name is Yinuo，Yinuo is

alwaysfocusing on providing the solutions for piping system for cli-ents all over the

world.Yinuo is supplying the malleable iron pipe fittings, ductile

iron pipe fittings, grooved pipe fittings, forged pipe fittings,

stainless steel pipe fittings, brass pipe fittings, stainless steel

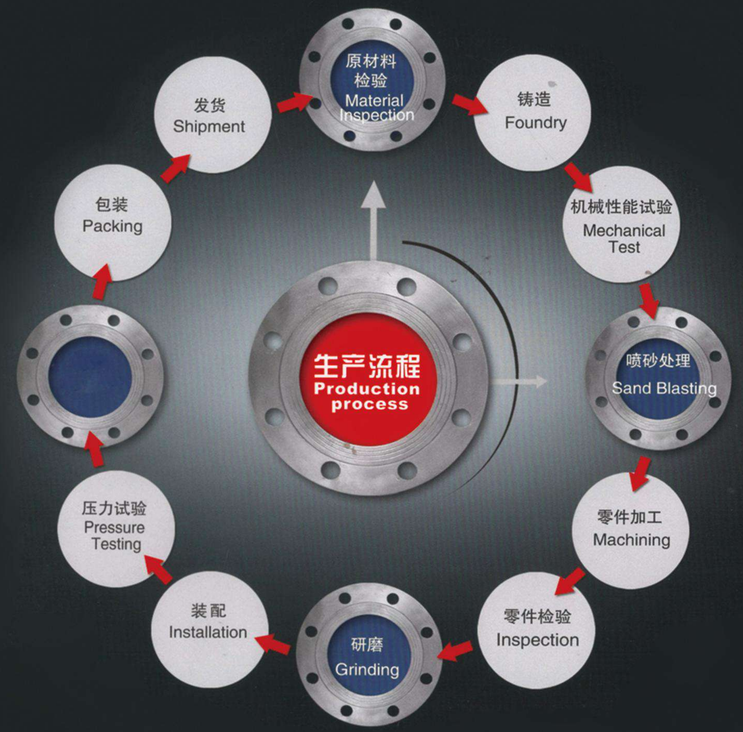
valves, welded pipe and other relevant accessories, widely used for fire protection system,

gas piping system, HVAC, home decoration etc. .

Our products are approved by UL, FM, CE, BSI, TSE, ISO, also

when you choose us, youare hiring a team of expperts with a deep understanding of

your industrial and your particular needs.



State of the Art Equipment

High precision equipment is quality assurance.

Hebei yinuo machinery Group is equipped with the most advanced facilities and equipment in the industry. The main production facilities include Disa automatic molding line,automatic molding sand mixers, electric furnaces ,CNC vertical machining centers, CNC machines, automatic box sealing line, stereoscopic warehouse and So on.

Pattern


Core Making


Sand Mulling


Melting


Disa Automatic Molding Line


Pouring


End Grinding Line


Threading and Air Pressure Test


Painting Line


Warehouse

Reliable Quality Assurance

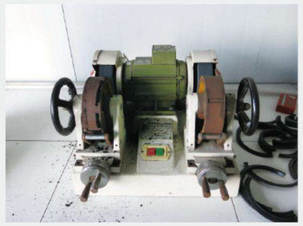
Inspection facilities include spectrom-eter, carbon sulfur analyzer, metallurgical microscope, tensile strength gesting equipment, pressure testing equipment, adhesive force testing equipment, hardness tester, etc.

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

Metallographical Microscope

Pressure Testing Machine

Metallographical Polisher

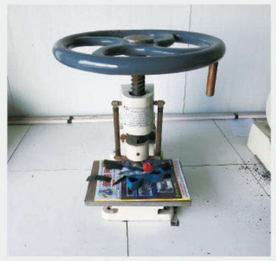


Gasket Grinding Machine

Thickness Testing Instrument

Rubber Aging Testing Machine

Rubber Tensile Testing Instrument



Rubber Sheet-punching Machine

Certificates

Certificate of Compliance

FM APPROVED

PIPE COUPLINGS, MECHANICAL TEES AND FITTINGS FOR ABOVEGROUND FIRE PROTECTION

RIGID COUPLINGS (XGQT01)
Sizes 60.3, 76.1, 88.9, 114.3, 139.7, 165.1 and 219.1 mm

MECHANICAL TEES (XGQT09)
Sizes 88.9, 114.3, 139.7 and 165.1 mm

PIPE FITTINGS
(XGQT03, XGQT04, XGQT08, XGQT10, XGQT06, XGQT05, XGQT07, XGQT07S, XGQT11, XGQT11S)
Sizes 60.3, 76.1, 88.9, 114.3, 139.7, 165.1 and 219.1 mm

YUTIAN YUDONG CASTING CO.,LTD.

SOUTH OF GUOJIATUN VILLAGE,
GUOJIATUN TOWN,YUTIAN COUNTY,
TANGSHAN CITY,HEBEI PROVINCE

FM Approvals Class: 1920
Approval Identification: 0003040988 Approval Granted: October 3, 2012

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

For more than 160 years FM Approvals has partnered with business and industry to reduce property losses.

Richard B. Durose
Group Manager -Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062

FM Approvals
Member of the FM Global Group

CERTIFICATE OF COMPLIANCE

Certificate Number 20141223-EX26392
Report Reference EX26392-20141218
Issue Date 2014-DECEMBER-22

Issued to: YUTIAN YUDONG CASTING CO.,LTD.
SOUTH OF GUOJIATUN VILLAGE,
GUOJIATUN TOWN,YUTIAN COUNTY,
TANGSHAN CITY,HEBEI PROVINCE

This is to certify that representative samples of: FITTINGS, GROOVED AND PLAIN END
Grooved and ductile iron fittings - XGQT03, XGQT04, XGQT01S, XGQT01N, XGQT05, XGQT06, XGQT07, XGQT07S, XGQT08, XGQT09S, XGQT10, XGQT11, XGQT11S, XGQT01Q

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 213C, Outline of Investigation for Grooved and Plain End Fittings
UL/CORD C213, Rubber Gasketed Fittings for Fire Protection Service

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

CERTIFICATE OF COMPLIANCE

Certificate Number 20141223-EX26393
Report Reference EX26393-20141218
Issue Date 2014-DECEMBER-23

Issued to: YUTIAN YUDONG CASTING CO.,LTD.
SOUTH OF GUOJIATUN VILLAGE,
GUOJIATUN TOWN,YUTIAN COUNTY,
TANGSHAN CITY,HEBEI PROVINCE

This is to certify that representative samples of: FITTINGS, RUBBER GASKETED
Rubber Gasketed fittings - XGQT01 and XGQT02

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 213, Rubber Gasketed Fittings for Fire-Protection Service
UL/CORD C213, Rubber Gasketed Fittings for Fire Protection Service

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

SZUTEST

CERTIFICATE

SGS

SGS

BVQI

ISO 9001:2000

BVQI

ISO 14001:1996

实用新型专利证书

外观设计专利证书

Product display

Material:ASTM A536,GRADE 65–45–12,QT450–10

Rigid Coupling | Flexible Coupling | Angle Pad Coupling | Reducing Coupling | Tee (long)

Mechanical Tee Grooved Outlet | Mechanical Tee Threaded Outlet | U–bolt Mechanical Tee | Mechanical Cross Grooved Outlet | Mechanical Cross Threaded Outlet

Tee | Grooved Reducing Tee | Threaded Reducing Tee | cross | Grooved Reducing Cross | Threaded Reducing Cross

Material:ASTM A536,GRADE 65–45–12,QT450–10

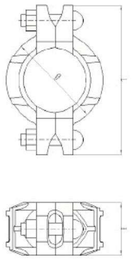
90° Elbow (long) | 90° Elbow | 45° Elbow | 22.5° Elbow | 11.25° Elbow

Grooved Eccentric Reducer | Threaded Eccentric Reducer | Grooved Concentric Reducer | Threaded Concentric Reducer

Cap | Cap with Eccentric Hole | Cap with Concentric Hole | Adaptor Flange | Split Flange

Rigid Coupling

This couplings available where moderate pressures are expected or weight considerations are a factor.this style couplings are designed with cross-ribbed construction to provide strong component for pressure piping systems and usually used in fire protection,feed water,oil or gas and etc.



Rigid Coupling

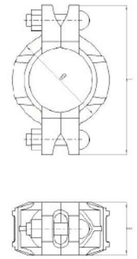
Nominal Size	Pipe OD.	Working Pressure	Dimensions mm/in A mm	B mm	C mm	Bolt Size No.-Size mm
mm/in	mm/in	psi/Mpa				
25	33.7	300Psi 2.07Mpa	58	98	45	3/8*45-2
1	1.327		2.28	3.85	1.77	
32	42.4		68	106	45	3/8*45-2
$1^1/_4$	1.669		2.68	4.17	1.77	
40	48.3		74	114	45	3/8*45-2
$1^1/_2$	1.9		2.91	4.49	1.77	
50	60.3		86	126	45	3/8*55-2
2	2.375		3.39	4.96	1.77	
65	73		98	137	45	3/8*55-2
$2^1/_2$	2.875		3.86	5.39	1.77	
65	76.1		103	141	45	3/8*55-2
$2^1/_2$	3		4.06	5.55	1.77	
80	88.9		114	158	45	3/8*55-2
3	3.5		4.49	6.22	1.77	
100	108		140	186	49	1/2*65-2
4	4.25		5.51	7.32	1.93	
100	114.3		143	192	49	1/2*65-2
4	4.5		5.63	7.56	1.93	
125	133		164	216	50	1/2*75-2
5	5.25		6.46	8.5	1.96	
125	139.7		172	223	50	1/2*75-2
5	5.5		6.77	8.78	1.96	
125	141.3		173	225	50	1/2*75-2
5	5.563		6.81	8.86	1.96	
150	159		193	246	50	1/2*75-2
6	6.25		7.59	9.69	1.96	
150	165.1		199	252	50	1/2*75-2
6	6.5		7.83	9.92	1.96	
150	168.3		202	252	50	1/2*75-2
6	6.625		7.95	9.92	1.96	
200	219.1		255	322	58	5/8*95-2
8	8.625		10.04	12.67	2.28	
250	273		318	400	62	3/4*110-2
10	10.75		12.51	15.74	2.44	
300	323.9		372	454	64	3/4*120-2
12	12.75		14.64	17.87	2.51	

Pressure Ratings and End loads for Mech Couplings on Steel Pipe

Nom. Size	Pipe O.D	Pipe Sched	Wall Thick	Max.Work Press	Max.End Load
DN/in	mm	(sch)	mm	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	3.68	35/500	6.3/1420
		10	2.77	35/500	6.3/1420
50	60.3	40	3.91	35/500	9.8/2210
		10	2.77	35/500	9.8/2210
65	73	40	5.16	35/500	14.4/3240
		10	3.05	35/500	14.4/3240
65	76.1	——	6.35		
		——	5.08	35/500	15.7/3530
		——	3.81	35/500	15.7/3530
80	88.9	40	5.49	35/500	21.4/4800
		10	3.05	35/500	21.4/4800
100	114.3	40	6.02	35/500	35.4/7950
		10	3.05	35/500	35.4/7950
125	141.3	40	6.55	31/450	48.6/10930
		10	3.4	31/450	48.6/10930
150	165.1	——	6.35	31/450	66.4/14930
		——	5.08	31/450	66.4/14930
150	168.3	40	7.11	31/450	68.9/15500
		10	3.4	31/450	68.9/15500
200	219.1	40	8.18	31/450	116.9/26280
		30	7.04	31/450	116.9/26280
		10	4.77	20/300	77.8/17500
250	273	40	9.27	20/300	121.0/27210
		30	7.8	20/300	121.0/27210
		10	4.77	20/300	121.0/27210
300	323.9	40	10.31	20/300	170.3/38280
		STD	9.53	20/300	170.3/38280
		30	6.35	20/300	170.3/38280
		10	4.77	20/300	170.3/38280

Fexible Coupling

This kind of coupling is designed for the pipe bearing moderate pressure.It allows controlled angular,linear and rotational movement at each joint and provides the added advantages of expansion,contraction and deflection.This is useful to accommodate uneven laying surfaces,and movement from thermal changes,settling,seismic effect or other causes.Flexible coupling can be used in fire protection system,feed water,natural gas system and etc.



Flexible Coupling

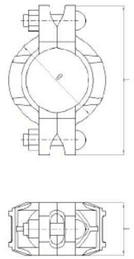
Nominal Size	Pipe OD.	Working Pressure	Dimensions mm/in A mm	B mm	C mm	Bolt Size No.-Size mm
mm/in	mm/in	psi/Mpa				
25	33.7	300Psi 2.07Mpa	58	98	45	3/8*45-2
1	1.327		2.28	3.85	1.77	
32	42.4		68	106	45	3/8*45-2
$1^1/_4$	1.669		2.68	4.17	1.77	
40	48.3		74	114	45	3/8*45-2
$1^1/_2$	1.9		2.91	4.49	1.77	
50	60.3		86	126	45	3/8*55-2
2	2.375		3.39	4.96	1.77	
65	73		98	137	45	3/8*55-2
$2^1/_2$	2.875		3.86	5.39	1.77	
65	76.1		103	141	45	3/8*55-2
$2^1/_2$	3		4.06	5.55	1.77	
80	88.9		114	158	45	3/8*55-2
3	3.5		4.49	6.22	1.77	
100	108		140	186	49	1/2*65-2
4	4.25		5.51	7.32	1.93	
100	114.3		143	192	49	1/2*65-2
4	4.5		5.63	7.56	1.93	
125	133		164	216	50	1/2*75-2
5	5.25		6.46	8.5	1.96	
125	139.7		172	223	50	1/2*75-2
5	5.5		6.77	8.78	1.96	
125	141.3		173	225	50	1/2*75-2
5	5.563		6.81	8.86	1.96	
150	159		193	246	50	1/2*75-2
6	6.25		7.59	9.69	1.96	
150	165.1		199	252	50	1/2*75-2
6	6.5		7.83	9.92	1.96	
150	168.3		202	252	50	1/2*75-2
6	6.625		7.95	9.92	1.96	
200	219.1		255	322	58	5/8*95-2
8	8.625		10.04	12.67	2.28	
250	273		318	400	62	3/4*110-2
10	10.75		12.51	15.74	2.44	
300	323.9		372	454	64	3/4*120-2
12	12.75		14.64	17.87	2.51	

Pressure Ratings and End loads for Mech Couplings on Steel Pipe

Nom. Size	Pipe O.D	Pipe Sched	Wall Thick	Max.Work Press	Max.End Load
DN/in	mm	(sch)	mm	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	3.68	35/500	6.3/1420
		10	2.77	35/500	6.3/1420
50	60.3	40	3.91	35/500	9.8/2210
		10	2.77	35/500	9.8/2210
65	73	40	5.16	35/500	14.4/3240
		10	3.05	35/500	14.4/3240
65	76.1	——	6.35		
		——	5.08	35/500	15.7/3530
		——	3.81	35/500	15.7/3530
80	88.9	40	5.49	35/500	21.4/4800
		10	3.05	35/500	21.4/4800
100	114.3	40	6.02	35/500	35.4/7950
		10	3.05	35/500	35.4/7950
125	141.3	40	6.55	31/450	48.6/10930
		10	3.4	31/450	48.6/10930
150	165.1	——	6.35	31/450	66.4/14930
		——	5.08	31/450	66.4/14930
150	168.3	40	7.11	31/450	68.9/15500
		10	3.4	31/450	68.9/15500
200	219.1	40	8.18	31/450	116.9/26280
		30	7.04	31/450	116.9/26280
		10	4.77	20/300	77.8/17500
250	273	40	9.27	20/300	121.0/27210
		30	7.8	20/300	121.0/27210
		10	4.77	20/300	121.0/27210
300	323.9	40	10.31	20/300	170.3/38280
		STD	9.53	20/300	170.3/38280
		30	6.35	20/300	170.3/38280
		10	4.77	20/300	170.3/38280

Reducing Flexible Coupling

According to different situation,the appearance can be dealed with epoxy powder,hot-dipped zinc,paint,dacromet or your requirement.



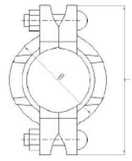
FM Approved c UL us LISTED CE

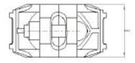
Reducing Flexible Coupling

Nominal Size	Pipe OD.	Working Pressure	Dimensions			Bolt Size
mm/in	mm/in	psi/Mpa	mm/in			No.-Size mm
			A	B	C	
50×32	60.3×42.4		86	125	44	2-3/8×55
2×1¼	2.375×1.660		3.39	4.93	1.74	2-M10×57
50×40	60.3×48.3		86	125	44	2-3/8×55
2×1½	2.375×1.900		3.39	4.93	1.74	2-M10×57
65×25	73.0×33.7		100	138	45	2-3/8×55
2½×1	2.875×1.327		3.94	5.44	1.78	2-M10×57
65×32	73.0×42.4		100	138	45	2-3/8×55
2½×1¼	2.875×1.660		3.94	5.44	1.78	2-M10×57
65×40	73.0×48.3		100	138	45	2-3/8×55
2½×1½	2.875×1.900		3.94	5.44	1.78	2-M10×57
65×50	73.0×60.3		100	138	45	2-3/8×55
2½×2	2.875×2.375		3.94	5.44	1.78	2-M10×57
65×25	76.0×33.7		102	140	45	2-3/8×55
2½×1	3.000×1.327		4.02	5.51	1.78	2-M10×57
65×40	76.1×48.3		102	140	45	2-3/8×55
2½×1½	3.000×1.900		4.02	5.51	1.78	2-M10×57
65×50	76.1×60.3		102	140	45	2-3/8×55
2½×2	3.000×2.375		4.02	5.51	1.78	2-M10×57
80×25	88.9×33.7		115	168	46	2-1/2×70
3×1	3.500×1.327		4.53	6.61	1.81	2-M12×70
80×40	88.9×48.3		115	168	46	2-1/2×70
3×1½	3.500×1.900		4.53	6.61	1.81	2-M12×70
80×50	88.9×60.3		115	168	46	2-1/2×70
3×2	3.500×2.375	300Psi	4.53	6.61	1.81	2-M12×70
80×65	88.9×73.0	2.07Mpa	115	168	46	2-1/2×70
3×2½	3.500×2.875		4.53	6.61	1.81	2-M12×70
80×65	88.9×76.1		115	168	46	2-1/2×70
3×2½	3.500×3.000		4.53	6.61	1.81	2-M12×70
100×25	114.3×33.7		144	198	50	2-1/2×70
4×1	4.500×1.327		5.67	7.8	1.97	2-M12×70
100×40	114.3×48.3		144	198	50	2-1/2×70
4×1½	4.500×1.900		5.67	7.8	1.97	2-M12×70
100×50	114.3×60.3		144	198	50	2-1/2×70
4×2	4.500×2.375		5.67	7.8	1.97	2-M12×70
100×65	114.3×73.0		144	198	50	2-1/2×70
4×2½	4.500×2.875		5.67	7.8	1.97	2-M12×70
100×65	114.3×76.1		144	198	50	2-1/2×70
4×2½	4.500×3.000		5.67	7.8	1.97	2-M12×70
100×80	114.3×88.9		144	198	50	2-1/2×70
4×3	4.500×3.500		5.67	7.8	1.97	2-M12×70
150×80	165.1×88.9		200	260	51	2-5/8×85
6×3	6.500×3.500		7.87	10.24	2.01	2-M16×85
150×100	165.1×88.9		200	260	51	2-5/8×85
6×4	6.500×4.500		7.87	10.24	2.01	2-M16×85
150×80	165.1×88.9		202.5	268	52.5	2-5/8×85
6×3	6.500×3.500		7.97	10.55	2.07	2-M16×85
150×100	165.1×114.3		202.5	268	52.5	2-5/8×85
6×4	6.500×4.500		7.97	10.55	2.07	2-M16×85
200×150	219.1×165.1		260	338	60	2-3/4×115
8×6	8.625×6.500		10.24	13.31	2.36	2-M20×115
200×150	219.1×168.3		260	338	60	2-3/4×115
8×6	8.625×6.625		10.24	13.31	2.36	2-M20×115

Angle Pad Coupling

This couplings available where moderate pressures are expected or weight considerations are a factor.this style couplings are designed with cross-ribbed construction to provide strong component for pressure piping systems and usually used in fire protection,feed water,oil or gas and etc.





FM Approved c UL us LISTED CE

Angle Pad Coupling

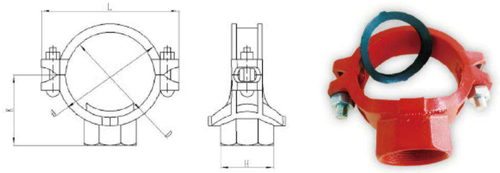
Nominal Size	Pipe OD.	Working Pressure	Dimensions			Bolt Size
mm/in	mm/in	psi/Mpa	mm/in			No.-Size mm
			A mm	B mm	C mm	
25	33.7		58	98	45	3/8*45-2
1	1.327		2.28	3.85	1.77	
32	42.4		68	106	45	3/8*45-2
1¼	1.669		2.68	4.17	1.77	
40	48.3		74	114	45	3/8*45-2
1½	1.9		2.91	4.49	1.77	
50	60.3		86	126	45	3/8*55-2
2	2.375		3.39	4.96	1.77	
65	73		98	137	45	3/8*55-2
2½	2.875		3.86	5.39	1.77	
65	76.1		103	141	45	3/8*55-2
2½	3		4.06	5.55	1.77	
80	88.9		114	158	45	3/8*55-2
3	3.5		4.49	6.22	1.77	
100	108		140	186	49	1/2*65-2
4	4.25	300Psi	5.51	7.32	1.93	
100	114.3	2.07Mpa	143	192	49	1/2*65-2
4	4.5		5.63	7.56	1.93	
125	133		164	216	50	1/2*75-2
5	5.25		6.46	8.5	1.96	
125	139.7		172	223	50	1/2*75-2
5	5.5		6.77	8.78	1.96	
125	141.3		173	225	50	1/2*75-2
5	5.563		6.81	8.86	1.96	
150	159		193	246	50	1/2*75-2
6	6.25		7.59	9.69	1.96	
150	165.1		199	252	50	1/2*75-2
6	6.5		7.83	9.92	1.96	
150	168.3		202	252	50	1/2*75-2
6	6.625		7.95	9.92	1.96	
200	219.1		255	322	58	5/8*95-2
8	8.625		10.04	12.67	2.28	
250	273		318	400	62	3/4*110-2
10	10.75		12.51	15.74	2.44	
300	323.9		372	454	64	3/4*120-2
12	12.75		14.64	17.87	2.51	

Pressure Ratings and End loads for Mech Couplings on Steel Pipe

Nom. Size	Pipe O.D	Pipe Sched	Wall Thick	Max.Work Press	Max.End Load
DN/in	mm	(sch)	mm	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	3.68	35/500	6.3/1420
		10	2.77	35/500	6.3/1420
50	60.3	40	3.91	35/500	9.8/2210
		10	2.77	35/500	9.8/2210
65	73	40	5.16	35/500	14.4/3240
		10	3.05	35/500	14.4/3240
65	76.1	——	6.35		
		——	5.08	35/500	15.7/3530
		——	3.81	35/500	15.7/3530
80	88.9	40	5.49	35/500	21.4/4800
		10	3.05	35/500	21.4/4800
100	114.3	40	6.02	35/500	35.4/7950
		10	3.05	35/500	35.4/7950
125	141.3	40	6.55	31/450	48.6/10930
		10	3.4	31/450	48.6/10930
150	165.1	——	6.35	31/450	66.4/14930
		——	5.08	31/450	66.4/14930
150	168.3	40	7.11	31/450	68.9/15500
		10	3.4	31/450	68.9/15500
200	219.1	40	8.18	31/450	116.9/26280
		30	7.04	31/450	116.9/26280
		10	4.77	20/300	77.8/17500
250	273	40	9.27	20/300	121.0/27210
		30	7.8	20/300	121.0/27210
		10	4.77	20/300	121.0/27210
300	323.9	40	10.31	20/300	170.3/38280
		STD	9.53	20/300	170.3/38280
		30	6.35	20/300	170.3/38280
		10	4.77	20/300	170.3/38280

Mechanical Tee
Threaded Outlet

According to different situation,the appearance can be dealed with epoxy powder,hot-dipped zinc,paint,dacromet or your requirement.

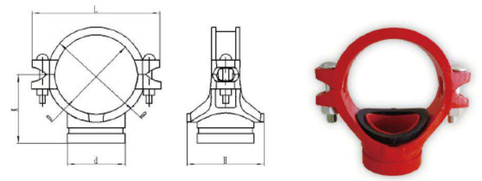


Mechanical Tee Threaded Outlet

Nominal Size	Pipe OD.	Working Pressure	HoleDia.	Dimensions mm/in				Bolt Size
mm/in	mm/in	psi/Mpa	Min/in +1.6/0 +0.063/0	A mm	B mm	C mm	D mm	
50×25	60.3×33.7	300Psi 2.07Mpa	38	118	74	60	40	M10×55-2
2×1	2.375×1.315		1.5	4.64	2.91	2.36	1.57	
50×32	60.3×42.4		51	118	74	60	40	M10×55-2
2×1 1/4	2.375×1.660		2.01	4.64	2.91	2.36	1.57	
50×40	60.3×48.3		51	118	74	60	40	M10×55-2
2×1 1/2	2.375×1.900		2.01	4.64	2.91	2.36	1.57	
65×25	73.0×33.7		38	132	74	64	47	M12×70-2
2 1/2×1	2.875×1.315		1.5	5.2	2.91	2.52	1.85	
65×32	73.0×42.4		51	132	74	64	47	M12×70-2
2 1/2×1 1/4	2.875×1.660		2.01	5.2	2.91	2.52	1.85	
65×40	73.0×48.3		51	132	80	64	47	M12×70-2
2 1/2×1 1/2	2.875×1.900		2.01	5.2	3.15	2.52	1.85	
65×25	76.1×33.7		38	144	74	64	49	M12×70-2
2 1/2×1	3.000×1.315		1.5	5.67	2.91	2.52	1.93	
65×32	76.1×42.4		51	144	74	64	49	M12×70-2
2 1/2×1 1/4	3.000×1.660		2.01	5.67	2.91	2.52	1.93	
65×40	76.1×48.3		51	144	80	64	49	M12×70-2
2 1/2×1 1/2	3.000×1.900		2.01	5.67	3.15	2.52	1.93	
80×15	88.9×21.3		30	146	74	70	55	M12×70-2
3×1/2	3.500×0.825		1.18	5.75	2.91	2.76	2.17	
80×20	88.9×26.9		30	146	74	70	55	M12×70-2
3×3/4	3.500×1.050		1.18	5.75	2.91	2.76	2.17	
80×25	88.9×33.7		38	146	74	70	55	M12×70-2
3×1	3.500×1.315		1.5	5.75	2.91	2.76	2.17	
80×32	88.9×42.4		51	146	86	73	55	M12×70-2
3×1 1/4	3.500×1.660		2.01	5.75	3.39	2.87	2.17	
80×40	88.9×48.3		51	146	86	77	55	M12×70-2
3×1 1/2	3.500×1.900		2.01	5.75	3.39	3.03	2.17	
80×50	88.9×60.3		64	146	96	80	55	M12×70-2
3×2	3.500×2.375		2.52	5.75	3.78	3.15	2.17	
100×25	108.0×33.7		38	172	72	76	64	M12×75-2
4×1	4.250×1.315		1.5	6.77	2.83	2.99	2.52	
100×32	108.0×42.4		51	172	82	76	64	M12×75-2
4×1 1/4	4.250×1.660		2.01	6.77	3.23	2.99	2.52	
100×40	108.0×48.3		51	172	84	76	64	M12×75-2
4×1 1/2	4.250×1.900		2.01	6.77	3.31	2.99	2.52	
100×50	108.0×60.3		64	172	95	78	64	M12×75-2
4×2	4.250×2.375		2.52	6.77	3.74	3.07	2.52	
100×25	114.3×33.7		38	178	74	86	69	M12×75-2
4×1	4.500×1.315		1.5	7.01	2.91	3.39	2.72	
100×32	114.3×42.4		51	178	86	87	69	M12×75-2
4×1 1/4	4.500×1.660		2.01	7.01	3.39	3.43	2.72	
100×40	114.3×48.3		51	178	86	89	69	M12×75-2
4×1 1/2	4.500×1.900		2.01	7.01	3.39	3.51	2.72	
100×50	114.3×60.3		64	178	100	94	69	M12×75-2
4×2	4.500×2.375		2.52	7.01	3.94	3.7	2.72	
100×65	114.3×76.1		70	178	106	100	69	M12×75-2
4×2 1/2	4.500×3.000		2.76	7.01	4.17	3.94	2.72	
100×80	114.3×88.9		89	178	124	99	69	M12×75-2
4×3	4.500×3.500		3.5	7.01	4.88	3.9	2.72	
125×25	133.0×33.7		38	200	72	88.5	77	M16×85-2
5×1	5.250×1.315		1.5	7.87	2.83	3.48	3.03	
125×32	133.0×42.4		51	200	82	88.5	77	M16×85-2
5×1 1/4	5.250×1.660		2.01	7.87	3.23	3.48	3.03	
125×40	133.0×48.3		51	200	82	88.5	77	M16×85-2
5×1 1/2	5.250×1.900		2.01	7.87	3.23	3.48	3.03	
125×50	133.0×60.3		64	200	95	89.5	77	M16×85-2
5×2	5.250×2.375		2.52	7.87	3.74	3.52	3.03	
125×25	139.7×33.7		38	213	74	98	81	M16×85-2
5×1	5.500×1.315		1.5	8.39	2.91	3.86	3.19	
125×32	139.7×42.4		51	213	86	99	81	M16×85-2
5×1 1/4	5.500×1.660		2.01	8.39	3.39	3.9	3.19	
125×40	139.7×48.3		51	213	86	111	81	M16×85-2
5×1 1/2	5.500×1.900		2.01	8.39	3.39	4.37	3.19	
125×50	139.7×60.3		64	213	100	106	81	M16×85-2
5×2	5.500×2.375		2.52	8.39	2.91	4.17	3.19	
125×65	139.7×76.1		70	213	108	110	81	M16×85-2
5×2 1/2	5.500×3.000		2.76	8.39	4.25	4.33	3.19	
125×80	139.7×88.9		89	213	126	110	81	M16×85-2
5×3	5.500×3.500		3.5	8.39	4.96	4.33	3.19	
125×25	141.3×33.7		38	213	74	98	81	M16×85-2
5×1	5.563×1.315		1.5	8.39	2.91	3.86	3.19	
125×32	141.3×42.4		51	213	86	99	81	M16×85-2
5×1 1/4	5.563×1.660		2.01	8.39	3.39	3.9	3.19	
125×40	141.3×48.3		51	213	86	111	81	M16×85-2
5×1 1/2	5.563×1.900		2.01	8.39	3.39	4.37	3.19	
125×50	141.3×60.3		64	239	100	106	81	M16×105-2
5×2	5.563×2.375		2.52	9.41	2.91	4.17	3.19	
125×65	141.3×76.1		70	239	108	110	81	M16×105-2
5×2 1/2	5.563×3.000		2.76	9.41	4.25	4.33	3.19	
125×80	141.3×88.9		89	239	126	110	81	M16×105-2
5×3	5.563×3.500		3.5	9.41	4.96	4.33	3.19	
125×25	141.3×33.7		38	239	74	98	81	M16×105-2
5×1	5.563×1.315		1.5	9.41	2.91	3.86	3.19	
125×32	141.3×42.4		51	239	86	99	81	M16×105-2
5×1 1/4	5.563×1.660		2.01	9.41	3.39	3.9	3.19	
125×40	141.3×48.3		51	239	86	111	81	M16×105-2
5×1 1/2	5.563×1.900		2.01	9.41	3.39	4.37	3.19	
125×50	141.3×60.3		64	239	100	106	81	M16×105-2
5×2	5.563×2.375		2.52	9.41	2.91	4.17	3.19	
125×65	141.3×76.1		70	239	108	124	95	M16×105-2
5×2 1/2	5.563×3.000		2.76	9.41	4.25	4.88	3.74	
125×80	141.3×88.9		89	239	126	123	95	M16×105-2
5×3	5.563×3.500		3.5	9.41	4.96	4.84	3.74	
125×25	141.3×33.7		38	239	74	112	95	M16×105-2
5×1	5.563×1.315		1.5	9.41	2.91	4.41	3.74	
125×32	141.3×42.4		51	239	86	113	95	M16×105-2
5×1 1/4	5.563×1.660		2.01	9.41	3.39	4.45	3.74	
125×40	141.3×48.3		51	239	86	115	95	M16×105-2
5×1 1/2	5.563×1.900		2.01	9.41	3.39	4.53	3.74	
125×50	141.3×60.3		64	239	100	120	95	M16×105-2
5×2	5.563×2.375		2.52	9.41	3.94	4.72	3.74	
125×65	141.3×76.1		70	239	108	124	95	M16×105-2
5×2 1/2	5.563×3.000		2.76	9.41	4.25	4.88	3.74	
125×80	141.3×88.9		89	239	126	123	95	M16×105-2
5×3	5.563×3.500		3.5	9.41	4.96	4.84	3.74	
125×25	141.3×33.7		38	310	73	135.5	115	M20×115-2
5×1	5.563×1.315		1.5	12.21	2.87	5.35	4.53	
125×32	141.3×42.4		51	310	82	135.5	115	M20×115-2
5×1 1/4	5.563×1.660		2.01	12.21	3.23	5.35	4.53	
125×40	141.3×48.3		51	310	86	135.5	115	M20×115-2
5×1 1/2	5.563×1.900		2.01	12.21	3.39	5.35	4.53	
125×50	141.3×60.3		64	310	97	138	115	M20×115-2
5×2	5.563×2.375		2.52	12.21	3.82	5.43	4.53	
125×65	141.3×76.1		70	310	115	138	115	M20×115-2
5×2 1/2	5.563×3.000		2.76	12.21	4.53	5.43	4.53	
125×80	141.3×88.9		89	310	127	140	115	M20×115-2
5×3	5.563×3.500		3.5	12.21	5	5.51	4.53	

Mechanical Tee
Grooved Outlet

According to different situation,the appearance can be dealed with epoxy powder,hot-dipped zinc,paint,dacromet or your requirement.

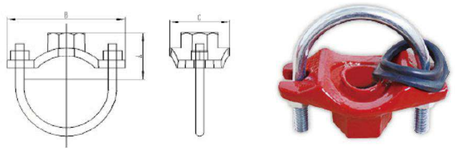


Mechanical Tee Grooved Outlet

Nominal Size	Pipe OD.	Working Pressure	HoleDia.	Dimensions mm/in				Bolt Size
mm/in	mm/in	psi/Mpa	Min/in +1.6/0 +0.063/0	A mm	B mm	C mm	D mm	
50×32	60.3×42.4	300Psi 2.07Mpa	45	116	69	68	40	M10×55-2
2×1 1/4	2.375×1.660		1.77	4.57	2.72	2.68	1.57	
50×40	60.3×48.3		45	116	69	68.5	40	M10×55-2
2×1 1/2	2.375×1.900		1.77	4.57	2.72	2.7	1.57	
65×25	76.1×33.7		38	144	69	76	49	M12×70-2
2 1/2×1	3.000×1.315		1.5	5.67	2.72	2.99	1.93	
65×32	76.1×42.4		51	144	69	76	49	M12×70-2
2 1/2×1 1/4	3.000×1.660		2.01	5.67	2.72	2.99	1.93	
65×40	76.1×48.3		51	144	80	76	49	M12×70-2
2 1/2×1 1/2	3.000×1.900		2.01	5.67	3.15	2.99	1.93	
80×32	88.9×42.4		51	146	86	85	55	M12×70-2
3×1 1/4	3.500×1.660		2.01	5.75	3.39	3.35	2.17	
80×40	88.9×48.3		51	146	86	85	55	M12×70-2
3×1 1/2	3.500×1.900		2.01	5.75	3.39	3.35	2.17	
80×50	88.9×60.3		64	146	96	85	55	M12×70-2
3×2	3.500×2.375		2.52	5.75	3.78	3.35	2.17	
100×32	114.3×42.4		51	178	82	96	69	M12×75-2
4×1 1/4	4.500×1.660		2.01	7.01	3.23	3.78	2.72	
100×40	114.3×48.3		51	178	82	96	69	M12×75-2
4×1 1/2	4.500×1.900		2.01	7.01	3.23	3.78	2.72	
100×50	114.3×60.3		64	178	95	97	69	M12×75-2
4×2	4.500×2.375		2.52	7.01	3.74	3.82	2.72	
100×65	114.3×73.0		70	178	113	97	69	M12×75-2
4×2 1/2	4.500×2.875		2.76	7.01	4.45	3.82	2.72	
100×65	114.3×76.1		70	178	113	97	69	M12×75-2
4×2 1/2	4.500×3.000		2.76	7.01	4.45	3.82	2.72	
125×32	139.7×42.4		51	204	82	110	81	M16×85-2
5×1 1/4	5.500×1.660		2.01	8.03	3.23	4.33	3.19	
125×40	139.7×48.3		51	204	82	110	81	M16×85-2
5×1 1/2	5.500×1.900		2.01	8.03	3.23	4.33	3.19	
125×50	139.7×60.3		64	204	95	110	81	M16×85-2
5×2	5.500×2.375		2.52	8.03	3.74	4.33	3.19	
125×65	139.7×73.0		70	204	113	110	81	M16×85-2
5×2 1/2	5.500×2.875		2.76	8.03	4.45	4.33	3.19	
125×65	139.7×76.1		70	204	113	110	81	M16×85-2
5×2 1/2	5.500×3.000		2.76	8.03	4.45	4.33	3.19	
125×32	141.3×42.4	300Psi 2.07Mpa	51	204	82	110	81	M16×85-2
5×1 1/4	5.563×1.660		2.01	8.03	3.23	4.33	3.19	
125×40	141.3×48.3		51	204	82	110	81	M16×85-2
5×1 1/2	5.563×1.900		2.01	8.03	3.23	4.33	3.19	
125×50	141.3×60.3		64	204	95	110	81	M16×85-2
5×2	5.563×2.375		2.52	8.03	3.74	4.33	3.19	
125×65	141.3×73.0		70	204	113	110	81	M16×85-2
5×2 1/2	5.563×2.875		2.76	8.03	4.45	4.33	3.19	
125×65	141.3×76.1		70	204	113	110	81	M16×85-2
5×2 1/2	5.563×3.000		2.76	8.03	4.45	4.33	3.19	
150×32	165.1×42.4		51	238	82	121	95	M16×105-2
6×1 1/4	6.500×1.660		2.01	9.37	3.23	4.76	3.74	
150×40	165.1×48.3		51	238	82	121	95	M16×105-2
6×1 1/2	6.500×1.900		2.01	9.37	3.23	4.76	3.74	
150×50	165.1×60.3		64	238	95	122	95	M16×105-2
6×2	6.500×2.375		2.52	9.37	3.74	4.8	3.74	
150×65	165.1×73.0		70	238	113	122	95	M16×105-2
6×2 1/2	6.500×2.875		2.76	9.37	4.45	4.8	3.74	
150×65	165.1×76.1		70	238	113	122	95	M16×105-2
6×2 1/2	6.500×3.000		2.76	9.37	4.45	4.8	3.74	
150×32	168.3×42.4	300Psi 2.07Mpa	51	238	82	121	95	M16×105-2
6×1 1/4	6.625×1.660		2.01	9.37	3.23	4.76	3.74	
150×40	168.3×48.3		51	238	82	121	95	M16×105-2
6×1 1/2	6.625×1.900		2.01	9.37	3.23	4.76	3.74	
150×50	168.3×60.3		64	238	95	122	95	M16×105-2
6×2	6.625×2.375		2.52	9.37	3.74	4.8	3.74	
150×65	168.3×73.0		70	238	113	122	95	M16×105-2
6×2 1/2	6.625×2.875		2.76	9.37	4.45	4.8	3.74	
150×65	168.3×76.1		70	238	113	122	95	M16×105-2
6×2 1/2	6.625×3.000		2.76	9.37	4.45	4.8	3.74	
200×32	219.1×42.4		51	310	82	152	124	M20×115-2
8×1 1/4	8.625×1.660		2.01	12.21	3.23	5.98	4.88	
200×40	219.1×48.3		51	310	82	152	124	M20×115-2
8×1 1/2	8.625×1.900		2.01	12.21	3.23	5.98	4.88	
200×50	219.1×60.3		64	310	97	152	124	M20×115-2
8×2	8.625×2.375		2.52	12.2	3.82	5.98	4.88	
200×65	219.1×73.0		70	310	115	152	124	M20×115-2
8×2 1/2	8.625×2.875		2.76	12.2	4.53	5.98	4.88	
200×65	219.1×76.1		70	310	115	152	124	M20×115-2
8×2 1/2	8.625×3.000		2.76	12.2	4.53	5.98	4.88	
200×80	219.1×88.9		89	310	127	152	124	M20×115-2
8×3	8.625×3.500		3.5	12.2	5	5.98	4.88	

U Bolt Mechanical Tee

According to different situation,the appearance can be dealed with epoxy powder,hot-dipped zinc,paint,dacromet or your requirement.

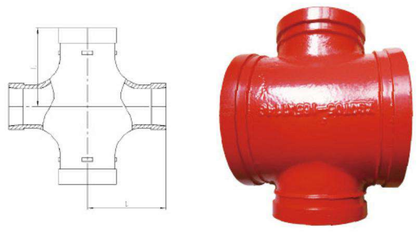


U Bolt Mechanical Tee

Nominal Size mm/in	Pipe OD. mm/in	Working Pressure psi/Mpa	HeieDia Mm/in +1.60/+0.06/3.0	Dimensions mm/in A mm	L mm	H mm	Bolt Size mm
32×15 1¼×½	42.4×21.3 1.660×0.825	300Psi 2.07Mpa	30 1.18	43 1.69	90 3.54	56 2.2	M10×42U
32×20 1¼×¾	42.4×26.9 1.660×1.050		30 1.18	43 1.69	90 3.54	56 2.2	M10×42U
32×25 1¼×1	42.4×33.7 1.660×1.315		30 1.18	51 2.01	90 3.54	56 2.2	M10×42U
40×15 1½×½	48.3×21.3 1.900×0.825		30 1.18	46 1.81	90 3.54	56 2.2	M10×48U
40×20 1½×¾	48.3×26.9 1.900×1.050		30 1.18	49 1.93	90 3.54	56 2.2	M10×48U
40×25 1½×1	48.3×33.7 1.900×1.315		30 1.18	54 2.13	90 3.54	56 2.2	M10×48U
50×15 2×½	60.3×21.3 2.375×0.825		30 1.18	52 2.05	96 3.78	56 2.2	M10×60U
50×20 2×¾	60.3×26.9 2.375×1.050		30 1.18	52 2.05	96 3.78	56 2.2	M10×60U
50×25 2×1	60.3×33.7 2.375×1.315		30 1.18	60 2.36	96 3.78	56 2.2	M10×60U
65×15 2½×½	76.1×21.3 3.000×0.825		30 1.18	60 2.36	112 4.41	56 2.2	M10×76U
65×20 2½×¾	76.1×26.9 3.000×1.050		30 1.18	60 2.36	112 4.41	56 2.2	M10×76U
65×25 2½×1	76.1×33.7 3.000×1.315		30 1.18	68 2.68	112 4.41	56 2.2	M10×76U

Grooved Reducing Cross

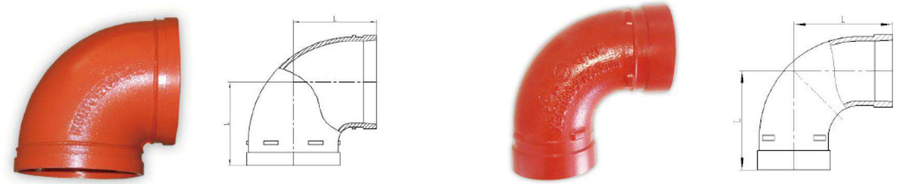
According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.



Grooved Reducing Cross

Nominal Size mm/in	Pipe OD. mm/in	Working Pressure psi/Mpa	Dimensions L1mm/in	Dimensions L2mm/in
100×50 4×2	114.3×60.3 4.500×2.375	300Psi 2.07Mpa	127 5	127 5
100×65 4×2½	114.3×76.1 4.500×3.000		127 5	127 5
100×80 4×3	114.3×88.9 4.500×3.500		127 5	127 5
150×100 6×4	165.1×114.3 6.500×4.500		165 6.5	165 6.5
150×50 6×2	168.3×60.3 6.625×2.375		165 6.5	165 6.5
150×65 6×2½	168.3×76.1 6.625×3.000		165 6.5	165 6.5
150×80 6×3	168.3×88.9 6.625×3.500		165 6.5	165 6.5
150×100 6×4	168.3×114.3 6.625×4.500		165 6.5	165 6.5

90° Elbow



90° Elbow(SHORT)

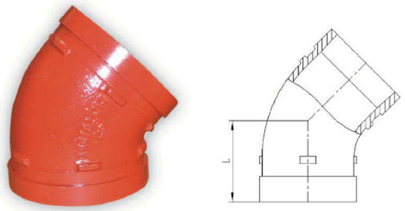
Nominal Size mm/in	Pipe OD mm/in	Working Pressure Mpa	Dimensions mm
25 1	33.7 1.327	300Psi 2.07Mpa	57 2.24
32 1¼	42.4 1.669		60 2.36
40 1½	48.3 1.9		60 2.36
50 2	60.3 2.375		70 2.76
65 2½	73 2.875		76 2.99
65 2½	76.1 3		76 2.99
80 3	88.9 3.5		86 3.39
100 4	108 4.25		102 4.02
100 4	114.3 4.5		102 4.02
125 5	133 5.25		121 4.76
125 5	139.7 5.5		121 4.76
125 5	141.3 5.563		121 4.76
150 6	159 6.25		140 5.51
150 6	165.1 6.5		140 5.51
150 6	168.3 6.625		140 5.51
200 8	219.1 8.625		175 6.89
250 10	273 10.75		215 8.46
300 12	323.9 12.75		245 9.65

90° Elbow(LONG)

Nominal Size mm/in	Pipe OD mm/in	Working Pressure Mpa	Dimensions mm
25 1	33.7 1.327	300Psi 2.07Mpa	70 2.76
32 1¼	42.4 1.669		70 2.76
40 1½	48.3 1.9		70 2.76
50 2	60.3 2.375		82 3.23
65 2½	73 2.875		95 3.74
65 2½	76.1 3		95 3.74
80 3	88.9 3.5		108 4.25
100 4	108 4.25		127 5
100 4	114.3 4.5		127 5
125 5	133 5.25		140 5.51
125 5	139.7 5.5		140 5.51
125 5	141.3 5.563		140 5.51
150 6	159 6.25		165 6.5
150 6	165.1 6.5		165 6.5
150 6	168.3 6.625		165 6.5
200 8	219.1 8.625		197 7.76
250 10	273 10.75		229 9.02
300 12	323.9 12.75		254 10

→ Product size

45° Elbow

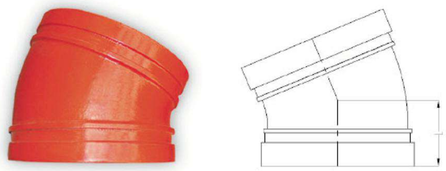


FM Approved · c UL us LISTED · CE

45° Elbow

Nominal Size	Pipe OD.	Working Pressure	Dimensions
mm/in	mm/in	psi/Mpa	Lmm/in
25	33.7	300Psi 2.07Mpa	45
1	1.327		1.77
32	42.4		45
$1^1/_4$	1.669		1.77
40	48.3		45
$1^1/_2$	1.9		1.77
50	60.3		51
2	2.375		2.01
65	73		57
$2^1/_2$	2.875		2.24
65	76.1		57
$2^1/_2$	3		2.24
80	88.9		64
3	3.5		2.51
100	108		76
4	4.25		3
100	114.3		76
4	4.5		3
125	133		82.5
5	5.25		3.24
125	139.7		82.5
5	5.5		3.24
125	141.3		82.5
5	5.563		3.24
150	159		89
6	6.25		3.5
150	165.1		89
6	6.5		3.5
150	168.3		89
6	6.625		3.5
200	219.1		108
8	8.625		4.25
250	273		120.5
10	10.75		4.74
300	323.9		133
12	12.75		5.23

22.5° Elbow



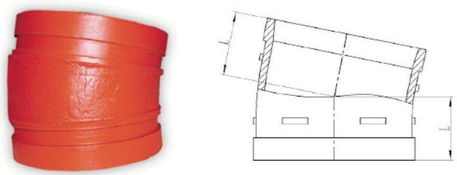
FM Approved · c UL us LISTED · CE

22.5° Elbow

Nominal Size	Pipe OD.	Working Pressure	Dimensions
mm/in	mm/in	psi/Mpa	Lmm/in
32	42.4	300Psi 2.07Mpa	40
$1^1/_4$	1.669		1.57
40	48.3		45
$1^1/_2$	1.9		1.77
50	60.3		50
2	2.375		1.97
65	73		50
$2^1/_2$	2.875		1.97
65	76.1		50
$2^1/_2$	3		1.97
80	88.9		60
3	3.5		2.36
100	108		70
4	4.25		2.76
100	114.3		70
4	4.5		2.76
125	133		70
5	5.25		2.76
125	139.7		70
5	5.5		2.76
150	159		89
6	6.25		3.5
150	165.1		89
6	6.5		3.5
150	168.3		89
6	6.625		3.5
200	219.1		98
8	8.625		3.85
250	273		120
10	10.75		4.72
300	323.9		120
12	12.75		4.72

Product size ←

11.25° Elbow

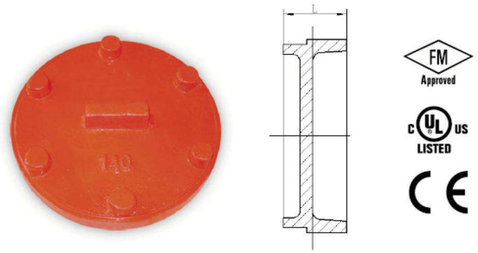


FM Approved · c UL us LISTED · CE

11.25° Elbow

Nominal Size	Pipe OD.	Working Pressure	Dimensions
mm/in	mm/in	psi/Mpa	Lmm/in
32	42.4	300Psi 2.07Mpa	35
$1^1/_4$	1.669		1.38
40	48.3		40
$1^1/_2$	1.9		1.57
50	60.3		40
2	2.375		1.57
65	73		40
$2^1/_2$	2.875		1.57
65	76.1		40
$2^1/_2$	3		1.57
80	88.9		40
3	3.5		1.57
100	108		45
4	4.25		1.77
100	114.3		45
4	4.5		1.77
125	133		50
5	5.25		1.97
125	139.7		50
5	5.5		1.97
150	159		50
6	6.25		1.97
150	165.1		50
6	6.5		1.97
150	168.3		50
6	6.625		1.97
200	219.1		50
8	8.625		1.97
250	273		80
10	10.75		3.15
300	323.9		80
12	12.75		3.15

Cap



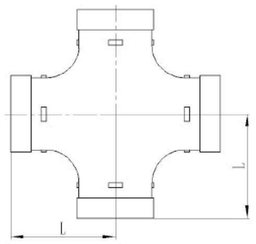
FM Approved · c UL us LISTED · CE

Cap

Nominal Size	Pipe OD	Working Pressure	Dimensions
mm/in	mm/in	psi/Mpa	Lmm/in
25	33.7	300Psi 2.07Mpa	25
1	1.327		0.98
32	42.4		25
$1^1/_4$	1.669		0.98
40	48.3		25
$1^1/_2$	1.9		0.98
50	60.3		25
2	2.375		0.98
65	73		25
$2^1/_2$	2.875		0.98
65	76.1		25
$2^1/_2$	3		0.98
80	88.9		25
3	3.5		0.98
100	108		27
4	4.25		1.06
100	114.3		27
4	4.5		1.06
125	133		27
5	5.25		1.06
125	139.7		27
5	5.5		1.06
125	141.3		27
5	5.563		1.06
150	159		27
6	6.25		1.06
150	165.1		27
6	6.5		1.06
150	168.3		27
6	6.625		1.06
200	219.1		31
8	8.625		1.22
250	273		33
10	10.75		1.3
300	323.9		33
12	12.75		1.3

Cross

According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.



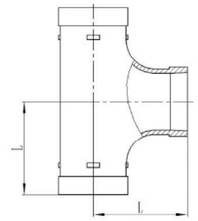
FM Approved c UL us LISTED CE

Cross

Nominal Size mm/in	Pipe OD. mm/in	Working Pressure psi/Mpa	Dimensions Lmm/in
25	33.7		70
1	1.327		2.76
32	42.4		70
$1^1/_4$	1.669		2.76
40	48.3		70
$1^1/_2$	1.9		2.76
50	60.3		82
2	2.375		3.23
65	73		95
$2^1/_2$	2.875		3.74
65	76.1		95
$2^1/_2$	3		3.74
80	88.9		108
3	3.5		4.25
100	108		127
4	4.25		5
100	114.3	300Psi	127
4	4.5	2.07Mpa	5
125	133		140
5	5.25		5.51
125	139.7		140
5	5.5		5.51
125	141.3		140
5	5.563		5.51
150	159		165
6	6.25		6.5
150	165.1		165
6	6.5		6.5
150	168.3		165
6	6.625		6.5
200	219.1		197
8	8.625		7.76
250	273		229
10	10.75		9.02
300	323.9		254
12	12.75		10

Tee

FM Approved c UL us LISTED CE



Tee(LONG)

Nominal Size mm/in	Pipe OD. mm/in	Working Pressure psi/Mpa	Dimensions Lmm/in
25	33.7		70
1	1.327		2.76
32	42.4		70
$1^1/_4$	1.669		2.76
40	48.3		70
$1^1/_2$	1.9		2.76
50	60.3		82
2	2.375		3.23
65	73		95
$2^1/_2$	2.875		3.74
65	76.1		95
$2^1/_2$	3		3.74
80	88.9		108
3	3.5		4.25
100	108		127
4	4.25		5
100	114.3	300Psi	127
4	4.5	2.07Mpa	5
125	133		140
5	5.25		5.51
125	139.7		140
5	5.5		5.51
125	141.3		140
5	5.563		5.51
150	159		165
6	6.25		6.5
150	165.1		165
6	6.5		6.5
150	168.3		165
6	6.625		6.5
200	219.1		197
8	8.625		7.76
250	273		229
10	10.75		9.02
300	323.9		254
12	12.75		10

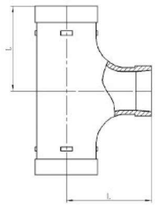
Tee(SHOT)

Nominal Size mm/in	Pipe OD. mm/in	Working Pressure psi/Mpa	Dimensions Lmm/in
25	33.7		57
1	1.327		2.24
32	42.4		60
$1^1/_4$	1.669		2.36
40	48.3		60
$1^1/_2$	1.9		2.36
50	60.3		70
2	2.375		2.76
65	73		76
$2^1/_2$	2.875		2.99
65	76.1		76
$2^1/_2$	3		2.99
80	88.9		86
3	3.5		3.39
100	108		102
4	4.25		4.02
100	114.3	300Psi	102
4	4.5	2.07Mpa	4.02
125	133		121
5	5.25		4.76
125	139.7		121
5	5.5		4.76
125	141.3		121
5	5.563		4.76
150	159		140
6	6.25		5.51
150	165.1		140
6	6.5		5.51
150	168.3		140
6	6.625		5.51
200	219.1		175
8	8.625		6.89
250	273		215
10	10.75		8.46
300	323.9		245
12	12.75		9.65

According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.

Grooved Reducing Tee

According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.



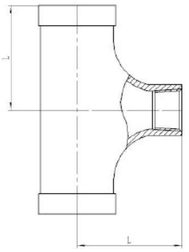
Grooved Reducing Tee

Nominal Size	Pipe OD.	Working Pressure	Dimensions	
mm/in	mm/in	psi/Mpa	L1mm/in	L2mm/in
50×25	60.3×33.7	300Psi 2.07Mpa	82	82
2×1	2.375×1.315		3.23	3.23
50×32	60.3×42.4		82	82
2×1¼	2.375×1.660		3.23	3.23
50×40	60.3×48.3		82	82
2×1½	2.375×1.900		3.23	3.23
65×32	73.0×42.4		95	95
2½×1¼	2.875×1.660		3.74	3.74
65×40	73.0×48.3		95	95
2½×1½	2.875×1.900		3.74	3.74
65×50	73.0×60.3		95	95
2½×2	2.875×2.375		3.74	3.74
65×32	76.1×42.4		95	95
2½×1¼	3.000×1.660		3.74	3.74
65×40	76.1×48.3		95	95
2½×1½	3.000×1.900		3.74	3.74
65×50	76.1×60.3		95	95
2½×2	3.000×2.375		3.74	3.74
80×40	88.9×48.3		108	108
3×1½	3.500×1.900		4.25	4.25
80×50	88.9×60.3		108	108
3×2	3.500×2.375		4.25	4.25
80×65	88.9×76.1		108	108
3×2½	3.500×3.000		4.25	4.25
100×65	108.0×76.1		127	127
4×2½	4.250×3.000		5	5
100×80	108.0×88.9		127	127
4×3	4.250×3.500		5	5
100×50	114.3×60.3		127	127
4×2	4.500×2.375		5	5
100×65	114.3×76.1		127	127
4×2½	4.500×3.000		5	5
100×80	114.3×88.9		127	127
4×3	4.500×3.500		5	5
125×50	133.0×60.3		140	140
5×2	5.250×2.375		5.51	5.51
125×65	133.0×76.1		140	140
5×2½	5.250×3.000		5.51	5.51
125×100	133.0×108.0		140	140
5×4	5.250×4.250		5.51	5.51
125×100	133.0×114.3		140	140
5×4	5.250×4.500		5.51	5.51
125×50	139.7×60.3		140	140
5×2	5.500×2.375		5.51	5.51
125×65	139.7×76.1		140	140
5×2½	5.500×3.000		5.51	5.51
125×80	139.7×88.9		140	140
5×3	5.500×3.500		5.51	5.51
125×100	139.7×114.3		140	140
5×4	5.500×4.500		5.51	5.51

Nominal Size	Pipe OD.	Working Pressure	Dimensions	
mm/in	mm/in	psi/Mpa	L1mm/in	L2mm/in
125×50	141.3×60.3	300Psi 2.07Mpa	140	140
5×2	5.563×2.375		5.51	5.51
125×65	141.3×73.0		140	140
5×2½	5.563×2.875		5.51	5.51
125×65	141.3×76.1		140	140
5×2½	5.563×3.000		5.51	5.51
125×80	141.3×88.9		140	140
5×3	5.563×3.500		5.51	5.51
125×100	141.3×114.3		140	140
5×2½	5.563×4.500		5.51	5.51
150×65	159.0×76.1		165	165
6×2½	6.250×3.000		6.5	6.5
150×80	159.0×88.9		165	165
6×3	6.250×3.500		6.5	6.5
150×100	159.0×108.0		165	165
6×4	6.250×4.250		6.5	6.5
150×100	159.0×114.3		165	165
6×4	6.250×4.500		6.5	6.5
150×50	165.1×60.3		165	165
6×2	6.500×2.375		6.5	6.5
150×65	165.1×76.1		165	165
6×2½	6.500×3.000		6.5	6.5
150×80	165.1×88.9		165	165
6×3	6.500×3.500		6.5	6.5
150×100	165.1×114.3		165	165
6×4	6.500×4.500		6.5	6.5
150×125	165.1×139.7		165	165
6×5	6.500×5.500		6.5	6.5
150×50	168.3×60.3		165	165
6×2	6.625×2.375		6.5	6.5
150×65	168.3×76.1		165	165
6×2½	6.625×3.000		6.5	6.5
150×80	168.3×88.9		165	165
6×3	6.625×3.500		6.5	6.5
200×65	219.1×76.1		197	197
8×2½	8.625×3.000		7.76	7.76
200×80	219.1×88.9		197	197
8×3	8.625×3.500		7.76	7.76
200×100	219.1×114.3		197	197
8×4	8.625×4.500		7.76	7.76
200×125	219.1×139.7		197	197
8×5	8.625×5.500		7.76	7.76
200×150	219.1×165.1		197	197
8×6	8.625×6.500		7.76	7.76
200×150	219.1×168.3		197	197
8×6	8.625×6.625		7.76	7.76
250×100	273.0×114.3		229	229
10×4	10.750×4.500		9.02	9.02
250×125	273.0×139.7		229	229
10×5	10.750×5.500		9.02	9.02
250×150	273.0×165.1		229	229
10×6	10.750×6.500		9.02	9.02

Threaded Reducing Tee

According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.



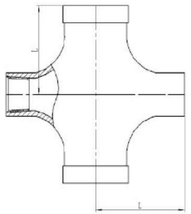
Threaded Reducing Tee

Nominal Size	Pipe OD.	Working Pressure	Dimensions	
mm/in	mm/in	psi/Mpa	L1mm/in	L2mm/in
40×25	48.3×33.7	300Psi 2.07Mpa	70	70
1½×1	1.900×1.315		2.76	2.76
40×32	48.3×42.4		70	70
1½×1¼	1.900×1.660		2.76	2.76
50×25	60.3×33.7		82	82
2×1	2.375×1.315		3.23	3.23
50×32	60.3×42.4		82	82
2×1¼	2.375×1.660		3.23	3.23
50×40	60.3×48.3		82	82
2×1½	2.375×1.900		3.23	3.23
65×25	73.0×33.7		95	95
2½×1	2.875×1.315		3.74	3.74
65×32	73.0×42.4		95	95
2½×1¼	2.875×1.660		3.74	3.74
65×40	73.0×48.3		95	95
2½×1½	2.875×1.900		3.74	3.74
65×50	73.0×60.3		95	95
2½×2	2.875×2.375		3.74	3.74
65×25	76.1×33.7		95	95
2½×1	3.000×1.315		3.74	3.74
65×32	76.1×42.4		95	95
2½×1¼	3.000×1.660		3.74	3.74
65×40	76.1×48.3		95	95
2½×1½	3.000×1.900		3.74	3.74
65×50	76.1×60.3		95	95
2½×2	3.000×2.375		3.74	3.74
80×25	88.9×33.7		108	108
3×1	3.500×1.315		4.25	4.25
80×32	88.9×42.4		108	108
3×1¼	3.500×1.660		4.25	4.25
80×40	88.9×48.3		108	108
3×1½	3.500×1.900		4.25	4.25
80×50	88.9×60.3		108	108
3×2	3.500×2.375		4.25	4.25
80×65	88.9×76.1		108	108
3×2½	3.500×3.000		4.25	4.25
100×65	108.0×76.1		127	127
4×2½	4.250×3.000		5	5
100×80	108.0×88.9		127	127
4×3	4.250×3.500		5	5
100×25	114.3×33.7		127	127
4×1	4.500×1.315		5	5
100×32	114.3×42.4		127	127
4×1¼	4.500×1.660		5	5
100×40	114.3×48.3		127	127
4×1½	4.500×1.900		5	5
100×50	114.3×60.3		127	127
4×2	4.500×2.375		5	5
100×65	114.3×76.1		127	127
4×2½	4.500×3.000		5	5
100×80	114.3×88.9		127	127
4×3	4.500×3.500		5	5
125×25	139.7×33.7		140	140
5×1	5.500×1.315		5.51	5.51

Nominal Size	Pipe OD.	Working Pressure	Dimensions	
mm/in	mm/in	psi/Mpa	L1mm/in	L2mm/in
125×32	139.7×42.4	300Psi 2.07Mpa	140	140
5×1¼	5.500×1.660		5.51	5.51
125×40	139.7×48.3		140	140
5×1½	5.500×1.900		5.51	5.51
125×50	139.7×60.3		140	140
5×2	5.500×2.375		5.51	5.51
125×65	139.7×76.1		140	140
5×2½	5.500×3.000		5.51	5.51
125×80	139.7×88.9		140	140
5×3	5.500×3.500		5.51	5.51
125×25	141.3×33.7		140	140
5×1	5.563×1.315		5.51	5.51
125×32	141.3×42.4		140	140
5×1¼	5.563×1.315		5.51	5.51
125×40	141.3×48.3		140	140
5×1½	5.563×1.900		5.51	5.51
125×50	141.3×60.3		140	140
5×2	5.563×2.375		5.51	5.51
125×65	141.3×73.0		140	140
5×2½	5.563×2.875		5.51	5.51
125×65	141.3×76.1		140	140
5×2½	5.563×3.000		5.51	5.51
150×65	159.0×76.1		165	165
6×2½	6.250×3.000		6.5	6.5
150×80	159.0×88.9		165	165
6×3	6.250×3.500		6.5	6.5
150×25	165.1×33.7		165	165
6×1	6.500×1.315		6.5	6.5
150×32	165.1×42.4		165	165
6×1¼	6.500×1.660		6.5	6.5
150×40	165.1×48.3		165	165
6×1½	6.500×1.900		6.5	6.5
150×50	165.1×60.3		165	165
6×2	6.500×2.375		6.5	6.5
150×65	165.1×76.1		165	165
6×2½	6.500×3.000		6.5	6.5
150×80	165.1×88.9		165	165
6×3	6.500×3.500		6.5	6.5
150×100	165.1×114.3		165	165
6×4	6.500×4.500		6.5	6.5
150×25	168.3×33.7		165	165
6×1	6.625×1.315		6.5	6.5
150×32	168.3×42.4		165	165
6×1¼	6.625×1.660		6.5	6.5
150×40	168.3×48.3		165	165
6×1½	6.625×1.900		6.5	6.5
150×50	168.3×60.3		165	165
6×2	6.625×2.375		6.5	6.5
200×50	219.1×60.3		197	197
8×2	8.625×2.375		7.76	7.76
200×65	219.1×76.1		197	197
8×2½	8.625×3.000		7.76	7.76
200×80	219.1×88.9		197	197
8×3	8.625×3.500		7.76	7.76

Threaded Reducing Cross

According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.



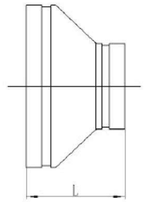
FM Approved c UL us LISTED CE

Threaded Reducing Cross

Nominal Size mm/in	Pipe OD. mm/in	Working Pressure psi/Mpa	Dimensions L1mm/in	Dimensions L2mm/in
100×25	114.3×33.7	300Psi 2.07Mpa	127	127
4×1	4.500×1.315		5	5
100×32	114.3×42.4		127	127
4×1 1/4	4.500×1.315		5	5
100×40	114.3×48.3		127	127
4×1 1/2	4.500×1.900		5	5
100×50	114.3×60.3		127	127
4×2	4.500×2.375		5	5
100×65	114.3×76.1		127	127
4×2 1/2	4.500×3.000		5	5
100×80	114.3×88.9		127	127
4×3	4.500×3.500		5	5
125×32	139.7×42.4		140	140
5×1 1/4	5.500×1.315		5.51	5.51
125×40	139.7×48.3		140	140
5×1 1/2	5.500×1.900		5.51	5.51
125×50	139.7×60.3		140	140
5×2	5.500×2.375		5.51	5.51
125×65	139.7×76.1		140	140
5×2 1/2	5.500×3.000		5.51	5.51
125×80	139.7×88.9		140	140
5×3	5.500×3.500		5.51	5.51
150×25	165.1×33.7		165	165
6×1	6.500×1.315		6.5	6.5
150×32	165.1×42.4		165	165
6×1 1/4	6.500×1.315		6.5	6.5
150×40	165.1×48.3		165	165
6×1 1/2	6.500×1.900		6.5	6.5
150×50	165.1×60.3		165	165
6×2	6.500×2.375		6.5	6.5
150×65	165.1×76.1		165	165
6×2 1/2	6.500×3.000		6.5	6.5
150×80	165.1×88.9		165	165
6×3	6.500×3.500		6.5	6.5

Grooved Concentric Reducer

According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.



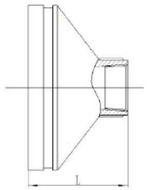
FM Approved c UL us LISTED CE

Grooved Concentric Reducer

Nominal Size mm/in	Pipe OD mm/in	Working Pressure psi/Mpa	Dimensions Lmm/in
32×25	42.4×33.7	300Psi 2.07Mpa	64
1 1/4×1	1.660×1.315		2.51
40×25	48.3×33.7		64
1 1/2×1	1.900×1.315		2.51
40×32	48.3×42.4		64
1 1/2×1 1/4	1.900×1.660		2.51
50×25	60.3×33.7		64
2×1	2.375×1.315		2.51
50×32	60.3×42.4		64
2×1 1/4	2.375×1.660		2.51
50×40	60.3×48.3		64
2×1 1/2	2.375×1.900		2.51
65×25	73.0×33.7		64
2 1/2×1	2.875×1.315		2.51
65×32	73.0×42.4		64
2 1/2×1 1/4	2.875×1.660		2.51
65×40	73.0×48.3		64
2 1/2×1 1/2	2.875×1.900		2.51
65×50	73.0×60.3		64
2 1/2×2	2.875×2.375		2.51
65×32	76.1×42.4		64
2 1/2×1 1/4	3.000×1.660		2.51
65×40	76.1×48.3		64
2 1/2×1 1/2	3.000×1.900		2.51
65×50	76.1×60.3		64
2 1/2×2	3.000×2.375		2.51
80×32	88.9×42.4		64
3×1 1/4	3.500×1.660		2.51
80×40	88.9×48.3		64
3×1 1/2	3.500×1.900		2.51
80×50	88.9×60.3		64
3×2	3.500×2.375		2.51
80×65	88.9×76.1		64
3×2 1/2	3.500×3.000		2.51
100×65	108.0×76.1		76
4×2 1/2	4.250×3.000		2.99
100×80	108.0×88.9		76
4×3	4.250×3.500		2.99
100×32	114.3×42.4		76
4×1 1/4	4.500×1.660		2.99
100×40	114.3×48.3		76
4×1 1/2	4.500×1.900		2.99
100×50	114.3×60.3		76
4×2	4.500×2.375		2.99
100×65	114.3×76.1		76
4×2 1/2	4.500×3.000		2.99
100×80	114.3×88.9		76
4×3	4.500×3.500		2.99
125×50	139.7×60.3		89
5×2	5.500×2.375		3.5
125×65	139.7×76.1		89
5×2 1/2	5.500×3.000		3.5
125×80	139.7×88.9		89
5×3	5.500×3.500		3.5
125×100	139.7×114.3		89
5×4	5.500×4.500		3.5
125×50	141.3×60.3	300Psi 2.07Mpa	89
5×2	5.563×2.375		3.5
125×65	141.3×76.1		89
5×2 1/2	5.563×3.000		3.5
125×80	141.3×88.9		89
5×3	5.563×3.500		3.5
125×100	141.3×114.3		89
5×2 1/2	5.563×4.500		3.5
150×50	159.0×60.3		102
6×2	6.250×2.375		4.01
150×65	159.0×76.1		102
6×2 1/2	6.250×3.000		4.01
150×80	159.0×88.9		102
6×3	6.250×3.500		4.01
150×100	159.0×108.0		102
6×4	6.250×4.250		4.01
150×100	159.0×114.3		102
6×4	6.250×4.500		4.01
150×125	159.0×133.0		102
6×5	6.250×5.250		4.01
150×125	159.0×139.7		102
6×5	6.250×5.500		4.01
150×50	165.1×60.3		102
6×2	6.500×2.375		4.01
150×65	165.1×76.1		102
6×2 1/2	6.500×3.000		4.01
150×80	165.1×88.9		102
6×3	6.500×3.500		4.01
150×100	165.1×114.3		102
6×4	6.500×4.500		4.01
150×125	165.1×139.7		102
6×5	6.500×5.500		4.01
150×50	168.3×60.3		102
6×2	6.625×2.375		4.01
150×65	168.3×76.1		102
6×2 1/2	6.625×3.000		4.01
150×80	168.3×88.9		102
6×3	6.625×3.500		4.01
150×100	168.3×114.3	300Psi 2.07Mpa	102
6×4	6.625×4.500		4.01
150×125	168.3×139.7		102
6×5	6.625×5.500		4.01
200×50	219.1×60.3		127
8×2	8.625×2.375		5
200×65	219.1×76.1		127
8×2 1/2	8.625×3.000		5
200×80	219.1×88.9		127
8×3	8.625×3.500		5
200×100	219.1×108.0		127
8×4	8.625×4.250		5
200×100	219.1×114.3		127
8×4	8.625×4.500		5
200×125	219.1×139.7		127
8×5	8.625×5.500		5
200×150	219.1×159.0		127
8×6	8.625×6.250		5
200×150	219.1×165.1		127
8×6	8.625×6.500		5
200×150	219.1×168.3		127
8×6	8.625×6.625		5

Threaded Concentric Reducer

According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.



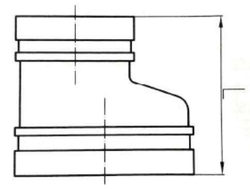
FM Approved c UL us LISTED CE

Threaded Concentric Reducer

Nominal Size	Pipe OD	Working Pressure	Dimen-sions
mm/in	mm/in	psi/Mpa	Lmm/in
32×25	42.4×33.7	300Psi 2.07Mpa	64
$1^1/_4$×1	1.660×1.315		2.51
40×32	48.3×42.4		64
$1^1/_2$×$1^1/_4$	1.900×1.660		2.51
50×25	60.3×33.7		64
2×1	2.375×1.315		2.51
50×32	60.3×42.4		64
2×$1^1/_4$	2.375×1.660		2.51
50×40	60.3×48.3		64
2×$1^1/_2$	2.375×1.900		2.51
65×25	73.0×33.7		64
$2^1/_2$×1	2.875×1.315		2.51
65×32	73.0×42.4		64
$2^1/_2$×$1^1/_4$	2.875×1.660		2.51
65×40	73.0×48.3		64
$2^1/_2$×$1^1/_2$	2.875×1.900		2.51
65×50	73.0×60.3		64
$2^1/_2$×2	2.875×2.375		2.51
65×25	76.1×33.7		64
$2^1/_2$×1	3.000×1.315		2.51
65×32	76.1×42.4		64
$2^1/_2$×$1^1/_4$	3.000×1.660		2.51
65×40	76.1×48.3		64
$2^1/_2$×$1^1/_2$	3.000×1.900		2.51
65×50	76.1×60.3		64
$2^1/_2$×2	3.000×2.375		2.51
80×25	88.9×33.7		64
3×1	3.500×1.315		2.51
80×32	88.9×42.4		64
3×$1^1/_4$	3.500×1.660		2.51
80×40	88.9×48.3		64
3×$1^1/_2$	3.500×1.900		2.51
80×50	88.9×60.3		64
3×2	3.500×2.375		2.51
80×65	88.9×76.1		64
3×$2^1/_2$	3.500×3.000		2.51
100×25	108.0×33.7		76
4×1	4.250×1.315		2.99
100×32	108.0×42.4		76
4×$1^1/_4$	4.250×1.660		2.99
100×40	108.0×48.3		76
4×$1^1/_2$	4.250×1.900		2.99
100×50	108.0×60.3		76
4×2	4.250×2.375		2.99
100×65	108.0×76.1		76
4×$2^1/_2$	4.250×3.000		2.99
100×80	108.0×88.9		76
4×3	4.250×3.500		2.99
100×25	114.3×33.7	300Psi 2.07Mpa	76
4×1	4.500×1.315		2.99
100×32	114.3×42.4		76
4×$1^1/_4$	4.500×1.660		2.99
100×40	114.3×48.3		76
4×$1^1/_2$	4.500×1.900		2.99
100×50	114.3×60.3		76
4×2	4.500×2.375		2.99
100×65	114.3×76.1		76
4×$2^1/_2$	4.500×3.000		2.99
100×80	114.3×88.9		76
4×3	4.500×3.500		2.99
125×25	133.0×33.7		89
5×1	5.250×1.315		3.5
125×32	133.0×42.4		89
5×$1^1/_4$	5.250×1.660		3.5
125×40	133.0×48.3		89
5×$1^1/_2$	5.250×1.900		3.5
125×50	133.0×60.3		89
5×2	5.250×2.375		3.5
125×25	139.7×33.7		89
5×1	5.500×1.315		3.5
125×32	139.7×42.4	300Psi 2.07Mpa	89
5×$1^1/_4$	5.500×1.660		3.5
125×40	139.7×48.3		89
5×$1^1/_2$	5.500×1.900		3.5
125×50	139.7×60.3		89
5×2	5.500×2.375		3.5
125×65	139.7×76.1		89
5×$2^1/_2$	5.500×3.000		3.5
125×80	139.7×88.9		89
5×3	5.500×3.500		3.5
125×100	139.7×114.3		89
5×4	5.500×4.500		3.5
125×25	141.3×33.7		89
5×1	5.563×1.315		3.5
125×32	141.3×42.4		89
5×$1^1/_4$	5.563×1.660		3.5
125×40	141.3×48.3		89
5×$1^1/_2$	5.563×1.900		3.5
125×50	141.3×60.3		89
5×2	5.563×2.375		3.5
125×65	141.3×76.1		89
5×$2^1/_2$	5.563×3.000		3.5
125×80	141.3×88.9		89
5×3	5.563×3.500		3.5
150×25	159.0×33.7		102
6×1	6.250×1.315		4.01
150×32	159.0×42.4		102
6×$1^1/_4$	6.250×1.660		4.01
150×40	159.0×48.3		102
6×$1^1/_2$	6.250×1.900		4.01
150×50	159.0×60.3		102
6×2	6.250×2.375		4.01
150×65	159.0×76.1		102
6×$2^1/_2$	6.250×3.000		4.01
150×80	159.0×88.9		102
6×3	6.250×3.500		4.01
150×25	165.1×33.7		102
6×1	6.500×1.315		4.01
150×32	165.1×42.4		102
6×$1^1/_4$	6.500×1.660		4.01
150×40	165.1×48.3		102
6×$1^1/_2$	6.500×1.900		4.01
150×50	165.1×60.3		102
6×2	6.500×2.375		4.01
150×65	165.1×76.1		102
6×$2^1/_2$	6.500×3.000		4.01
150×80	165.1×88.9		102
6×3	6.500×3.500		4.01
150×100	165.1×114.3	300Psi 2.07Mpa	102
6×4	6.500×4.500		4.01
150×25	168.3×33.7		102
6×1	6.625×1.315		4.01
150×32	168.3×42.4		102
6×$1^1/_4$	6.625×1.660		4.01
150×40	168.3×48.3		102
6×$1^1/_2$	6.625×1.900		4.01
150×50	168.3×60.3		102
6×2	6.625×2.375		4.01
200×25	219.1×33.7		127
8×1	8.625×1.315		5
200×32	219.1×42.4		127
8×$1^1/_4$	8.625×1.660		5
200×40	219.1×48.3		127
8×$1^1/_2$	8.625×1.900		5
200×50	219.1×60.3		127
8×2	8.625×2.375		5
200×65	219.1×76.1		127
8×$2^1/_2$	8.625×3.000		5
200×80	219.1×88.9		127
8×3	8.625×3.500		5
200×100	219.1×114.3		127
8×4	8.625×4.500		5

Grooved Eccentric Reducer

According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.

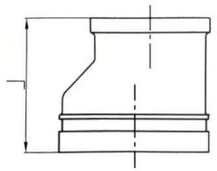


FM Approved c UL us LISTED CE

Grooved Eccentric Reducer

Nominal Size	Pipe OD	Working Pressure	Dimen-sions
mm/in	mm/in	psi/Mpa	Lmm/in
32×25	42.4×33.7	300Psi 2.07Mpa	64
$1^1/_4$×1	1.660×1.315		2.51
40×25	48.3×33.7		64
$1^1/_2$×1	1.900×1.315		2.51
40×32	48.3×42.4		64
$1^1/_2$×$1^1/_4$	1.900×1.660		2.51
50×25	60.3×33.7		64
2×1	2.375×1.315		2.51
50×32	60.3×42.4		64
2×$1^1/_4$	2.375×1.660		2.51
50×40	60.3×48.3		64
2×$1^1/_2$	2.375×1.900		2.51
65×25	73.0×33.7		64
$2^1/_2$×1	2.875×1.315		2.51
65×32	73.0×42.4		64
$2^1/_2$×$1^1/_4$	2.875×1.660		2.51
65×40	73.0×48.3		64
$2^1/_2$×$1^1/_2$	2.875×1.900		2.51
65×50	73.0×60.3		64
$2^1/_2$×2	2.875×2.375		2.51
65×32	76.1×42.4		64
$2^1/_2$×$1^1/_4$	3.000×1.660		2.51
65×40	76.1×48.3		64
$2^1/_2$×$1^1/_2$	3.000×1.900		2.51
65×50	76.1×60.3		64
$2^1/_2$×2	3.000×2.375		2.51
80×32	88.9×42.4		64
3×$1^1/_4$	3.500×1.660		2.51
80×40	88.9×48.3		64
3×$1^1/_2$	3.500×1.900		2.51
80×50	88.9×60.3		64
3×2	3.500×2.375		2.51
80×65	88.9×76.1		64
3×$2^1/_2$	3.500×3.000		2.51
100×65	108.0×76.1		76
4×$2^1/_2$	4.250×3.000		2.99
100×80	108.0×88.9		76
4×3	4.250×3.500		2.99
100×32	114.3×42.4		76
4×$1^1/_4$	4.500×1.660		2.99
100×40	114.3×48.3	300Psi 2.07Mpa	76
4×$1^1/_2$	4.500×1.900		2.99
100×50	114.3×60.3		76
4×2	4.500×2.375		2.99
100×65	114.3×76.1		76
4×$2^1/_2$	4.500×3.000		2.99
100×80	114.3×88.9		76
4×3	4.500×3.500		2.99
125×50	139.7×60.3		89
5×2	5.500×2.375		3.5
125×65	139.7×76.1		89
5×$2^1/_2$	5.500×3.000		3.5
125×80	139.7×88.9		89
5×3	5.500×3.500		3.5
125×100	139.7×114.3		89
5×4	5.500×4.500		3.5
125×50	141.3×60.3		89
5×2	5.563×2.375		3.5
125×65	141.3×76.1		89
5×$2^1/_2$	5.563×3.000		3.5
125×80	141.3×88.9		89
5×3	5.563×3.500		3.5
125×100	141.3×114.3		89
5×$2^1/_2$	5.563×4.500		3.5
150×50	159.0×60.3		102
6×2	6.250×2.375		4.01
150×65	159.0×76.1		102
6×$2^1/_2$	6.250×3.000		4.01
150×80	159.0×88.9		102
6×3	6.250×3.500		4.01
150×100	159.0×108.0		102
6×4	6.250×4.250		4.01
150×100	159.0×114.3		102
6×4	6.250×4.500		4.01
150×125	159.0×133.0		102
6×5	6.250×5.250		4.01
150×125	159.0×139.7		102
6×5	6.250×5.500		4.01
150×50	165.1×60.3		102
6×2	6.500×2.375		4.01
150×65	165.1×76.1		102
6×$2^1/_2$	6.500×3.000		4.01
150×80	165.1×88.9		102
6×3	6.500×3.500		4.01
150×100	165.1×114.3		102
6×4	6.500×4.500		4.01
150×125	165.1×139.7		102
6×5	6.500×5.500		4.01
150×50	168.3×60.3		102
6×2	6.625×2.375		4.01
150×65	168.3×76.1		102
6×$2^1/_2$	6.625×3.000		4.01
150×80	168.3×88.9		102
6×3	6.625×3.500		4.01
150×100	168.3×114.3	300Psi 2.07Mpa	102
6×4	6.625×4.500		4.01
150×125	168.3×139.7		102
6×5	6.625×5.500		4.01
200×50	219.1×60.3		127
8×2	8.625×2.375		5
200×65	219.1×76.1		127
8×$2^1/_2$	8.625×3.000		5
200×80	219.1×88.9		127
8×3	8.625×3.500		5
200×100	219.1×108.0		127
8×4	8.625×4.250		5
200×100	219.1×114.3		127
8×4	8.625×4.500		5
200×125	219.1×139.7		127
8×5	8.625×5.500		5
200×150	219.1×159.0		127
8×6	8.625×6.250		5
200×150	219.1×165.1		127
8×6	8.625×6.500		5
200×150	219.1×168.3		127
8×6	8.625×6.625		5

Threaded Eccentric Reducer



According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.

FM Approved c UL us LISTED CE

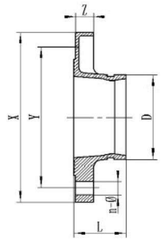
Threaded Eccentric Reducer

Nominal Size	Pipe OD	Working Pressure	Dimen-sions
mm/in	mm/in	psi/Mpa	Lmm/in
32×25	42.4×33.7		64
1 1/4×1	1.660×1.315		2.51
40×32	48.3×42.4		64
1 1/2×1 1/4	1.900×1.660		2.51
50×25	60.3×33.7		64
2×1	2.375×1.315		2.51
50×32	60.3×42.4		64
2×1 1/4	2.375×1.660		2.51
50×40	60.3×48.3		64
2×1 1/2	2.375×1.900		2.51
65×25	73.0×33.7		64
2 1/2×1	2.875×1.315		2.51
65×32	73.0×42.4		64
2 1/2×1 1/4	2.875×1.660		2.51
65×40	73.0×48.3		64
2 1/2×1 1/2	2.875×1.900		2.51
65×50	73.0×60.3		64
2 1/2×2	2.875×2.375		2.51
65×25	76.1×33.7		64
2 1/2×1	3.000×1.315		2.51
65×32	76.1×42.4		64
2 1/2×1 1/4	3.000×1.660		2.51
65×40	76.1×48.3	300Psi	64
2 1/2×1 1/2	3.000×1.900	2.07Mpa	2.51
65×50	76.1×60.3		64
2 1/2×2	3.000×2.375		2.51
80×25	88.9×33.7		64
3×1	3.500×1.315		2.51
80×32	88.9×42.4		64
3×1 1/4	3.500×1.660		2.51
80×40	88.9×48.3		64
3×1 1/2	3.500×1.900		2.51
80×50	88.9×60.3		64
3×2	3.500×2.375		2.51
80×65	88.9×76.1		64
3×2 1/2	3.500×3.000		2.51
100×25	108.0×33.7		76
4×1	4.250×1.315		2.99
100×32	108.0×42.4		76
4×1 1/4	4.250×1.660		2.99
100×40	108.0×48.3		76
4×1 1/2	4.250×1.900		2.99
100×50	108.0×60.3		76
4×2	4.250×2.375		2.99
100×65	108.0×76.1		76
4×2 1/2	4.250×3.000		2.99
100×80	108.0×88.9		76
4×3	4.250×3.500		2.99

Nominal Size	Pipe OD	Working Pressure	Dimen-sions
mm/in	mm/in	psi/Mpa	Lmm/in
100×25	114.3×33.7		76
4×1	4.500×1.315		2.99
100×32	114.3×42.4		76
4×1 1/4	4.500×1.660		2.99
100×40	114.3×48.3		76
4×1 1/2	4.500×1.900		2.99
100×50	114.3×60.3		76
4×2	4.500×2.375		2.99
100×65	114.3×76.1		76
4×2 1/2	4.500×3.000		2.99
100×80	114.3×88.9		76
4×3	4.500×3.500		2.99
125×25	133.0×33.7		89
5×1	5.250×1.315		3.5
125×32	133.0×42.4		89
5×1 1/4	5.250×1.660		3.5
125×40	133.0×48.3		89
5×1 1/2	5.250×1.900		3.5
125×50	133.0×60.3		89
5×2	5.250×2.375		3.5
125×25	139.7×33.7		89
5×1	5.500×1.315		3.5
125×32	139.7×42.4	300Psi	89
5×1 1/4	5.500×1.660	2.07Mpa	3.5
125×40	139.7×48.3		89
5×1 1/2	5.500×1.900		3.5
125×50	139.7×60.3		89
5×2	5.500×2.375		3.5
125×65	139.7×76.1		89
5×2 1/2	5.500×3.000		3.5
125×80	139.7×88.9		89
5×3	5.500×3.500		3.5
125×100	139.7×114.3		89
5×4	5.500×4.500		3.5
125×25	141.3×33.7		89
5×1	5.563×1.315		3.5
125×32	141.3×42.4		89
5×1 1/4	5.563×1.660		3.5
125×40	141.3×48.3		89
5×1 1/2	5.563×1.900		3.5
125×50	141.3×60.3		89
5×2	5.563×2.375		3.5
125×65	141.3×76.1		89
5×2 1/2	5.563×3.000		3.5
125×80	141.3×88.9		89
5×3	5.563×3.500		3.5
150×25	159.0×33.7		102
6×1	6.250×1.315		4.01

Nominal Size	Pipe OD	Working Pressure	Dimen-sions
mm/in	mm/in	psi/Mpa	Lmm/in
150×32	159.0×42.4		102
6×1 1/4	6.250×1.660		4.01
150×40	159.0×48.3		102
6×1 1/2	6.250×1.900		4.01
150×50	159.0×60.3		102
6×2	6.250×2.375		4.01
150×65	159.0×76.1		102
6×2 1/2	6.250×3.000		4.01
150×80	159.0×88.9		102
6×3	6.250×3.500		4.01
150×25	165.1×33.7		102
6×1	6.500×1.315		4.01
150×32	165.1×42.4		102
6×1 1/4	6.500×1.660		4.01
150×40	165.1×48.3		102
6×1 1/2	6.500×1.900		4.01
150×50	165.1×60.3		102
6×2	6.500×2.375		4.01
150×65	165.1×76.1		102
6×2 1/2	6.500×3.000		4.01
150×80	165.1×88.9		102
6×3	6.500×3.500		4.01
150×100	165.1×114.3	300Psi	102
6×4	6.500×4.500	2.07Mpa	4.01
150×25	168.3×33.7		102
6×1	6.625×1.315		4.01
150×32	168.3×42.4		102
6×1 1/4	6.625×1.660		4.01
150×40	168.3×48.3		102
6×1 1/2	6.625×1.900		4.01
150×50	168.3×60.3		102
6×2	6.625×2.375		4.01
200×25	219.1×33.7		127
8×1	8.625×1.315		5
200×32	219.1×42.4		127
8×1 1/4	8.625×1.660		5
200×40	219.1×48.3		127
8×1 1/2	8.625×1.900		5
200×50	219.1×60.3		127
8×2	8.625×2.375		5
200×65	219.1×76.1		127
8×2 1/2	8.625×3.000		5
200×80	219.1×88.9		127
8×3	8.625×3.500		5
200×100	219.1×114.3		127
8×4	8.625×4.500		5

PN16 Adaptor Flange



All usual measurements of bolts and nuts of flanges in this handbook are the fitting measurement of international flange rated pressure 1.6Mpa.According to installation,you can choose other rated flange,i.e. 1.0Mpa,2.5Mpa or others,please make a note when ordering.

According to different situation,the appearance can be dealed with epoxy powder,hot-dipped zinc,paint,dacromet or your requirement.

The weight refers to casting weight,not include the weight of bolt and nut or gasket ring.

FM Approved c UL us LISTED CE

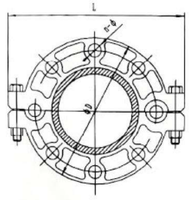
Adaptor Flange

Nominal Size	Pipe OD.	Working Pressure	Dimensions mm/in				Bolt Size
mm/in	mm/in	psi/Mpa	L mm/in	X mm/in	Y mm/in	Z mm/in	No.-Size mm
50	60.3	300Psi 2.07Mpa	50	165	125	13	4-φ16
2	2.375		1.97	6.02	4.92	0.51	
65	73		50	185	145	13	4-φ16
2 1/2	2.875		1.97	6.89	5.71	0.51	
65	76.1		50	185	145	13	4-φ16
2 1/2	3		1.97	6.89	5.71	0.51	
80	88.9		60	200	160	13	8-φ16
3	3.5		2.36	7.48	6.3	0.51	
100	108		70	220	180	18	8-φ16
4	4.25		2.76	8.27	7.09	0.71	
100	114.3		70	220	180	18	8-φ16
4	4.5		2.76	8.58	7.09	0.71	
125	133		70	250	210	18	8-φ16
5	5.25		2.76	8.58	7.09	0.71	
125	139.7		70	250	210	18	8-φ16
5	5.5		2.76	8.58	7.09	0.71	
125	141.3		70	250	210	18	8-φ16
5	5.563		2.76	8.58	7.09	0.71	
150	159		70	285	240	18	8-φ20
6	6.25		2.76	11.1	9.44	0.71	
150	165.1		70	285	240	18	8-φ20
6	6.5		2.76	11.1	9.44	0.71	
150	168.3		70	285	240	18	8-φ20
6	6.625		2.76	11.1	9.44	0.71	
200	219.1		80	340	295	19	12-φ20
8	8.625		3.15	13.11	11.61	0.75	
250	273		90	405	355	20	12-φ20
10	10.75		3.54	15.63	13.98	0.79	
300	323.9		100	460	410	23	12-φ20
12	12.75		3.94	18.11	16.14	0.91	

→ Product size

PN16 Split Flange

According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.



FM Approved c UL us LISTED CE

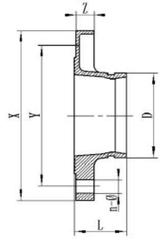
Split Flange

Nominal Size	Pipe O.D	Working Pressure		Dimensions					Bolt / Nut
mm/in	mm/in	PSI/MPa		A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	No.-Size mm
40 $1^1/_2$	48.3 1.9	300 2.07	1.6	195 7.68	18.5 0.73	150 5.90	110 4.33	45.4 1.78	4-ϕ16
50 2	60.3 2.375	300 2.07	1.6	220 8.66	18.5 0.73	165 6.50	125 4.92	57.5 2.26	4-ϕ16
65 76.1	76.1 3	300 2.07	1.6	235 9.25	18.5 0.73	185 7.28	145 5.71	72.7 2.86	4-ϕ16
80 3	88.9 3.5	300 2.07	1.6	255 10.04	18.5 0.73	195 7.68	160 6.30	85.5 3.37	8-ϕ16
100 108.0	108 4.25	300 2.07	1.6	279 10.98	18.5 0.73	220 8.66	180 7.09	104.5 4.11	8-ϕ16
100 4	114.3 4.5	300 2.07	1.6	279 10.98	18.5 0.73	224 8.82	180 7.09	110.5 4.35	8-ϕ16
125 5	133 5.25	300 2.07	1.6	312 12.28	21.5 0.85	250 9.84	210 8.27	129.2 5.08	8-ϕ16
125 5	139.7 5.5	300 2.07	1.6	320 12.60	23 0.91	250 9.84	210 8.27	135.5 5.33	8-ϕ16
150 6	159 6.25	300 2.07	1.6	346 13.62	21.5 0.85	280 11.00	240 9.45	154.8 6.10	8-ϕ20
150 6	165.1 6.5	300 2.07	1.6	346 13.62	21.5 0.85	280 11.00	240 9.45	160.8 6.33	8-ϕ20
150 6	168.3 6.625	300 2.07	1.6	346 13.62	24 0.94	280 11.00	240 9.45	164.3 6.47	8-ϕ20
200 8	219.1 8.625	300 2.07	1.6	414.3 16.31	30 1.18	340 13.39	295 11.61	214.9 8.46	12-ϕ20
250 10	273 10.75	300 2.07	1.6	480 18.90	25.5 1.00	405 15.94	355 13.98	268.9 10.59	12-ϕ24
300 12	323.9 12.75	300 2.07	1.6	530.5 20.88	25.5 1.00	460 18.11	410 16.14	318.9 12.56	12-ϕ24

Product size ←

Class 150 Adaptor Flange

According to different situation,the appearance can be dealed with epoxy powder,hot-dipped zinc,paint,dacromet or your requirement.



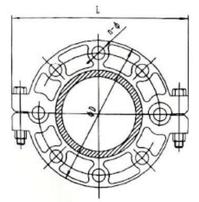
FM Approved c UL us LISTED CE

Adaptor Flange

Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa		Dimensions				Bolt/Nut
				L mm/in	X mm/in	Y mm/in	Z mm/in	No.-SIZE mm
50 2	60.3 2.375	300 2.07	2.0	65 2.559	152 6.0	120.5 4.74	16 0.63	4-ϕ16
65 $2^1/_2$	73.0 2.875	300 2.07	2.0	65 2.559	185 7.28	139.7 5.50	16 0.63	4-ϕ16
80 3	88.9 3.500	300 2.07	2.0	65 2.559	200 7.87	152.4 6.00	16 0.63	4-ϕ16
100 4	114.3 4.500	300 2.07	2.0	70 2.756	229 9.01	190.5 7.50	16 0.63	8-ϕ16
150 6	168.3 6.625	300 2.07	2.0	70 2.756	282 11.10	241.3 9.50	18 0.71	8-ϕ20
200 8	219.1 8.625	300 2.07	2.0	75 2.95	340 13.39	298.5 11.75	19 0.75	8-ϕ20
250 10	273.0 10.75	300 2.07	2.0	85 3.35	406 15.98	362 14.25	21 0.826	12-ϕ24

Class 150 Split Flange

According to different situation,the appearance can be dealed with epoxy powder, hot-dipped zinc,paint,dacromet or your requirement.



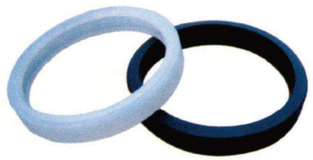
FM Approved c UL us LISTED CE

Split Flange

Nominal Size	Pipe O.D	Working Pressure		Dimensions					Bolt / Nut
mm/in	mm/in	PSI/MPa		A mm/in	B mm/in	C mm/in	D mm/in	E mm/in	No.-Size mm
50 2	60.3 2.375	300 2.07	2.0	206 8.11	19 0.75	152 5.98	121 4.76	57.5 2.26	4-ϕ16
65 $2^1/_2$	73.0 2.875	300 2.07	2.0	230 9.05	19 0.75	178 7	140 5.51	69.8 2.74	4-ϕ16
80 3	88.9 3.5	300 2.07	2.0	246 9.68	19 0.75	191 7.52	152 5.98	85.5 3.37	4-ϕ16
100 4	114.3 4.5	300 2.07	2.0	280 11.02	19 0.75	229 9	191 7.52	110.5 4.35	8-ϕ16
125 5	141.3 4.5	300 2.07	2.0	320 12.60	22 0.87	254 10	216 8.5	137.4 5.41	8-ϕ20
150 6	168.3 6.625	300 2.07	2.0	346 13.62	24 0.94	280 11	241.3 9.5	164.3 6.47	8-ϕ20
200 8	219.1 8.625	300 2.07	2.0	414.3 16.31	30 1.18	341.4 13.44	298.5 11.75	214.9 8.46	8-ϕ20
250 10	273 10.75	300 2.07	2.0	481.2 18.94	30.3 1.19	405.6 15.97	361.95 14.25	268.9 10.59	12-ϕ24
300 12	323.9 12.75	300 2.07	2.0	553.3 21.78	30.4 1.2	482.6 19	431.8 17	318.9 12.56	12-ϕ24

→ Product size

Gasket Data



Material Composition	Applocable temperature	Application Scops
EPDM	−34°C−+150°C	Cold an hot water,non-oil gas,diluted acid,alkaline salt,and multi-chemicals(free of hydrocarbon).Oil-like mediums are forbidden.
Silicon rubber	−40°C−+177°C	Drinking water,hot water,high-temperature air and some high-temperature chemicals. Oil-like mediums are forbidden.
Nir rile rubber	−29°C−+82°C	Oil,oil-gas,mineral oil,vegetable oil,hot water,water with temperature of not than 65°C are forbidden.

Notes: 1、Gaslet rings of different materials will be used for different liquid mediums.
2、Produsts can be supplied as per Customers requirments.

Bolt and Nut

Bolt and Nut is designed for nozzle. The neck of bolt is oval. It can provent slipping when screwing. The nut is the filling piece type. Installs only needs a spanner.

Bolt dimension	M10	M12	M16	M20	M22
Spanner dimension	16	22	24	30	34

Material: The material of bolts is 40Cr or 35# steel. The material of nuts is 35# steel. The nut performance rating conforms to in GB/T3098.1−2000 9.8 level of above request.The nut machine capability conforms to GB/T3098.2−2000 stipulation 8.8 levels of requests.

Product installation procedure ←

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

Remove 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.

7a、 Assembly completed− flexible coupling

For flexible coupling, two housings should be iron to iron connected. Gaskets can’t be seen visually.

7b、Assembly completed− rigid coupling

For rigid coupling, keep the gaps at bolt pads evenly spaced. Gaskets can’t be seen visually.

→ Product installation procedure

Installation instruction for threaded U-bolt mechanical tee & 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

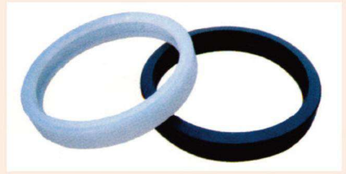
Align the strap around the pipe, insert the bolts and tighten the nuts finger tight.

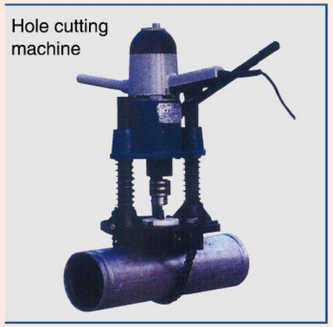
5、Tighten nuts

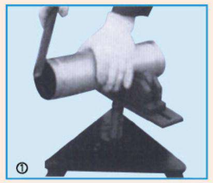
Alternatively and evenly tighten the nuts to the specified bolt torque.

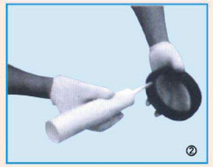
6、Assembly completed

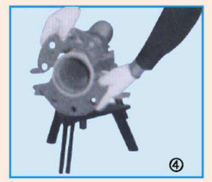
There should be even gaps on two sides between upper and lower housings.

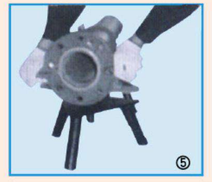


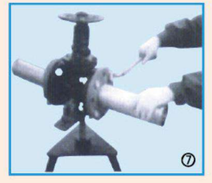












Installation instruction for grooved flange

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

Remove 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.

→ Engineering Test

NO.	Item	Standard Requirements
1	Vacuum Test	Grooved couplings, grooved split couplings, grooved split flanges, mechanical tees, and plain end couplings shall be able to withstand the effects of vacuum conditions encountered when sprinkler system are drained. Samples of each nominal size and style of gasketed coupling and fitting shall be subjective 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(345kpa) while submerged in 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, “4 time;≥12”， 3 times).
3	Air Leakage Test	The coupling assembly shall be pressurized with air to 3 bar +0.5/–0bar.The assembly shall be immersed in water to establish that there in 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 assembly to short length of pipe, and subjective to 275° F(135℃) 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 50psi(0 to 345kpa) 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	Gold Gasket Test	The low temperature exposure shall consist of –40F° (–40℃)air exposure for 4 days. After exposure, the assembly while submerged in –40F° (–40℃) antifreeze, shall 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 join is mounted, U–bent on the test apparatus an 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 of the smaller nominal diameter ＜DN100; 8min for nominal diameters ≥DN100 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 (5minor 8min) and the test joint shall be cooled down. For cooling the4 joint is then filled completely with water until steam formation is no longer visible, but at least foe 3min. 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 from 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 (1205kpa) minimum, for a duration of 5 minutes. Without leakage or cracking. Assemblies shall then be subjected to 20000cycles from zero pressure to the rated working poressure, 175psi(1205kpa) minimum. After cycling, the test assembly shall be tested Hydrostatic Strength and maintain 5 minutes without leakage and cracking.

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 5.0psi(35kpa) at a flow producing a velocity of 20ft/s (6.1m/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 an operating springkler head whose discharge associated with over–head piping ,less than or equal to 12 in NPS(300mm).
11	Torsion test	This test relates to pipe joints ≤DN40 only .The test joint is filled with water an 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 of up to 80Nm from one 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 (203.2mm) or 0.5degree for 8 inches (203.2mm) 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 coupling 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 15cycles with the internal pressure equal to the rated working pressure. the 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 test ,within the manufacturer’ s stated limitations for angular deflection or lateral displacement of associated pipe work.
15	Hydrostatic fluctuation pressure test	The coupling assembly shall be pressurized with water to a gauge pressure of 10bar ± 1bar 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 /–0.1bar for 2min +30s/–0s,and allowed to return to atmospheric pressure in not less than 5s.The assembly shall then be pressurized with water to 10bar ± 1bar +0bar /–0.1bar for 2min +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(532℃) 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 .