

DUCTILE IRON GROOVED FITTINGS

"FOR GUARANTEED TROUBLE FREE SERVICE"

BRD+9463593016





LATE THAKUR GANPAT RAI JI
OUR FOUNDER AND GUIDING FORCE

ABOUT US

It is a journey that began many decades back. An idea matured and carried forward by our founders and guiding force **Late Thakur Ganpat Rai ji**. Today his vision has taken shape and is popularly known as '**SANT GROUP**' a connotation for quality products, efficiency & customer satisfaction; symbolizing thousand of dreams that have come true.

The '**SANT GROUP**' was seeded by **Late Thakur Ganpat Rai ji** in 1953 with manufacturing of industrial valves under the brand name '**SANT**' which quickly became a household name for the valves all over India. The success of his tale which started from manufacturing quality valves has today transformed in a group of companies having diversified into manufacturing GI Fittings, Carbon Steel Fittings, distribution of Composite Pipes along with a 100% export unit of hand tools and power tools.

Our products have been in the service of the people in the country and abroad for the 6 decades. To reach this pinnacle we have always kept abreast the latest technological advancements. It is due to these reasons our products are a preferred choice of top consultants and Contractors, government & semi government organizations & countless major industrial houses. After rigorous research and development, our group has recently ventured into Ductile Iron Grooved Fittings. Now with access to our product range you are guaranteed to have a trouble free and dependable grooved piping system. Our product range is approved by both UL & FM.

CERTIFICATES

The collage displays several key certifications for Wafang Juntong Machinery Auxiliaries Co., Ltd. (WJMA):

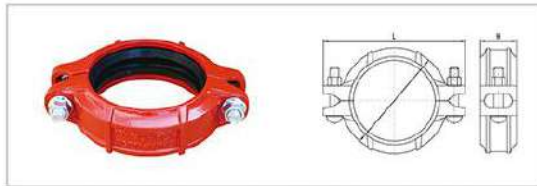
- FM APPROVED:** Multiple certificates for Non-Gasketed Pipe Fittings for use with Aboveground Sprinkler Systems, covering various models and sizes.
- Certificate of Compliance:** Documents detailing technical specifications and testing procedures for different pipe fitting models.
- Quality Management System:** A certificate from the China Quality Certification Centre (CQC) certifying the company's adherence to GB/T 19001-2008 standards.
- Material Manufacturer Certificate:** A certificate from HDVHS certifying the material quality of the pipe fittings.
- Verification of Compliance:** A document from ECM certifying the product's compliance with specific standards.

DUCTILE IRON GROOVED FITTINGS AND COUPLINGS



Surface treatment: P: Painting E: Electroplate B: Black
S: Epoxy G: Galvanization J: Galvanization+Epoxy D: Dacroment

Rigid coupling XGQT1



According to different situations, the appearance can be dealt with epoxy powder, galvanized, paint, dacromet or your requirements.

Flexible coupling XGQT2

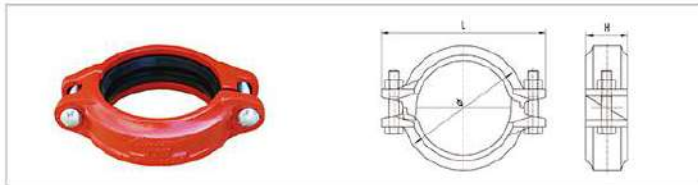


According to different situations, the appearance can be dealt with epoxy powder, galvanized, paint, dacromet or your requirements.

Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Bolt Size No.-Size mm	Dimensions mm/in		
				Φ	L	H
25 1	33.7 1.327	300 2.07	2-M10*45	55.5 2.188	98 3.858	44 1.732
32 1 1/4	42.4 1.669	300 2.07	2-M10*45	66 2.598	107 4.213	44 1.732
40 1 1/2	48.3 1.9	300 2.07	2-M10*45	74 2.913	115 4.527	44 1.732
50 2	60.3 2.374	300 2.07	2-M10*55	88.4 3.480	125 4.921	46 1.732
65 2 1/2	73.0 2.875	300 2.07	2-M10*55	102.2 4.024	140 5.512	46 1.772
65 2 1/2	76.1 3	300 2.07	2-M10*55	102.2 4.024	140 5.512	46 1.772
80 3	88.9 3.5	300 2.07	2-M10*60	117.4 4.622	154 6.063	46 1.772
100 4	108 4.25	300 2.07	2-M12*65	138.8 5.466	184 7.244	48 1.889
100 4	114.3 4.5	300 2.07	2-M12*65	146.6 5.772	190 7.480	48 1.889
125 5	133 5.25	300 2.07	2-M12*75	158 6.220	212 8.346	48 1.889
125 5	139.7 5.5	300 2.07	2-M12*75	171.2 6.740	220 8.661	48 1.889
125 5	141.3 5.56	300 2.07	2-M12*75	171.2 6.740	220 8.661	48 1.889
150 6	159 6.25	300 2.07	2-M12*75	192 7.559	240 9.448	48 2.008
150 6	165.1 6.5	300 2.07	2-M12*75	196.2 7.724	244 9.606	48 2.008
150 6	168.3 6.625	300 2.07	2-M12*75	199.4 7.850	246 9.685	48 2.008
200 8	219.1 8.625	232 1.6	2-M16*85	256.4 10.024	326 12.835	58 2.283
250 10	273 10.748	232 1.6	2-M20*100	316 12.441	426 16.771	64 2.520
300 12	323.9 12.75	232 1.6	2-M22*130	380 14.961	470 18.504	65 2.559

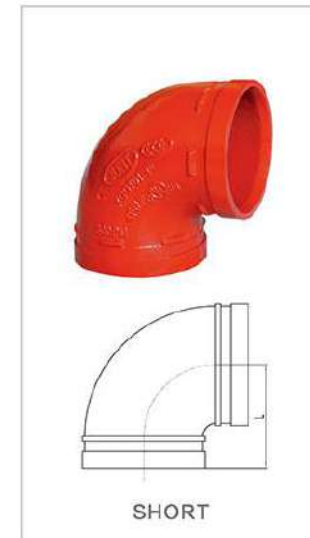
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Bolt Size No.-Size mm	Dimensions mm/in		
				Φ	L	H
25 1	33.7 1.327	300 2.07	2-M10*45	55.5 2.188	98 3.858	44 1.732
32 1 1/4	42.4 1.669	300 2.07	2-M10*45	66 2.598	107 4.213	44 1.732
40 1 1/2	48.3 1.9	300 2.07	2-M10*45	74 2.913	115 4.527	44 1.732
50 2	60.3 2.374	300 2.07	2-M10*55	88.4 3.480	125 4.921	46 1.732
65 2 1/2	73.0 2.875	300 2.07	2-M10*55	102.2 4.024	140 5.512	46 1.772
65 2 1/2	76.1 3	300 2.07	2-M10*55	102.2 4.024	140 5.512	46 1.772
80 3	88.9 3.5	300 2.07	2-M10*60	117.4 4.622	154 6.063	46 1.772
100 4	108 4.25	300 2.07	2-M12*65	138.8 5.466	184 7.244	48 1.889
100 4	114.3 4.5	300 2.07	2-M12*65	146.6 5.772	190 7.480	48 1.889
125 5	133 5.25	300 2.07	2-M12*75	158 6.220	212 8.346	48 1.889
125 5	139.7 5.5	300 2.07	2-M12*75	171.2 6.740	220 8.661	48 1.889
125 5	141.3 5.56	300 2.07	2-M12*75	171.2 6.740	220 8.661	48 1.889
150 6	159 6.25	300 2.07	2-M12*75	192 7.559	240 9.448	48 2.008
150 6	165.1 6.5	300 2.07	2-M12*75	196.2 7.724	244 9.606	48 2.008
150 6	168.3 6.625	300 2.07	2-M12*75	199.4 7.850	246 9.685	48 2.008
200 8	219.1 8.625	232 1.6	2-M16*85	256.4 10.024	326 12.835	58 2.283
250 10	273 10.748	232 1.6	2-M20*100	316 12.441	426 16.771	64 2.520
300 12	323.9 12.75	232 1.6	2-M22*130	380 14.961	470 18.504	65 2.559

Angle coupling



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Bolt Size No. - Size mm	Dimensions mm/in		
				ø	L	H
25	33.7	300	2-M10*45	55.6	98	44
1	1.327	2.07		2.188	3.858	1.732
32	42.4	300	2-M10*45	66	107	44
1 1/4	1.669	2.07		2.598	4.213	1.732
40	48.3	300	2-M10*45	74	115	44
1 1/2	1.9	2.07		2.913	4.527	1.732
50	60.3	300	2-M10*55	88.4	125	46
2	2.374	2.07		3.480	4.921	1.732
65	73.0	300	2-M10*55	102.2	140	46
2 1/2	2.875	2.07		4.024	5.512	1.772
65	76.1	300	2-M10*55	102.2	140	46
2 1/2	3	2.07		4.024	5.512	1.772
80	88.9	300	2-M10*60	117.4	154	46
3	3.5	2.07		4.622	6.063	1.772
100	108	300	2-M12*65	138.8	184	48
4	4.25	2.07		5.466	7.244	1.889
100	114.3	300	2-M12*65	146.6	190	48
4	4.5	2.07		5.772	7.480	1.889
125	133	300	2-M12*75	158	212	48
5	5.25	2.07		6.220	8.346	1.889
125	139.7	300	2-M12*75	171.2	220	48
5	5.5	2.07		6.740	8.661	1.889
125	141.3	300	2-M12*75	171.2	220	48
5	5.56	2.07		6.740	8.661	1.889
150	159	300	2-M12*75	192	240	48
6	6.25	2.07		7.559	9.448	2.008
150	165.1	300	2-M12*75	196.2	244	48
6	6.5	2.07		7.724	9.606	2.008
150	168.3	300	2-M12*75	199.4	246	48
6	6.625	2.07		7.850	9.685	2.008
200	219.1	232	2-M16*85	256.4	326	58
8	8.625	1.6		10.024	12.835	2.283
250	273	232	2-M20*100	316	426	64
10	10.748	1.6		12.441	16.771	2.520
300	323.9	232	2-M22*130	380	470	65
12	12.75	1.6		14.961	18.504	2.559

90° Elbow · XGQT01



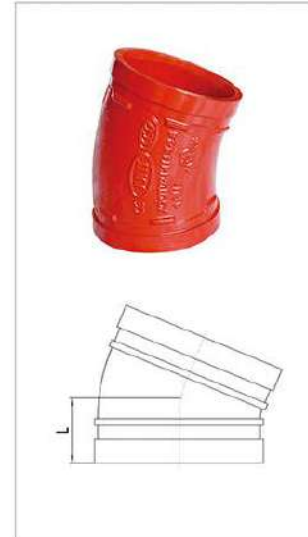
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
			Short
25	33.7	300	57
1	1.327	2.07	2.244
32	42.4	300	60
1 1/4	1.669	2.07	2.362
40	48.3	300	60
1 1/2	1.900	2.07	2.362
50	60.3	300	70
2	2.375	2.07	2.756
65	73.0	300	76
2 1/2	2.875	2.07	2.992
65	76.1	300	76
2 1/2	3	2.07	2.992
80	88.9	300	90
3	3.5	2.07	3.543
100	108	300	102
4	4.252	2.07	4.016
100	114.3	300	102
4	4.5	2.07	4.016
125	133	300	122
5	5.25	2.07	4.803
125	139.7	300	122
5	5.5	2.07	4.803
125	141.3	300	122
5	5.56	2.07	4.803
150	159	300	140
6	6.25	2.07	5.512
150	165.1	300	140
6	6.5	2.07	5.512
150	168.3	300	140
6	6.625	2.07	5.512
200	219.1	300	175
8	8.625	2.07	6.890
250	273	300	215
10	10.75	2.07	8.465
300	323.9	300	230
12	12.75	2.07	9.055

45° Elbow · XGQT02



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
25	33.7	300	38
1	1.327	2.07	1.496
32	42.4	300	44
1 1/4	1.669	2.07	1.732
40	48.3	300	44
1 1/2	1.900	2.07	1.732
50	60.3	300	51
2	2.375	2.07	2.008
65	73.0	300	57
2 1/2	2.875	2.07	2.244
65	76.1	300	57
2 1/2	3	2.07	2.244
80	88.9	300	64
3	3.5	2.07	2.52
100	108	300	76
4	4.252	2.07	2.992
100	114.3	300	76
4	4.5	2.07	2.992
125	133	300	83
5	5.25	2.07	3.27
125	139.7	300	83
5	5.5	2.07	3.27
125	141.3	300	83
5	5.56	2.07	3.27
150	159	300	89
6	6.25	2.07	3.504
150	165.1	300	89
6	6.5	2.07	3.504
150	168.3	300	89
6	6.625	2.07	3.504
200	219.1	232	108
8	8.625	1.60	4.252
250	273	232	121
10	10.75	1.60	4.764
300	323.9	232	133
12	12.75	1.60	5.236

22.5° Elbow · XGQT021



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
50	60.3	300	51
2	2.375	2.07	2.007
65	73	300	51
2 1/2	2.875	2.07	2.007
65	76.1	300	51
2 1/2	3	2.07	2.007
80	88.9	300	57
3	3.5	2.07	2.244
100	108	300	73
4	4.252	2.07	2.874
100	114.3	300	73
4	4.5	2.07	2.874
125	133	300	73
5	5.25	2.07	2.874
125	139.7	300	73
5	5.5	2.07	2.874
125	141.3	300	73
5	5.56	2.07	2.874
150	159	300	79
6	6.25	2.07	3.110
150	165.1	300	79
6	6.5	2.07	3.110
150	168.3	300	79
6	6.625	2.07	3.110
200	219.1	232	98
8	8.625	1.60	3.858

11.25° Elbow · XGQT022



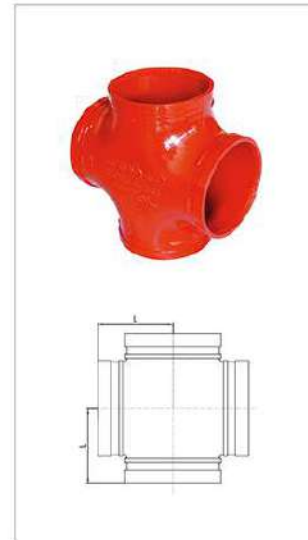
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
50	60.3	300	35
2	2.375	2.07	1.378
65	73	300	38
2 1/2	2.875	2.07	1.496
65	76.1	300	38
2 1/2	3	2.07	1.496
80	88.9	300	38
3	3.5	2.07	1.496
100	108	300	44
4	4.252	2.07	1.732
100	114.3	300	48
4	4.5	2.07	1.890
125	133	300	51
5	5.25	2.07	2.008
125	139.7	300	51
5	5.5	2.07	2.008
125	141.3	300	51
5	5.56	2.07	2.008
150	159	300	51
6	6.25	2.07	2.008
150	165.1	300	51
6	6.5	2.07	2.008
150	168.3	300	51
6	6.625	2.07	2.008
200	219.1	232	51
8	8.625	1.60	2.008

Equal Tee · XGQT03



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
			Short
25	33.7	300	57
1	1.327	2.07	2.244
32	42.4	300	60
1 1/4	1.669	2.07	2.362
40	48.3	300	60
1 1/2	1.90	2.07	2.362
50	60.3	300	70
2	2.375	2.07	2.756
65	73	300	76
2 1/2	2.875	2.07	2.992
65	76.1	300	76
2 1/2	3	2.07	2.992
80	88.9	300	86
3	3.5	2.07	3.386
100	108	300	102
4	4.252	2.07	4.016
100	114.3	300	102
4	4.5	2.07	4.016
125	133	300	122
5	5.25	2.07	4.803
125	139.7	300	122
5	5.5	2.07	4.803
125	141.3	300	122
5	5.56	2.07	4.803
150	159	300	140
6	6.25	2.07	5.512
150	165.1	300	140
6	6.5	2.07	5.512
150	168.3	300	140
6	6.625	2.07	5.512
200	219.1	232	175
8	8.625	1.60	6.890
250	273	232	215
10	10.75	1.60	8.466
300	323.9	232	230
12	12.75	1.60	9.055

Equal Cross · XGQT05



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
			Short
25	33.7	300	57
1	1.327	2.07	2.244
32	42.4	300	60
1 1/4	1.669	2.07	2.362
40	48.3	300	60
1 1/2	1.900	2.07	2.362
50	60.3	300	70
2	2.375	2.07	2.756
65	73	300	76
2 1/2	2.875	2.07	2.992
65	76.1	300	76
2 1/2	3	2.07	2.992
80	88.9	300	86
3	3.5	2.07	3.386
100	108	300	102
4	4.252	2.07	4.016
100	114.3	300	102
4	4.5	2.07	4.016
125	133	300	122
5	5.25	2.07	4.803
125	139.7	300	122
5	5.5	2.07	4.803
125	141.3	300	122
5	5.56	2.07	4.803
150	159	300	140
6	6.25	2.07	5.512
150	165.1	300	140
6	6.5	2.07	5.512
150	168.3	300	140
6	6.625	2.07	5.512
200	219.1	232	175
8	8.625	1.60	6.890
250	273	232	215
10	10.75	1.60	8.466
300	323.9	232	230
12	12.75	1.60	9.055

Reducing Tee (Grooved) · XGQT04



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
50x25	60.3x33.7	300	70	100x40	114.3x48.3	300	102
2x1	2.375x1.327	2.07	2.756	4x1 1/2	4.5x1.902	2.073	4.016
50x32	60.3x42.4	300	70	100x50	114.3x60.3	300	102
2x1 1/4	2.375x1.669	2.07	2.756	4x2	4.5x2.375	2.073	4.016
50x40	60.3x48.3	300	70	100x65	114.3x76.1	300	102
2x1 1/2	2.375x1.902	2.07	2.756	4x2 1/2	4.5x2.996	2.073	4.016
65x25	73.0x33.7	300	76	100x80	114.3x88.9	300	102
2 1/2x1	2.875x1.327	2.07	2.992	4x3	4.5x3.5	2.073	4.016
65x32	73.0x42.4	300	76	125x25	139.7x33.7	300	122
2 1/2x1 1/4	2.875x1.669	2.07	2.992	5x1	5.5x1.327	2.073	4.803
65x40	73.0x48.3	300	76	125x32	139.7x42.4	300	122
2 1/2x1 1/2	2.875x1.902	2.07	2.992	5x1 1/4	5.5x1.669	2.073	4.803
65x50	73.0x60.3	300	76	125x40	139.7x48.3	300	122
2 1/2x2	2.875x2.375	2.07	2.992	5x1 1/2	5.5x1.902	2.073	4.803
65x25	76.1x33.7	300	76	125x50	139.7x60.3	300	122
2 1/2x1	2.996x1.327	2.07	2.992	5x2	5.5x2.375	2.07	4.803
65x32	76.1x42.4	300	76	125x65	139.7x76.1	300	122
2 1/2x1 1/4	2.996x1.669	2.07	2.992	5x2 1/2	5.5x2.996	2.07	4.803
65x40	76.1x48.3	300	76	125x80	139.7x88.9	300	122
2 1/2x1 1/2	2.996x1.902	2.07	2.992	5x3	5.5x3.5	2.07	4.803
65x50	76.1x60.3	300	76	125x100	139.7x114.3	300	122
2 1/2x2	2.996x2.375	2.07	2.992	5x4	5.5x4.5	2.07	4.803
80x25	88.9x33.7	300	86	125x25	141.3x33.7	300	122
3x1	3.5x1.327	2.07	3.386	5x1	5.56x1.327	2.073	4.803
80x32	88.9x42.4	300	86	125x32	141.3x42.4	300	122
3x1 1/4	3.5x1.669	2.07	3.386	5x1 1/4	5.56x1.669	2.073	4.803
80x40	88.9x48.3	300	86	125x40	141.3x48.3	300	122
3x1 1/2	3.5x1.902	2.07	3.386	5x1 1/2	5.56x1.902	2.073	4.803
80x50	88.9x60.3	300	86	125x50	141.3x60.3	300	122
3x2	3.5x2.375	2.07	3.386	5x2	5.56x2.375	2.07	4.803
80x65	88.9x76.1	300	86	125x65	141.3x76.1	300	122
3x2 1/2	3.5x2.996	2.07	3.386	5x2 1/2	5.56x2.996	2.07	4.803
100x25	108x33.7	300	102	125x80	141.3x88.9	300	122
4x1	4.3x1.327	2.07	4.016	5x3	5.56x3.5	2.07	4.803
100x32	108x42.4	300	102	125x100	141.3x114.3	300	122
4x1 1/4	4.3x1.669	2.07	4.016	5x4	5.56x4.5	2.07	4.803
100x40	108x48.3	300	102	150x25	159x33.7	300	140
4x1 1/2	4.3x1.902	2.07	4.016	6x1	6.26x1.327	2.07	5.512
100x50	108x60.3	300	102	150x32	159x42.4	300	140
4x2	4.3x2.375	2.07	4.016	6x1 1/4	6.26x1.669	2.07	5.512
100x65	108x76.1	300	102	150x40	159x48.3	300	140
4x2 1/2	4.3x2.996	2.07	4.016	6x1 1/2	6.26x1.902	2.07	5.512
100x80	108x88.9	300	102	150x50	159x60.3	300	140
4x3	4.3x3.5	2.07	4.016	6x2	6.26x2.375	2.07	5.512
100x25	114.3x33.7	300	102	150x65	159x76.1	300	140
4x1	4.5x1.327	2.073	4.016	6x2 1/2	6.26x2.996	2.07	5.512
100x32	114.3x42.4	300	102	150x80	159x88.9	300	140
4x1 1/4	4.5x1.669	2.073	4.016	6x3	6.26x3.5	2.07	5.512

Reducing Tee (Grooved) · XGQT04



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
150x100	159x108	300	140	200x65	219.1x76.1	300	175
6x4	6.26x4.25	2.07	5.512	8x2 1/2	8.622x2.996	2.07	6.89
150x100	159x114.3	300	140	200x80	219.1x88.9	300	175
6x4	6.26x4.5	2.07	5.512	8x3	8.622x3.5	1.6	6.89
150x25	165.1x33.7	300	140	200x80	219.1x108	300	175
6x1	6.5x1.327	2.07	5.512	8x4	8.622x4.252	1.6	6.89
150x32	165.1x42.4	300	140	200x100	219.1x143	300	175
6x1 1/4	6.5x1.669	2.07	5.512	8x4	8.622x4.5	1.6	6.89
150x40	165.1x48.3	300	140	200x125	219.1x133	300	175
6x1 1/2	6.5x1.902	2.07	5.512	8x6	8.622x5.236	1.6	6.89
150x50	165.1x60.3	300	140	200x125	219.1x139.7	300	175
6x2	6.5x2.375	2.07	5.512	8x6	8.622x5.5	1.6	6.89
150x65	165.1x76.1	300	140	200x150	219.1x159	300	175
6x2 1/2	6.5x2.996	2.07	5.512	8x6	8.622x5.26	1.6	6.89
150x80	165.1x88.9	300	140	200x150	219.1x165.1	300	175
6x3	6.5x3.5	2.07	5.512	8x6	8.622x6.626	1.6	6.89
150x100	165.1x108	300	140	200x125	219.1x168.3	300	176
6x4	6.5x4.25	2.07	5.512	8x6	8.622x6.5	1.6	6.89
150x100	165.1x114.3	300	140	250x80	273x88.9	300	215
6x4	6.5x4.5	2.07	5.512	10x3	10.748x3.5	1.6	6.465
150x125	165.1x139.7	300	140	250x100	273x114.3	300	215
6x5	6.5x5.5	2.07	5.512	10x4	10.748x4.5	1.6	6.465
150x25	168.3x33.7	300	140	250x125	273x133	300	215
6x1	6.626x1.327	2.07	5.512	10x6	10.748x5.236	1.6	6.465
150x32	168.3x42.4	300	140	250x125	273x139.7	300	215
6x1 1/4	6.626x1.669	2.07	5.512	10x6	10.748x5.5	1.6	6.465
150x40	168.3x48.3	300	140	250x150	273x159	300	215
6x1 1/2	6.626x1.902	2.07	5.512	10x6	10.748x6.26	1.6	6.465
150x50	168.3x60.3	300	140	250x150	273x168.3	300	215
6x2	6.626x2.375	2.07	5.512	10x6	10.748x6.5	1.6	6.465
150x65	168.3x76.1	300	140	250x150	273x165.1	300	215
6x2 1/2	6.626x2.996	2.07	5.512	10x6	10.748x6.5	1.6	6.465
150x80	168.3x88.9	300	140	250x200	273x219.1	300	215
6x3	6.626x3.5	2.07	5.512	10x8	10.748x8.626	1.6	6.465
150x100	168.3x114.3	300	140	300x100	323.5x114.3	300	230
6x4	6.626x4.5	2.07	5.512	12x4	12.75x4.5	1.6	9.055
150x125	168.3x139.7	300	140	300x125	323.5x139.7	300	230
6x5	6.626x5.5	2.07	5.512	12x6	12.75x5.5	1.6	9.055
200x50	219.1x60.3	300	175	300x125	323.5x141.3	300	230
8x2	8.622x2.375	2.07	6.89	12x6	12.75x5.56	1.6	9.055

Reducing Tee (Threaded) · XGQT04S



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
50x25	60.3x33.7	300	70	100x40	114.3x48.3	300	102
2x1	2.375x1.327	2.07	2.756	4x1 1/2	4.5x1.902	2.07	4.016
50x32	60.3x42.4	300	70	100x50	114.3x60.3	300	102
2x1 1/4	2.375x1.669	2.07	2.756	4x2	4.5x2.374	2.07	4.016
50x40	60.3x48.3	300	70	100x65	114.3x76.1	300	102
2x1 1/2	2.375x1.902	2.07	2.756	4x2 1/2	4.5x2.669	2.07	4.016
65x25	73.0x33.7	300	76	100x80	114.3x88.9	300	102
2 1/2x1	2.875x1.327	2.07	2.992	4x3	4.5x3.5	2.07	4.016
65x32	73.0x42.4	300	76	150x25	165.1x33.7	300	140
2 1/2x1 1/4	2.875x1.669	2.07	2.992	6x1	6.5x1.327	2.07	5.512
65x40	73.0x48.3	300	76	150x32	165.1x42.4	300	140
2 1/2x1 1/2	2.875x1.902	2.07	2.992	6x1 1/4	6.5x1.669	2.07	5.512
65x50	73.0x60.3	300	76	150x40	165.1x48.3	300	140
2 1/2x2	2.875x2.374	2.07	2.992	6x1 1/2	6.5x1.902	2.07	5.512
65x25	76.1x33.7	300	76	150x50	165.1x60.3	300	140
2 1/2x1	2.996x1.327	2.07	2.992	6x2	6.5x2.375	2.07	5.512
65x32	76.1x42.4	300	76	150x65	165.1x76.1	300	140
2 1/2x1 1/4	2.996x1.669	2.07	2.992	6x2 1/2	6.5x2.996	2.07	5.512
65x40	76.1x48.3	300	76	150x80	168.3x70.1	300	140
2 1/2x1 1/2	2.996x1.902	2.07	2.992	6x2 1/2	6.626x2.996	2.07	5.512
65x50	76.1x60.3	300	76	150x80	168.3x88.9	300	140
2 1/2x2	2.996x2.374	2.07	2.992	6x3	6.626x3.5	2.07	5.512
80x50	88.9x33.7	300	86	150x100	168.3x114.3	300	140
3x1	3.5x1.327	2.07	3.386	6x4	6.626x4.5	2.07	5.512
80x32	88.9x42.4	300	86	200x50	219.1x60.3	300	175
3x1 1/4	3.5x1.669	2.07	3.386	8x2	8.622x2.375	2.07	6.89
80x40	88.9x48.3	300	86	200x65	219.1x76.1	300	175
3x1 1/2	3.5x1.902	2.07	3.386	8x2 1/2	8.622x2.996	2.07	6.89
80x50	88.9x60.3	300	86	200x80	219.1x88.9	232	175
3x2	3.5x2.374	2.07	3.386	8x3	8.622x3.5	1.6	6.89
100x25	114.3x33.7	300	102	200x100	219.1x114.3	232	175
4x1	4.5x1.327	2.07	4.016	8x4	8.622x4.5	1.6	6.89
100x32	114.3x42.4	300	102	200x125	219.1x168.3	323	176
4x1 1/4	4.5x1.669	2.07	4.016	8x6	8.622x6.5	1.6	6.89

Reducing Cross (Grooved) · XGQT051



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
50x40	60.3x48.3	300	70	100x40	114.3x48.3	300	102
2x1 1/2	2.375x1.902	2.07	2.756	4x1 1/2	4.5x1.902	2.073	4.016
65x25	76.1x33.7	300	70	100x50	114.3x60.3	300	102
2 1/2x1	2.996x1.327	2.07	2.756	4x2	4.5x2.375	2.073	4.016
65x32	76.1x42.4	300	70	100x65	114.3x76.1	300	102
2 1/2x1 1/4	2.996x1.669	2.07	2.756	4x2 1/2	4.5x2.996	2.073	4.016
65x40	76.1x48.3	300	70	100x80	114.3x88.9	300	102
2 1/2x1 1/2	2.996x1.902	2.07	2.756	4x3	4.5x3.5	2.073	4.016
65x50	76.1x60.3	300	70	125x25	139.7x33.7	300	122
2 1/2x2	2.996x2.375	2.07	2.756	5x1	5.5x1.327	2.073	4.803
80x25	88.9x33.7	300	86	125x32	139.7x42.4	300	122
3x1	3.5x1.327	2.07	3.386	5x1 1/4	5.5x1.669	2.073	4.803
80x32	88.9x42.4	300	86	125x40	139.7x48.3	300	122
3x1 1/4	3.5x1.669	2.07	3.386	5x1 1/2	5.5x1.902	2.073	4.803
80x40	88.9x48.3	300	86	125x50	139.7x60.3	300	122
3x1 1/2	3.5x1.902	2.07	3.386	5x2	5.5x2.375	2.07	4.803
80x50	88.9x60.3	300	86	125x65	139.7x76.1	300	122
3x2	3.5x2.375	2.07	3.386	5x2 1/2	5.5x2.996	2.07	4.803
80x65	88.9x76.1	300	86	125x80	139.7x88.9	300	122
3x2 1/2	3.5x2.996	2.07	3.386	5x3	5.5x3.5	2.07	4.803
100x25	108x33.7	300	102	125x100	139.7x114.3	300	122
4x1	4.3x1.327	2.07	4.016	5x4	5.5x4.5	2.07	4.803
100x32	108x42.4	300	102	150x25	159x33.7	300	140
4x1 1/4	4.3x1.669	2.07	4.016	6x1	6.26x1.327	2.07	5.512
100x40	108x48.3	300	102	150x32	159x42.4	300	140
4x1 1/2	4.3x1.902	2.07	4.016	6x1 1/4	6.26x1.669	2.07	5.512
100x50	108x60.3	300	102	150x40	159x48.3	300	140
4x2	4.3x2.375	2.07	4.016	6x1 1/2	6.26x1.902	2.07	5.512
100x65	108x76.1	300	102	150x50	159x60.3	300	140
4x2 1/2	4.3x2.996	2.07	4.016	6x2	6.26x2.375	2.07	5.512
100x80	108x88.9	300	102	150x65	159x76.1	300	140
4x3	4.3x3.5	2.07	4.016	6x2 1/2	6.26x2.996	2.07	5.512
100x25	114.3x33.7	300	102	150x80	159x88.9	300	140
4x1	4.5x1.327	2.073	4.016	6x3	6.26x3.5	2.07	5.512
100x32	114.3x42.4	300	102	150x100	159x108	300	140
4x1 1/4	4.5x1.669	2.073	4.016	6x4	6.26x4.25	2.07	5.512

Reducing Cross (Grooved) • XGQT051



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
150x100	159x114.3	300	140	200x50	219x60.3	232	175
6x4	6.26x4.5	2.07	5.512	8x2	8.622x2.375	1.6	6.89
150x25	165.1x33.7	300	140	200x65	219x76.1	232	175
6x1	6.5x1.327	2.07	5.512	8x2 1/2	8.622x2.996	1.6	6.89
150x32	165.1x42.4	300	140	200x80	219x88.9	232	175
6x1 1/4	6.5x1.669	2.07	5.512	8x3	8.522x3.5	1.6	6.89
150x40	165.1x48.3	300	140	200x100	219x108	232	175
6x1 1/2	6.5x1.902	2.07	5.512	8x4	8.622x4.252	1.6	6.89
150x50	165.1x60.3	300	140	200x100	219x114.3	232	175
6x2	6.5x2.375	2.07	5.512	8x4	8.522x4.5	1.6	6.89
150x65	165.1x76.1	300	140	200x125	219x133	232	175
6x2 1/2	6.5x2.996	2.07	5.512	8x5	8.622x5.236	1.6	6.89
150x80	165.1x88.9	300	140	200x125	219x139.7	232	175
6x3	6.5x3.5	2.07	5.512	8x5	8.522x5.5	1.6	6.89
150x100	165.1x108	300	140	200x150	219x159	232	175
6x4	6.5x4.25	2.07	5.512	8x6	8.622x6.26	1.6	6.89
150x100	165.1x114.3	300	140	200x150	219x168.3	232	175
6x4	6.5x4.5	2.07	5.512	8x6	8.622x6.626	1.6	6.89
150x125	165.1x139.7	300	140	200x150	219x165.1	232	176
6x5	6.5	2.07	5.512	8x6	8.522x6.5	1.6	6.89
150x25	168.3x33.7	300	140	250x80	273x88.9	232	215
6x1	6.626x1.327	2.07	5.512	10x3	10.748x3.5	1.6	8.465
150x32	168.3x42.4	300	140	250x100	273x114.3	232	215
6x1 1/4	6.626x1.669	2.07	5.512	10x4	10.748x4.5	1.6	8.465
150x40	168.3x48.3	300	140	250x125	273x133	232	215
6x1 1/2	6.626x1.902	2.07	5.512	10x5	10.748x5.236	1.6	8.465
150x50	168.3x60.3	300	140	250x125	273x139.7	232	215
6x2	6.626x2.375	2.07	5.512	10x5	10.748x5.5	1.6	8.465
150x65	168.3x76.1	300	140	250x150	273x159	232	215
6x2 1/2	6.626x2.996	2.07	5.512	10x6	10.748x6.26	1.6	8.465
150x80	168.3x88.9	300	140	250x150	273x168.3	232	215
6x3	6.626x3.5	2.07	5.512	10x6	10.748x6.626	1.6	8.465
150x100	168.3x114.3	300	140	250x150	273x165.1	232	215
6x4	6.626x4.5	2.07	5.512	10x6	10.748x6.5	1.6	8.465
150x125	168.3x139.7	300	140	250x200	273x219.1	232	215
6x5	6.626x5.5	2.07	5.512	10x8	10.748x8.626	1.6	8.465

Reducing Cross (Threaded) • XGQT051S



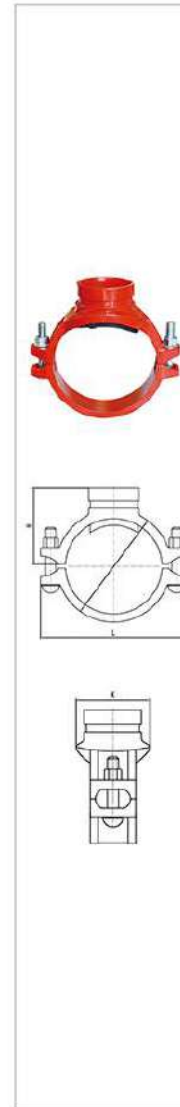
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
50x25	60.3x33.7	300	70	100x50	108x60.3	300	102
2x1	2.375x1.327	2.07	2.756	4x2	4.25x2.375	2.07	4.016
50x32	60.3x42.4	300	70	100x65	108x76.1	300	102
2x1 1/4	2.375x1.669	2.07	2.756	4x2 1/2	4.25x2.996	2.07	4.016
50x40	60.3x48.3	300	70	100x80	108x88.9	300	102
2x1 1/2	2.375x1.902	2.07	2.756	4x3	4.25x3.5	2.07	4.016
65x25	76.1x33.7	300	76	100x25	114.3x33.7	300	102
2 1/2x1	2.996x1.327	2.07	2.992	4x1	4.5x1.327	2.07	4.016
65x32	76.1x42.4	300	76	100x32	114.3x42.4	300	102
2 1/2x1 1/4	2.996x1.669	2.07	2.992	4x1 1/4	4.5x1.669	2.07	4.016
65x40	76.1x48.3	300	76	100x40	114.3x48.3	300	102
2 1/2x1 1/2	2.996x1.902	2.07	2.992	4x1 1/2	4.5x1.902	2.07	4.016
65x50	76.1x60.3	300	76	100x50	114.3x60.3	300	102
2 1/2x2	2.996x2.374	2.07	2.992	4x2	4.5x2.374	2.07	4.016
80x25	88.9x33.7	300	86	100x65	114.3x76.1	300	102
3x1	3.5x1.327	2.07	3.386	4x2 1/2	4.5x2.669	2.07	4.016
80x32	88.9x42.4	300	86	100x80	114.3x88.9	300	102
3x1 1/4	3.5x1.669	2.07	3.386	4x3	4.5x3.5	2.07	4.016
80x40	88.9x48.3	300	86	125x25	133x33.7	300	122
3x1 1/2	3.5x1.902	2.07	3.386	5x1	5.236x1.327	2.07	4.803
80x50	88.9x60.3	300	86	125x32	133x42.4	300	122
3x2	3.5x2.374	2.07	3.386	5x1 1/4	5.236x1.669	2.07	4.803
80x65	88.9x76.1	300	86	125x40	133x48.3	300	122
3x2 1/2	3.5x2.669	2.07	3.386	5x1 1/2	5.236x1.902	2.07	4.803
100x25	108x33.7	300	102	125x50	133x60.3	300	122
4x1	4.25x1.327	2.07	4.016	5x2	5.236x2.374	2.07	4.803
100x32	108x42.4	300	102	125x65	133x76.1	300	122
4x1 1/4	4.25x1.669	2.07	4.016	5x2 1/2	5.236x2.996	2.07	4.803
100x40	108x48.3	300	102	125x80	133x88.9	300	122
4x1 1/2	4.25x1.902	2.07	4.016	5x3	5.236x3.5	2.07	4.803

Reducing Cross (Threaded) · XGQT051S



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
125x25	139.7x33.7	300	122	150x50	165.1x60.3	300	140
5x1	5.5x1.327	2.07	4.803	6x2	6.5x2.374	2.07	5.512
125x32	139.7x42.4	300	122	150x65	165.1x76.1	300	140
5x1 1/4	5.5x1.669	2.07	4.803	6x2 1/2	6.5x2.996	2.07	5.512
125x40	139.7x48.3	300	122	150x80	165.1x88.9	300	140
5x1 1/2	5.5x1.902	2.07	4.803	6x3	6.5x3.5	2.07	5.512
125x50	139.7x60.3	300	122	150x100	165.1x114.3	300	140
5x2	5.5x2.374	2.07	4.803	6x4	6.5x4.5	2.07	5.512
125x65	139.7x76.1	300	122	150x25	168.3x33.7	300	140
5x2 1/2	5.5x2.996	2.07	4.803	6x1	6.626x1.327	2.07	5.512
125x80	139.7x88.9	300	122	150x32	168.3x42.4	300	140
5x3	5.5x3.5	2.07	4.803	6x1 1/4	6.626x1.669	2.07	5.512
150x25	159x33.7	300	140	150x40	168.3x48.3	300	140
6x1	6.26x1.327	2.07	5.512	6x1 1/2	6.626x1.902	2.07	5.512
150x32	159x42.4	300	140	150x50	168.3x60.3	300	140
6x1 1/4	6.26x1.669	2.07	5.512	6x2	6.626x2.375	2.07	5.512
150x40	159x48.3	300	140	150x65	168.3x76.1	300	140
6x1 1/2	6.26x1.902	2.07	5.512	6x2 1/2	6.626x2.996	2.07	5.512
150x50	159x60.3	300	140	150x80	168.3x88.9	300	140
6x2	6.26x2.374	2.07	5.512	6x3	6.626x3.5	2.07	5.512
150x65	159x76.1	300	140	150x100	168.3x114.3	300	140
6x2 1/2	6.26x2.996	2.07	5.512	6x4	6.626x4.5	2.07	5.512
150x80	159x88.9	300	140	200x50	219x60.3	232	175
6x3	6.26x3.5	2.07	5.512	8x2	8.622x2.375	1.6	6.890
150x25	165.1x33.7	300	140	200x65	219x76.1	232	175
6x1	6.5x1.327	2.07	5.512	8x2 1/2	8.622x2.996	1.6	6.890
150x32	165.1x42.4	300	140	200x80	219x88.9	232	175
6x1 1/2	6.5x1.669	2.07	5.512	5x3	8.522x3.5	1.6	6.890
150x40	165.1x48.3	300	140	200x100	219x114.3	232	175
6x1 1/2	6.5x1.902	2.07	5.512	8x4	8.522x4.5	1.6	6.890

Mechanical Tee (Grooved) · XGQT3

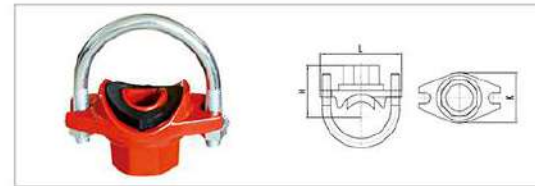


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Bot Size No. - Size mm	Dimensions mm/in				Hole Dia mm/in +1.6,0/+0.063,0
				Φ	L	K	H	
50x25	60.3x33.7	300	2-M10x60	81	116	64.5	64	38
2 1/2x1	2.375x1.327	2.07		3.189	4.567	2.539	2.520	1.496
50x32	60.3x42.4	300		81	116	64.5	68	46
2x1 1/4	2.375x1.699	2.07		3.189	4.567	2.539	2.677	1.811
50x40	60.3x48.3	300		81	116	64.5	68	46
2x1 1/2	2.375x1.90	2.07		3.189	4.567	2.539	2.677	1.811
65x25	73.0x33.7	300		98	137	73	69	38
2 1/2x1	2.875x1.327	2.07		3.858	5.394	2.874	2.717	1.496
65x32	73.0x42.4	300		98	137	73	76	46
2 1/2x1 1/4	2.875x1.669	2.07		3.858	5.394	2.874	2.992	1.811
65x40	73.0x48.3	300		98	137	73	82	51
2 1/2x1 1/2	2.875x1.90	2.07		3.858	5.394	2.874	3.228	2.007
65x25	76.1x33.7	300	2-M12x75	98	137	73	69	38
2 1/2x1	2.996x1.327	2.07		3.858	5.394	2.874	2.717	1.496
65x32	76.1x42.4	300		98	137	73	76	46
2 1/2x1 1/4	2.996x1.669	2.07		3.858	5.394	2.874	2.992	1.811
65x40	76.1x48.3	300		98	137	73	82	51
2 1/2x1 1/2	2.996x1.90	2.07		3.858	5.394	2.874	3.228	2.007
80x25	88.9x33.7	300		113	146	80.5	69	38
3x1	3.50x1.327	2.07		4.449	5.748	3.169	2.717	1.496
80x32	88.9x42.4	300		113	146	80.5	76	46
3x1 1/4	3.50x1.669	2.07		4.449	5.748	3.169	2.992	1.811
80x40	88.9x48.3	300		113	146	80.5	82	51
3x1 1/2	3.50x1.90	2.07		4.449	5.748	3.169	3.228	2.007
80x50	88.9x60.3	300	2-M12x75	113	146	80.5	91	61
3x2	3.50x2.375	2.07		4.449	5.748	3.169	3.583	2.402
100x25	108.0x33.7	300		132	166	90	70	38
4x1	4.252x1.327	2.07		5.197	6.535	3.543	2.756	1.496
100x32	108.0x42.4	300		132	166	90	77	46
4x1 1/4	4.252x1.669	2.07		5.197	6.535	3.543	3.031	1.811
100x40	108.0x48.3	300		132	166	90	83	51
4x1 1/2	4.252x1.90	2.07		5.197	6.535	3.543	3.268	2.008
100x50	108.0x60.3	300		132	166	90	92	61
4x2	4.252x2.375	2.07		5.197	6.535	3.543	3.622	2.402
100x65	108.0x76.1	300		132	166	90	112	81
4x2 1/2	4.252x2.996	2.07		5.197	6.535	3.543	4.409	3.189
100x25	114.3x33.7	300	2-M12x75	138	176	93	70	38
4x1	4.50x1.327	2.07		5.433	6.929	3.661	2.756	1.496
100x32	114.3x42.4	300		138	176	93	77	46
4x1 1/4	4.50x1.669	2.07		5.433	6.929	3.661	3.031	1.811
100x40	114.3x48.3	300		138	176	93	83	51
4x1 1/2	4.50x1.90	2.07		5.433	6.929	3.661	3.268	2.007
100x50	114.3x60.3	300		138	176	93	92	61
4x2	4.50x2.375	2.07		5.433	6.929	3.661	3.622	2.402
100x65	114.3x76.1	300		138	176	93	112	81
4x2 1/2	4.50x2.996	2.07		5.433	6.929	3.661	4.409	3.189
100x80	114.3x88.9	300		138	176	93	118	86
4x3	4.50x3.50	2.07		5.433	6.929	3.661	4.646	3.386
125x25	139.7x33.7	300	2-M12x75	164	206	105	70	38
5x1	5.50x1.327	2.07		6.457	8.110	4.144	2.756	1.496
125x32	139.7x42.4	300		164	206	105	77	46
5x1 1/4	5.50x1.669	2.07		6.457	8.110	4.144	3.031	1.811
125x40	139.7x48.3	300		164	206	105	83	51
5x1 1/2	5.50x1.90	2.07		6.457	8.110	4.144	3.268	2.008
125x50	139.7x60.3	300		164	206	106	92	61
5x2	5.50x2.375	2.07		6.457	8.110	4.173	3.622	2.402
125x65	139.7x76.1	300		164	206	106	112	81
5x2 1/2	5.50x2.996	2.07		6.457	8.110	4.173	4.409	3.189
125x80	139.7x88.9	300		164	206	106	118	86
5x3	5.50x3.50	2.07		6.457	8.110	4.173	4.646	3.386

Mechanical Tee (Threaded) · XGQT3S

Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Bolt Size No. - Size mm	Dimensions mm/in				Hole Dia mm/in +1.6,0/+0.063,0
				Φ	L	K	H	
125x25	141.3x33.7	300		164	206	98	70	38
5x1	5.56x1.327	2.07		6.457	8.110	3.858	2.756	1.496
125x32	141.3x42.4	300		164	206	98	77	46
5x1 1/4	5.56x1.669	2.07		6.457	8.110	3.858	3.031	1.811
125x40	141.3x48.3	300		164	206	98	83	51
5x1 1/2	5.56x1.90	2.07		6.457	8.110	3.858	3.268	2.008
125x50	141.3x60.3	300		164	206	98	92	61
5x2	5.56x2.375	2.07		6.457	8.110	3.858	3.522	2.402
125x65	141.3x76.1	300		164	206	98	112	81
5x2 1/2	5.56x2.996	2.07		6.457	8.110	3.858	4.409	3.189
125x80	141.3x88.9	300		164	206	98	116	66
5x3	5.56x3.50	2.07		6.457	8.110	3.858	4.546	3.386
150x25	159.0x33.7	300		183	222	110	70	38
6x1	6.260x1.327	2.07		7.205	8.740	4.331	2.756	1.496
150x32	159.0x42.4	300		183	222	110	77	46
6x1 1/4	6.260x1.669	2.07		7.205	8.740	4.331	3.031	1.811
150x40	159.0x48.3	300		183	222	110	83	51
6x1 1/2	6.260x1.90	2.07		7.205	8.740	4.331	3.268	2.008
150x50	159.0x60.3	300		183	222	110	92	61
6x2	6.260x2.375	2.07		7.205	8.740	4.331	3.522	2.402
150x65	159.0x76.1	300		183	222	110	112	81
6x2 1/2	6.260x2.996	2.07		7.205	8.740	4.331	4.409	3.189
150x80	159.0x88.9	300		183	222	110	116	86
6x3	6.260x3.500	2.07		7.205	8.740	4.331	4.546	3.386
150x25	155.1x33.7	300	2-M12x75	189	226	113	70	38
6x1	6.500x1.327	2.07		7.441	8.898	4.449	2.756	1.496
150x32	155.1x42.4	300		189	226	113	77	46
6x1 1/4	6.500x1.669	2.07		7.441	8.898	4.449	3.031	1.811
150x40	155.1x48.3	300		189	226	113	83	51
6x1 1/2	6.50x1.90	2.07		7.441	8.898	4.449	3.268	2.008
150x50	155.1x60.3	300		189	226	113	92	61
6x2	6.50x2.375	2.07		7.441	8.898	4.449	3.522	2.402
150x65	155.1x76.1	300		189	226	113	112	81
6x2 1/2	6.50x2.996	2.07		7.441	8.898	4.449	4.409	3.189
150x80	155.1x88.9	300		189	226	113	116	86
6x3	6.50x3.50	2.07		7.441	8.898	4.449	4.546	3.386
150x100	165.1x114.3	300		189	226	113	148	114
6x4	6.50x4.50	2.07		7.441	8.898	4.449	5.866	4.488
150x25	168.3x33.7	300		192	228	115	70	38
6x1	6.625x1.327	2.07		7.559	8.976	4.528	2.756	1.496
150x32	168.3x42.4	300		192	228	115	77	46
6x1 1/4	6.625x1.669	2.07		7.559	8.976	4.528	3.031	1.811
150x40	168.3x48.3	300		192	228	115	83	51
6x1 1/2	6.625x1.90	2.07		7.559	8.976	4.528	3.268	2.007
150x50	168.3x60.3	300		192	228	115	92	61
6x2	6.625x2.375	2.07		7.559	8.976	4.528	3.522	2.401
150x65	168.3x76.1	300		192	228	115	112	81
6x2 1/2	6.625x2.996	2.07		7.559	8.976	4.528	4.409	3.228
150x80	168.3x88.9	300		192	228	115	116	86
6x3	6.625x3.50	2.07		7.559	8.976	4.528	4.546	3.385
200x25	219.1x33.7	232		247	304	142	72	38
8x1	8.625x1.327	1.60		9.724	11.969	5.591	2.835	1.811
200x32	219.1x42.4	232		247	304	142	79	46
8x1 1/4	8.625x1.669	1.60		9.724	11.969	5.591	3.110	1.811
200x40	219.1x48.3	232		247	304	142	85	51
8x1 1/2	8.625x1.90	1.60		9.724	11.969	5.591	3.346	2.008
200x50	219.1x60.3	232		247	304	142	94	61
8x2	8.625x2.375	1.60	2-M16x100	9.724	11.969	5.591	3.701	2.402
200x65	219.1x76.1	232		247	304	142	114	81
8x2 1/2	8.625x2.996	1.60		9.724	11.969	5.591	4.488	3.189
200x80	219.1x88.9	232		247	304	142	120	86
8x3	8.625x3.50	1.60		9.724	11.969	5.591	4.724	3.386
200x100	219.1x114.3	232		247	304	142	148	114
8x4	8.625x4.50	1.60		9.724	11.969	5.591	5.866	4.488

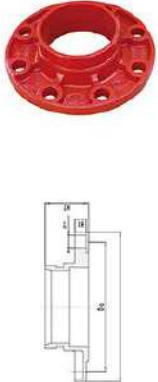
U-Bolted Mechanical Tee(Threaded) · XGQT3U



According to different situations, the appearance can be dealt with epoxy powder, galvanized, paint, dacromet or your requirements.


Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Bolt Size No. - Size mm	Dimensions mm/in			Hole cutting dimensions mm/in +1.6,0/+0.063,0
				H	L	K	
25x15	33.7x21.3	300		43.5	74	44	26
1x1/2	1.327x0.839	2.07	M8x25	1.713	2.913	1.732	1.024
25x20	33.7x26.9	300		47.5	74	44	26
1x3/4	1.327x1.059	2.07	M8x25	1.870	2.913	1.732	1.024
32x15	42.4x21.3	300		47	90	56	30
1 1/4x1/2	1.669x0.839	2.07	M10x28.5	1.850	3.543	2.205	1.181
32x20	42.4x26.9	300		51	90	56	30
1 1/4x3/4	1.669x1.059	2.07	M10x28.5	2.008	3.543	2.205	1.181
32x25	42.4x33.7	300		56	90	56	30
1 1/4x1	1.669x1.327	2.07	M10x28.5	2.205	3.543	2.205	1.181
40x15	48.3x21.3	300		49	90	56	30
1 1/2x1/2	1.900x0.839	2.07	M10x28.5	1.929	3.543	2.205	1.181
40x20	48.3x26.9	300		53	90	56	30
1 1/2x3/4	1.900x1.059	2.07	M10x28.5	2.087	3.543	2.205	1.181
40x25	48.3x33.7	300		58	90	56	30
1 1/2x1	1.900x1.327	2.07	M10x28.5	2.283	3.543	2.205	1.181
50x15	60.3x21.3	300		56	100	56	30
2x1/2	2.375x0.839	2.07	M10x30	2.205	3.937	2.205	1.181
50x20	60.3x26.9	300		60	100	56	30
2x3/4	2.375x1.059	2.07	M10x30	2.362	3.937	2.205	1.181
50x25	60.3x33.7	300		65	100	56	30
2x1	2.375x1.327	2.07	M10x30	2.559	3.937	2.205	1.181
65x15	73.1x21.3	300		64	112	56	30
2 1/2x1/2	2.878x0.839	2.07	M10x30	2.520	4.409	2.205	1.181
65x20	73.1x26.9	300		68	112	56	30
2 1/2x3/4	2.878x1.059	2.07	M10x30	2.677	4.409	2.205	1.181
65x25	73.1x33.7	300		73	112	56	30
2 1/2x1	2.878x1.327	2.07	M10x30	2.874	4.409	2.205	1.181
65x15	76.1x21.3	300		61	110	59	30
2 1/2x1/2	2.996x0.839	2.07	M10x30	2.402	4.331	2.323	1.181
65x20	76.1x26.9	300		67	110	59	30
2 1/2x3/4	2.996x1.059	2.07	M10x30	2.538	4.331	2.323	1.181
65x25	76.1x33.7	300		74	110	59	30
2 1/2x1	2.996x1.327	2.07	M10x30	2.913	4.331	2.323	1.181

Flange Adaptor PN16 · XGQT08




Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Dimensions mm/in				Bolt/Nut NO.-Size mm
			Do	H1	H2	Φ	
50	60.3	232	125	16	60	160	4xM16
2	2.374	1.60	4.921	0.630	2.362	6.299	
65	73.0	232	145	16	60	180	4xM16
2 1/2	2.875	1.60	5.709	0.630	2.362	7.087	
65	76.1	232	145	16	60	180	4xM16
2 1/2	3	1.60	5.709	0.630	2.362	7.087	
80	88.9	232	160	17	60	195	8xM16
3	3.5	1.60	6.299	0.669	2.362	7.677	
100	108	232	180	17	60	215	8xM16
4	4.25	1.60	7.087	0.669	2.362	8.465	
100	114.3	232	180	17	60	215	8xM16
4	4.5	1.60	7.087	0.669	2.362	8.465	
125	133	232	210	19	65	245	8xM16
5	5.25	1.60	8.268	0.748	2.559	9.646	
125	139.7	232	210	19	65	245	8xM16
5	5.5	1.60	8.268	0.748	2.559	9.646	
125	141.3	232	210	19	65	245	8xM16
5	5.56	1.60	8.268	0.748	2.559	9.646	
150	159	232	240	20	65	280	8xM20
6	6.25	1.60	9.449	0.787	2.559	11.024	
150	165.1	232	240	20	65	280	8xM20
6	6.5	1.60	9.449	0.787	2.559	11.024	
150	168.3	232	240	20	65	280	8xM20
6	6.625	1.60	9.449	0.787	2.559	11.024	
200	219.1	232	295	20	75	330	12xM20
8	8.625	1.60	11.614	0.787	2.952	12.992	
250	273	232	295	25	85	400	12xM20
10	10.748	1.60	11.614	0.984	3.346	15.748	
300	323.9	232	410	25	90	460	12xM24
12	12.752	1.60	16.142	0.987	3.543	18.110	

Adaptor Flange PN25



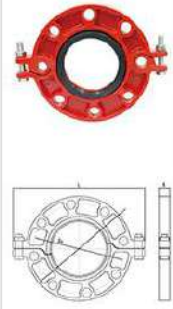
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Dimensions mm/in				Bolt/Nut NO.-Size mm
			Do	H1	H2	Φ	
100	108.0	362	190	18	70	230	8XM20
108.0	4.250	2.5	7.48	0.71	2.756	9.05	
100	114.3	362	190	16	70	235	8XM20
4	4.500	2.5	7.48	0.63	2.756	9.25	
150	159.0	362	250	20	70	300	8XM20
159.0	6.250	2.5	9.85	0.79	2.756	11.80	
150	165.1	362	250	18	70	300	8XM20
165.1	6.500	2.5	9.84	0.71	2.756	11.80	
200	219.1	362	310	19	80	360	8XM20
8	8.625	2.5	12.20	0.75	3.150	14.17	

Flange Adaptor (Threaded) · XGQT08S



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Dimensions mm/in				Bolt/Nut NO.-Size mm
			Do	H1	H2	Φ	
50	60.3	300	125	16	30	160	4xM16
2	2.374	2.07	4.921	0.630	1.181	6.299	
65	76.1	300	145	16	30	180	4xM16
2 1/2	3	2.07	5.709	0.630	1.181	7.087	
80	88.9	300	160	17	30	195	8xM16
3	3.5	2.07	6.299	0.669	1.181	7.677	
100	114.3	300	180	17	30	215	8xM16
4	4.5	2.07	7.087	0.669	1.181	8.465	

Grooved Flange PN16 · XGQT18



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Dimensions mm/in				Bolt/Nut NO.-Size mm
			Do	L	K	Φ	
50	60.3	232	125	220	22	160	4xM16
2	2.374	1.60	4.921	8.661	0.866	6.299	
65	73.0	232	145	225	22	180	4xM16
2 1/2	2.875	1.60	5.709	8.858	0.866	7.087	
65	76.1	232	145	225	22	180	4xM16
2 1/2	3	1.60	5.709	8.858	0.866	7.087	
80	88.9	232	160	253	22	195	8xM16
3	3.5	1.60	6.299	9.961	0.866	7.677	
100	108	232	180	262	22	215	8xM16
4	4.25	1.60	7.087	10.315	0.866	8.465	
100	114.3	232	180	262	22	215	8xM16
4	4.5	1.60	7.087	10.315	0.866	8.465	
125	133	232	210	292	22	245	8xM16
5	5.25	1.60	8.268	10.315	0.866	9.646	
125	139.7	232	210	292	22	245	8xM16
5	5.5	1.60	8.268	10.315	0.866	9.646	
125	141.3	232	210	292	22	245	8xM16
5	5.56	1.60	8.268	10.315	0.866	9.646	
150	159	232	240	340	22	280	8xM20
6	6	1.60	9.449	13.386	0.866	11.024	
150	165.1	232	240	340	22	280	8xM20
6	6.5	1.60	9.449	13.386	0.866	11.024	
150	168.3	232	240	340	22	280	8xM20
6	6.625	1.60	9.449	13.386	0.866	11.024	
200	219.1	232	295	408	25	330	12xM20
8	8.625	1.60	11.614	16.063	0.984	12.992	

Grooved Flange PN25



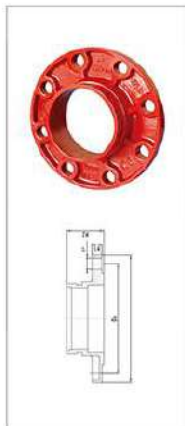
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Dimensions mm/in				Bolt/Nut NO.-Size mm	
			Do	L	K	Φ		
100	108.0	362	180	280	25.5	220	2-M12X55	8XM16
108.0	4.250	2.5	7.09	11.02	1.00	8.66		
150	165.1	362	240	346	25.5	280	2-M12X65	8XM20
165.1	6.500	2.5	9.45	13.62	1.00	11.00		

Concentric Reducer (Grooved) · XGQT07



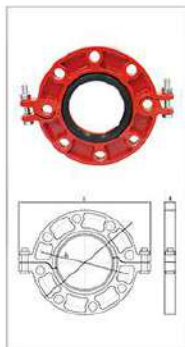
Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
50x25	60.3x33.7	300	60	100x80	108x88.9	300	76
2x1	2.375x1.327	2.07	2.362	4x3	4.252x3.5	2.07	2.99
50x32	60.3x42.4	300	64	100x50	114.3x60.3	300	76
2x1 1/4	2.375x1.669	2.07	2.62	4x2	1.5x2.374	2.07	2.99
50x40	60.3x48.3	300	64	100x65	114.3x76.1	300	76
2x1 1/2	2.375x1.902	2.07	2.62	4x2 1/2	4.5x2.996	2.07	2.99
65x25	73.0x33.7	300	64	100x80	114.3x88.9	300	76
2 1/2x1	2.875x1.327	2.07	2.62	4x3	1.5x3.5	2.07	2.99
65x32	73.0x42.4	300	64	125x25	133x33.7	300	102
2 1/2x1 1/4	2.875x1.669	2.07	2.62	5x1	5.236x1.327	2.07	4.02
65x40	73.0x48.3	300	64	125x50	133x60.3	300	102
2 1/2x1 1/2	2.875x1.902	2.07	2.62	5x2	5.236x2.374	2.07	4.016
65x50	73.0x60.3	300	64	125x65	133x76.1	300	102
2 1/2x2	2.875x2.375	2.07	2.62	5x2 1/2	5.236x2.996	2.07	4.016
65x25	76.1x33.7	300	64	125x80	133x88.9	300	102
2 1/2x1	2.996x1.327	2.07	2.62	5x3	5.236x3.5	2.07	4.016
65x32	76.1x42.4	300	64	125x100	133x108	300	102
2 1/2x1 1/4	2.996x1.669	2.07	2.62	5x4	5.236x4.252	2.07	4.016
65x40	76.1x48.3	300	64	125x100	133x114.3	300	102
2 1/2x1 1/2	2.996x1.902	2.07	2.62	5x4	5.236x4.5	2.07	4.016
65x50	76.1x60.3	300	64	125x50	139.7x60.3	300	102
2 1/2x2	2.996x2.375	2.07	2.62	5x2	5.5x2.374	2.07	4.016
80x25	88.9x33.7	300	64	125x65	139.7x76.1	300	102
3x1	3.5x1.327	2.07	2.62	5x2 1/2	5.5x2.996	2.07	4.016
80x32	88.9x42.4	300	64	125x80	139.7x88.9	300	102
3x1 1/4	3.5x1.669	2.07	2.62	5x3	5.5x3.5	2.07	4.016
80x40	88.9x48.3	300	64	125x100	139.7x88.9	300	102
3x1 1/2	3.5x1.902	2.07	2.62	5x4	5.5x3.5	2.07	4.016
80x50	88.9x60.3	300	64	125x100	139.7x108	300	102
3x2	3.5x2.374	2.07	2.52	5x4	5.5x4.252	2.07	4.016
80x65	88.9x76.1	300	64	125x100	139.7x114.3	300	102
3x2 1/2	3.5x2.996	2.07	2.52	5x4	5.5x4.5	2.07	4.016
100x50	108x60.3	300	76	125x50	141.3x60.3	300	102
4x2	4.252x2.374	2.07	2.99	5x2	5.56x2.374	2.07	4.016
100x65	108x76.1	300	76	125x65	141.3x76.1	300	102
4x2 1/2	4.252x2.996	2.07	2.99	5x2 1/2	5.56x2.996	2.07	4.016

Flange Adaptor ANSI-Class 125/150 · XGQT18



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Dimensions mm/in				Bolt/Nut NO.-Size mm	
			Do	H1	H2	Φ		
50	60.3	300	120.5	19	60.3	152	4XM16	
2	2.375	2.07	4.744	0.748	2.37	5.98		
65	73.0	300	139.5	24	60.3	178	4XM16	
2 1/2	2.875	2.07	5.693	0.944	2.37	7.00		
80	88.9	300	152.5	24	60.3	190	4XM16	
3	3.500	2.07	6.00	0.944	2.37	7.48		
100	114.3	300	190.5	24	70	229	4XM16	
4	4.500	2.07	7.5	0.944	2.755	9.015		
125	141.3	300	216	24	70	254	8XM20	
5	5.56	2.07	8.503	0.944	2.755	10		
150	168.3	300	241.5	25	70	279	8XM20	
6	6.625	2.07	9.507	0.984	2.755	10.98		
200	219.1	300	298.5	29	76.1	343	8XM20	
8	8.625	2.07	11.751	1.141	2.99	13.50		
250	273.0	300	362	30	85	406	12XM22	
10	10.750	2.07	14.251	1.181	3.346	15.98		
300	323.9	300	432	32	90	483	12XM22	
12	12.750	2.07	17.00	1.259	3.543	19.01		

Grooved Flange ANSI-Class 125/150 · XGQT19



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	Dimensions mm/in				Bolt/Nut NO.-Size mm	
			Do	L	K	Φ		
50	60.3	300	121	206	22	152	4XM16	
2	2.375	2.07	4.763	8.110	0.866	5.984		
65	73.0	300	140	230	22	178	4XM16	
2 1/2	2.875	2.07	5.511	9.055	0.866	7.007		
80	88.9	300	152	242	24	191	4XM16	
3	3.500	2.07	5.984	9.572	0.944	7.519		
100	114.3	300	191	280	24	229	8XM16	
4	4.500	2.07	7.519	11.023	0.944	9.015		
125	141.3	300	216	325	24.5	254	8XM20	
5	5.56	2.07	8.503	12.795	0.964	10		
150	168.3	300	241.5	345	24.5	282	8XM20	
6	6.625	2.07	9.508	13.583	0.964	11.102		
200	219.1	300	298.5	414.3	28	341.4	8XM20	
8	8.625	2.07	11.751	16.311	1.102	13.44		

Concentric Reducer (Grooved) · XGQT07



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
125x100	141.3x108	300	102	150x100	168.3x108	300	102
5x4	5.56x4.252	2.07	4.016	6x4	6.614x4.252	2.07	4.016
125x100	141.3x114.3	300	102	150x100	168.3x114.3	300	102
5x4	5.56x4.5	2.07	4.016	6x4	6.614x4.5	2.07	4.016
150x50	159x60.3	300	102	150x125	168.3x133	300	102
6x2	6.26x2.374	2.07	4.016	6x5	6.614x5.236	2.07	4.016
150x65	159x76.1	300	102	150x125	168.3x139.7	300	102
6x2 1/2	6.26x2.996	2.07	4.016	6x5	6.614x5.5	2.07	4.016
150x80	159x88.9	300	102	200x50	219.1x60.3	232	127
6x3	6.26x3.5	2.07	4.016	8x2	8.626x2.374	1.6	5
150x100	159x108	300	102	200x65	219.1x76.1	232	127
6x4	6.26x4.252	2.07	4.02	8x2 1/2	8.626x2.996	1.6	5
150x100	159x114.3	300	102	200x80	219.1x88.9	232	127
6x4	6.26x4.5	2.07	4.02	8x3	8.626x3.5	1.6	5
150x125	159x133	300	102	200x100	219.1x108	232	127
6x5	6.26x5.236	2.07	4.02	8x4	8.626x4.252	1.6	5
150x125	159x139.7	300	102	200x100	219.1x114.3	232	127
6x5	6.26x5.5	2.07	4.02	8x4	8.626x4.5	1.6	5
150x50	165.1x60.3	300	102	200x125	219.1x133	232	127
6x2	6.5x2.374	2.07	4.016	8x5	8.626x5.236	1.6	5
150x65	165.1x76.1	300	102	200x125	219.1x139.7	232	127
6x2 1/2	6.5x2.996	2.07	4.016	8x5	8.626x5.5	1.6	5
150x80	165.1x88.9	300	102	200x150	219.1x159	232	127
6x3	6.5x3.5	2.07	4.016	8x6	8.626x6.25	1.6	5
150x100	165.1x108	300	102	200x150	219.1x165.1	232	127
6x4	6.5x4.252	2.07	4.016	8x6	8.626x6.5	1.6	5
150x100	165.1x114.3	300	102	200x150	219.1x168.3	232	127
6x4	6.5x4.5	2.07	4.016	8x6	8.626x6.626	1.6	5
150x125	165.1x133	300	102	250x100	273x114.3	232	135
6x5	6.5x5.236	2.07	4.016	10x4	10.748x4.5	1.6	5.315
150x125	165.1x139.7	300	102	250x125	273x139.7	232	135
6x5	6.5x5.5	2.07	4.016	10x5	10.748x5.5	1.6	5.315
150x50	168.3x60.3	300	102	250x150	273x165.1	232	135
6x2	6.614x2.374	2.07	4.016	10x6	10.748x6.5	1.6	5.315
150x65	168.3x76.1	300	102	250x150	273x168.3	232	135
6x2 1/2	6.614x2.996	2.07	4.016	10x6	10.748x6.626	1.6	5.315
150x80	168.3x88.9	300	102	250x200	273x219.1	232	135
6x3	6.614x3.5	2.07	4.016	10x8	10.748x8.626	1.6	5.315

Concentric Reducer (Threaded) · XGQT07S



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
50x25	60.3x33.7	300	64	100x65	108x76.1	300	76
2x1	2.375x1.327	2.07	2.62	4x2 1/2	4.252x2.996	2.07	2.992
50x32	60.3x42.4	300	64	100x80	108x88.9	300	76
2x1 1/2	2.375x1.669	2.07	2.62	4x3	4.252x3.5	2.07	2.992
50x40	60.3x48.3	300	64	100x25	114.3x33.7	300	76
2x1 1/2	2.375x1.902	2.07	2.62	4x1	4.5x1.327	2.07	2.992
65x25	73.0x33.7	300	64	100x32	114.3x42.4	300	76
2 1/2x1	2.875x1.327	2.07	2.62	4x1 1/4	4.5x1.869	2.07	2.992
65x32	73.0x42.4	300	64	100x40	114.3x48.3	300	76
2 1/2x1 1/4	2.875x1.669	2.07	2.62	4x1 1/2	4.5x1.902	2.07	2.992
65x40	73.0x48.3	300	64	100x50	114.3x60.3	300	76
2 1/2x1 1/2	2.875x1.902	2.07	2.62	4x2	4.5x2.375	2.07	2.992
65x50	73.0x60.3	300	64	100x65	144.3x76.1	300	76
2 1/2x2	2.875x2.375	2.07	2.62	4x2 1/2	4.5x2.996	2.07	2.992
65x25	76.1x33.7	300	64	100x80	114.3x88.9	300	76
2 1/2x1	2.996x1.327	2.07	2.62	4x3	4.5x3.5	2.07	2.992
65x32	76.1x42.4	300	64	125x25	133x33.7	300	102
2 1/2x1 1/4	2.996x1.669	2.07	2.62	5x1	5.236x1.327	2.07	4.016
65x40	76.1x48.3	300	64	125x32	133x42.4	300	102
2 1/2x1 1/2	2.996x1.902	2.07	2.62	5x1 1/4	5.236x1.669	2.07	4.016
65x50	76.1x60.3	300	64	125x40	133x48.3	300	102
2 1/2x2	2.996x2.375	2.07	2.62	5x1 1/2	5.236x1.902	2.07	4.016
80x25	88.9x33.7	300	64	125x50	133x60.3	300	102
3x1	3.5x1.327	2.07	2.62	5x2	5.236x2.375	2.07	4.016
80x32	88.9x42.4	300	64	125x65	133x76.1	300	102
3x1 1/4	3.5x1.669	2.07	2.62	5x2 1/2	5.236x2.375	2.07	4.016
80x40	88.9x48.3	300	64	125x80	133x88.9	300	102
3x1 1/2	3.5x1.902	2.07	2.62	5x3	5.236x3.5	2.07	4.016
80x50	88.9x60.3	300	64	125x100	133x108	300	102
3x2	3.5x2.375	2.07	2.62	5x4	5.236x4.252	2.07	4.016
80x65	88.9x76.1	300	64	125x100	133x114.3	300	102
3x2 1/2	3.5x2.996	2.07	2.62	5x4	5.236x4.5	2.07	4.016
100x25	108x33.7	300	76	125x25	139.7x33.7	300	102
4x1	4.252x1.327	2.07	2.992	5x1	5.5x1.327	2.07	4.016
100x32	108x42.4	300	76	125x32	139.7x42.4	300	102
4x1 1/4	4.252x1.669	2.07	2.992	5x1 1/4	5.5x1.869	2.07	4.016
100x40	108x48.3	300	76	125x40	139.7x48.3	300	102
4x1 1/2	4.252x1.902	2.07	2.992	5x1 1/2	5.5x1.902	2.07	4.016
100x50	108x60.3	300	76	125x50	139.7x60.3	300	102
4x2	4.252x2.375	2.07	2.992	5x2	5.5x2.375	2.07	4.016

Concentric Reducer (Threaded) · XGQT07S



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in	Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
125x65	139.7x76.1	300	102	150x32	165.1x42.4	300	102
5x2 1/2	5.5x2.996	2.07	4.016	6x1 1/4	6.5x1.669	2.07	4.016
125x80	139.7x88.9	300	102	150x40	165.1x48.3	300	102
5x3	5.5x3.5	2.07	4.016	6x1 1/2	6.5x1.902	2.07	4.016
125x100	139.7x108	300	102	150x50	165.1x60.3	300	102
5x4	5.5x4.5	2.07	4.016	6x2	6.5x2.375	2.07	4.016
125x100	139.7x114.3	300	102	150x65	165.1x76.1	300	102
5x4	5.5x4.5	2.07	4.016	6x2 1/2	6.5x2.996	2.07	4.016
125x25	141.3x32.7	300	102	150x80	165.1x88.9	300	102
5x1	5.56x1.327	2.07	4.016	6x3	6.5x3.5	2.07	4.016
125x32	141.3x42.4	300	102	150x100	165.1x114.3	300	102
5x1 1/4	5.56x1.669	2.07	4.016	6x4	6.5x4.5	2.07	4.016
125x40	141.3x48.3	300	102	150x25	168.3x33.7	300	102
5x1 1/2	5.56x1.902	2.07	4.016	6x1	6.614x1.327	2.07	4.016
125x50	141.3x60.3	300	102	150x32	168.3x42.4	300	102
5x2	5.56x2.375	2.07	4.016	6x1 1/4	6.614x1.669	2.07	4.016
125x65	141.3x76.1	300	102	150x40	168.3x48.3	300	102
5x2 1/2	5.56x2.996	2.07	4.016	6x1 1/2	6.614x1.902	2.07	4.016
125x80	141.3x88.9	300	102	150x50	168.3x60.3	300	102
5x3	5.56x3.5	2.07	4.016	6x2	6.614x2.375	2.07	4.016
125x100	141.3x108	300	102	150x65	168.3x76.1	300	102
5x4	5.56x4.5	2.07	4.016	6x2 1/2	6.614x2.996	2.07	4.016
125x100	141.3x114.3	300	102	150x80	168.3x88.9	300	102
5x4	5.56x4.5	2.07	4.016	6x3	6.614x3.5	2.07	4.016
150x25	159x33.7	300	102	150x100	168.3x114.3	300	102
6x1	6.26x1.327	2.07	4.016	6x4	6.614x4.5	2.07	4.016
150x32	159x42.4	300	102	200x25	219.1x33.7	232	127
6x1 1/4	6.26x1.669	2.07	4.016	8x1	8.625x1.327	1.6	5.000
150x40	159x48.3	300	102	200x32	219.1x42.4	232	127
6x1 1/2	6.26x1.902	2.07	4.016	8x1 1/4	8.625x1.669	1.6	5.000
150x50	159x60.3	300	102	200x40	219.1x48.3	232	127
6x2	6.26x2.375	2.07	4.016	8x1 1/2	8.625x1.902	1.6	5.000
150x65	159x76.1	300	102	200x50	219.1x60.3	232	127
6x2 1/2	6.26x2.996	2.07	4.016	8x2	8.625x2.375	1.6	5.000
150x80	159x88.9	300	102	200x65	219.1x76.1	232	127
6x3	6.26x3.5	2.07	4.016	8x2 1/2	8.625x2.996	1.6	5.000
150x100	159x114.3	300	102	200x80	219.1x88.9	232	127
6x4	6.26x4.5	2.07	4.016	8x3	8.625x3.5	1.6	5.000
150x25	165.1x33.7	300	102	200x100	219.1x114.3	232	127
6x1	6.5x1.327	2.07	4.016	8x4	8.625x4.5	1.6	5.000

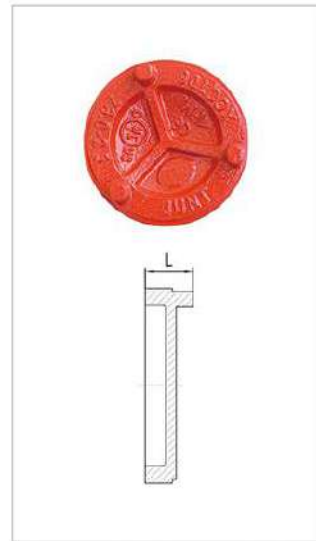
Eccentric Reducer (Grooved) · XGQT17



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
100x65	108x76.1	300	102
4x2 1/2	4.25x2.996	2.07	4.331
100x80	108x88.9	300	102
4x3	4.25x3.50	2.07	4.331
100x65	114.3x76.1	300	102
4x2 1/2	4.50x2.996	2.07	4.331
100x80	114.3x88.9	300	102
4x3	4.50x3.50	2.07	4.331
125x80	139.7x88.9	300	102
5x3	5.50x3.50	2.07	4.331
125x100	139.7x114.3	300	102
5x4	5.50x4.50	2.07	4.331
150x65	159x76.1	300	102
6x2 1/2	6.26x2.996	2.07	4.331
150x80	159x88.9	300	102
6x3	6.26x3.50	2.07	4.331
150x100	159x108	300	102
6x4	6.26x4.252	2.07	4.331
150x100	159x114.3	300	102
6x4	6.26x4.50	2.07	4.331
150x125	159x139.7	300	102
6x5	6.26x5.50	2.07	4.331
150x65	165.1x76.1	300	102
6x2 1/2	6.50x2.996	2.07	4.331
150x80	165.1x88.9	300	102
6x3	6.50x3.50	2.07	4.331
150x100	165.1x114.3	300	102
6x4	6.50x4.50	2.07	4.331
150x125	165.1x139.7	300	102
6x5	6.50x5.50	2.07	4.331
200x80	219.1x88.9	232	130
8x3	8.626x3.50	1.6	5.118
200x100	219.1x114.3	232	130
8x4	8.626x4.50	1.6	5.118
200x125	219.1x139.7	232	130
8x5	8.626x5.50	1.6	5.118
200x150	219.1x165.1	232	130
8x6	8.626x6.260	1.6	5.118
200x150	219.1x165.1	232	130
6x6	8.626x6.50	1.6	5.118
200x150	219.1x168.3	232	130
5x6	8.626x6.626	1.6	5.118
250x150	273x159	232	152
10x6	10.748x6.260	1.6	5.984

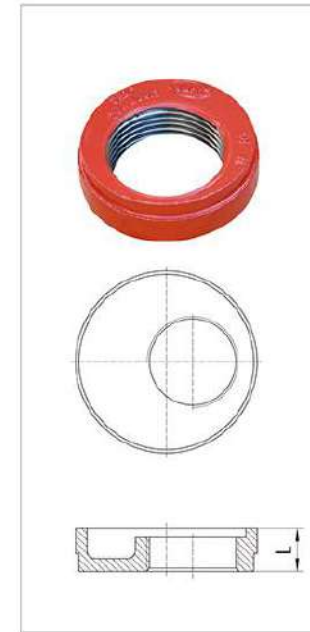
Cap · XGQT06

According to different situations, the appearance can be dealt with epoxy powder, galvanized, paint, dacromet or your requirements.



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
25	33.7	300	24
1	1.327	2.07	0.945
32	42.4	300	24
1 1/4	1.569	2.07	0.945
40	48.3	300	24
1 1/2	1.900	2.07	0.945
50	60.3	300	26
2	2.375	2.07	1.024
65	73.0	300	28
2 1/2	2.875	2.07	1.102
65	76.1	300	28
2 1/2	3	2.07	1.102
80	88.9	300	28
3	3.5	2.07	1.102
100	108	300	28
4	4.252	2.07	1.102
100	114.3	300	28
4	4.5	2.07	1.102
125	133	300	28
5	5.25	2.07	1.102
125	139.7	300	28
5	5.5	2.07	1.102
125	141.3	300	28
5	5.56	2.07	1.102
150	159	300	28
6	6.25	2.07	1.102
150	165.1	300	28
6	6.5	2.07	1.102
150	168.3	300	28
6	6.825	2.07	1.102
200	219.1	232	36
8	8.825	1.60	1.417
250	273	232	36
10	10.75	1.60	1.417

Cap with Eccentric Hole



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure PSI/Mpa	L mm/in
65x25	76.1x33.7	300	23.5
2 1/2x1	3.000x1.315	2.07	0.925
65x40	76.1x48.3	300	23.5
2 1/2x1 1/2	3.000x1.900	2.07	0.925
80x25	88.9x33.7	300	23.5
3x1	3.500x1.315	2.07	0.925
80x40	88.9x48.3	300	23.5
3x1 1/2	3.500x1.900	2.07	0.925
80x50	88.9x60.3	300	23.5
3x2	3.500x2.375	2.07	0.925
100x25	114.3x33.7	300	25.4
4x1	4.500x1.315	2.07	1.00
100x40	114.3x48.3	300	25.4
4x1 1/2	4.500x1.900	2.07	1.00
100x50	114.3x60.3	300	25.4
4x2	4.500x2.375	2.07	1.00
125x40	139.7x60.3	300	25.4
5x1 1/2	5.500x1.900	2.07	1.00
125x50	139.7x60.3	300	25.4
5x2	5.500x2.375	2.07	1.00
150x40	165.1x48.3	300	25.4
6x1 1/2	6.500x1.900	2.07	1.00
150x40	168.3x48.3	300	25.4
6x1 1/2	6.625x1.900	2.07	1.00
150x50	168.3x60.3	300	25.4
6x2	6.625x2.375	2.07	1.00
200x40	219.1x48.3	300	30.2
8x1 1/2	8.625x1.900	2.07	1.19
200x50	219.1x60.3	300	30.2
8x2	8.625x2.375	2.07	1.19

Gasket Ring



Name	Temperature Range	General Service Recommendations	Color Mark
EPDM	-34~+150° C (-30~+302° F)	Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL classified in accordance with ANSINSF 61 or cold +86° F(+30) and hot +180° F (+82° C.) potable water service. Not recommended for petroleum service.	Green Strip
Nitrile rubber	-29~+82° C (-20~+180° F)	Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services.	Orange Strip
Silicon rubber	-40~+177° C (-40~+350° F)	Recommended for high temperature dry air and some high temperature chemical products.	White

Notes: 1.Gasket rings of different materials will be used for different liquid mediums.
2.Products can be supplied as per customers requirements.

Bolts and Nuts



Raw material of bolts and nuts are taken as 40 cr or 35# steel, and its mechanical properties should reach Gr.8.8 after hot-t treatment. Only one wrench will be used during the installation, safely and firmly.

Bolt dimension	M10	M12	M16	M20	M22
Spanner dimension	15	18	24	30	34

Other products



Roll grooving machine



Hole cutting machine



Pipe cutting machine

Hole cutting machine

Run Nominal Size mm/in	Outlet Nominal Size mm/in	Hole Dia. +3.2, 0+0.13, 0 mm/in
50 2"/60.3	25 1	38 1.496
	32 1-1/4	46 1.811
	40 1-1/2	51 2.008
65 2-1/2"/73.0 76.1	25 1	38 1.496
	32 1-1/4	46 1.811
	40 1-1/2	51 2.008
	50 2"/60.3	61 2.40
80 3"/88.9	25 1	38 1.50
	32 1-1/4	46 1.81
	40 1-1/2	51 2.008
	50 2"/60.3	61 2.40
	65 2-1/2	81 3.189
	80 3	96 3.78

Run Nominal Size mm/in	Outlet Nominal Size mm/in	Hole Dia. +3.2, 0+0.13, 0 mm/in
100 4"/114.3	25 1	38 1.50
	32 1-1/4	46 1.81
	40 1-1/2	51 2.008
	50 2"/60.3	61 2.40
	65 2-1/2	81 3.189
125 133 139.7 5"/141.3	25 1	38 1.50
	32 1-1/4	46 1.81
	40 1-1/2	51 2.008
	50 2"/60.3	61 2.40
	65 2-1/2	81 3.189
	80 3	96 3.78

Run Nominal Size mm/in	Outlet Nominal Size mm/in	Hole Dia. +3.2, 0+0.13, 0 mm/in
150 159 165.1 6"/186.3	25 1	38 1.50
	32 1-1/4	46 1.81
	40 1-1/2	51 2.008
	50 2"/60.3	61 2.40
	65 2-1/2	81 3.189
200 8"/219.1	25 1	38 1.50
	32 1-1/4	46 1.81
	40 1-1/2	51 2.008
	50 2"/60.3	61 2.40
	65 2-1/2	81 3.189
	80 3	96 3.78

Roll Groove Dimensions

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	Max Allow flare Dia.F mm/in	Min. Allow Wall Thickness T mm/in	
	Basic mm/in	Tolerance mm/in			Basic mm/in	Tolerance 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 1-1/4	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 1-1/2	48.3 1.900	+0.44 +0.017	-0.52 -0.020	15.88 0.625	7.14 0.281	45.09 1.779	-0.38 -0.015	1.60 0.063	48.4 1.945	1.8 0.071
50 2"	60.3 2.374	+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 2-1/2	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	1.98 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 5.560	+1.42 +0.055	-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

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	Max Allow flare Dia.F mm/in	Min. Allow Wall Thickness T mm/in	
	Basic mm/in	Tolerance mm/in			Basic mm/in	Tolerance mm/in				
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 -0.0251	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 -0.0251	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 10.685	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	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	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
500 20	529.0 20.827	+1.60 +0.063	-0.79 -0.031	25.40 1.000	11.91 0.469	523.46 20.608	-0.76 -0.030	2.77 0.109	533.0 20.984	5.0 0.197

Installation Instruction For Rigid & Flexible Coupling



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.

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.

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

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.



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.

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.

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

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

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

Specified Bolt Torque		
ANSI BOLTS		
Bolt Size	Specified Bolt Torque	
	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



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.

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

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.



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

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

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	
	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	-	-

Engineering Test

No	Test	Standard
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 gasket coupling and fitting shall be subjected to an internal vacuum of 25 inHg (85kpa) 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 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 Sizes 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/-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 (0-345 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-belt 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 >= 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 (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 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 5 minutes without leakage and cracking.

No	Test	Standard
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 (300mm).
11	Torsion test	This test relates to pipe joints <= DN40 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 (203.3mm) or 0.5 degrees 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 50-500 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 pipe work.
15	Hydrostatic fluctuation pressure resi.	The coupling assembly shall be pressurized with water to a gauge pressure of 10 bar ± 1 bar for 2 min, +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 al/mercury or -0.8 bar +0 bar/-0.1 bar for 2 min +30s/-0s, and allowed to return to atmospheric pressure in not less than 5s. The assembly shall then be pressurized with water to 10 bar ± 1 bar 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 Approval, 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 expose, 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 the joint shall be hydrostatically tested, as described in the hydrostatic test.