

JIANZHI

SINCE 1982

CONTACT US

HEBEI JIANZHI CASTING GROUP CO., LTD.

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Jianzhi Malleable Iron Pipe Fittings >> www.jianzhipipefitting.com
Jianzhi Grooved Pipe Fittings >> www.jianzhifittings.com



THE GUIDE TO JIANZHI PRODUCTS

A well-known trademark of grooved coupling in China
Hebei Jianzhi Casting Group Co., Ltd.



Quality Pipe Fittings Since 1982.
Safer. No Leak.

MAKING DUCTILE IRON GROOVED FITTINGS DURABLE FOREVER

WHO IS JIANZHI?

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

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



4,500
employees



90%
Reorder rate

BUSINESS MODEL OF JIANZHI:

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

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

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

SOCIAL CONTRIBUTIONS OF JIANZHI:

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

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

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



99.96%
Qualified rate



1 in 440000
return rate

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

JIANZHI Predecessor

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



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

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

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

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

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

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

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

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

ADVANCED PRODUCTION EQUIPMENT

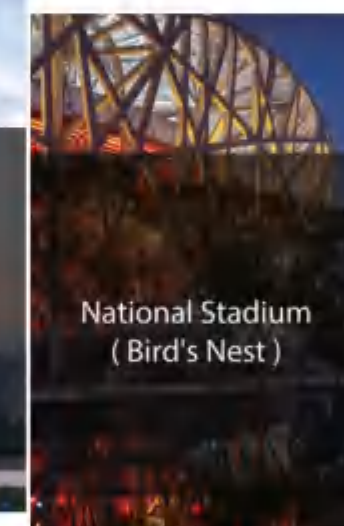
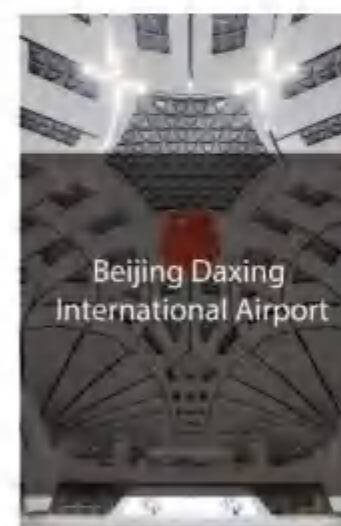
High precision equipment is quality assurance. All production workshops of JIANZHI are equipped with advanced production and testing equipment. Including the DISA vertical molding line imported from Denmark, the horizontal automatic molding line imported from Japan, and the FONDARC sand mixer imported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



OVERVIEW

Material:	ASTM A536, GRADE 65-45-12, QT450-10
Threads:	ASME B1.20.1, ISO 7-1, GB 7306
Size Available	1"-24"
Surface Treatment	Painted, Electroplated, Black, Epoxy, Hot-dip Galvanized

FAMOUS CASES



APPLICATION



Gas



Fire Pipes



Water supply pipeline



Heating pipe



Oil pipeline



System water pipeline



Building gas pipeline



Water treatment

CERTIFICATES



Ductile Iron Grooved Fittings and Couplings



XGQT01-Rigid Coupling



XGQT02-Flexible Coupling



XGQT03-90° Elbow



XGQT04-45° Elbow



XGQT05-22.5° Elbow



XGQT06-11.25° Elbow



XGQT07-Equal Tee



XGQT08-Grooved Tee Reducing



XGQT08S-Threaded Reducing Tee



XGQT09-Grooved Cross



XGQT10-Grooved Cross Reducing



XGQT10S-Threaded Reducing Cross



XGQT11-Grooved Reducer Concentric



XGQT11S-Threaded Reducer Concentric



XGQT12-Grooved Eccentric Reducer



XGQT13-Adaptor Flange



XGQT14-Split Flange



XGQT15-Grooved Mechanical Cross



XGQT15S-Threaded Mechanical Cross



XGQT16-Blind Cap



XGQT17-Grooved Mechanical Tee



XGQT17S-Threaded Mechanical Tee

XGQT01

Rigid Coupling



Nominal Size	Pipe O.D	Working Pressure	Max. End Load	Pipe End Separation	Dimensions			Bolt Size
mm/in	mm/in	PSI/Mpa	KN/Lbs	mm/in	L (mm/in)	H (mm/in)	φ (mm/in)	No. - Size (mm)
规格	管子尺寸	工作压力		最大管端负荷	允许管端间距			螺栓规格
		UL/FM	国标					
25	33.7	300PSI 2.07MPa	363PSI 2.5MPa	3.0/680	0-2.0	99	43	55
1	1.327				0-0.08	3.898	1.693	2.165
40	48.3			6.3/1420	0-3.2	115	43	70
1½	1.902				0-0.13	4.528	1.693	2.756
50	60.3			9.8/2210	0-3.2	128	43	83
2	2.374				0-0.13	5.039	1.693	3.268
65	76.1			14.4/3240	0-3.2	145	44	100
2½	2.996				0-0.13	5.709	1.732	3.937
80	88.9			21.4/4810	0-3.2	160	44	113
3	3.500				0-0.13	6.299	1.732	4.449
100	108.0			31.5/7100	0-3.2	186	47	134
4	4.252				0-0.13	7.323	1.850	5.276
100	114.3	225PSI 1.6MPa	225PSI 1.6MPa	35.4/7960	0-3.2	192	47	141
4	4.500				0-0.13	7.559	1.850	5.551
125	133.0			28.7/6460	0-3.2	214	48	161
5	5.236				0-0.13	8.425	1.890	6.339
125	139.7			52.9/11800	0-3.2	221	48	168
5	5.500				0-0.13	8.701	1.890	6.614
150	159.0			41.0/9240	0-3.2	245	49.5	190
6	6.260				0-0.13	9.646	1.949	7.480
150	165.1			73.8/16610	0-3.2	251	49.5	196
6	6.500				0-0.13	9.882	1.949	7.717
150	168.3			76.7/17260	0-3.2	254	49.5	199
6	6.626				0-0.13	10.000	1.949	7.835
200	219.1			116.9/26280	0-3.2	325	59	255
8	8.626				0-0.13	12.795	2.323	10.039
250	273.0			121.0/27210	0-3.2	416	63	322
10	10.750				0-0.13	16.378	2.480	12.677
300	323.9			170.3/38280	0-3.2	470	63	377
12	12.752				0-0.13	18.504	2.480	14.843
250	273.0			121.0/27210	0-3.2	416	61	320
10	10.750				0-0.13	16.378	2.402	12.598
300	323.9			170.3/38280	0-3.2	470	61	375
12	12.752				0-0.13	18.504	2.402	14.764

XGQT02

Flexible Coupling



Nominal Size	Pipe O.D	Working Pressure	Max. End Load	Pipe End Separation	Dimensions			Bolt Size
mm/in	mm/in	PSI/Mpa	KN/Lbs	mm/in	L (mm/in)	H (mm/in)	φ (mm/in)	No. - Size (mm)
规格	管子尺寸	工作压力		最大管端负荷	允许管端间距			螺栓规格
		UL/FM	国标					
50	60.3	300PSI 2.07MPa	363PSI 2.5MPa	9.8/2210	0-3.2	128	45	84
2	2.374				0-0.13	5.039	1.772	3.307
65	76.1			14.4/3240	0-3.2	145	46	101
2½	2.996				0-0.13	5.709	1.811	3.976
80	88.9			21.4/4810	0-3.2	164	47	115
3	3.500				0-0.13	6.457	1.850	4.528
100	108.0			31.5/7100	0-3.2	187	49	136
4	4.252				0-0.13	7.362	1.929	5.354
100	114.3			35.4/7960	0-3.2	193	49	143
4	4.500				0-0.13	7.598	1.929	5.630
125	133.0			28.7/6460	0-3.2	217	50	163
5	5.236				0-0.13	8.543	1.969	6.417
125	139.7	225PSI 1.6MPa	225PSI 1.6MPa	52.9/11800	0-3.2	224	50	170
5	5.500				0-0.13	8.819	1.969	6.693
150	159.0			41.0/9240	0-3.2	250	51	193
6	6.260				0-0.13	9.843	2.008	7.598
150	165.1			73.8/16610	0-3.2	256	51	199
6	6.500				0-0.13	10.079	2.008	7.835
200	216.3			76.7/17260	0-3.2	325	60	256
8	8.516				0-0.13	12.795	2.362	10.079
200	219.1			116.9/26280	0-3.2	328	60	259
8	8.626				0-0.13	12.913	2.362	10.197

XGQT03

Elbow



Nominal Size	Pipe O.D	Working Pressure		Dimensions
mm/in	mm/in	PSI/Mpa		L (mm/in)
规格	管子尺寸	工作压力		尺寸
		UL/FM	国标	
50	60.3	300PSI 2.07MPa	363PSI 2.5MPa	68.5
2	2.374			2.697
65	76.1			74
2½	2.996			2.913
80	88.9			84
3	3.500			3.307
100	108.0			100
4	4.252			3.937
100	114.3			100
4	4.500			3.937
125	133.0			122
5	5.236			4.803
125	139.7	225PSI 1.6MPa	363PSI 2.5MPa	122
5	5.500			4.803
150	159.0			138
6	6.260			5.433
150	165.1			138
6	6.500			5.433
200	219.1			171
8	8.626			6.732
250	273.0			212
10	10.748			8.346
300	323.9			242
12	12.752			9.528
250	273.0	225PSI 1.6MPa	363PSI 2.5MPa	212
10	10.748			8.346
300	323.9			242
12	12.752			9.528

XGQT04

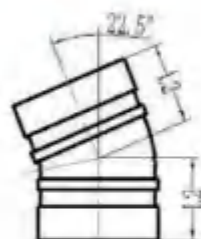
45° Elbow



Nominal Size	Pipe O.D	Working Pressure		Dimensions
mm/in	mm/in	PSI/Mpa		L (mm/in)
规格	管子尺寸	工作压力		尺寸
		UL/FM	国标	
50	60.3	300PSI 2.07MPa	363PSI 2.5MPa	49.5
2	2.374			1.949
65	76.1			55.5
2½	2.996			2.185
80	88.9			62.5
3	3.500			2.461
100	108.0			74
4	4.252			2.913
100	114.3			74
4	4.500			2.913
125	133.0			81
5	5.236			3.189
125	139.7	225PSI 1.6MPa	363PSI 2.5MPa	81
5	5.500			3.189
150	159.0			87
6	6.260			3.425
150	165.1			87
6	6.500			3.425
200	219.1			106
8	8.626			4.173
250	273.0			119
10	10.748			4.685
300	323.9			131
12	12.752			5.157

XGQT05

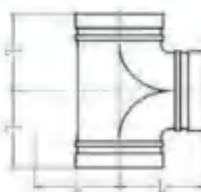
22.5° Elbow



Nominal Size	Pipe O.D	Working Pressure		Dimensions
mm/in	mm/in	PSI/Mpa		L (mm/in)
规格	管子尺寸	工作压力		尺寸
		UL/FM	国标	
50	60.3	300PSI 2.07MPa	363PSI 2.5MPa	46.5
2	2.374			1.831
65	76.1			49.5
2½	2.996			1.949
80	88.9			55.5
3	3.500			2.185
100	108.0			71.5
4	4.252			2.815
100	114.3			71.5
4	4.500			2.815
125	133.0			71.5
5	5.236			2.815
125	139.7			71.5
5	5.500			2.815
150	159.0			77
6	6.260			3.031
150	165.1			77
6	6.500			3.031
200	219.1	225PSI 1.6MPa		96
8	8.626			3.780
250	273.0			109
10	10.748			4.291
300	323.9			122
12	12.752			4.803

XGQT07

Equal Tee



Nominal Size	Pipe O.D	Working Pressure		Dimensions
mm/in	mm/in	PSI/Mpa		L (mm/in)
规格	管子尺寸	工作压力		尺寸
		UL/FM	国标	
50	60.3	300PSI 2.07MPa	363PSI 2.5MPa	68.5
2	2.374			2.697
65	76.1			74
2½	2.996			2.913
80	88.9			84
3	3.500			3.307
100	108.0			100
4	4.252			3.937
100	114.3			100
4	4.500			3.937
125	133.0			122
5	5.236			4.803
125	139.7			122
5	5.500			4.803
150	159.0			138
6	6.260			5.433
150	165.1			138
6	6.500			5.433
200	219.1	225PSI 1.6MPa	363PSI 2.5MPa 225PSI 1.6MPa	171
8	8.626			6.732
250	273.0			212
10	10.748			8.346
300	323.9			242
12	12.752			9.528
250	273.0			212
10	10.748			8.346
300	323.9			242
12	12.752			9.528

XGQT06

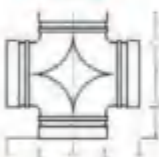
11.25° Elbow



Nominal Size	Pipe O.D	Working Pressure		Dimensions
mm/in	mm/in	PSI/Mpa		L (mm/in)
规格	管子尺寸	工作压力		尺寸
		UL/FM	国标	
50	60.3	300PSI 2.07MPa	363PSI 2.5MPa	33.5
2	2.374			1.319
65	76.1			36.5
2½	2.996			1.437
80	88.9			36.5
3	3.500			1.437
100	108.0			42.5
4	4.252			1.673
100	114.3			42.5
4	4.500			1.673
125	133.0			49.5
5	5.236			1.949
125	139.7			49.5
5	5.500			1.949
150	159.0			49.5
6	6.260			1.949
150	165.1			49.5
6	6.500			1.949
200	219.1	225PSI 1.6MPa		49.5
8	8.626			1.949
250	273.0			52.5
10	10.748			2.067
300	323.9			55.5
12	12.752			2.185

XGQT09

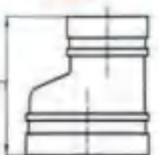
Equal Cross



Nominal Size	Pipe O.D	Working Pressure		Dimensions
mm/in	mm/in	PSI/Mpa		L (mm/in)
规格	管子尺寸	工作压力		尺寸
		UL/FM	国标	
50	60.3	300PSI 2.07MPa	363PSI 2.5MPa	68.5
2	2.374			2.697
65	76.1			74
2½	2.996			2.913
80	88.9			84
3	3.500			3.307
100	108.0			100
4	4.252			3.937
100	114.3			100
4	4.500			3.937
125	133.0			122
5	5.500			4.803
150	159.0			138
6	6.260			5.433
150	165.1			138
6	6.500			5.433
200	219.1			171
8	8.626			6.732

XGQT12

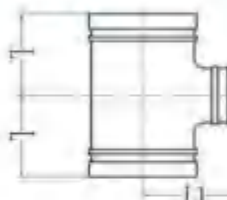
Grooved Eccentric Reducer



Nominal Size	Pipe O.D	Working Pressure	Dimensions
mm/in	mm/in	PSI/Mpa	L (mm/in)
规格	管子尺寸	工作压力	尺寸
100 × 65	114.3 × 76.1	363PSI 2.5MPa	101
4 × 2½	4.500 × 3.000		3.975
100 × 80	114.3 × 88.9		101
4 × 3	4.500 × 3.500		3.975
125 × 80	139.7 × 88.9		126
5 × 3	5.500 × 3.500		4.961
125 × 100	139.7 × 114.3		126
5 × 4	5.500 × 4.500		4.961
150 × 80	165.1 × 88.9		139
6 × 3	6.500 × 3.500		5.472
150 × 100	165.1 × 114.3		139
6 × 4	6.500 × 4.500		5.472
150 × 125	165.1 × 139.7		139
6 × 5	6.500 × 5.500		5.472
200 × 100	219.1 × 114.3		213
8 × 4	8.625 × 4.500		8.386
200 × 125	219.1 × 139.7		213
8 × 5	8.625 × 5.500		8.386
200 × 150	219.1 × 165.1		213
8 × 6	8.625 × 6.500		8.386

XGQT08

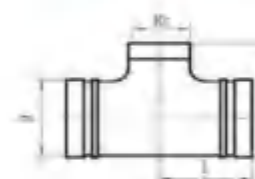
Grooved Tee Reducing



Nominal Size mm/in	Pipe O.D mm/in	Working Pressure		Dimensions	
		PSI/Mpa		L (mm/in)	L ₁ (mm/in)
规格	管子尺寸	工作压力	图例	尺寸	尺寸
50 × 25	60.3 × 33.7	300PSI 2.07MPa		55	63
2 × 1	2.375 × 1.315			2.165	2.480
50 × 32	60.3 × 42.4			59	63
2 × 1 1/4	2.375 × 1.660			2.323	2.480
50 × 40	60.3 × 48.3			62	63
2 × 1 1/2	2.375 × 1.900			2.441	2.480
65 × 40	76.1 × 48.3			62	74
2 1/2 × 1 1/2	3.000 × 1.900			2.441	2.913
65 × 50	76.1 × 60.3			66.5	74
2 1/2 × 2	3.000 × 2.375			2.618	2.913
80 × 50	88.9 × 60.3			68.5	84
3 × 2	3.500 × 2.375			2.697	3.307
80 × 65	88.9 × 76.1			74	84
3 × 2 1/2	3.500 × 3.000			2.913	3.307
100 × 50	108.0 × 60.3			68.5	96
4 × 2	4.250 × 2.375			2.697	3.780
100 × 65	108.0 × 76.1			74	96
4 × 2 1/2	4.250 × 3.000			2.913	3.780
100 × 80	108.0 × 88.9			84	96
4 × 3	4.250 × 3.500			3.307	3.780
100 × 40	114.3 × 48.3			66	97
4 × 1 1/2	4.500 × 1.900			2.598	3.819
100 × 50	114.3 × 60.3			68.5	96
4 × 2	4.500 × 2.375			2.697	3.780
100 × 65	114.3 × 76.1			74	96
4 × 2 1/2	4.500 × 3.000			2.913	3.780
100 × 80	114.3 × 88.9			84	96
4 × 3	4.500 × 3.500			3.307	3.780
125 × 65	133.0 × 76.1	363PSI 2.5MPa		74	113
5 × 2 1/2	5.250 × 3.000			2.913	4.449
125 × 80	133.0 × 88.9			84	113
5 × 3	5.250 × 3.500			3.307	4.449
125 × 100	133.0 × 108.0			98	113
5 × 4	5.250 × 4.250			3.858	4.449
125 × 100	133.0 × 114.3			98	113
5 × 4	5.250 × 4.500			3.858	4.449
125 × 65	139.7 × 76.1			74	113
5 × 2 1/2	5.500 × 3.000			2.913	4.449
125 × 80	139.7 × 88.9			84	113
5 × 3	5.500 × 3.500			3.307	4.449
125 × 100	139.7 × 114.3			98	113
5 × 4	5.500 × 4.500			3.858	4.449
150 × 65	159.0 × 76.1			74	122
6 × 2 1/2	6.250 × 3.000			2.913	4.803
150 × 80	159.0 × 88.9			84	122
6 × 3	6.250 × 3.500			3.307	4.803
150 × 100	159.0 × 108.0			98	122
6 × 4	6.250 × 4.250			3.858	4.803
150 × 100	159.0 × 114.3			102	122
6 × 4	6.250 × 4.500			4.016	4.803
150 × 125	159.0 × 133.0			111	122
6 × 5	6.250 × 5.250			4.370	4.803
150 × 125	159.0 × 139.7			114	128
6 × 5	6.250 × 5.500			4.488	5.039
150 × 65	165.1 × 76.1			78	126
6 × 2 1/2	6.500 × 3.000			3.071	4.961
150 × 80	165.1 × 88.9			84	126
6 × 3	6.500 × 3.500			3.307	4.961
150 × 100	165.1 × 114.3			102	122
6 × 4	6.500 × 4.500			4.016	4.803
150 × 125	165.1 × 139.7			114	128
6 × 5	6.500 × 5.500			4.488	5.039
200 × 65	219.1 × 76.1	225PSI 1.6MPa		87.5	155
8 × 2 1/2	8.625 × 3.000			3.445	6.102
200 × 80	219.1 × 88.9			94.5	155
8 × 3	8.625 × 3.500			3.720	6.102
200 × 100	219.1 × 108.0			103	149
8 × 4	8.625 × 4.250			4.055	5.866
200 × 100	219.1 × 114.3			103	149
8 × 4	8.625 × 4.500			4.055	5.866
200 × 125	219.1 × 133.0			118	156
8 × 5	8.625 × 5.250			4.646	6.142
200 × 125	219.1 × 139.7			118	156
8 × 5	8.625 × 5.500			4.646	6.142
200 × 150	219.1 × 159.0			124	158
8 × 6	8.625 × 5.500			4.882	6.220
200 × 150	219.1 × 165.1			133	158
8 × 6	8.625 × 6.500			5.236	6.220
250 × 100	273.0 × 114.3			136	186
10 × 4	10.75 × 4.250			5.354	7.323
250 × 150	273.0 × 165.1			136	186
10 × 6	10.75 × 6.500			5.354	7.323
250 × 200	273.0 × 219.1			165	190
10 × 8	10.750 × 8.625			6.496	7.480
300 × 200	323.9 × 219.1			165	215
12 × 8	12.750 × 8.625			6.496	8.465
300 × 250	323.9 × 273.0			192	215
12 × 10	12.750 × 10.750			7.559	8.465

XGQT08S

Threaded Reducing Tee



Specification	Nominal Size	Pipe O.D	Working Pressure		Dimensions	
			PSI/Mpa		L (mm/in)	L ₁ (mm/in)
D × Rc	mm/in	mm/in	工作压力		尺寸	尺寸
规格	规格尺寸	管子尺寸	UL/FM	国标		
60×Rc1	50 × 25	60.3 × 33.7	300PSI 2.07MPa		59.5	55.5
	2 × 1	2.375 × 1.315			2.343	2.185
					70	70
60×Rc1¼	50 × 32 2 × 1¼	60.3 × 42.4 2.375 × 1.660			2.756	2.756
					64.5	55.5
60×Rc1½	50 × 40 2 × 1½	60.3 × 48.3 2.375 × 1.900			2.539	2.185
					64.5	55.5
76×Rc1	65 × 25	76.1 × 33.7			2.539	2.185
					66.5	66.5
					2.618	2.618
76×Rc1¼	2½ × 1	3.000 × 1.315			76	76
					2.992	2.992
					66.5	66.5
76×Rc1½	65 × 32 2 × 1¼	76.1 × 42.4 3.000 × 1.660			2.618	2.618
					66.5	66.5
76×Rc2	65 × 40 2½ × 1½	76.1 × 48.3 3.000 × 1.900			2.618	2.618
					73.5	67.5
89×Rc1	80 × 25 3 × 1	88.9 × 33.7 3.500 × 1.315			2.894	2.657
					59.5	69.5
89×Rc1¼	80 × 32 3 × 1¼	88.9 × 42.4 3.500 × 1.660			2.343	2.736
					66.5	73.5
89×Rc1½	80 × 40 3 × 1½	88.9 × 48.3 3.500 × 1.900			2.618	2.894
					66.5	73.5
89×Rc2	80 × 50 3 × 2	88.9 × 60.3 3.500 × 2.375			2.618	2.894
					73.5	73.5
89×Rc2½	80 × 65 3 × 2½	88.9 × 76.1 3.500 × 3.000			2.894	2.894
					82	79
114×Rc1	100 × 25 4 × 1	114.3 × 33.7 4.500 × 1.315			3.228	3.110
					64	80
					2.520	3.150
114×Rc1¼	100 × 32 4 × 1¼	114.3 × 42.4 4.500 × 1.660	67.5	82		
			2.657	3.228		
114×Rc1½	100 × 40 4 × 1½	114.3 × 48.3 4.500 × 1.900	67.5	82		
			2.657	3.228		
114×Rc2	100 × 50 4 × 2	114.3 × 60.3 4.500 × 2.375	78	87		
			3.071	3.425		
114×Rc2½	100 × 65 4 × 2½	114.3 × 76.1 4.500 × 3.000	82	87		
			3.228	3.425		
114×Rc3	100 × 80 4 × 3	114.3 × 88.9 4.500 × 3.500	92	95		
			3.622	3.740		
140×Rc1	125 × 25 5 × 1	139.7 × 33.7 5.500 × 1.315	62	100		
			2.441	3.937		
140×Rc1¼	125 × 32 5 × 1¼	139.7 × 42.4 5.500 × 1.660	66	102		
			2.598	4.016		
140×Rc1½	125 × 40 5 × 1½	139.7 × 48.3 5.500 × 1.900	69.5	102		
			2.736	4.016		
140×Rc2	125 × 50 5 × 2	139.7 × 60.3 5.500 × 2.375	76.5	102		
			3.012	4.016		
140×Rc2½	125 × 65 5 × 2½	139.7 × 76.1 5.500 × 3.000	82	107		
			3.228	4.213		
140×Rc3	125 × 80 5 × 3	139.7 × 88.9 5.500 × 3.500	92	107		
			3.622	4.213		
165×Rc1½	150 × 40 6 × 1½	165.1 × 48.3 6.500 × 1.900	76.5	107		
			3.012	4.213		
165×Rc2	150 × 50 6 × 2	165.1 × 60.3 6.500 × 2.375	76.5	107		
			3.012	4.213		
165×Rc2½	150 × 65 6 × 2½	165.1 × 76.1 6.500 × 3.000	88	122		
			3.465	4.803		
165×Rc3	150 × 80 6 × 3	165.1 × 88.9 6.500 × 3.500	95	122		
			3.740	4.803		
165×Rc4	150 × 100 6 × 4	165.1 × 114.3 6.500 × 4.500	105	122		
			4.134	4.803		
219×Rc2	200 × 50 8 × 2	219.1 × 60.3 8.625 × 2.375	88	138		
			3.465	5.433		
219×Rc2½	200 × 65 8 × 2½	219.1 × 76.1 8.625 × 3.000	88	138		
			3.465	5.433		
219×Rc3	200 × 80 8 × 3	219.1 × 88.9 8.625 × 3.500	97	146		
			3.819	5.748		
219×Rc4	200 × 100 8 × 4	219.1 × 114.3 8.625 × 4.500	113	146		
			4.449	5.748		

XGQT10

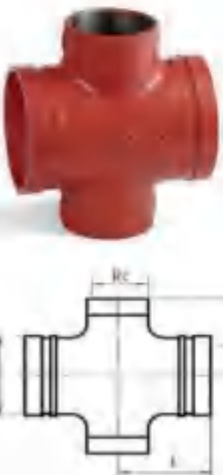
Grooved Cross Reducing



Nominal Size	Pipe O.D	Working Pressure		Dimensions	
mm/in	mm/in	PSI/Mpa		L (mm/in)	L ₁ (mm/in)
规格	管子尺寸	工作压力		尺寸	尺寸
		UL/FM	国标		
80 × 65	88.9 × 76.1	300PSI 2.07MPa	363PSI 2.5MPa	74	84
3 × 2½	3.500 × 3.000			2.913	3.307
100 × 65	114.3 × 76.1			74	96
4 × 2½	4.500 × 3.000			2.913	3.780
100 × 80	114.3 × 88.9			84	96
4 × 3	4.500 × 3.500			3.307	3.780
125 × 65	139.7 × 76.1			74	113
5 × 2½	5.500 × 3.000			2.913	4.449
125 × 80	139.7 × 88.9			84	113
5 × 3	5.500 × 3.500			3.307	4.449
125 × 100	139.7 × 114.3			98	113
5 × 4	5.500 × 4.500			3.858	4.449
150 × 100	159.0 × 108.0			98	122
6 × 4	6.250 × 4.250			3.858	4.803
150 × 65	165.1 × 76.1			78	126
6 × 2½	6.500 × 3.000			3.071	4.961
150 × 80	165.1 × 88.9			84	126
6 × 3	6.500 × 3.500			3.307	4.961
150 × 100	165.1 × 114.3			102	122
6 × 4	6.500 × 4.500			4.016	4.803
200 × 100	219.1 × 114.3			103	149
8 × 4	8.625 × 4.500			4.055	5.866
200 × 150	219.1 × 165.1			133	158
8 × 6	8.625 × 6.500			5.236	6.220

XGQT10s

Threaded Reducing Cross



Specification	Nominal Size	Pipe O.D	Working Pressure		Dimensions	
D×Rc	mm/in	mm/in	PSI/Mpa		L (mm/in)	L ₁ (mm/in)
规格	规格尺寸	管子尺寸	工作压力		尺寸	尺寸
			UL/FM	国标		
89×Rc1½	80 × 32 3 × 1¼	88.9 × 42.4 3.500 × 1.660	300PSI 2.07MPa	363PSI 2.5MPa	66.5	73.5
89×Rc1½	80 × 40 3 × 1½	88.9 × 48.3 3.500 × 1.900			2.618	2.894
89×Rc2	80 × 50 3 × 2	88.9 × 60.3 3.500 × 2.375			66.5	73.5
89×Rc2½	80 × 65 3 × 2½	88.9 × 76.1 3.500 × 3.000			2.618	2.894
114×Rc1½	100 × 40 4 × 1½	114.3 × 48.3 4.500 × 1.900			73.5	73.5
114×Rc2	100 × 50 4 × 2	114.3 × 60.3 4.500 × 2.375			2.894	2.894
114×Rc2½	100 × 65 4 × 2½	114.3 × 76.1 4.500 × 3.000			82	79
114×Rc3	100 × 80 4 × 3	114.3 × 88.9 4.500 × 3.500			3.228	3.110
165×Rc2	150 × 50 6 × 2	165.1 × 60.3 6.500 × 2.375			67.5	82
165×Rc2½	150 × 65 6 × 2½	165.1 × 76.1 6.500 × 3.000			2.657	3.228
165×Rc3	150 × 80 6 × 3	165.1 × 88.9 6.500 × 3.500			78	87
165×Rc4	150 × 100 6 × 4	165.1 × 114.3 6.500 × 4.500			3.071	3.425
					82	87
					3.228	3.425
					92	95
					3.622	3.740
					76.5	107
					3.012	4.213
					88	122
					3.465	4.803
					95	122
					3.740	4.803
					105	122
					4.134	4.803

XGQT11S

Threaded Reducer Concentric



Specification	Nominal Size	Pipe O.D	Working Pressure		Dimensions
D×Rc	mm/in	mm/in	PSI/Mpa		L (mm/in)
规格	规格尺寸	管子尺寸	工作压力		尺寸
			UL/FM	国标	
60×Rc¼	50 × 20 2 × ¾	60.3 × 26.9 2.375 × 1.050	300PSI 2.07MPa	363PSI 2.5MPa	62.5
60×Rc1	50 × 25 2 × 1	60.3 × 33.7 2.375 × 1.315			2.461
60×Rc1¼	50 × 31 2 × 1¼	60.3 × 42.4 2.375 × 1.660			62.5
60×Rc1½	50 × 40 2 × 1½	60.3 × 48.3 2.375 × 1.900			2.461
73×Rc1	65 × 25 2½ × 1	73.0 × 33.7 2.857 × 1.315			62.5
76×Rc1¼	65 × 32 2½ × 1¼	76.1 × 42.4 3.000 × 1.660			2.461
76×Rc1½	65 × 40 2½ × 1½	76.1 × 48.3 3.000 × 1.900			62.5
76×Rc2	65 × 50 2½ × 2	76.1 × 60.3 3.000 × 2.375			2.461
89×Rc1	80 × 25 3 × 1	88.9 × 33.7 3.500 × 1.315			62.5
89×Rc1¼	80 × 32 3 × 1¼	88.9 × 42.4 3.500 × 1.660			2.461
89×Rc1½	80 × 40 3 × 1½	88.9 × 48.3 3.500 × 1.900			62.5
89×Rc2	80 × 50 3 × 2	88.9 × 60.3 3.500 × 2.375			2.461
89×Rc2½	80 × 65 3 × 2½	88.9 × 76.1 3.500 × 3.000			62.5
114×Rc1	100 × 25 4 × 1	114.3 × 33.7 4.500 × 1.315			73.5
114×Rc1¼	100 × 32 4 × 1¼	114.3 × 42.4 4.500 × 1.660			2.894
114×Rc1½	100 × 40 4 × 1½	114.3 × 48.3 4.500 × 1.900			73.5
114×Rc2	100 × 50 4 × 2	114.3 × 60.3 4.500 × 2.375			2.894
114×Rc2½	100 × 65 4 × 2½	114.3 × 76.1 4.500 × 3.000			73.5
114×Rc3	100 × 80 4 × 3	114.3 × 88.9 4.500 × 3.500			2.894
133×Rc2½	125 × 65 5 × 2½	133.0 × 76.1 5.250 × 3.000			87
133×Rc3	125 × 80 5 × 3	133.0 × 88.9 5.250 × 3.500			3.425
140×Rc1	125 × 25 5 × 1	139.7 × 33.7 5.500 × 1.315			87
140×Rc1¼	125 × 32 5 × 1¼	139.7 × 42.4 5.500 × 1.660			3.425
140×Rc1½	125 × 40 5 × 1½	139.7 × 48.3 5.500 × 1.900			87
140×Rc2	125 × 50 5 × 2	139.7 × 60.3 5.500 × 2.375			3.425
140×Rc2½	125 × 65 5 × 2½	139.7 × 76.1 5.500 × 3.000			87
140×Rc3	125 × 80 5 × 3	139.7 × 88.9 5.500 × 3.500			3.425
159×Rc2½	150 × 65 6 × 2½	159.0 × 76.1 6.250 × 3.000			100
159×Rc3	150 × 80 6 × 3	159.0 × 88.9 6.250 × 3.500			3.937
165×Rc1	150 × 25 6 × 1	165.1 × 33.7 6.500 × 1.315			100
165×Rc1¼	150 × 32 6 × 1¼	165.1 × 42.4 6.500 × 1.660			3.937
165×Rc1½	150 × 40 6 × 1½	165.1 × 48.3 6.500 × 1.900			100
165×Rc2	150 × 50 6 × 2	165.1 × 60.3 6.500 × 2.375			3.937
165×Rc2½	150 × 65 6 × 2½	165.1 × 76.1 6.500 × 3.000			100
165×Rc3	150 × 80 6 × 3	165.1 × 88.9 6.500 × 3.500			3.937
165×Rc4	150 × 100 6 × 4	165.1 × 114.3 6.500 × 4.500			100
219×Rc2	200 × 50 8 × 2	219.1 × 60.3 8.625 × 2.375			125
219×Rc2½	200 × 65 8 × 2½	219.1 × 76.1 8.625 × 3.000			4.921
219×Rc3	200 × 80 8 × 3	219.1 × 88.9 8.625 × 3.500			125
					4.921

XGQT11

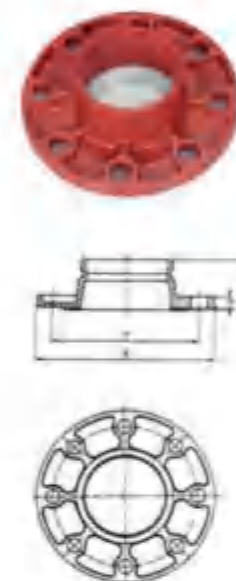
Reducer Concentric



Nominal Size	Pipe O.D	Working Pressure		Dimensions
mm/in	mm/in	PSI/Mpa		L ₂ (mm/in)
规格	管子尺寸	工作压力		尺寸
		UL/FM	国标	
50 × 40	60.3 × 48.3	300PSI 2.07MPa	363PSI 2.5MPa	62.5
2 × 1½	2.375 × 1.900			2.461
65 × 25	76.1 × 33.7			62.5
2½ × 1	3.000 × 1.315			2.461
65 × 50	76.1 × 60.3			62.5
2½ × 2	3.000 × 2.375			2.461
80 × 32	88.9 × 42.4			62.5
3 × 1¼	3.500 × 1.660			2.461
80 × 50	88.9 × 60.3			62.5
3 × 2	3.500 × 2.375			2.461
80 × 65	88.9 × 76.1			62.5
3 × 2½	3.500 × 3.000			2.461
100 × 65	108.0 × 76.1			74
4 × 2½	4.250 × 3.000			2.913
100 × 80	108.0 × 88.9			74
4 × 3	4.250 × 3.500			2.913
100 × 50	114.3 × 60.3			74
4 × 2	4.500 × 2.375			2.913
100 × 65	114.3 × 76.1			74
4 × 2½	4.500 × 3.000			2.913
100 × 80	114.3 × 88.9			74
4 × 3	4.500 × 3.500			2.913
125 × 100	133.0 × 108.0			87
5 × 4	5.250 × 4.250			3.425
125 × 65	139.7 × 76.1			87
5 × 2½	5.500 × 3.000			3.425
125 × 80	139.7 × 88.9			87
5 × 3	5.500 × 3.500			3.425
125 × 100	139.7 × 114.3			87
5 × 4	5.500 × 4.500			3.425
150 × 65	159.0 × 76.1	300PSI 2.07MPa	363PSI 2.5MPa	100
6 × 2½	6.250 × 3.000			3.937
150 × 100	159.0 × 108.0			100
6 × 4	6.250 × 4.250			3.937
150 × 125	159.0 × 133.0			100
6 × 5	6.250 × 5.250			3.937
150 × 50	165.1 × 60.3			100
6 × 2	6.500 × 2.375			3.937
150 × 65	165.1 × 76.1			100
6 × 2½	6.500 × 3.000			3.937
150 × 80	165.1 × 88.9			100
6 × 3	6.500 × 3.500			3.937
150 × 100	165.1 × 114.3			100
6 × 4	6.500 × 4.500			3.937
150 × 125	165.1 × 139.7			100
6 × 5	6.500 × 5.500			3.937
200 × 65	219.1 × 76.1			125
8 × 2½	8.625 × 3.000			4.921
200 × 80	219.1 × 88.9			125
8 × 3	8.625 × 3.500			4.921
200 × 100	219.1 × 114.3			125
8 × 4	8.625 × 4.500			4.921
200 × 125	219.1 × 139.7			125
8 × 5	8.625 × 5.500			4.921
200 × 150	219.1 × 165.1			125
8 × 6	8.625 × 6.500			4.921
250 × 100	273.0 × 114.3	225PSI 1.6MPa		150
10 × 4	10.750 × 4.500			5.906
250 × 125	273.0 × 139.7			150
10 × 5	10.750 × 5.500			5.906
250 × 150	273.0 × 165.1			150
10 × 6	10.750 × 6.500			5.906
250 × 200	273.0 × 219.1			150
10 × 8	10.750 × 8.625			5.906

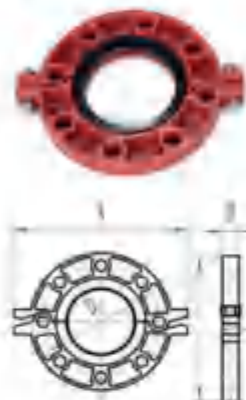
XGQT13

Adaptor Flange



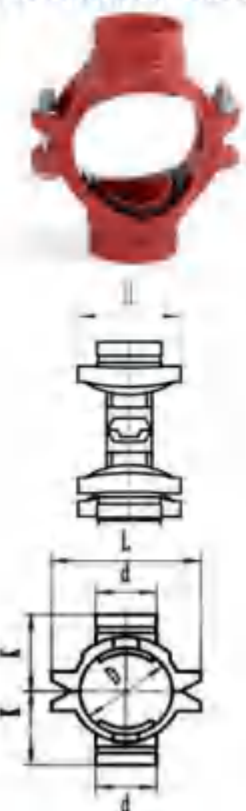
Nominal Size	Pipe O.D	Working Pressure		Dimensions				Bolt/Nut Size
mm/in	mm/in	PSI/Mpa		L (mm/in)	X (mm/in)	Y (mm/in)	Z (mm/in)	No. - Size (mm)
规格	管子尺寸	工作压力		尺寸				螺栓规格和尺寸
		UL/FM	国标					
50	60.3	225PSI 1.6MPa		63.5	125	165	15	4-φ18
2	2.374			2.500	4.92	6.50	0.59	4-φ18
65	76.1			63.5	145	185	15	4-φ18
2½	2.996			2.500	5.71	7.28	0.59	4-φ18
80	88.9			63.5	160	200	15	8-φ18
3	3.500			2.500	6.30	7.87	0.59	8-φ18
100	108.0			68.5	180	220	16	8-φ18
4	4.252			2.697	7.09	8.66	0.63	8-φ18
100	114.3			68.5	180	220	16	8-φ18
4	4.500			2.697	7.09	8.66	0.63	8-φ18
125	133.0			68.5	210	250	16	8-φ18
5	5.236			2.697	8.27	9.84	0.63	8-φ18
100	139.7			68.5	210	250	16	8-φ18
4	5.500			2.697	8.27	9.84	0.63	8-φ18
150	159.0			68.5	240	285	17	8-φ22
6	6.260			2.697	9.45	11.22	0.67	8-φ22
150	165.1			68.5	240	285	17	8-φ22
6	6.500			2.697	9.45	11.22	0.67	8-φ22
150	216.3			78	295	340	18	12-φ22
6	8.516			3.071	11.61	13.39	0.71	12-φ22
200	219.1			78	295	340	18	12-φ22
8	8.626			3.071	11.61	13.39	0.71	12-φ22
250	273.0			83	355	405	19	12-φ26
10	10.748			3.268	13.98	15.94	0.75	12-φ26
300	323.9			88	410	460	21	12-φ26
12	12.752			3.465	16.14	18.11	0.83	12-φ26
50	60.3	300PSI 2.07MPa	363PSI 2.5MPa	63.5	125	165	16	4-φ18
2	2.374			2.500	4.92	6.50	0.63	4-φ18
65	76.1			63.5	145	185	16	8-φ18
2½	2.996			2.500	5.71	7.28	0.63	8-φ18
80	88.9			63.5	160	200	16	8-φ18
3	3.500			2.500	6.30	7.87	0.63	8-φ18
100	108.0			68.5	190	235	17	8-φ22
4	4.252			2.697	7.48	9.25	0.67	8-φ22
100	114.3			68.5	190	235	17	8-φ22
4	4.500			2.697	7.48	9.25	0.67	8-φ22
125	133.0			68.5	220	270	17	8-φ26
5	5.236			2.697	8.66	10.63	0.67	8-φ26
100	139.7			68.5	220	270	17	8-φ26
4	5.500			2.697	8.66	10.63	0.67	8-φ26
150	159.0			68.5	250	300	18	8-φ26
6	6.260			2.697	9.84	11.81	0.71	8-φ26
150	165.1			68.5	250	300	18	8-φ26
6	6.500			2.697	9.84	11.81	0.71	8-φ26
150	216.3			78	310	360	19	12-φ26
6	8.516			3.071	12.20	14.17	0.75	12-φ26
200	219.1			78	310	360	19	12-φ26
8	8.626			3.071	12.20	14.17	0.75	12-φ26
250	273.0			83	370	425	21	12-φ30
10	10.748			3.268	14.57	16.73	0.83	12-φ30
300	323.9			88	430	485	23	12-φ30
12	12.752			3.465	16.93	19.09	0.91	12-φ30
200	219.1	150PSI 1.0MPa		78	295	340	17	8-φ22
8	8.626			3.071	11.61	13.39	0.67	8-φ22

XGQT14 Split Flange



Nominal Size	Pipe O.D	Working Pressure		Dimensions				Bolt/Nut Size
mm/in	mm/in	PSI/Mpa		A (mm/in)	B (mm/in)	D (mm/in)	φ (mm/in)	No. - Size (mm)
规格	管子尺寸	工作压力		尺寸				螺栓规格和尺寸
		UL/FM	国际					
65	76.1	225PSI 1.6MPa	232PSI 1.6MPa	230	18.5	145	185	4-φ18
2½	2.996			9.06	0.73	5.71	7.28	
80	88.9			254	18.5	160	200	8-φ18
3	3.500			10.00	0.73	6.30	7.87	
100	114.3			272	18.5	180	220	8-φ18
4	4.500			10.71	0.73	7.09	8.66	
125	139.7			305	21.5	210	250	8-φ18
5	5.500			12.01	0.85	8.27	9.84	
150	165.1			340	21.5	240	285	8-φ22
6	6.500			13.39	0.85	9.45	11.22	
200	219.1			400	24.5	295	340	12-φ22
8	8.626			15.75	0.96	11.61	13.39	

XGQT15 Grooved Mechanical Cross



Nominal Size	Pipe O.D (D × d)	Working Pressure	Hole Dia mm/in	Dimensions			Bolt/Nut Size	
mm/in	mm/in	PSI/Mpa	mm/in	K (mm/in)	L (mm/in)	H (mm/in)	No. × Size (mm)	
规格	管子尺寸	工作压力	开孔尺寸	尺寸			螺栓规格	
		UL/FM	UL/FM					
100 × 25 4 × 1	114.3 × 33.7 4.500 × 1.315	300PSI 2.07MPa	363PSI 2.5MPa	38	102	180	80	M12×70
	1.20			4.02	7.09	3.15		
100 × 32 4 × 1¼	114.3 × 42.4 4.500 × 1.660			51	102	180	92	M12×70
	1.60			4.02	7.09	3.62		
100 × 40 4 × 1½	114.3 × 48.3 4.500 × 1.900			51	102	180	92	M12×70
	1.60			4.02	7.09	3.62		
100 × 50 4 × 2	114.3 × 60.3 4.500 × 2.375			64	102	180	107	M12×70
	2.00			4.02	7.09	4.21		
100 × 65 4 × 2½	114.3 × 76.1 4.500 × 3.000			70	102	180	114	M12×70
	2.00			4.02	7.09	4.49		
100 × 80 4 × 3	114.3 × 88.9 4.500 × 3.500			89	102	180	134	M12×70
	2.00			4.02	7.09	5.28		
125 × 65 5 × 2½	139.7 × 76.1 5.500 × 3.000			70	115	217	114	M16×85
	2.00			4.53	8.54	4.49		
125 × 80 5 × 3	139.7 × 88.9 5.500 × 3.500			89	115	217	134	M16×85
	2.00			4.53	8.54	5.28		
150 × 65 6 × 2½	159.0 × 76.1 6.250 × 3.000			70	125	239	114	M16×95
	2.00			4.92	9.41	4.49		
150 × 80 6 × 3	159.0 × 88.9 6.250 × 3.500			89	125	239	134	M16×95
	2.00			4.92	9.41	5.28		
150 × 100 6 × 4	159.0 × 106.0 6.250 × 4.250			114	130	239	162	M16×95
	2.00			5.12	9.41	6.36		
150 × 50 6 × 2	165.1 × 60.3 6.500 × 2.375			64	128	244	107	M16×95
	2.00			5.04	9.61	4.21		
150 × 65 6 × 2½	165.1 × 76.1 6.500 × 3.000	70	128	244	114	M16×95		
	2.00	5.04	9.61	4.49				
150 × 80 6 × 3	165.1 × 88.9 6.500 × 3.500	89	128	244	134	M16×95		
	2.00	5.04	9.61	5.28				
150 × 100 6 × 4	165.1 × 114.3 6.500 × 4.500	114	132	244	162	M16×95		
	2.00	5.24	9.61	6.36				
200 × 50 8 × 2	219.1 × 60.3 8.625 × 2.375	64	156	307	107	M18×100		
	2.00	6.14	12.09	4.21				
200 × 65 8 × 2½	219.1 × 76.1 8.625 × 3.000	70	156	307	114	M18×100		
	2.00	6.14	12.09	4.49				
200 × 80 8 × 3	219.1 × 88.9 8.625 × 3.500	89	156	307	134	M18×100		
	2.00	6.14	12.09	5.28				
200 × 100 8 × 4	219.1 × 114.3 8.625 × 4.500	114	158	307	162	M18×100		
	2.00	6.22	12.09	6.36				
250 × 100 10 × 4	273.0 × 114.3 10.750 × 4.500	187	187	384	162	M20×110		
		7.36	7.36	15.12	6.36			

XGQT15S Threaded Mechanical Cross



Nominal Size	Pipe O.D (D × Rc)	Working Pressure	Hole Dia mm/in	Dimensions			Bolt/Nut Size
mm/in	mm/in	PSI/Mpa	mm/in	K (mm/in)	L (mm/in)	H (mm/in)	No. - Size (mm)
规格	管子尺寸	工作压力	开孔尺寸	尺寸			螺栓规格
		UL/FM					
65 × 25	76.1 × 33.7	100PSI 2.07MPa	38	68	136	80	M12×65
2½ × 1	3,000 × 1.315		1.20	2.68	5.35	3.15	
65 × 32	76.1 × 42.4		51	70	136	92	M12×65
2½ × 1¼	3,000 × 1.660		1.60	2.76	5.35	3.62	
65 × 40	76.1 × 48.3		51	70	136	92	M12×65
2½ × 1½	3,000 × 1.900		1.60	2.76	5.35	3.62	
80 × 25	88.9 × 33.7		38	75	149	80	M12×65
3 × 1	3,500 × 1.315		1.20	2.95	5.87	3.15	
80 × 32	88.9 × 42.4		51	78	149	92	M12×65
3 × 1¼	3,500 × 1.660		1.60	3.07	5.87	3.62	
80 × 40	88.9 × 48.3		51	78	149	92	M12×65
3 × 1½	3,500 × 1.900		1.60	3.07	5.87	3.62	
80 × 50	88.9 × 60.3		64	82	149	107	M12×65
3 × 2	3,500 × 2.375		2.00	3.23	5.87	4.21	
100 × 25	108.0 × 33.7		38	87.5	174	80	M12×70
4 × 1	4,250 × 1.315		1.20	3.44	6.85	3.15	
100 × 32	108.0 × 42.4		51	90	174	92	M12×70
4 × 1¼	4,250 × 1.660		1.60	3.54	6.85	3.62	
100 × 40	108.0 × 48.3		51	90	174	92	M12×70
4 × 1½	4,250 × 1.900		1.60	3.54	6.85	3.62	
100 × 50	108.0 × 60.3		64	94	174	107	M12×70
4 × 2	4,250 × 2.375		2.00	3.70	6.85	4.21	
100 × 65	108.0 × 76.1		70	100	174	114	M12×70
4 × 2½	4,250 × 3.000		2.00	3.94	6.85	4.49	
100 × 80	114.3 × 88.9	89	104	180	134	M12×70	
4 × 3	4,500 × 1.500	2.00	4.09	7.09	5.28		
125 × 65	133.0 × 76.1	70	112	210	114	M16×85	
5 × 2½	5,250 × 3.000	2.00	4.41	8.27	4.49		
125 × 80	133.0 × 88.9	89	113	210	134	M16×85	
5 × 3	5,250 × 3.500	2.00	4.45	8.27	5.28		
125 × 100	139.7 × 108.0	114	120	217	162	M16×85	
5 × 4	5,500 × 4.250	2.00	4.66	8.54	6.36		
150 × 65	159.0 × 76.1	70	116	217	114	M16×85	
6 × 2½	6,250 × 3.000	2.00	4.57	8.54	4.49		
150 × 80	159.0 × 88.9	89	117	217	134	M16×85	
6 × 3	6,250 × 3.500	2.00	4.61	8.54	5.28		
150 × 100	159.0 × 108.0	114	120	217	162	M16×85	
6 × 4	6,250 × 4.250	2.00	4.66	8.54	6.36		
200 × 50	219.1 × 60.3	64	119	239	107	M16×95	
8 × 2	8,625 × 2.375	2.00	4.69	9.41	4.21		
200 × 65	219.1 × 76.1	70	124	239	114	M16×95	
8 × 2½	8,625 × 3.000	2.00	4.88	9.41	4.49		
200 × 80	219.1 × 88.9	89	125	239	134	M16×95	
8 × 3	8,625 × 3.500	2.00	4.92	9.41	5.28		
200 × 100	219.1 × 114.3	114	127	244	162	M16×95	
8 × 4	8,625 × 4.500	2.00	5.00	9.61	6.36		
250 × 100	273.0 × 114.3	114	132	244	162	M16×95	
10 × 4	10,750 × 4.500	2.00	5.20	9.61	6.36		
200 × 25	219.1 × 33.7	38	143	307	80	M16×100	
8 × 1	8,625 × 1.315	1.20	5.63	12.09	3.15		
200 × 32	219.1 × 42.4	51	145	307	92	M16×100	
8 × 1¼	8,625 × 1.660	1.60	5.71	12.09	3.62		
200 × 40	219.1 × 48.3	51	145	307	92	M16×100	
8 × 1½	8,625 × 1.900	1.60	5.71	12.09	3.62		
200 × 50	219.1 × 60.3	64	149	307	107	M16×100	
8 × 2	8,625 × 2.375	2.00	5.87	12.09	4.21		
200 × 65	219.1 × 76.1	70	155	307	114	M16×100	
8 × 2½	8,625 × 3.000	2.00	6.10	12.09	4.49		
200 × 80	219.1 × 88.9	89	158	307	134	M16×100	
8 × 3	8,625 × 3.500	2.00	6.22	12.09	5.28		
250 × 25	273.0 × 33.7	38	175	384	80	M20×110	
10 × 1	10,750 × 1.315	1.20	6.89	15.12	3.15		
250 × 50	273.0 × 60.3	64	179	384	107	M20×110	
10 × 2	10,750 × 2.375	2.00	7.05	15.12	4.21		

XGQT16

Blind Cap



Nominal Size	Pipe O.D	Working Pressure	Dimensions
mm/in	mm/in	PSI/Mpa	T (mm/in)
规格	管子尺寸	工作压力	尺寸
50	60.3	300PSI 2.07MPa	24
2	2.374		0.94
65	76.1		24
2½	2.996		0.94
80	88.9		24
3	3.500		0.94
100	114.3		26
4	4.500		1.02
125	139.7		26
5	5.500		1.02
150	165.1		26
6	6.500		1.02
200	219.1		30
8	8.626		1.18

XGQT17

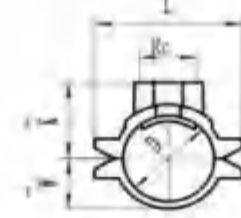
Grooved Mechanical Tee



Nominal Size	Pipe O.D (D x d)	Working Pressure	Hole Dia	Dimensions	Bolt/Nut Size
mm/in	mm/in	PSI/Mpa	mm/in	K (mm/in) W (mm/in) L (mm/in) H (mm/in) A (mm/in)	mm/in
规格	管子尺寸	工作压力	开孔尺寸	尺寸	螺栓规格
100 x 25	114.3 x 33.7	300PSI 2.07MPa	38	102 71 180 80	M12 x 70
4 x 1	4.500 x 1.315		1.20	4.02 2.80 7.09 3.15	
100 x 32	114.3 x 42.4		51	102 71 180 92	M12 x 70
4 x 1¼	4.500 x 1.660		1.60	4.02 2.80 7.09 3.62	
100 x 40	114.3 x 48.3		51	102 71 180 92	M12 x 70
4 x 1½	4.500 x 1.900		1.60	4.02 2.80 7.09 3.62	
100 x 50	114.3 x 60.3		64	102 71 180 107	M12 x 70
4 x 2	4.500 x 2.375		2.00	4.02 2.80 7.09 4.21	
100 x 65	114.3 x 76.1		70	102 71 180 114	M12 x 70
4 x 2½	4.500 x 3.000		2.00	4.02 2.80 7.09 4.49	
100 x 80	114.3 x 88.9		89	102 71 180 134	M12 x 70
4 x 3	4.500 x 3.500		2.00	4.02 2.80 7.09 5.28	
125 x 65	139.7 x 76.1		70	115 84 217 114	M16 x 85
5 x 2½	5.500 x 3.000		2.00	4.53 3.31 8.54 4.49	
125 x 80	139.7 x 88.9		89	115 84 217 134	M16 x 85
5 x 3	5.500 x 3.500		2.00	4.53 3.31 8.54 5.28	
150 x 65	159.0 x 76.1	300PSI 2.07MPa	70	125 93 228 114	M16 x 85
6 x 2½	6.250 x 3.000		2.00	4.92 3.66 9.41 4.49	
150 x 80	159.0 x 88.9		89	125 93 228 134	M16 x 85
6 x 3	6.250 x 3.500		2.00	4.92 3.66 9.41 5.28	
150 x 100	159.0 x 106.6		114	135 97 244 162	M16 x 95
6 x 4	6.250 x 4.250		2.00	5.12 3.66 9.41 6.38	
150 x 50	159.0 x 60.3		64	128 97 244 107	M16 x 95
6 x 2	6.500 x 2.375		2.00	5.04 3.82 9.61 4.21	
150 x 65	159.0 x 76.1		70	128 97 244 114	M16 x 95
6 x 2½	6.500 x 3.000		2.00	5.04 3.82 9.61 4.49	
150 x 80	159.0 x 88.9		89	128 97 244 134	M16 x 95
6 x 3	6.500 x 3.500		2.00	5.04 3.82 9.61 5.28	
150 x 100	159.0 x 106.6		114	135 97 244 162	M16 x 95
6 x 4	6.500 x 4.500		2.00	5.24 3.82 9.61 6.38	
200 x 50	219.1 x 60.3	300PSI 2.07MPa	64	156 126 307 107	M16 x 100
6 x 2	8.625 x 2.375		2.00	6.14 4.96 12.09 4.21	
200 x 65	219.1 x 76.1		70	156 126 307 114	M16 x 100
6 x 2½	8.625 x 3.000		2.00	6.14 4.96 12.09 4.49	
200 x 80	219.1 x 88.9		89	156 126 307 134	M16 x 100
6 x 3	8.625 x 3.500		2.00	6.14 4.96 12.09 5.28	
250 x 100	273.0 x 114.3		114	158 126 307 162	M16 x 100
8 x 4	8.625 x 4.500		2.00	6.22 4.96 12.09 6.38	
250 x 50	273.0 x 60.3		64	152 126 307 107	M20 x 110
10 x 4	10.750 x 4.500		7.36	5.98 15.12 6.38	

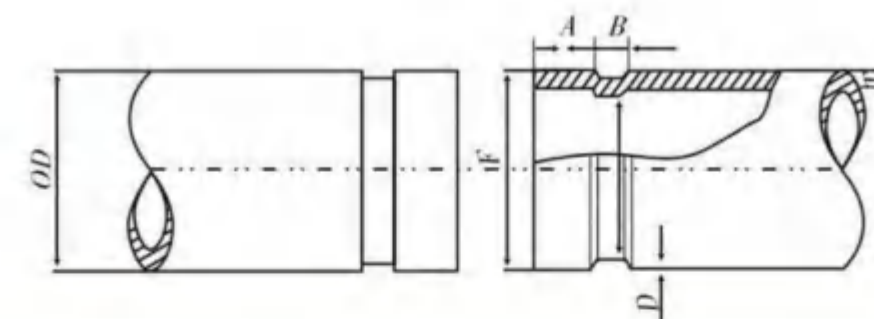
XGQT17S

Threaded Mechanical Tee



Nominal Size	Pipe O.D (D x Rc)	Working Pressure	Hole Dia	Dimensions	Bolt/Nut Size
mm/in	mm/in	PSI/Mpa	mm/in	K (mm/in) W (mm/in) L (mm/in) H (mm/in)	mm/in
规格	管子尺寸	工作压力	开孔尺寸	尺寸	螺栓规格
65 x 25	76.1 x 33.7	300PSI 2.07MPa	38	68 51 136 60	M12 x 65
2½ x 1	3.000 x 1.315		1.20	2.68 2.01 5.35 3.15	
65 x 32	76.1 x 42.4		51	70 51 136 92	M12 x 65
2½ x 1¼	3.000 x 1.660		1.60	2.76 2.01 5.35 3.62	
65 x 40	76.1 x 48.3		51	70 51 136 92	M12 x 65
2½ x 1½	3.000 x 1.900		1.60	2.76 2.01 5.35 3.62	
80 x 25	88.9 x 33.7		38	75 58 149 60	M12 x 65
3 x 1	3.500 x 1.315		1.20	2.95 2.28 5.87 3.15	
80 x 32	88.9 x 42.4		51	78 58 149 92	M12 x 65
3 x 1¼	3.500 x 1.660		1.60	3.07 2.28 5.87 3.62	
80 x 40	88.9 x 48.3		51	78 58 149 92	M12 x 65
3 x 1½	3.500 x 1.900		1.60	3.07 2.28 5.87 3.62	
80 x 50	88.9 x 60.3		64	82 58 149 107	M12 x 65
3 x 2	3.500 x 2.375		2.00	3.23 2.28 5.87 4.21	
100 x 25	108.0 x 33.7		38	87.5 68 174 80	M12 x 70
4 x 1	4.250 x 1.315		1.20	3.44 2.68 6.85 3.15	
100 x 32	108.0 x 42.4	300PSI 2.07MPa	51	90 68 174 92	M12 x 70
4 x 1¼	4.250 x 1.660		1.60	3.54 2.68 6.85 3.62	
100 x 40	108.0 x 48.3		51	90 68 174 92	M12 x 70
4 x 1½	4.250 x 1.900		1.60	3.54 2.68 6.85 3.62	
100 x 50	108.0 x 60.3		64	94 68 174 107	M12 x 70
4 x 2	4.250 x 2.375		2.00	3.70 2.68 6.85 4.21	
100 x 65	108.0 x 76.1		70	100 68 174 114	M12 x 70
4 x 2½	4.250 x 3.000		2.00	3.94 2.68 6.85 4.49	
100 x 80	114.3 x 88.9		89	100 71 180 134	M12 x 70
4 x 3	4.500 x 3.500		2.00	4.09 2.80 7.09 5.28	
125 x 65	139.7 x 76.1		70	112 80 210 114	M16 x 85
5 x 2½	5.250 x 3.000		2.00	4.41 3.15 8.27 4.49	
125 x 80	139.7 x 88.9		89	113 80 210 134	M16 x 85
5 x 3	5.250 x 3.500		2.00	4.45 3.15 8.27 5.28	
125 x 100	139.7 x 106.6	300PSI 2.07MPa	114	128 93 244 162	M16 x 95
6 x 2½	6.250 x 3.000		2.00	4.92 3.66 9.41 4.49	
150 x 65	159.0 x 76.1		70	124 93 239 114	M16 x 95
6 x 2	6.500 x 2.375		2.00	4.88 3.66 9.41 4.21	
150 x 80	159.0 x 88.9		89	125 93 239 134	M16 x 95
6 x 3	6.500 x 3.500		2.00	4.92 3.66 9.41 5.28	
150 x 100	159.0 x 106.6		114	135 97 244 162	M16 x 95
6 x 4	6.500 x 4.500		2.00	5.24 3.82 9.61 6.38	
200 x 50	219.1 x 60.3		64	156 126 307 107	M16 x 100
6 x 2	8.625 x 2.375		2.00	6.14 4.96 12.09 4.21	
200 x 65	219.1 x 76.1		70	156 126 307 114	M16 x 100
6 x 2½	8.625 x 3.000		2.00	6.14 4.96 12.09 4.49	
200 x 80	219.1 x 88.9		89	156 126 307 134	M16 x 100
6 x 3	8.625 x 3.500		2.00	6.14 4.96 12.09 5.28	
250 x 100	273.0 x 114.3	300PSI 2.07MPa	114	158 126 307 162	M16 x 100
8 x 4	8.625 x 4.500		2.00	6.22 4.96 12.09 6.38	
250 x 50	273.0 x 60.3		64	152 126 307 107	M20 x 110
10 x 4	10.750 x 4.500		7.36	5.98 15.12 6.38	

ROLL GROOVE DIMENSIONS



Nominal Size 管道公称通径DN mm/in	Pipe OD 管道外径 OD			Gasket Seat A 管端至沟槽尺寸A ±0.76 mm/in	Groove Width B 沟槽宽度B ±0.76 mm/in	
	Basic 实际尺寸 mm/in	Tolerance 公差 mm/in			Cutting 切割	Rolling 轧制
		+	-			
25 1	33.7 1.327	0.41 0.016	0.68 0.026	15.88 0.625	7.93 0.312	7.14 0.281
32 1¼	42.4 1.669	0.5 0.020	0.6 0.023			
40 1½	48.3 1.900	0.44 0.017	0.52 0.020			
50 2	60.3 2.375	0.61 0.024	0.61 0.024			
65 2½	73.0 2.875	0.74 0.029	0.74 0.029			
65 2½	76.1 3.000	0.76 0.030	0.76 0.030			
80 3	88.9 3.500	0.89 0.035	0.79 0.031			
100 4	108.0 4.250	1.07 0.042				
100 4	114.3 4.500	1.14 0.045				
125 5	133.0 5.250	1.32 0.052				
125 5	139.7 5.500	1.4 0.055				
125 5	141.3 5.563	1.42 0.056				
150 6	159.0 6.250	1.6 0.063				
150 6	165.1 6.500					
150 6	168.3 6.625					
200 8	219.1 8.625					
250 10	273.0 10.750					
300 12	323.9 12.750					
				19.05 0.750	11 0.433	11.91 0.469
					12.7 0.500	

Groove Dia C 沟槽直径C		Groove Depth D (ref) 沟槽深度D (参考) mm/in		Min.Allow Wall Thickness T 管壁最小厚度 T mm/in		Max Allow Flare Dia F 轧制最大伸扁面外径F mm/in
Basic 实际 mm/in	Tolerance 公差 mm/in	Cutting 切割	Rolling 轧制	Cutting 切割	Rolling 轧制	
30.23 1.190	0.38 0.015	1.7 0.067	1.6 0.063	3.3 0.130	1.8 0.071	34.5 1.358
38.99 1.535				3.5 0.138		43.5 1.713
45.09 1.775				3.6 0.142		49.4 1.945
57.15 2.250		62.2 2.449				
69.09 2.720		4 0.157				2.3 0.091
72.26 2.845				77.7 3.059		
84.94 3.344	4.5 0.177		90.6 3.567			
103.73 4.084	5.4 0.213		2.9 0.114	109.7 4.319		
110.08 4.334				116.2 4.575		
129.13 5.084				2.9 0.114	2.9 0.114	
135.48 5.334		141.7 5.579				
137.03 5.395		143.5 5.650				
154.5 6.083		2.16 0.085				5.4 0.213
160.9 6.330	167.1 6.579					
163.96 6.455	170.7 6.720					
214.4 8.441	221.5 8.720					
268.28 10.562	275.4 10.842					
318.29 12.531	326.2 12.842					

Installation Instruction For Rigid & Flexible Coupling



1.Take out the Rigid & Flexible Coupling

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



2.Split the Rigid & Flexible Coupling

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



3.Pipe preparation

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



4.Lubricate gasket

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



5.Gasket installation

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.



6.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.



7.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.



8. installation completed Grooved Coupling

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

Caution

Proper bolt torque is required to achieve rated performance.

Excessive bolt torque will damage castings and bolts and cause the connection to fall off. If the bolt torque is too low, the pressure retaining performance will be reduced, the bending load capacity will be weakened, and leakage will occur or the connection will fall off. Once the pipe connection falls off, it will cause major property loss and serious personal injury.

Specified Bolt Torque

METRIC BOLTS

Bolt Size	Required Torque	
mm	N.M	Lbs-Ft.
M10	40-60	30-45
M12	110-135	80-100
M16	135-175	100-130
M20	175-245	130-180

Installation Instruction For Threaded & Grooved Mechanical Tee



1.Take out the Rigid & Flexible Coupling

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.Split the Rigid & Flexible Coupling

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



3.Pipe preparation

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.Lubricate gasket

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



5.Gasket installation

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



6.Housing installation

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

Caution

Proper bolt torque is required to achieve rated performance.

Excessive bolt torque will damage castings and bolts and cause the connection to fall off. If the bolt torque is too low, the pressure retaining performance will be reduced, the bending load capacity will be weakened, and leakage will occur or the connection will fall off. Once the pipe connection falls off, it will cause major property loss and serious personal injury.

RUBBER GASKET DATA

Mark	Name	Recommended Application Medium	Related Standards	Recommended Application Temperature Range
E	EPDM	water supply, drainage, sewage, normal temperature air, weak acid, and weak alkali	GB 5135.11 GB/T 21873	-30°C~+130°C -22°F~+266°F
		continuous supply of 110°C hot water	GB/T 27572	
D	NITRILE	petroleum, vegetable oil, mineral oil	GB 5135.11 GB/T 23658	-20°C~+80°C -4°F~+176°F
S	SILICON	drinking water	GB/T 28604	-40°C~+180°C
		high-temperature dry air and some high-temperature chemicals	GB 5135.11	-40°F~+356°F
F	FLUORINE	the acid, alkaline solution, and hot lubricating oil	HG/T 2181	-20°C~+180°C -4°F~+356°F
V	NEOPRENE	seawater	—	-20°C~+100°C -4°F~+212°F

PERFORMANCE REQUIREMENTS

Airtight Performance

There must be no air bubbles on the surface of the Jianzhi grooved pipe fittings (hereinafter referred to as "test samples") when the inflation pressure reaches 0.5 MPa.

Compressive Strength

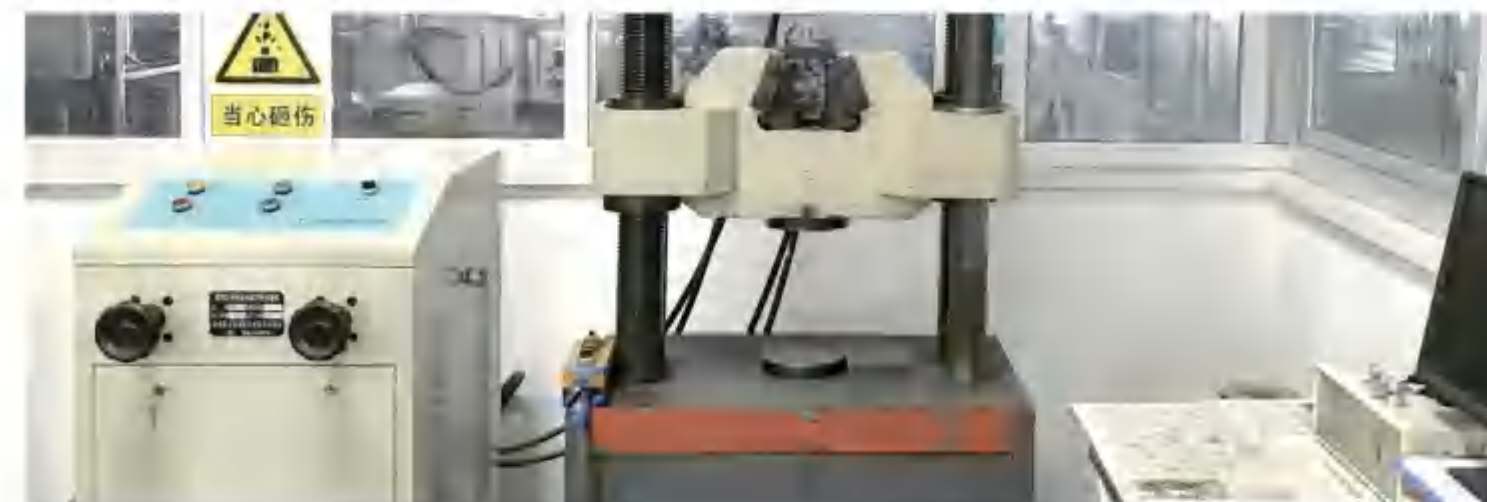
The internal test pressure requirements for the test samples: the nominal size ≤ DN300, and 4 times the rated working pressure; DN300 < the nominal size ≤ DN600, and 2 times the rated working pressure; the test piece shall be free of leakage or damage.

Hermetic Performance

The internal test pressure requirements for the test samples: the nominal size ≤ DN300, and 2 times the rated working pressure; DN300 < the nominal size ≤ DN600, and 1.5 times the rated working pressure; the surface of the test piece shall be free of leakage.

Bearing torque of flange and mechanical tee

Flanges and mechanical tees' bearing torque shall be tested under the provisions of 2.5.5 and the calculation method of the recommended data below. No leakage or fracture shall occur.



CALCULATION PRINCIPLE OF BEARING MOMENT

The bearing torque of flange and mechanical tee is calculated as follows:

$$M = -WL^2/4$$

Mark:

M — Bending moment, measured by Newton meter (N·m);
 W — Weight of the water-filled pipe (including the pipe and the water in it). The pipe is calculated according to the wall thickness grade, rounded up, measured by Newton meter (N·m);
 L — Twice the separation distance of the brackets, and the maximum supporting distance of the pipeline is 3.6 m below DN32 and 4.6 m above DN40.

Low-temperature Resistance of Flanges and Mechanical tees

The test samples shall be tested according to 2.5.6, and there must be no pressure loss and sealing ring damage. The maximum size of the test samples shall not exceed DN300.

Water Impact Resistance

The test samples shall be able to withstand the impact of the water from 0 to the rated working pressure 20,000 times without leakage. The maximum size of the test samples shall not exceed DN300.

High-temperature Aging Resistance of Flanges and Mechanical Tees

The test samples shall be tested in accordance with the provisions of 2.5.7, and there must be no air leakage, adhesion, or damage to the sealing ring. The maximum size of the test component shall not exceed DN300.

Antivibration Performance

The test samples shall be tested by the provisions of 2.5.9 in regards to vibration performance, following which the compressive strength test shall be carried out, and there shall be no leakage or damage. The maximum size of the test samples shall not exceed DN150.

Material test

Jianzhi through sufficient tests to ensure that nodular cast iron or other materials meet the material grade requirements specified in the following table. Nodular cast iron material test: Nodular cast iron material test shall be carried out according to the test method specified in GB/T 1348. Cast steel material test: The cast steel material test is carried out according to the test method specified in GB/T 11352.

Table 1 - Common materials for grooved pipe fittings

Material	Standard Encoding	Common Grades
Ductile Iron	GB/T 1348	QT450-10, QT500-7
Cast Steel	GB/T 11352	ZG270-500

Detection of the angle between the groove end face and the axis of the end face

Use a universal goniometer or other equivalent methods to detect the axis angle.

Coating and plating inspection

Jianzhi guarantees that the coatings and coatings of grooved pipe fittings, bolts, and nuts meet the requirements of A and B (production standards). The coating and coating thickness is measured with an electronic or magnetic thickness gauge, and the density and continuity of the coating are visually inspected. The lead content of the paint layer is detected by an element analyzer. The lead content of the zinc layer is detected by a spectrometer.

A. The surface of grooved pipe fittings should be treated with anti-corrosion treatment such as dipping, spraying, hot-dip galvanizing, etc.:

- Paint layer. It should be uniform, smooth, firm, free of paint bumps, paint buildup, or paint leakage. The thickness of the paint layer is not less than 25.4um, and the lead content of the paint layer is less than 0.009%.
- Plastic layer. It should be uniform, continuous, smooth and firm, and should not be flammable when used in fire-fighting systems. The thickness of the plastic layer is not less than 40um.
- Hot-dip galvanized layer. The zinc layer on the surface of galvanized grooved pipe fittings should be uniform, continuous and smooth, and there should be no defects such as zinc leakage, zinc layer shedding, black spots, etc.; the contact surface with the rubber ring/pad is not allowed to have zinc nodules, zinc slag, zinc piles, etc. The lead content of the zinc layer is not more than 0.1%. The minimum zinc layer thickness is 63um.

B. Bolts and nuts should be hot-dip galvanized, electro-galvanized, and other anti-corrosion treatments:

- Electro-galvanized. The electroplating layer has a bright luster, and the zinc layer is uniform and complete. There should be no zinc leakage and rust spots in the local area. The thickness of the zinc layer is not less than 8um.
- Hot-dip galvanizing. Hot-dip galvanizing should meet the requirements in GB/T 5267.3, and the surface should be smooth, free of missing plating, zinc nodules, black spots, residual solvent slag, oxide scale inclusions, and other defects that damage the intended use performance of the parts. The thickness of the zinc layer is not less than 40um.

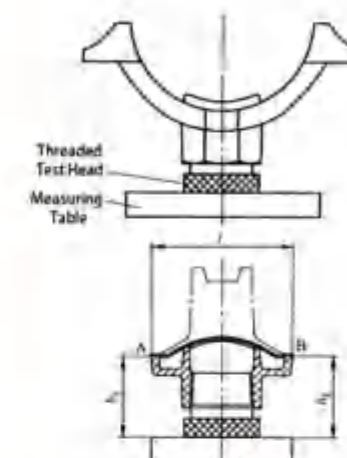
Inspection of the included angle of thread axis of mechanical tee pipe

Detection method I

As shown in Figure 1, tighten the thread of the mechanical tee and the threaded probe and place it on the platform. First, ensure that there is no burr and sand around the two points A and B in the figure, and then use a height Threaded ruler to directly measure the figure. The heights of points A and B are h1 and h2.

According to the distance L between points A and B and the heights h1 and h2, and can be converted in combination with the calculation formula given below, the standard value can be calculated. The measured difference between h1 and h2 is less than or equal to the standard value, which means it is qualified.

Threaded Test Head
Measuring Table



CALCULATION PRINCIPLE OF INCLUDED ANGLE OF MECHANICAL TEE AXIS

The included angle of the mechanical tee axis shall be calculated according to the following formula

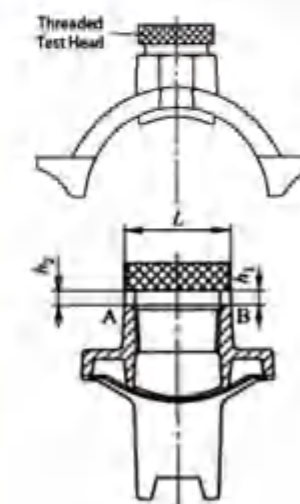
$$\tan \alpha = \frac{h_1 - h_2}{L}$$

Explanation:

- α : Included angle of thread axis.
- h1: The maximum height between A and B.
- h2: The minimum height between A and B.
- L: The distance between A and B.

Detection method II

As shown in Figure 2, tighten the thread of the mechanical tee with the threaded probe, and use a vernier caliper to measure the distance between the lower plane of the probe and the end of the threaded mechanical tee. The maximum distance and the minimum distance are h1, h2, respectively. According to the distance h1 and h2 between the two points A and B, and can be converted with the calculation formula given in 2.4.1 to obtain the standard value, the difference between h1 and h2 measured is less than or equal to the standard value, that is, it is qualified.



Tightness inspection

All pressure-bearing pipe fittings (except mechanical tees and flanges) can be tested by one of the following methods, and there is no leakage by visual inspection:

- All pipe fittings under pressure should show no signs of leakage. The test console should be equipped with a confirmed and effective test pressure gauge and be connected in series with the tested pipe fittings to obtain the true test results.

Table II - Air pressure and holding pressure schedule

No.	Size	Pressure	Time to keep the pressure	Remark
1	≤DN50	≥0.5 MPa	≥5s	Air pressure
2	> DN50~DN350	≥0.5 MPa	≥10s	Air pressure
3	> DN350	1.5 times the rated working pressure	5 min	Water pressure

Airtight Performance Test

The test samples should be equipped with a pressure gauge with an accuracy of not less than 1.5 to display the actual pressure value. The test should be carried out at a temperature of 20°C±5°C.

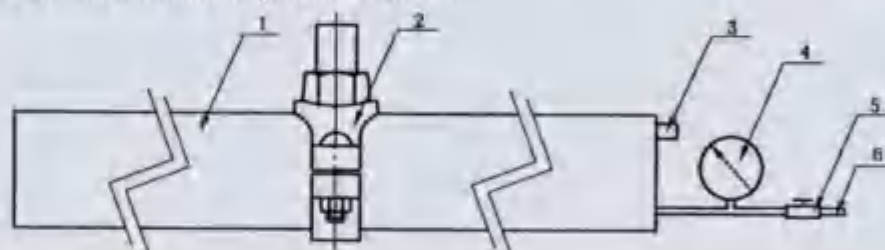
Before the test, the sample should be fully immersed in water in advance. Pressurize the inside to 0.1MPa, keep it for a while to remove surface bubbles, and then gradually increase the pressure to 0.5MPa and keep it for 5 minutes. The test results should meet the requirements of 1.1.

Hermetic Performance Test

As shown in Figure 3, the test sample should be filled with water with air removed, and the pressure in the pipeline should increase at a rate not exceeding 2MPa/min until it reaches the pressure value specified in 1.2 and keep it for 5 minutes. The test result should meet the requirements of 1.2.

Explanation:

- 1- Test pipe
- 2- Grooved pipe fittings
- 3- Vent
- 4- Pressure gauge
- 5- Globe valve
- 6- Water injection pressure filling port



Compressive Strength Test

As shown in Figure 3, the test sample should be filled with water with air removed, and the pressure in the pipeline should increase at a rate not exceeding 2MPa/min until it reaches the pressure value specified in 1.3 and keep it for 5 minutes. The test results should meet the requirements of 1.3.

Test method for bearing moment of mechanical tee (side outlet pipe)

10.10.5.1 Test method for bearing moment of mechanical tee (side outlet pipe)

As shown in Figure 4, the test assembly includes a connecting machine. The two sections of the mechanical tee are not less than 400 mm in length, the side outlet pipe is not less than 300 mm in length, the end is closed, and one end is a pressure gauge with 1.5-level assembly accuracy.

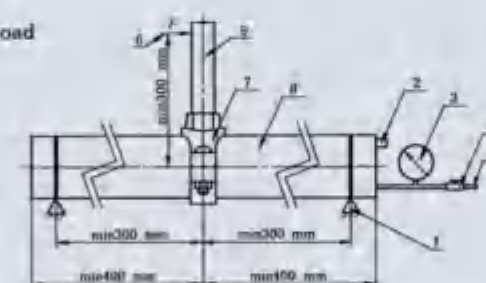
The test sample should be filled with water with air removed, and the inside hydrostatic pressure of the rated working pressure should be maintained during the test.

Choose the torque corresponding to the nominal size of the side outlet pipeline, load it to the joint junction, and keep it for one minute. The test result should meet the requirements of 9.4.

a) Parallel to axis direction, apply load

Explanation:

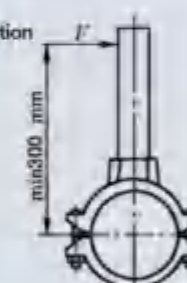
- 1- Fixed point
- 2- Vent
- 3- Pressure gauge
- 4- Water injection pressure filling port
- 5- Globe valve



b) Perpendicular to axis direction, apply load

Explanation:

- 1- Test load F
- 2- Mech Tee
- 3- Main test pipe
- 4- Branch test pipe

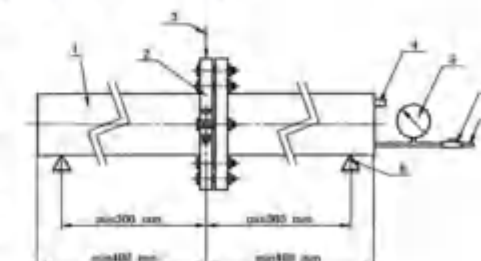


Test method for the load-bearing moment of single-piece flange

As shown in Figure 5, the test sample consists of two pipes with flanges that are not less than 400 mm in length, closed at the end, and is fitted with a pressure gauge with an assembly accuracy of 1.5 at one end.

The test sample should be filled with water with air removed, and the inside hydrostatic pressure of the rated working pressure should be maintained during the test.

Select the torque corresponding to the nominal size, load it to the junction of the joint, and keep it for one minute. The test result should meet the requirements of 1.4.



Explanation:

- 1- Test pipe
- 2- Grooved flange
- 3- Test load F
- 4- Vent
- 5- Pressure gauge
- 6- Globe valve
- 7- Water injection pressure filling port
- 8- Fixed point





Low-temperature resistance test

The test sample consists of two pipelines of at least 150 mm in length and is closed at both ends. It connects the grooved pipe fittings and is fitted with a pressure gauge and a shut-off valve with an accuracy of 1.5 at one end. The sample is placed horizontally at a temperature of $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and is filled with water to a height of 3mm. Then the air is pumped into the sample, bringing the pressure to 0.3 MPa. After sealing it, it will be placed horizontally at a temperature of $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 24h. Then take it out and place it at room temperature of $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 24h. The test results should meet the requirements of 1.5.

High-temperature aging resistance test

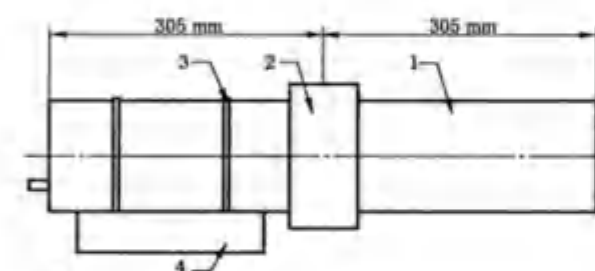
The pressure of the test sample should be brought to 0.3 MPa according to the method in 2.5.2, to observe whether it leaks. Then release the pressure and place it at a temperature of $135^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 45 days. 45 days later, take the test sample out and place it in a room. After its temperature returns to $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$, immerse it in water and increase the pressure to 0.3 MPa, then keep the pressure for 5 min. Observe whether it leaks during the 5min. After the above test, the test sample will be disassembled to check whether the sealing ring adheres to the shell. The two sides of the sealing ring cavity will be squeezed together to inspect if there is visual damage on the surface. The sealing ring with a nominal size of DN200 should not be damaged even when the two opposite sections are twisted for one circle.

Water impact resistance test

The test sample will withstand the water shock from 0 to the rated working pressure 20,000 times. After the water impact test, the compressive strength test should be carried out in accordance with the provisions of 2.5.4, and the test results should meet the provisions of 1.7.

Antivibration performance test

Select a small-diameter grooved flange or a mechanical tee from the sample for the vibration test. The test sample and the pipeline are shown in Figure 6. The single tube length of the test pipeline is 305 mm. Connect one end of the pipeline fixed on the horizontal (or vertical) workbench of the mechanical vibration table, extend the test piece, and the other end of the pipeline out of the vibration test table. The vibration plane is vertical (or horizontal) vibration. The test requirements are shown in Table 7. Before the vibration test, water pressure in the test pipeline will be brought to 0.7MPa. After the test is completed, the compressive strength test should be carried out in accordance with the provisions of 2.5.4, and the test results should comply with the provisions of 1.8.



Explanation:

- 1- Test pipe
- 2- Test grooved fitting sample
- 3- Fixed point
- 4- Vibration test bench

Table III - Vibration test data sheet

Amplitude/mm	Frequency/Hz	Time/h
0.25	28	5
0.51	28	5
1.90	28	5
0.51	18-37 (variable)	5
0.89	18-37 (variable)	5

Note: the waveform of frequency conversion can be trapezoidal, sinusoidal, or exponential.

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