



上海常浩高压管件有限公司

Shanghai Changhao High Pressure Pipefittings Co., Ltd.

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整体式绝缘接头

INSULATING JOINT

安装使用手册



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BRIEF INTRODUCTION

简介 Brief introduction

关于我们

欢迎来到长昊

上海长昊高压管件有限公司成立于2002年3月13日，是一家专业从事绝缘接头，绝缘法兰，钢制法兰，钢对焊管件，锻造管件的研发，生产的制造商和贸易商。

，不锈钢管件和管件。我们位于中国上海，交通便利。我们所有的产品都符合国际质量标准，并在全球各个不同的市场中受到高度赞赏。

我们的优势：

我们拥有200多名员工，年销售额超过1,200万美元，目前全球68%的产品出口。我们设备齐全的设施和卓越的质量控制贯穿于生产的各个阶段，使我们能够保证客户的总体满意度

凭借我们优质的产品和出色的客户服务，我们已经建立了遍及欧洲，美国，中东和苏丹的全球销售网络。

如果您对我们的任何产品感兴趣或想讨论定制订单，请随时与我们联系。我们期待在不久的将来与世界各地的新客户建立成功的业务关系。

ABOUT US

WELCOME TO CHANGHAO

Established in March 13, 2002, Shanghai Changhao High Pressure Pipe Fittings Co., Ltd. is a manufacturer and trader specialized in the research, development and production of insulation joints, insulating flanges, contain steel flanges, steel butt welding pipe fittings, forged pipe fittings, stainless steel pipe fittings and pipes. We are located in Shanghai, China, with convenient transportation access. All of our products comply with international quality standards and are greatly appreciated in a variety of different markets throughout the world.

OUR ADVANTAGE:

We have over 200 employees, boast an annual sales figure that exceeds USD 1,200,000 and currently export 68% of our products worldwide. Our well-equipped facilities and excellent quality control throughout all stages of production enable us to guarantee total customer satisfaction.

As a result of our high quality products and outstanding customer service we have gained a global sales network reaching Europe, the United States, the Middle East and Sudan.

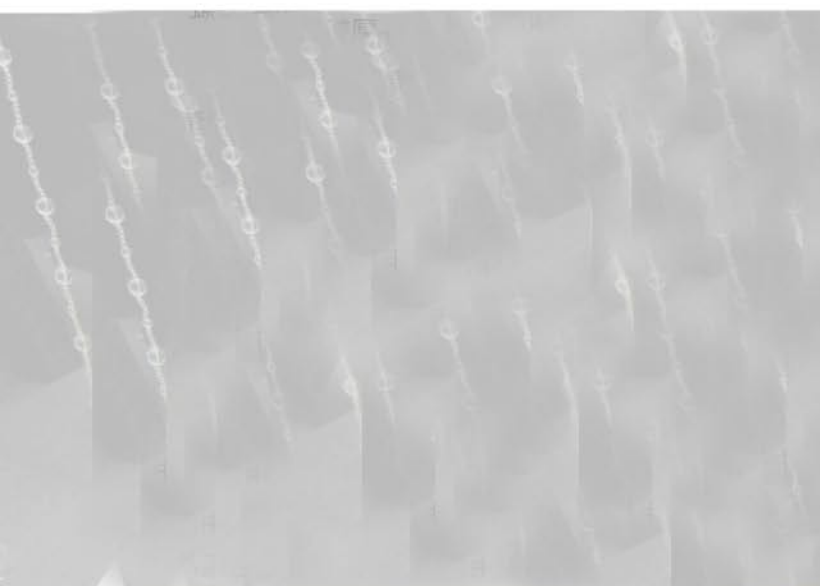
If you are interested in any of our products or would like to discuss a custom order, please feel free to contact us. We are looking forward to forming successful business relationships with new clients around the world in the near future.



内容 Content

Insulating Joint 01-07

But Welding Fitting 08-24





Product Introduction

Steel Pipes suffer chemical and electrochemical corrosion at any moment when they are used, and these metal materials which take us a lot of labor and energy to flow away. This is because iron metal is in instable thermodynamic state. Once there are opportunities, it tries to restore comparatively stable state as it was in lithosphere before, to produce Fe_2O_3 or transform into $\text{Fe} + 3$ In the course can be regarded as reverse course of metallurgy.





Cathodic protection method applied in antiseptic engineering effectively resist Corrosion of metal pipes, and electricity insulation is an indispensable condition for cathodic protection in antiseptic engineering of underground metal pipes, Integral Insulating joint invented by our company applies patent technique, which more Effectively ensure electricity insulating condition for cathodic protection. Thus it is the best electricity component for cathodic protection.

Its functions are: to perform insulation and seclusion among each section of steel pipe. Pipe lines and equipments; to avoid flowing off of electricity because of cathodic protection; to reduce Galvanic Corrosion and disturbance of disorder current, and so on. The joint can effectively protect steel pipelines from electrochemical corrosion, extend their usinglives pan, and prevent electric components of equipments form disturbance of disorder current. Product characteristics: high insulating resistance value, high breakdown voltage, better mechanic performance, direct underground use, needing no maintenance management, long using cycle. It is updated and replacing product of insulated Flange.

Monolithic Insulating joint is composed of the following parts: upper and lower conduits, sleeve, insulating part, seals and insulating coat.

Insulating part and seal are fixed where upper and lower conduits are joined oppositely, which forms double sealing structure possessed of insulating performance. Groove welding is applied to sleeve, or it is directly welded with upper conduit. In this way, insulating part and upper and lower conduits are sealed inside firmly, which forms sealed vessel. Therefore, the joint can provide better in sulating effect, and it also improves mechanic performances such as pull resistance, bending resistance and stress resistance.



Flanged Insulating Joints

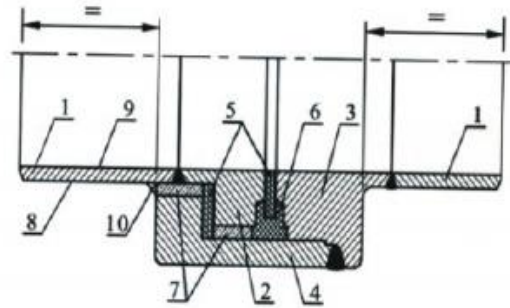
APPLIED STANDARD

1. Design code:

ASME CODE Section VII Division. 1

UNI CIG 10285

2. Material



Item	Parts		Material
1	Pup		API5L
2	Flange- I	Forging	ASTM A105
3	Flange-II		
4	Flange-III		
5	Insulation Gasket		Epoxy fiber Glass ASTM D709
6	Seal System	U-ring (Double seal system)	Viton ASTM D 2000
7	Filling		Epoxy resin
8	External Coating		Epoxy Paint DET300 Micron
9	Internal Coating		Epoxy Paint DFT300 Micron
10	Sealant		Epoxy resin

SIZE RANGE : DN 25 (1") ~ DNI 200 (48")
PRESSURE CLAS : ANSI 150 ~ANSI 600 (UP to ANSI 1500)
WORKING TEMP. : -10 ~ + 90°C
SUITABLE MEDIA : Gas, Oil, Water

TESTING

100% Hydrostatic Test : 1.5 times MOP
 100% Electrical resistance: $\geq 100 \text{ M}\Omega$ (1000 V DC) Under Dry air, 25°C
 100% Dielectric Strength: 3.5KV/50 Hz (1 min) (Can be 5.0 KV up to the request)
 100% coating Thickness $\geq 300 \mu\text{m}$
 100% Appearance and dimension inspection

Standard NDE Test

PN 25 –MOP 25-ANSI # 150

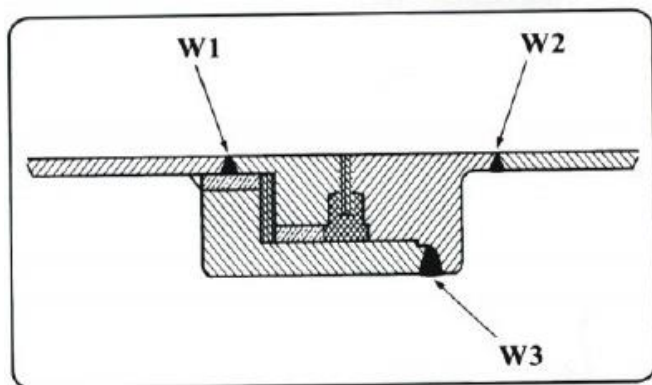
1. Pipe Ring Wold (W1-W2) : RT
2. Closure Weld W3: MT

PN64-MOP64-ANSI # 300

PN100-MOP100-ANSI #600

1. Pipe ring Wold (W1-W2): RT,U
2. Closure Weld W3: MT
3. Weld End Bevel : MT

4. Additional NDE Test RT,UT, MT,PT is available upon request.



Main Pipeline Insulating Joints

Class: PN25-MoP25-ANSI #150/300/600

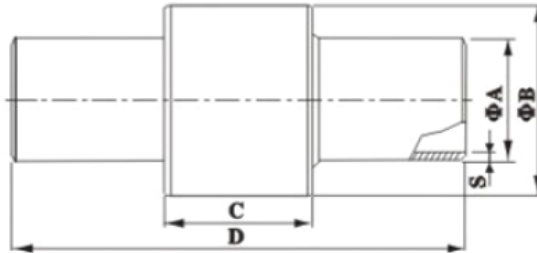
MAIN APPLICATIONS:

Steel Pipeline for Methane, LPG, natural gas, water



T	R	RT	RP	P	Where:
90°C	>100 Mohm	3.5KV (>10)		25BAR	T= Max. Operating temperature R=Electric resistance in air at 1000 Volt d.c. RT= Dielectric test a.c. RP = Dielectric strength c.a P= Max operating pressure
	Day Gas, 250°C				

OUTLINE DRAWING



Released certificate
● En10204 3.1B

PN100/ANSI 600							PN25/ANSI 150						PN64/ANSI 150					
Pipe Mat (*)	ΦA	S	B	C	D	N.W (kg)	ΦA	S	B	C	D	N.W (kg)	ΦA	S	B	C	D	N.W (kg)
APL 5L CR.B EN 10208-2 L245	Φ 33.4	3.9	90	100	250	5.3	Φ 33.4	3.9	65	48	250	2.1	Φ 33.4	3.9	80	85	250	4
APL 5L CR.B EN 10208-2 L245	Φ 48.3	3.9	100	100	300	6.5	Φ 48.3	3.9	82	65	300	3.5	Φ 48.3	3.9	95	90	300	5
APL 5L CR.B EN 10208-2 L245	Φ 60.3	3.9	115	105	350	8.5	Φ 60.3	4	102	66	350	4.1	Φ 60.3	4	108	90	350	6.5
APL 5L CR.B EN 10208-2 L245	Φ 76.1	5.5	135	120	350	13.5	Φ 76.1	5	112	68	350	6.5	Φ 76.1	6	125	95	350	8.8
APL 5L CR.B EN 10208-2 L245	Φ 88.9	5.5	155	125	500	18.7	Φ 88.9	5	125	72	400	7.1	Φ 88.9	6	140	95	400	10.5
APL 5L CR.B EN 10208-2 L245	Φ 114.3	6	190	135	500	28	Φ 114.3	6	154	72	400	9.5	Φ 114.3	7	165	115	500	18
APL 5L CR.B EN 10208-2 L245	Φ 141.3	6.5	220	150	600	41	Φ 141.3	6	139 4	85	500	17	Φ 141.3	7	196	120	600	26
APL 5L CR.B EN 10208-2 L245	Φ 168.3	7.1	255	170	600	57	Φ 168.3	7	234	95	500	25	Φ 168.3	8	240	135	600	42
APL 5L CR.B EN 10208-2 L245	Φ 219.1	8.2	320	187	600	90	Φ 219.1	7	276	110	500	34.2	Φ 219.1	10	278	158	600	51
APL 5L CR.B EN 10208-2 L245	Φ 273.1	9.27	372	215	800	138	Φ 273.1	7	325	144	800	60	Φ 273.1	10	350	186	800	98
APL 5L CR.B EN 10208-2 L245	Φ 323.9	9.53	440	235	800	193	Φ 323.9	8	384	168	800	94	Φ 323.9	10	395	203	800	152
APL 5L CR.B EN 10208-2 L245	Φ 355.6	12.7	480	255	1000	272	Φ 355.6	8	457	210	900	185	Φ 355.6	14	484	205	1000	213

PN100/ANSI 600							PN25/ANSI 150							PN64/ANSI 150					
APL 5L CR.B EN 10208-2 L245	Φ 406.4	12.7	550	280	1000	356	Φ 406.4	10	535	260	900	255	Φ 406.4	14	490	244	1000	220	
APL 5L CR.B EN 10208-2 L245	Φ 457.2	14.3	600	300	1000	448	Φ 457.2	10	520	190	900	165	Φ 457.2	14.3	570	265	1000	315	
APL 5L CR.B EN 10208-2 L245	Φ 508	15.9	685	330	1200	660	Φ 508	10	630	265	900	335	Φ 508	15.9	630	275	1200	421	
APL 5L CR.B EN 10208-2 L245	Φ 609.6	19.1	815	400	1200	1070	Φ 609.6	12	695	250	1000	325	Φ 609.6	19.1	720	330	1200	580	
APL 5L CR.B EN 10208-2 L245	Φ 660	19.05	790	425	1200	1130	Φ 660	12	260	380	1000	386	Φ 660	23.8	820	380	1000	650	
APL 5L CR.B EN 10208-2 L245	Φ 711.2	19.1	900	440	1300	1280	Φ 711.2	12	800	250	1200	415	Φ 711.2	19.1	815	375	1300	756	
APL 5L CR.B EN 10208-2 L245	Φ 812.8	23.8	1000	480	1300	1650	Φ 812.8	12	950	305	1300	706	Φ 812.8	20	970	410	1300	1220	

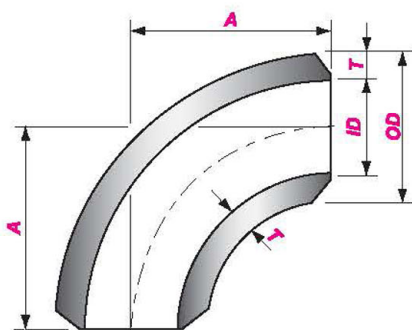
Quality Control



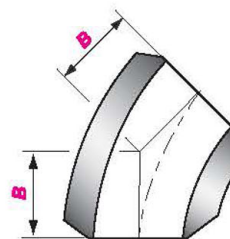




BUTT-WELDING ELBOWS



对焊 90° 长半径 / 短半径弯头
BW 90° LR/SR Elbow



对焊 45° 长半径弯头
BW 45° LR Elbow

GB/T 12459、GB/T 13401、ASME B16.9 (Sch-Page No. 26-29)

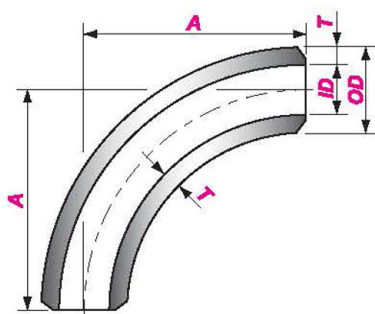
公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End			
			90° Elbows		45° Elbows	
DN	NPS	OD	A		B	
			长半径 LR	短半径 SR	长半径 LR	
15	1/2	21.3	38	-	16	
20	3/4	26.7	38	-	19	
25	1	33.4	38	25	22	
32	1¼	42.2	48	32	25	
40	1½	48.3	57	38	29	
50	2	60.3	76	51	35	
65	2½	73.0	95	64	44	
80	3	88.9	114	76	51	
90	3½	101.6	133	89	57	
100	4	114.3	152	102	64	
125	5	141.3	190	127	79	
150	6	168.3	229	152	95	
200	8	219.1	305	203	127	
250	10	273.0	381	254	159	
300	12	323.8	457	305	190	
350	14	355.6	533	356	222	
400	16	406.4	610	406	254	
450	18	457.0	686	457	286	
500	20	508.0	762	508	318	
550	22	559.0	838	559	343	
600	24	610.0	914	610	381	
650	26	660.0	991	660	406	
700	28	711.0	1067	711	438	
750	30	762.0	1143	762	470	
800	32	813.0	1219	813	502	
850	34	864.0	1295	864	533	
900	36	914.0	1372	914	565	
950	38	965.0	1448	965	600	
1000	40	1016.0	1524	1016	632	
1050	42	1067.0	1600	1067	660	
1100	44	1118.0	1676	1118	695	
1150	46	1168.0	1753	1168	727	
1200	48	1219.0	1829	1219	759	
1300	52	1321.0	1981	1321	821	
1400	56	1422.0	2134	1422	883	
1500	60	1524.0	2286	1524	947	
1600	64	1626.0	2438	1626	1010	
1700	68	1727.0	2591	1727	1073	
1800	72	1829.0	2743	1829	1137	
1900	76	1930.0	2896	1930	1199	
2000	80	2032.0	3048	2032	1263	

注释:

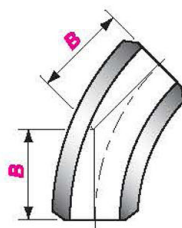
- 除上述标准外, 还可按 GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 等标准制造。
- 更大规格的弯头, 可根据采购方与制造商协商一致的尺寸制造。

Notes:

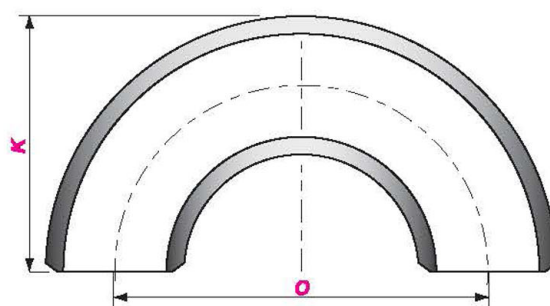
- Besides these, GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 etc. are also applied.
- The elbow with NPS over 80 shall be made subject to the sizes agreed by purchaser and manufacturer.



对焊 90° 3D 弯头
BW 90° 3D Elbow



对焊 45° 3D 弯头
BW 45° 3D Elbow

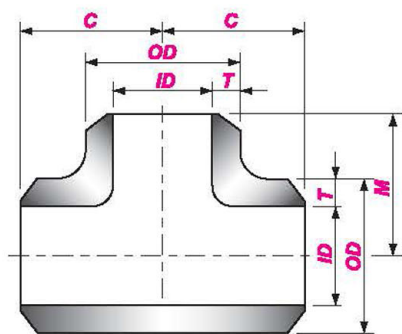


对焊 180° 长半径 / 短半径弯头
BW 180° LR/SR Return

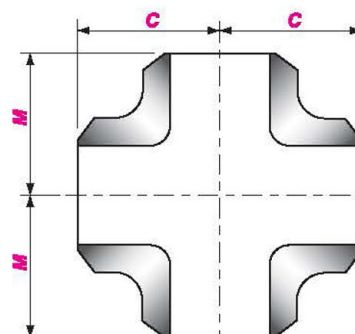
GB/T 12459 GB/T 13401 ASME B16.9 (Sch-Page No. 26-29)

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End		中心至中心 Center to Center		背面至端面 Back to Face	
DN	NPS	OD	90° Elbows	45° Elbows	180° Returns			
			A	B	O		K	
			3D	3D	长半径 LR	短半径 SR	长半径 LR	短半径 SR
15	1/2	21.3	-	-	76	-	48	-
20	3/4	26.7	57	24	76	-	51	-
25	1	33.4	76	31	76	51	56	41
32	1 1/4	42.2	95	39	95	64	70	52
40	1 1/2	48.3	114	47	114	76	83	62
50	2	60.3	152	63	152	102	106	81
65	2 1/2	73.0	190	79	190	127	132	100
80	3	88.9	229	95	229	152	159	121
90	3 1/2	101.6	267	111	267	178	184	140
100	4	114.3	305	127	305	203	210	159
125	5	141.3	381	157	381	254	262	197
150	6	168.3	457	189	457	305	313	237
200	8	219.1	610	252	610	406	414	313
250	10	273.0	762	316	762	508	518	391
300	12	323.8	914	378	914	609	619	467
350	14	355.6	1067	441	1067	711	711	533
400	16	406.4	1219	505	1219	813	813	610
450	18	457.0	1372	568	1372	914	914	686
500	20	508.0	1524	632	1524	1016	1016	762
550	22	559.0	1676	694	1676	1118	1118	838
600	24	610.0	1829	757	1829	1219	1219	914
650	26	660.0	1981	821	-	-	-	-
700	28	711.0	2134	883	-	-	-	-
750	30	762.0	2286	964	-	-	-	-
800	32	813.0	2438	1010	-	-	-	-
850	34	864.0	2591	1073	-	-	-	-
900	36	914.0	2743	1135	-	-	-	-
950	38	965.0	2896	1200	-	-	-	-
1000	40	1016.0	3048	1264	-	-	-	-
1050	42	1067.0	3200	1326	-	-	-	-
1100	44	1118.0	3353	1389	-	-	-	-
1150	46	1168.0	3505	1453	-	-	-	-
1200	48	1219.0	3658	1516	-	-	-	-

BUTT-WELDING TEES AND CROSSES



对焊 等径三通
BW Straight Tee

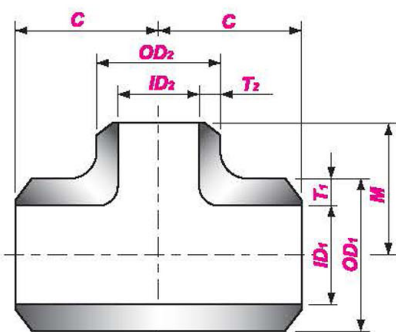


对焊等径四通
BW Straight Cross

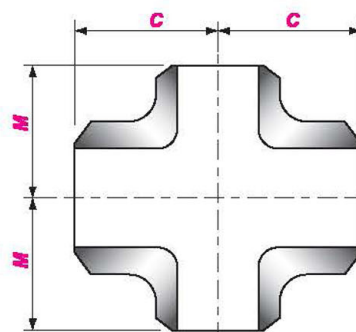
GB/T 12459、GB/T 13401、ASME B16.9 (Sch-Page No. 26-29)

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	$OD_1 \times OD_2$	C	M
15	1/2	21.3	25	25
15 × 10	1/2 × 3/8	21.3 × 17.1		25
15 × 8	1/2 × 1/4	21.3 × 13.7		25
20	3/4	26.7	29	29
20 × 15	3/4 × 1/2	26.7 × 21.3		29
20 × 10	3/4 × 3/8	26.7 × 17.1		29
25	1	33.4	38	38
25 × 20	1 × 3/4	33.4 × 26.7		38
25 × 15	1 × 1/2	33.4 × 21.3		38
32	1 1/4	42.2	48	48
32 × 25	1 1/4 × 1	42.2 × 33.4		48
32 × 20	1 1/4 × 3/4	42.2 × 26.7		48
32 × 15	1 1/4 × 1/2	42.2 × 21.3		48
40	1 1/2	48.3	57	57
40 × 32	1 1/2 × 1 1/4	48.3 × 42.2		57
40 × 25	1 1/2 × 1	48.3 × 33.4		57
40 × 20	1 1/2 × 3/4	48.3 × 26.7		57
40 × 15	1 1/2 × 1/2	48.3 × 21.3		57
50	2	60.3	64	64
50 × 40	2 × 1 1/2	60.3 × 48.3		60
50 × 32	2 × 1 1/4	60.3 × 42.2		57
50 × 25	2 × 1	60.3 × 33.4		51
50 × 20	2 × 3/4	60.3 × 26.7		44
65	2 1/2	73.0	76	76
65 × 50	2 1/2 × 2	73.0 × 60.3		70
65 × 40	2 1/2 × 1 1/2	73.0 × 48.3		67
65 × 32	2 1/2 × 1 1/4	73.0 × 42.2		64
65 × 25	2 1/2 × 1	73.0 × 33.4		57
80	3	88.9	86	86
80 × 65	3 × 2 1/2	88.9 × 73.0		83
80 × 50	3 × 2	88.9 × 60.3		76
80 × 40	3 × 1 1/2	88.9 × 48.3		73
80 × 32	3 × 1 1/4	88.9 × 42.2		70
90	3 1/2	101.6	95	95
90 × 80	3 1/2 × 3	101.6 × 88.9		92
90 × 65	3 1/2 × 2 1/2	101.6 × 73.0		89
90 × 50	3 1/2 × 2	101.6 × 60.3		83
90 × 40	3 1/2 × 1 1/2	101.6 × 48.3		79
100	4	114.3	105	105
100 × 90	4 × 3 1/2	114.3 × 101.6		102
100 × 80	4 × 3	114.3 × 88.9		98
100 × 65	4 × 2 1/2	114.3 × 73.0		95
100 × 50	4 × 2	114.3 × 60.3		89
100 × 40	4 × 1 1/2	114.3 × 48.3		86

BUTT-WELDING TEES AND CROSSES



对焊异径三通
BW Reducing Tee



对焊异径四通
BW Reducing Cross

GB/T 12459、GB/T 13401、ASME B16.9 (Sch-Page No. 26-29)

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	$OD_1 \times OD_2$	C	M
125	5	141.3	124	124
125 × 100	5 × 4	141.3 × 114.3		117
125 × 90	5 × 3½	141.3 × 101.6		114
125 × 80	5 × 3	141.3 × 88.9		111
125 × 65	5 × 2½	141.3 × 73.0		108
125 × 50	5 × 2	141.3 × 60.3		105
150	6	168.3	143	143
150 × 125	6 × 5	168.3 × 141.3		137
150 × 100	6 × 4	168.3 × 114.3		130
150 × 90	6 × 3½	168.3 × 101.6		127
150 × 80	6 × 3	168.3 × 88.9		124
150 × 65	6 × 2½	168.3 × 73.0		121
200	8	219.1	178	178
200 × 150	8 × 6	219.1 × 168.3		168
200 × 125	8 × 5	219.1 × 141.3		162
200 × 100	8 × 4	219.1 × 114.3		156
200 × 90	8 × 3½	219.1 × 101.6		152
250	10	273.0	216	216
250 × 200	10 × 8	273.0 × 219.1		203
250 × 150	10 × 6	273.0 × 168.3		194
250 × 125	10 × 5	273.0 × 141.3		191
250 × 100	10 × 4	273.0 × 114.3		184
300	12	323.8	254	254
300 × 250	12 × 10	323.8 × 273.0		241
300 × 200	12 × 8	323.8 × 219.1		229
300 × 150	12 × 6	323.8 × 168.3		219
300 × 125	12 × 5	323.8 × 141.3		216
350	14	355.6	279	279
350 × 300	14 × 12	355.6 × 323.8		270
350 × 250	14 × 10	355.6 × 273.0		257
350 × 200	14 × 8	355.6 × 219.1		248
350 × 150	14 × 6	355.6 × 168.3		238
400	16	406.4	305	305
400 × 350	16 × 14	406.4 × 355.6		305
400 × 300	16 × 12	406.4 × 323.8		295
400 × 250	16 × 10	406.4 × 273.0		283
400 × 200	16 × 8	406.4 × 219.1		273
400 × 150	16 × 6	406.4 × 168.3		264

BUTT-WELDING TEES AND CROSSES



对焊 三通、四通

BW TEES & CROSSES

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	OD ₁ × OD ₂	C	M
450	18	457.0	343	343
450 × 400	18 × 16	457.0 × 406.4		330
450 × 350	18 × 14	457.0 × 355.6		330
450 × 300	18 × 12	457.0 × 323.8		321
450 × 250	18 × 10	457.0 × 273.0		308
450 × 200	18 × 8	457.0 × 219.1		298
500	20	508.0	381	381
500 × 450	20 × 18	508.0 × 457.0		368
500 × 400	20 × 16	508.0 × 406.4		356
500 × 350	20 × 14	508.0 × 355.6		356
500 × 300	20 × 12	508.0 × 323.8		346
500 × 250	20 × 10	508.0 × 273.0		333
500 × 200	20 × 8	508.0 × 219.1		324
550	22	559.0	419	419
550 × 500	22 × 20	559.0 × 508.0		406
550 × 450	22 × 18	559.0 × 457.0		394
550 × 400	22 × 16	559.0 × 406.4		381
550 × 350	22 × 14	559.0 × 355.6		381
550 × 300	22 × 12	559.0 × 323.8		371
550 × 250	22 × 10	559.0 × 273.0		359
600	24	610.0	432	432
600 × 550	24 × 22	610.0 × 559.0		432
600 × 500	24 × 20	610.0 × 508.0		432
600 × 450	24 × 18	610.0 × 457.0		419
600 × 400	24 × 16	610.0 × 406.4		406
600 × 350	24 × 14	610.0 × 355.6		406
600 × 300	24 × 12	610.0 × 323.8		397
600 × 250	24 × 10	610.0 × 273.0		384
650	26	660.0	495	495
650 × 600	26 × 24	660.0 × 610.0		483
650 × 550	26 × 22	660.0 × 559.0		470
650 × 500	26 × 20	660.0 × 508.0		457
650 × 450	26 × 18	660.0 × 457.0		444
650 × 400	26 × 16	660.0 × 406.4		432
650 × 350	26 × 14	660.0 × 355.6		432
650 × 300	26 × 12	660.0 × 323.8		422
700	28	711.0	521	521
700 × 650	28 × 26	711.0 × 660.0		521
700 × 600	28 × 24	711.0 × 610.0		508
700 × 550	28 × 22	711.0 × 559.0		495
700 × 500	28 × 20	711.0 × 508.0		483
700 × 450	28 × 18	711.0 × 457.0		470
700 × 400	28 × 16	711.0 × 406.4		457
700 × 350	28 × 14	711.0 × 355.6		457
700 × 300	28 × 12	711.0 × 323.8		448
750	30	762.0	559	559
750 × 700	30 × 28	762.0 × 711.0		546
750 × 650	30 × 26	762.0 × 660.0		546
750 × 600	30 × 24	762.0 × 610.0		533
750 × 550	30 × 22	762.0 × 559.0		521
750 × 500	30 × 20	762.0 × 508.0		508
750 × 450	30 × 18	762.0 × 457.0		495
750 × 400	30 × 16	762.0 × 406.4		483
750 × 350	30 × 14	762.0 × 355.6		483
750 × 300	30 × 12	762.0 × 323.8		473
750 × 250	30 × 10	762.0 × 273.0		460

对焊三通、四通

BW TEES & CROSSES

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	OD ₁ × OD ₂	C	M
800	32	813.0	597	597
800 × 750	32 × 30	813.0 × 762.0		584
800 × 700	32 × 28	813.0 × 711.0		572
800 × 650	32 × 26	813.0 × 660.0		572
800 × 600	32 × 24	813.0 × 610.0		559
800 × 550	32 × 22	813.0 × 559.0		546
800 × 500	32 × 20	813.0 × 508.0		533
800 × 450	32 × 18	813.0 × 457.0		521
800 × 400	32 × 16	813.0 × 406.4		508
800 × 350	32 × 14	813.0 × 355.6		508
850	34	864.0	635	635
850 × 800	34 × 32	864.0 × 813.0		622
850 × 750	34 × 30	864.0 × 762.0		610
850 × 700	34 × 28	864.0 × 711.0		597
850 × 650	34 × 26	864.0 × 660.0		597
850 × 600	34 × 24	864.0 × 610.0		584
850 × 550	34 × 22	864.0 × 559.0		572
850 × 500	34 × 20	864.0 × 508.0		559
850 × 450	34 × 18	864.0 × 457.0		546
850 × 400	34 × 16	864.0 × 406.4		533
900	36	914.0	673	673
900 × 850	36 × 34	914.0 × 864.0		660
900 × 800	36 × 32	914.0 × 813.0		648
900 × 750	36 × 30	914.0 × 762.0		635
900 × 700	36 × 28	914.0 × 711.0		622
900 × 650	36 × 26	914.0 × 660.0		622
900 × 600	36 × 24	914.0 × 610.0		610
900 × 550	36 × 22	914.0 × 559.0		597
900 × 500	36 × 20	914.0 × 508.0		584
900 × 450	36 × 18	914.0 × 457.0		572
900 × 400	36 × 16	914.0 × 406.4		559
950	38	965.0	711	711
950 × 900	38 × 36	965.0 × 914.0		711
950 × 850	38 × 34	965.0 × 864.0		698
950 × 800	38 × 32	965.0 × 813.0		686
950 × 750	38 × 30	965.0 × 762.0		673
950 × 700	38 × 28	965.0 × 711.0		648
950 × 650	38 × 26	965.0 × 660.0		648
950 × 600	38 × 24	965.0 × 610.0		635
950 × 550	38 × 22	965.0 × 559.0		622
950 × 500	38 × 20	965.0 × 508.0		610
950 × 450	38 × 18	965.0 × 457.0		597
1000	40	1016.0	749	749
1000 × 950	40 × 38	1016.0 × 965.0		749
1000 × 900	40 × 36	1016.0 × 914.0		737
1000 × 850	40 × 34	1016.0 × 864.0		724
1000 × 800	40 × 32	1016.0 × 813.0		711
1000 × 750	40 × 30	1016.0 × 762.0		698
1000 × 700	40 × 28	1016.0 × 711.0		673
1000 × 650	40 × 26	1016.0 × 660.0		673
1000 × 600	40 × 24	1016.0 × 610.0		660
1000 × 550	40 × 22	1016.0 × 559.0		648
1000 × 500	40 × 20	1016.0 × 508.0		635
1000 × 450	40 × 18	1016.0 × 457.0		622

BUTT-WELDING TEES AND CROSSES



对焊 三通、四通

BW TEES & CROSSES

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	OD ₁ × OD ₂	C	M
1050	42	1067.0	762	711
1050 × 1000	42 × 40	1067.0 × 1016.0		711
1050 × 950	42 × 38	1067.0 × 965.0		711
1050 × 900	42 × 36	1067.0 × 914.0		711
1050 × 850	42 × 34	1067.0 × 864.0		711
1050 × 800	42 × 32	1067.0 × 813.0		711
1050 × 750	42 × 30	1067.0 × 762.0		711
1050 × 700	42 × 28	1067.0 × 711.0		698
1050 × 650	42 × 26	1067.0 × 660.0		698
1050 × 600	42 × 24	1067.0 × 610.0		660
1050 × 550	42 × 22	1067.0 × 559.0		660
1050 × 500	42 × 20	1067.0 × 508.0		660
1050 × 450	42 × 18	1067.0 × 457.0		648
1050 × 400	42 × 16	1067.0 × 406.4		635
1100	44	1118.0	813	762
1100 × 1050	44 × 42	1118.0 × 1067.0		762
1100 × 1000	44 × 40	1118.0 × 1016.0		749
1100 × 950	44 × 38	1118.0 × 965.0		737
1100 × 900	44 × 36	1118.0 × 914.0		724
1100 × 850	44 × 34	1118.0 × 864.0		724
1100 × 800	44 × 32	1118.0 × 813.0		711
1100 × 750	44 × 30	1118.0 × 762.0		711
1100 × 700	44 × 28	1118.0 × 711.0		698
1100 × 650	44 × 26	1118.0 × 660.0		698
1100 × 600	44 × 24	1118.0 × 610.0		698
1100 × 550	44 × 22	1118.0 × 559.0		686
1100 × 500	44 × 20	1118.0 × 508.0		686
1150	46	1168.0	851	800
1150 × 1100	46 × 44	1168.0 × 1118.0		800
1150 × 1050	46 × 42	1168.0 × 1067.0		787
1150 × 1000	46 × 40	1168.0 × 1016.0		775
1150 × 950	46 × 38	1168.0 × 965.0		762
1150 × 900	46 × 36	1168.0 × 914.0		762
1150 × 850	46 × 34	1168.0 × 864.0		749
1150 × 800	46 × 32	1168.0 × 813.0		749
1150 × 750	46 × 30	1168.0 × 762.0		737
1150 × 700	46 × 28	1168.0 × 711.0		737
1150 × 650	46 × 26	1168.0 × 660.0		737
1150 × 600	46 × 24	1168.0 × 610.0		724
1150 × 550	46 × 22	1168.0 × 559.0		724
1200	48	1219.0	889	838
1200 × 1150	48 × 46	1219.0 × 1168.0		838
1200 × 1100	48 × 44	1219.0 × 1118.0		838
1200 × 1050	48 × 42	1219.0 × 1067.0		813
1200 × 1000	48 × 40	1219.0 × 1016.0		813
1200 × 950	48 × 38	1219.0 × 965.0		813
1200 × 900	48 × 36	1219.0 × 914.0		787
1200 × 850	48 × 34	1219.0 × 864.0		787
1200 × 800	48 × 32	1219.0 × 813.0		787
1200 × 750	48 × 30	1219.0 × 762.0		762
1200 × 700	48 × 28	1219.0 × 711.0		762
1200 × 650	48 × 26	1219.0 × 660.0		762
1200 × 600	48 × 24	1219.0 × 610.0		737
1200 × 550	48 × 22	1219.0 × 559.0		737

对焊三通、四通

BW TEES & CROSSES

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	OD ₁ × OD ₂	C	M
1300	52	1321.0	965	914
1300 × 1200	52 × 48	1321.0 × 1219.0		864
1300 × 1100	52 × 44	1321.0 × 1118.0		813
1300 × 1000	52 × 40	1321.0 × 1016.0		762
1400	56	1422.0	1041	965
1400 × 1300	56 × 52	1422.0 × 1321.0		914
1400 × 1200	56 × 48	1422.0 × 1219.0		864
1400 × 1100	56 × 44	1422.0 × 1118.0		813
1500	60	1524.0	1118	1016
1500 × 1400	60 × 56	1524.0 × 1422.0		965
1500 × 1300	60 × 52	1524.0 × 1321.0		914
1500 × 1200	60 × 48	1524.0 × 1219.0		864
1600	64	1626.0	1194	1092
1600 × 1500	64 × 60	1626.0 × 1524.0		1067
1600 × 1400	64 × 56	1626.0 × 1422.0		1016
1600 × 1300	64 × 52	1626.0 × 1321.0		965
1600 × 1200	64 × 48	1626.0 × 1219.0		914
1700	68	1727.0	1270	1168
1700 × 1600	68 × 64	1727.0 × 1626.0		1143
1700 × 1500	68 × 60	1727.0 × 1524.0		1118
1700 × 1400	68 × 56	1727.0 × 1422.0		1067
1700 × 1300	68 × 52	1727.0 × 1321.0		1016
1700 × 1200	68 × 48	1727.0 × 1219.0		965
1800	72	1829.0	1320	1245
1800 × 1700	72 × 68	1829.0 × 1727.0		1219
1800 × 1600	72 × 64	1829.0 × 1626.0		1194
1800 × 1500	72 × 60	1829.0 × 1524.0		1168
1800 × 1400	72 × 56	1829.0 × 1422.0		1118
1800 × 1300	72 × 52	1829.0 × 1321.0		1067
1800 × 1200	72 × 48	1829.0 × 1219.0		1016
1900	76	1930.0	1422	1320
1900 × 1800	76 × 72	1930.0 × 1829.0		1295
1900 × 1700	76 × 68	1930.0 × 1727.0		1270
1900 × 1600	76 × 64	1930.0 × 1626.0		1245
1900 × 1500	76 × 60	1930.0 × 1524.0		1219
1900 × 1400	76 × 56	1930.0 × 1422.0		1168
1900 × 1300	76 × 52	1930.0 × 1321.0		1118
1900 × 1200	76 × 48	1930.0 × 1219.0		1067
2000	80	2032.0	1499	1397
2000 × 1900	80 × 76	2032.0 × 1930.0		1372
2000 × 1800	80 × 72	2032.0 × 1829.0		1346
2000 × 1700	80 × 68	2032.0 × 1727.0		1321
2000 × 1600	80 × 64	2032.0 × 1626.0		1295
2000 × 1500	80 × 60	2032.0 × 1524.0		1270
2000 × 1400	80 × 56	2032.0 × 1422.0		1219
2000 × 1300	80 × 52	2032.0 × 1321.0		1168
2000 × 1200	80 × 48	2032.0 × 1219.0		1118

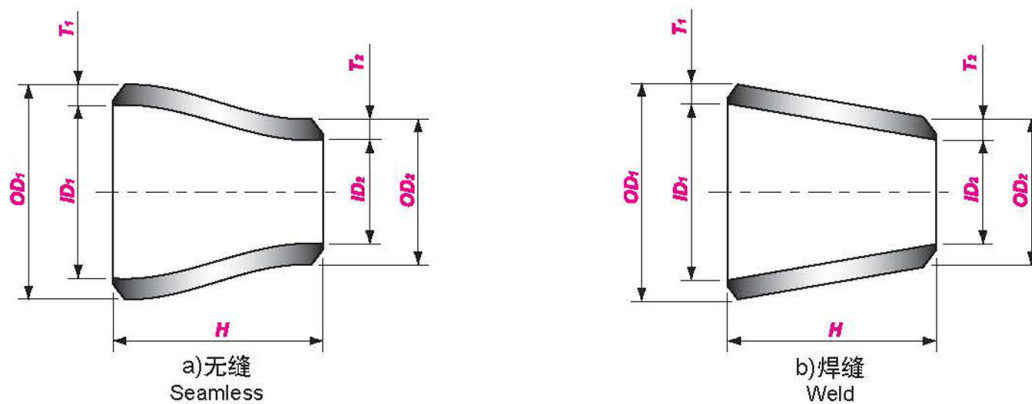
注释:

- 除上述标准外, 还可按 GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 等标准制造。
- 对于 ≥ DN 650 (NPS 26) 的等径三通、四通和 ≥ DN 350 (NPS 14) 的异径三通、四通, 推荐但不一定要采用出口尺寸 M。
- 更大规格的三通、四通, 按采购方与制造商协商的尺寸制造, 或按制造商的尺寸供货。

Notes:

- Besides the above mentioned standards, the standards of GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 etc. are also applied.
- For the straight tees and crosses with DN ≥ 650(NPS 26) and the reducing tees and crosses with DN ≥ 350(NPS 14), the outlet sizes are recommended to use (that mean the other sizes may be applied).
- For the tees and crosses with the sizes larger than that listed in the above table, they will be supplied subject to the sized agreed by purchaser and manufacturer or according to manufacturer's size.

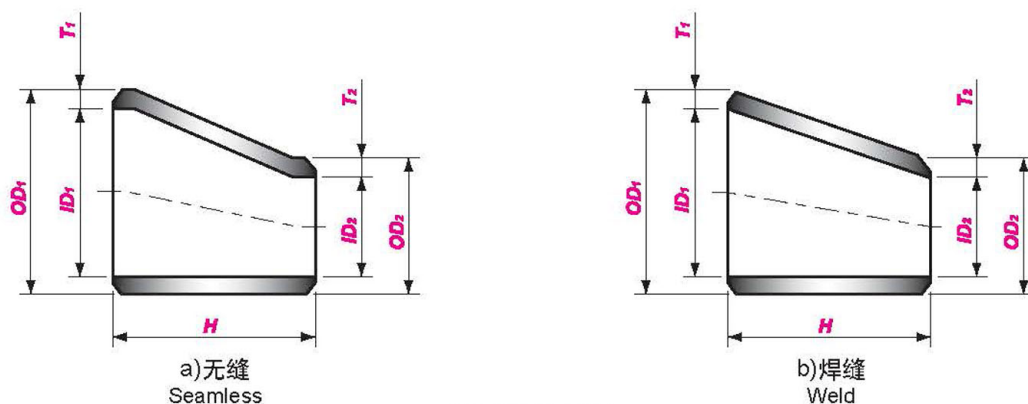
BUTT-WELDING REDUCERS



对焊同心异径管
BW Concentric Reducer

GB/T 12459、GB/T 13401、ASME B16.9 (Sch-Page No. 26-29)

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	端面至端面 End to End
DN	NPS	$OD_1 \times OD_2$	H
20 × 15	3/4 × 1/2	26.7 × 21.3	38
20 × 10	3/4 × 3/8	26.7 × 17.1	
25 × 20	1 × 3/4	33.4 × 26.7	
25 × 15	1 × 1/2	33.4 × 21.3	
32 × 25	1 1/4 × 1	42.2 × 33.4	51
32 × 20	1 1/4 × 3/4	42.2 × 26.7	
32 × 15	1 1/4 × 1/2	42.2 × 21.3	
40 × 32	1 1/2 × 1 1/4	48.3 × 42.2	
40 × 25	1 1/2 × 1	48.3 × 33.4	64
40 × 20	1 1/2 × 3/4	48.3 × 26.7	
40 × 15	1 1/2 × 1/2	48.3 × 21.3	
50 × 40	2 × 1 1/2	60.3 × 48.3	76
50 × 32	2 × 1 1/4	60.3 × 42.2	
50 × 25	2 × 1	60.3 × 33.4	
50 × 20	2 × 3/4	60.3 × 26.7	
65 × 50	2 1/2 × 2	73.0 × 60.3	89
65 × 40	2 1/2 × 1 1/2	73.0 × 48.3	
65 × 32	2 1/2 × 1 1/4	73.0 × 42.2	
65 × 25	2 1/2 × 1	73.0 × 33.4	
80 × 65	3 × 2 1/2	88.9 × 73.0	89
80 × 50	3 × 2	88.9 × 60.3	
80 × 40	3 × 1 1/2	88.9 × 48.3	
80 × 32	3 × 1 1/4	88.9 × 42.2	
90 × 80	3 1/2 × 3	101.6 × 88.9	102
90 × 65	3 1/2 × 2 1/2	101.6 × 73.0	
90 × 50	3 1/2 × 2	101.6 × 60.3	
90 × 40	3 1/2 × 1 1/2	101.6 × 48.3	
90 × 32	3 1/2 × 1 1/4	101.6 × 42.2	
100 × 90	4 × 3 1/2	114.3 × 101.6	102
100 × 80	4 × 3	114.3 × 88.9	
100 × 65	4 × 2 1/2	114.3 × 73.0	
100 × 50	4 × 2	114.3 × 60.3	
100 × 40	4 × 1 1/2	114.3 × 48.3	
125 × 100	5 × 4	141.3 × 114.3	127
125 × 90	5 × 3 1/2	141.3 × 101.6	
125 × 80	5 × 3	141.3 × 88.9	
125 × 65	5 × 2 1/2	141.3 × 73.0	
125 × 50	5 × 2	141.3 × 60.3	



对焊偏心异径管
BW Eccentric Reducer

GB/T 12459、GB/T 13401、ASME B16.9 (Sch-Page No. 26-29)

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	端面至端面 End to End
DN	NPS	OD ₁ × OD ₂	H
150 × 125	6 × 5	168.3 × 141.3	140
150 × 100	6 × 4	168.3 × 114.3	
150 × 90	6 × 3½	168.3 × 101.6	
150 × 80	6 × 3	168.3 × 88.9	
150 × 65	6 × 2½	168.3 × 73.0	
200 × 150	8 × 6	219.1 × 168.3	152
200 × 125	8 × 5	219.1 × 141.3	
200 × 100	8 × 4	219.1 × 114.3	
200 × 90	8 × 3½	219.1 × 101.6	
250 × 200	10 × 8	273.0 × 219.1	178
250 × 150	10 × 6	273.0 × 168.3	
250 × 125	10 × 5	273.0 × 141.3	
250 × 100	10 × 4	273.0 × 114.3	
300 × 250	12 × 10	323.8 × 273.0	203
300 × 200	12 × 8	323.8 × 219.1	
300 × 150	12 × 6	323.8 × 168.3	
300 × 125	12 × 5	323.8 × 141.3	
350 × 300	14 × 12	355.6 × 323.8	330
350 × 250	14 × 10	355.6 × 273.0	
350 × 200	14 × 8	355.6 × 219.1	
350 × 150	14 × 6	355.6 × 168.3	
400 × 350	16 × 14	406.4 × 355.6	356
400 × 300	16 × 12	406.4 × 323.8	
400 × 250	16 × 10	406.4 × 273.0	
400 × 200	16 × 8	406.4 × 219.1	
400 × 150	16 × 6	406.4 × 168.3	
450 × 400	18 × 16	457.0 × 406.4	381
450 × 350	18 × 14	457.0 × 355.6	
450 × 300	18 × 12	457.0 × 323.8	
450 × 250	18 × 10	457.0 × 273.0	
450 × 200	18 × 8	457.0 × 219.1	
500 × 450	20 × 18	508.0 × 457.0	508
500 × 400	20 × 16	508.0 × 406.4	
500 × 350	20 × 14	508.0 × 355.6	
500 × 300	20 × 12	508.0 × 323.8	
500 × 250	20 × 10	508.0 × 273.0	
550 × 500	22 × 20	559.0 × 508.0	508
550 × 450	22 × 18	559.0 × 457.0	
550 × 400	22 × 16	559.0 × 406.4	
550 × 350	22 × 14	559.0 × 355.6	
550 × 300	22 × 12	559.0 × 323.8	

BUTT-WELDING REDUCERS



对焊同心、偏心异径管

BW CONCENTRIC & ECCENTRIC REDUCERS (Sch-Page No. 26-29)

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	端面至端面 End to End
DN	NPS	OD ₁ × OD ₂	H
600 × 550	24 × 22	610.0 × 559.0	508
600 × 500	24 × 20	610.0 × 508.0	
600 × 450	24 × 18	610.0 × 457.0	
600 × 400	24 × 16	610.0 × 406.4	
600 × 350	24 × 14	610.0 × 355.6	
600 × 300	24 × 12	610.0 × 323.8	
650 × 600	26 × 24	660.0 × 610.0	610
650 × 550	26 × 22	660.0 × 559.0	
650 × 500	26 × 20	660.0 × 508.0	
650 × 450	26 × 18	660.0 × 457.0	
650 × 400	26 × 16	660.0 × 406.4	
650 × 350	26 × 14	660.0 × 355.6	
700 × 650	28 × 26	711.0 × 660.0	610
700 × 600	28 × 24	711.0 × 610.0	
700 × 550	28 × 22	711.0 × 559.0	
700 × 500	28 × 20	711.0 × 508.0	
700 × 450	28 × 18	711.0 × 457.0	
700 × 400	28 × 16	711.0 × 406.4	
700 × 350	28 × 14	711.0 × 355.6	
750 × 700	30 × 28	762.0 × 711.0	610
750 × 650	30 × 26	762.0 × 660.0	
750 × 600	30 × 24	762.0 × 610.0	
750 × 550	30 × 22	762.0 × 559.0	
750 × 500	30 × 20	762.0 × 508.0	
750 × 450	30 × 18	762.0 × 457.0	
750 × 400	30 × 16	762.0 × 406.4	
750 × 350	30 × 14	762.0 × 355.6	
800 × 750	32 × 30	813.0 × 762.0	610
800 × 700	32 × 28	813.0 × 711.0	
800 × 650	32 × 26	813.0 × 660.0	
800 × 600	32 × 24	813.0 × 610.0	
800 × 550	32 × 22	813.0 × 559.0	
800 × 500	32 × 20	813.0 × 508.0	
850 × 800	34 × 32	864.0 × 813.0	610
850 × 750	34 × 30	864.0 × 762.0	
850 × 700	34 × 28	864.0 × 711.0	
850 × 650	34 × 26	864.0 × 660.0	
850 × 600	34 × 24	864.0 × 610.0	
850 × 550	34 × 22	864.0 × 559.0	
900 × 850	36 × 34	914.0 × 864.0	610
900 × 800	36 × 32	914.0 × 813.0	
900 × 750	36 × 30	914.0 × 762.0	
900 × 700	36 × 28	914.0 × 711.0	
900 × 650	36 × 26	914.0 × 660.0	
900 × 600	36 × 24	914.0 × 610.0	
900 × 550	36 × 22	914.0 × 559.0	610
950 × 900	38 × 36	965.0 × 914.0	
950 × 850	38 × 34	965.0 × 864.0	
950 × 800	38 × 32	965.0 × 813.0	
950 × 750	38 × 30	965.0 × 762.0	
950 × 700	38 × 28	965.0 × 711.0	
950 × 650	38 × 26	965.0 × 660.0	
950 × 600	38 × 24	965.0 × 610.0	

对焊同心、偏心异径管

BW CONCENTRIC & ECCENTRIC REDUCERS (Sch-Page No. 26-29)

公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	端面至端面 End to End
DN	NPS	OD ₁ × OD ₂	H
1000 × 950	40 × 38	1016.0 × 965.0	610
1000 × 900	40 × 36	1016.0 × 914.0	
1000 × 850	40 × 34	1016.0 × 864.0	
1000 × 800	40 × 32	1016.0 × 813.0	
1000 × 750	40 × 30	1016.0 × 762.0	
1000 × 700	40 × 28	1016.0 × 711.0	
1050 × 1000	42 × 40	1067.0 × 1016.0	610
1050 × 950	42 × 38	1067.0 × 965.0	
1050 × 900	42 × 36	1067.0 × 914.0	
1050 × 850	42 × 34	1067.0 × 864.0	
1050 × 800	42 × 32	1067.0 × 813.0	
1050 × 750	42 × 30	1067.0 × 762.0	
1050 × 700	42 × 28	1067.0 × 711.0	
1100 × 1050	44 × 42	1118.0 × 1067.0	610
1100 × 1000	44 × 40	1118.0 × 1016.0	
1100 × 950	44 × 38	1118.0 × 965.0	
1100 × 900	44 × 36	1118.0 × 914.0	
1100 × 850	44 × 34	1118.0 × 864.0	
1100 × 800	44 × 32	1118.0 × 813.0	
1150 × 1100	46 × 44	1168.0 × 1118.0	711
1150 × 1050	46 × 42	1168.0 × 1067.0	
1150 × 1000	46 × 40	1168.0 × 1016.0	
1150 × 950	46 × 38	1168.0 × 965.0	
1150 × 900	46 × 36	1168.0 × 914.0	
1150 × 850	46 × 34	1168.0 × 864.0	
1200 × 1150	48 × 46	1219.0 × 1168.0	711
1200 × 1100	48 × 44	1219.0 × 1118.0	
1200 × 1050	48 × 42	1219.0 × 1067.0	
1200 × 1000	48 × 40	1219.0 × 1016.0	
1200 × 950	48 × 38	1219.0 × 965.0	
1200 × 900	48 × 36	1219.0 × 914.0	
1300 × 1200	52 × 48	1321.0 × 1219.0	711
1300 × 1150	52 × 46	1321.0 × 1168.0	
1300 × 1100	52 × 44	1321.0 × 1118.0	
1300 × 1050	52 × 42	1321.0 × 1067.0	
1300 × 1000	52 × 40	1321.0 × 1016.0	
1400 × 1300	56 × 52	1422.0 × 1321.0	711
1400 × 1200	56 × 48	1422.0 × 1219.0	
1400 × 1100	56 × 44	1422.0 × 1118.0	
1400 × 1000	56 × 40	1422.0 × 1016.0	
1500 × 1400	60 × 56	1524.0 × 1422.0	711
1500 × 1300	60 × 52	1524.0 × 1321.0	
1500 × 1200	60 × 48	1524.0 × 1219.0	
1500 × 1100	60 × 44	1524.0 × 1118.0	

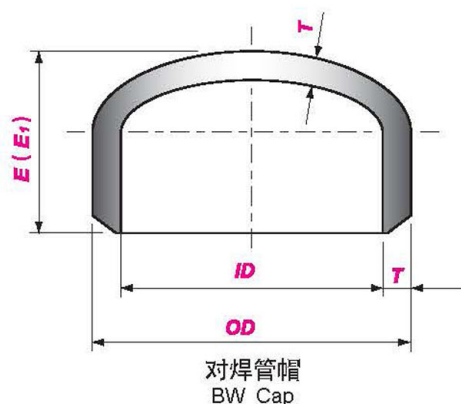
注释：

- 1) 除上述标准外, 还可按 GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 等标准制造。
- 2) 更大规格的同心或偏心异径管, 按采购方与制造商协商的尺寸制造, 或按制造商的尺寸供货。

Notes:

- 1) Besides the above mentioned standards, the standards of GB/T 10752、SH 3408、SH 3409、HG/T 21635、HG/T 21631、SY/T 0510、DL/T 695、EN 10253 etc. are also applied.
- 2) For the concentric and eccentric reducers with the sizes larger than that listed in the above table, they will be supplied subject to the sizes agreed by purchaser and manufacturer or according to manufacturer's size.

BUTT-WELDING CAPS (Sch-Page No. 26-29)



GB/T 12459、GB/T 13401、ASME B16.9

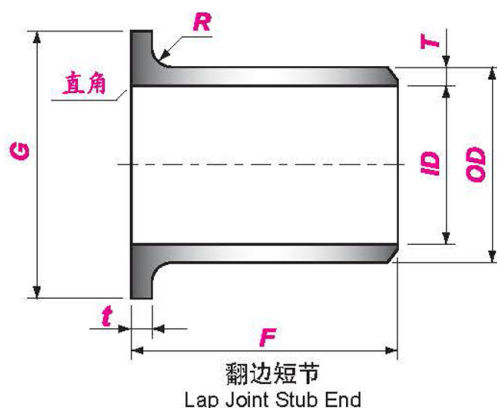
公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	长度 Length		对尺寸 E 的限制厚度 Limiting Wall Thickness for Length E
DN	NPS	OD	E	E ₁	
15	1/2	21.3	25	25	4.57
20	3/4	26.7	25	25	3.81
25	1	33.4	38	38	4.57
32	1 1/4	42.2	38	38	4.83
40	1 1/2	48.3	38	38	5.08
50	2	60.3	38	44	5.59
65	2 1/2	73.0	38	51	7.11
80	3	88.9	51	64	7.62
90	3 1/2	101.6	64	76	8.13
100	4	114.3	64	76	8.64
125	5	141.3	76	89	9.65
150	6	168.3	89	102	10.92
200	8	219.1	102	127	12.70
250	10	273.0	127	152	12.70
300	12	323.8	152	178	12.70
350	14	355.6	165	191	12.70
400	16	406.4	178	203	12.70
450	18	457.0	203	229	12.70
500	20	508.0	229	254	12.70
550	22	559.0	254	254	12.70
600	24	610.0	267	305	12.70
650	26	660.0	267	---	---
700	28	711.0	267	---	---
750	30	762.0	267	---	---
800	32	813.0	267	---	---
850	34	864.0	267	---	---
900	36	914.0	267	---	---
950	38	965.0	305	---	---
1000	40	1016.0	305	---	---
1050	42	1067.0	305	---	---
1100	44	1118.0	343	---	---
1150	46	1168.0	343	---	---
1200	48	1219.0	343	---	---

注释:

- 管帽形状为标准椭圆形。
- 管帽的长度不大于限制厚度时为 E，大于限制厚度时为 E₁；当管帽的公称尺寸 ≥ DN 650 (NPS 26) 时，长度 E₁ 按采购方与制造商协商的尺寸制造，或按制造商的尺寸供货。

Notes:

- The configuration of the cap is normal ellipse.
- Length E applies for the thickness not exceeding the Limiting Wall Thickness, Length E₁ applies for the thickness exceeding the Limiting Wall Thickness. For the caps with DN ≥ 650 (NPS26), they will be made subject to the sizes agreed between purchaser and manufacturer or be supplied according to manufacturer's size.



GB/T 12459、ASME B16.9、MSS SP-43

公称尺寸 Nominal Size		筒体外径 OD of Cylinder		长度 Length		圆角半径 Radius of Fillet		搭接直径 Diameter of Lap
DN	NPS	OD		F		R		G
		Max.	Min.	长型 Long Type	短型 Short Type	A	B _{max}	
15	1/2	22.8	20.5	76	51	3	0.8	35
20	3/4	28.1	25.9	76	51	3	0.8	43
25	1	35.0	32.6	102	51	3	0.8	51
32	1 1/4	43.6	41.4	102	51	5	0.8	64
40	1 1/2	49.9	47.5	102	51	6	0.8	73
50	2	62.4	59.5	152	64	8	0.8	92
65	2 1/2	75.3	72.2	152	64	8	0.8	105
80	3	91.3	88.1	152	64	10	0.8	127
90	3 1/2	104.0	100.8	152	76	10	0.8	140
100	4	116.7	113.5	152	76	11	0.8	157
125	5	144.3	140.5	203	76	11	1.6	186
150	6	171.3	167.5	203	89	13	1.6	216
200	8	222.1	218.3	203	102	13	1.6	270
250	10	277.2	272.3	254	127	13	1.6	324
300	12	328.0	323.1	254	152	13	1.6	381
350	14	359.9	354.8	305	152	13	1.6	413
400	16	411.0	405.6	305	152	13	1.6	470
450	18	462.0	456.0	305	152	13	1.6	533
500	20	514.0	507.0	305	152	13	1.6	584
550	22	565.0	558.0	305	152	13	1.6	641
600	24	616.0	609.0	305	152	13	1.6	692

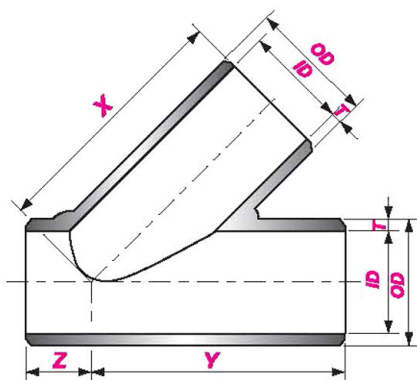
注释:

- 当短型翻边短节用于 PN 50 和 PN 110(300 和 600 级)的较大法兰以及大于等于 PN 150(900 级)的大部分规格的法兰时, 或当长型翻边短节用于 PN 260 和 PN 420(1500 和 2500 级)的较大法兰时, 为了避免法兰可能影响焊接, 或许需要增加筒体的长度。长度增加量由制造商与采购方双方协商。
- 当采用榫槽面和凹凸密封面时, 必须增加搭接边的厚度。增加厚度应附加(不包括)在基本长度 F 上。
- A 型圆角半径 R 与 GB/T 9118.1~9118.2 或 ASME B16.5 中的松套法兰的圆角半径相符合。B 型的圆角半径 R 仅用于 MSS SP-43 标准中, 其长度 F 为短型。
- 搭接直径 G 与 ASME B16.5 中表示的标准机加工面相符合。搭接边的背面应进行机加工, 使其与安装表面一致。当采用环连接密封面时, 使用 ASME B16.5 中给出的尺寸 K。
- 搭接厚度 t 应不小于管子的公称壁厚。

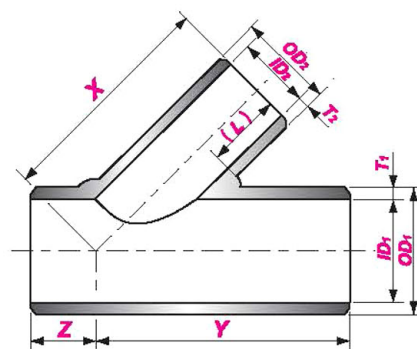
Notes:

- When the short type is used on the larger flanges with PN 50 and PN 110 (300 and 600 LB) and on flanges with PN 150(900 LB) and above, or the long type is used on the larger flange with PN 260 and PN 420(1500 and 2500LB), the length of the cylinder may be added to be feasible the welding, the adding length shall be negotiated by manufacturer and purchaser.
- The thickness of joint shall be added if the TG and MFM contact surface of flange are used, and the adding thickness shall increase (not be included in) the base length F.
- The radius of fillet R(type A) shall conform to the ones of loose flanges according to GB/T 9118.1~9118.2 or ASME B16.5. The radius of fillet R (type B) is only applied for the standards of MSS SP-43 with short length F.
- The lap joint diameter G shall conform to the standard machined face indicated in ASME B16.5, and the back of joint shall be machined to conform to the surface of installation. When RJ used, the size K specified in ASME B 16.5 Shall apply.
- The minimum lap joint thickness t shall not be less than the nominal pipe wall thickness.

BUTT-WELDING LATERAL TEES



对焊等径 45° 斜三通
BW Straight 45° Lateral Tee



对焊异径 45° 斜三通
BW Reducing 45° Lateral Tee

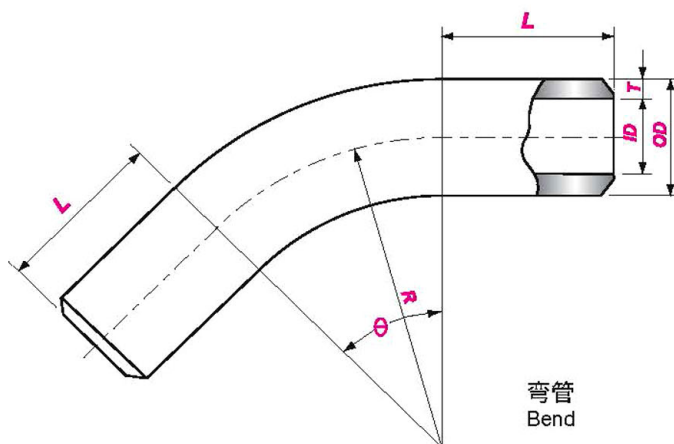
公称尺寸 Nominal Size		端部外径 Outside Diameter at Bevel	中心至端面 Center to End	
DN	NPS	OD	X and Y	Z
15	1/2	21.3	90	50
20	3/4	26.7	108	50
25	1	33.4	133	50
32	1 1/4	42.2	184	57
40	1 1/2	48.3	216	64
50	2	60.3	230	64
65	2 1/2	73.0	267	64
80	3	88.9	280	76
90	3 1/2	101.6	292	76
100	4	114.3	343	76
125	5	141.3	381	90
150	6	168.3	445	102
200	8	219.1	520	127
250	10	273.0	610	140
300	12	323.8	700	152
350	14	355.6	787	165
400	16	406.4	876	178
450	18	457.0	953	203
500	20	508.0	1029	216
550	22	559.0	1112	229
600	24	610.0	1207	254
650	26	660.0	1308	267
700	28	711.0	1422	286
750	30	762.0	1524	299
800	32	813.0	1626	311
850	34	864.0	1727	330
900	36	914.0	1829	350
950	38	965.0	1930	483
1000	40	1016.0	2032	508
1050	42	1067.0	2134	533
1100	44	1118.0	2235	559
1150	46	1168.0	2337	584
1200	48	1219.0	2438	610
1250	50	1270.0	2540	635
1300	52	1321.0	2642	660
1350	54	1372.0	2743	686
1400	56	1422.0	2845	711
1450	58	1473.0	2946	737
1500	60	1524.0	3048	762

注释:

- 1) 异径三通的 X 值按支管公称尺寸对应的 X 值制造, 但当支管变径超过 2 档 (例如 NPS 20 × 14) 时, 45 度夹角处的长度 L 应等于或大于支管外径 OD₂。

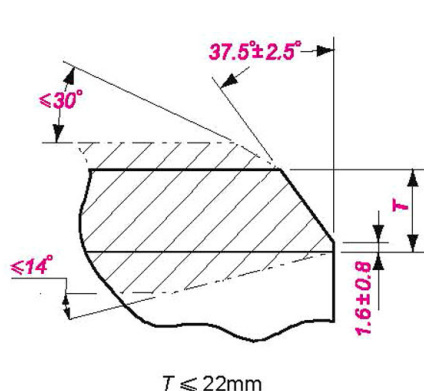
Note:

- 1) The value X of the reducing tee shall be according to the one matching to the nominal size of branch pipe, but when the varying diameter of branch exceeds and includes two levels (for example NPS 20 × 14), the length L near the 45° angle shall be equal or larger than the OD₂ of branch pipe.

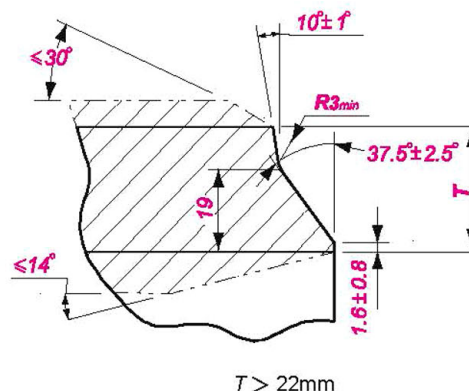


项 目 Item	内 容 Content
标 准 Standard	DL/T 515 《电站弯管》、SY/T 5257 《油气输送用钢制弯管》、ASME B16.49 《用于输送和分配的管道系统中的工厂制造的钢制感应弯管》或采购文件规定 DL/T 515 Pipe Bends for Power Station, SY/T 5257 Steel Bend for Oil and Gas Transmission, ASME B16.49 Factory-Made Wrought Steel Induction Bends for Transportation and Distribution Systems and or purchasing specification
材 料 Material	碳素钢、合金钢、不锈钢 Carbon Steel、Alloy Steel、Stainless Steel
弯曲半径 R Bend Radius	$R \geq 3OD$ (OD 为管子外径) $R \geq 3OD$ (OD is outside diameter of pipe)
弯曲角度 θ Bend Angle	按设计文件规定 According to the specification of design documentation.
直段长度 L Straight Length	按标准或设计文件规定的长度；或两端直段长度为 500 mm Per standard or specified length in the design documentation, or both straight lengths are 500mm.
外径 OD Outside Diameter	$OD \leq 1220\text{mm}$
壁厚 T Wall Thickness	按设计文件规定 According to the specification of design documentation.
端部坡口 Bevel at Ends	按对焊管件端部坡口型式；或按设计文件规定 According to the bevel ends of BW fittings or per specification of design documentation.

对焊管件端部坡口型式 BEVEL ENDS OF BW FITTINGS



$T \leq 22\text{mm}$



$T > 22\text{mm}$

注释:

1) 图示为对焊管件常用的端部焊接坡口型式。当采购文件对端部坡口有另外规定时, 按采购文件规定的型式加工。

Note:

1) The general bevel ends are as the above. If specially required, the purchase specification shall be performed.

TOLERANCES FOR BW FITTINGS

对焊管件的公差

TOLERANCES FOR BW FITTINGS

公称尺寸 Nominal Size		所有管件 ¹⁾²⁾ All Fittings		45°、90° 弯头、三通、四通 45° & 90° Elbows & Tees, Crosses	3D 弯头 3D Radius Elbows	180° 弯头 Returns			管帽 Caps	异径管、翻边短节 Reducers & Lap Joint Stub Ends	翻边短节 Lap Joint Stub Ends		
DN	NPS	OD ³⁾⁴⁾	ID ³⁾	A, B, C, M	A, B	O	K	U	E, E ₁	H, F	G	R	t
15-65	1/2-2 1/2	+1.6 -0.8	± 0.8	± 2	± 3	± 6	± 6	± 1	± 3	± 2	0 -1	0 -1	+1.6 0
80-90	3-3 1/2	± 1.6	± 1.6	± 2	± 3	± 6	± 6	± 1	± 3	± 2	0 -1	0 -1	+1.6 0
100	4	± 1.6	± 1.6	± 2	± 3	± 6	± 6	± 1	± 3	± 2	0 -1	0 -2	+1.6 0
125-200	5-8	+2.4 -1.6	± 1.6	± 2	± 3	± 6	± 6	± 1	± 6	± 2	0 -1	0 -2	+1.6 0
250-450	10-18	+4.0 -3.2	± 3.2	± 2	± 3	± 10	± 6	± 2	± 6	± 2	0 -2	0 -2	+3.2 0
500-600	20-24	+6.4 -4.8	± 4.8	± 2	± 3	± 10	± 6	± 2	± 6	± 2	0 -2	0 -2	+3.2 0
650-750	26-30	+6.4 -4.8	± 4.8	± 3	± 6	---	---	---	± 10	± 5	---	---	---
800-1200	32-48	+6.4 -4.8	± 4.8	± 5	± 6	---	---	---	± 10	± 5	---	---	---
1300-1500	52-60	+6.4 -4.8	± 4.8	± 5	---	---	---	---	---	---	---	---	---
1600-1700	64-68	+6.4 -4.8	± 4.8	± 5	---	---	---	---	---	---	---	---	---
1800-2000	72-80	+6.4 -4.8	± 4.8	± 5	---	---	---	---	---	---	---	---	---

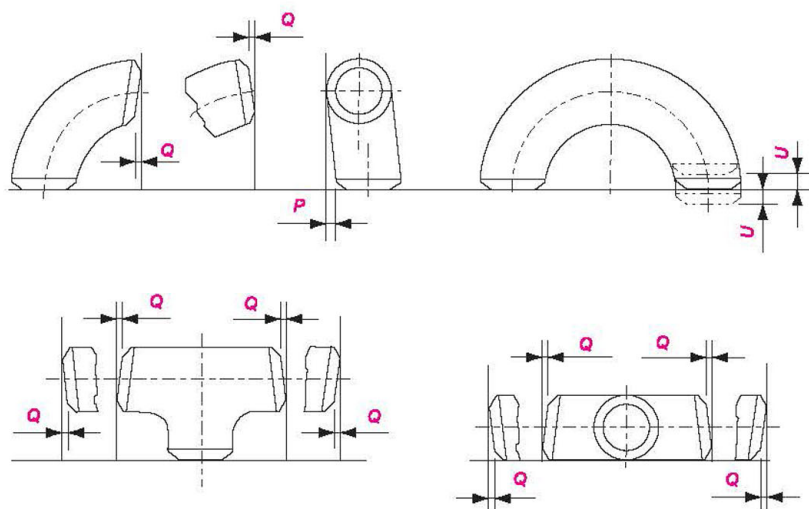
注释:

- 1) 端部内径和公称壁厚由采购方指定。
- 2) 如采购方未规定壁厚公差, 则适用 87.5% 的最小壁厚。
- 3) 圆度为正负偏差绝对值之和。
- 4) 当需要增加壁厚以满足设计要求时, 该项公差可超过表列值。

Note:

- 1) The inside diameter and the nominal wall thickness shall be specified by purchaser.
- 2) If purchaser doesn't specify the thickness tolerance, 87.5% of the nominal thickness shall be the min. thickness.
- 3) Out-of-roundness is the sum of absolute values of plus and minus tolerance.
- 4) When the wall thickness needs increasing to meet the design requirement, the tolerance may exceed the ones indicated in the above list.

公称尺寸 Nominal Size		Q	P
DN	NPS		
15-100	1/2-4	1	2
125-200	5-8	2	4
250-300	10-12	3	5
350-400	14-16	3	6
450-600	18-24	4	10
650-750	26-30	5	10
800-1050	32-42	5	13
1100-1200	44-48	5	19
1300-2000	50-80	5	19





Contact US



If you have any inquiry or demands, please contact with us freely. We ensure that reply within 24 hours.



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