



TM 天马管件
TianMa Fitting

河北海浩高压法兰管件集团天马管件有限公司

TIANMA FITTING CO.,LTD. HEBEI HAHAO HIGH-PRESSURE FLANGE GROUP

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中国·河北

企业简介篇

Enterprise Brief

河北海浩高压法兰管件集团天马管件有限公司创建于1997年。是规模较大的生产各种管件和管道配件的专业公司。坐落于被誉为中国弯头、管件之都的孟村回族自治县。北靠京津，东临渤海和黄骅港，环境优越，交通便利。

公司多年以来一直致身于技术的创新和产品质量的提高。经过公司领导和广大员工不懈努力下，建立了完善的管理和质量保证体系。1999年公司通过了ISO9001:2000质量体系认证。建有专门的检验室，具备化学分析、金相检验、物理实验、无损探伤等检验能力。

公司生产各种高低压碳钢管，合金管，以及弯头，三通，异径管，弯管，法兰等管件。所有产品执行ASME (ANSI), DIN, JIS, BS, GB/T, JB, SA, 和 HG 标准，和可以按照客户的图纸要求加工。此外，我们可以生产各种非标，厚壁管道配件。产品被广泛应用于石油，化工，电力，冶金制药等行业。

我公司产品95%以上出口，远销非洲，欧洲，澳洲，东南亚，中东，北美，南美等国家。年出口能力超过9000000吨。

我公司坚持“制造精品，履行承诺，不断进取，追求完善”和“合作共赢，共创辉煌”的经营理念，用质量占领市场，用真诚服务客户。

董事长董俊明携公司全体员工，欢迎国内外的各界朋友光临我公司参观指导，洽谈业务，共创美好明天！

Hebei Haihao High-Pressure Flange Group Tianma Fittings Co., Ltd., is established in 1997, which is one of the largest enterprises that produce all kinds of pipes fittings, located in the Fullin industrial area of Mangcun Huizu Autonomous County—— The City of China Elbow and Pipe Fittings. At south of Beijing and Tianjin, west of Huanghua port, has convenient transportation.

After working on improving technology and quality for many years, with effort of all of our workers and management team. We build perfect management and quality system, we obtained ISO9001:2000 Quality Management System Certificate in 1999. We have lab for chemical analyze, physical experiment, UTC test for quality test.

Our company are professional in high, middle or low pressure carbon steel pipes, alloy steel pipes, elbows, tees, reducers, reducing elbows, caps, bends and flanges.

All of our products are made according to ASME (ANSI), DIN, JIS, BS, GB/T, JB, SA, and HG standards, or as per customers' drawings or samples. Moreover, we can produce products which are non-standard, very thick, and wall pipe accessories. Our products are widely used in petroleum, chemical, power station, metallurgy, pulper, beverage and pharmaceutical industries.

More than 95% of our products have been exported exported to many country in Africa, European, Australia, East Asia, Mid-east, North America, South America etc. the annual export capability over 9000000 ton.

We insist on our company policy "Top quality, Sincere cooperation, Consistent improvement, Pursuing perfect" and "Mutual benefit, Mutual Success". We use the quality to occupy the market, use our sincerity to serve our customers.

The Managing Director Dong Junming represents all of the staffs in our company welcome both the domestic customers and the foreign customers to visit our company for the business opportunities and share the mutual success with our esteemed customers.

海浩集团天马公司



荣誉·印证成就

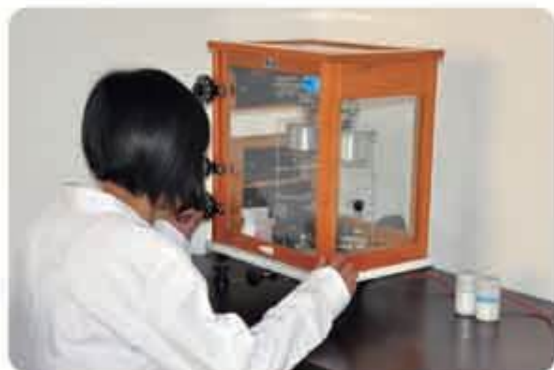
OUR HONOR 我们的荣誉

我们追求的不仅仅是荣誉，
更加是得到客户的认可

We pursue of not only a honor,
but also recognition form customers.



检测设备 Detection equipment



检测设备 Detection equipment



生产设备 Production equipment



产品库房 Warehouse



产品展示 Products display



产品展示 Products display



美国压力管道管件常用材料

The General Material For American Pressure Piping Fittings

类型 Type	标准号 Standard and Code	级别 Grade	化学成分 Chemical Composition %/max						
			C	Mn	P	S	Si	Cu	
管件 FITTING	ASTM A234/A234M	WPB	≤0.30	0.29-1.06	0.050	0.058	≤0.10mm	≤0.40	
		WPC	≤0.35	0.29-1.06	0.050	0.058	≤0.10mm	0.40	
		WPI	≤0.28	0.30-0.90	0.045	0.045	—	—	
		WP12CL1	0.05-0.20	0.30-0.80	0.045	0.045	≤0.60	0.80-1.25	
		WP12CL2	0.05-0.20	0.30-0.80	0.045	0.045	≤0.60	0.80-1.25	
		WP11CL1	0.05-0.15	0.30-0.60	0.030	0.030	0.50-1.00	1.00-1.50	
		WP11CL2	0.05-0.20	0.30-0.80	0.040	0.040	0.50-1.00	1.00-1.50	
		WP11CL3	0.05-0.20	0.30-0.80	0.040	0.040	0.50-1.00	1.00-1.50	
		WP22CL1	0.05-0.15	0.30-0.60	0.040	0.040	≤0.50	1.90-2.60	
		WP22CL3	0.05-0.15	0.30-0.60	0.040	0.040	≤0.50	1.90-2.60	
		WP9CL1	≤0.15	0.30-0.60	0.040	0.030	≤0.50	4.0-6.0	
		WP9CL3	≤0.15	0.30-0.60	0.040	0.030	≤0.50	4.0-6.0	
		WP9CL1	≤0.15	0.30-0.60	0.030	0.030	≤1.00	8.0-10.0	
		WP9CL3	≤0.15	0.30-0.60	0.030	0.030	≤1.00	8.0-10.0	
		WPR	≤0.20	0.30-0.60	0.045	0.050	—	—	
		WPR1	0.08-0.12	0.30-0.60	0.020	0.010	0.20-0.50	8.0-9.5	
		WPR11	0.09-0.13	0.30-0.60	0.020	0.010	0.10-0.50	8.5-10.5	
	ASTM A403/A403M	WP304	0.08	2.00	0.045	0.030	1.00	18.0-20.0	
		WP304H	0.04-0.10	2.00	0.045	0.030	1.00	18.0-20.0	
		WP304L	0.035	2.00	0.045	0.030	1.00	18.0-20.0	
		WP304LN	0.03	2.00	0.045	0.030	1.00	18.0-20.0	
		WP304N	0.08	2.00	0.045	0.030	1.00	18.0-20.0	
		WP308	0.20	2.00	0.045	0.030	1.00	22.0-24.0	
		WP310	0.15	2.00	0.045	0.030	1.5	24.0-26.0	
		WP316	0.08	2.00	0.045	0.030	1.00	18.0-18.0	
		WP316H	0.04-0.10	2.00	0.045	0.030	1.00	18.0-18.0	
		WP316LN	0.03	2.00	0.045	0.030	1.00	18.0-18.0	
		WP316L	0.035	2.00	0.045	0.030	1.00	18.0-18.0	
		WP316N	0.08	2.00	0.045	0.030	1.00	18.0-20.0	
		WP317	0.08	2.00	0.045	0.030	1.00	18.0-20.0	
		WP317L	0.03	2.00	0.045	0.030	1.00	18.0-20.0	
		WP321	0.08	2.00	0.045	0.030	1.00	17.0-19.0	
		WP321H	0.04-0.10	2.00	0.045	0.030	1.00	17.0-19.0	
		WP347	0.08	2.00	0.045	0.030	1.00	17.0-19.0	
		WP347H	0.04-0.10	2.00	0.045	0.030	1.00	17.0-19.0	
		WP348	0.08	2.00	0.045	0.030	1.00	17.0-19.0	
		WP348H	0.04-0.10	2.00	0.045	0.030	1.00	17.0-19.0	
管件 ORDING	ASTM A420/A420M	WPL8	0.30	0.50-1.35	0.035	0.040	0.15-0.40	0.30	
		WPL8	0.20	0.4-1.06	0.030	0.030	—	—	
		WPL3	0.20	0.31-0.64	0.05	0.05	0.13-0.37	—	
		WPL8	0.13	0.50	0.030	0.030	0.13-0.37	—	
		UNS S31803	0.030	2.0	0.030	0.020	0.10	21.0-23.0	
	ASTM A105/A105M	A105	0.35	0.60-1.05	0.035	0.040	0.10-0.35	0.30	
		F11CL1	0.05-0.15	0.30-0.60	0.030	0.030	0.50-1.00	1.00-1.50	
		F11CL2	0.10-0.20	0.30-0.80	0.040	0.040	0.50-1.00	1.00-1.50	
		F11DL3	0.10-0.20	0.30-0.80	0.040	0.040	0.50-1.00	1.00-1.50	
		F12CL1	0.05-0.15	0.30-0.60	0.045	0.045	0.3	0.80-1.25	
		F12CL2	0.10-0.20	0.30-0.80	0.040	0.040	0.10-0.60	0.80-1.25	
		F304	0.08	2.00	0.045	0.030	1.00	18.0-20.0	
		F304H	0.40-0.10	2.00	0.045	0.030	1.00	18.0-20.0	
		F304L	0.035	2.00	0.045	0.030	1.00	18.0-20.0	
		F316	0.035	2.00	0.045	0.030	1.00	18.0-18.0	
		F317	0.08	2.00	0.045	0.030	1.00	18.0-20.0	
		F321	0.08	2.00	0.045	0.030	1.00	17.0-19.0	
		F347	0.08	2.00	0.045	0.030	1.00	17.0-20.0	
管 PIPE	ASTM A53/A53M	B	0.30	0.29-1.06	0.035	0.045	—	0.40	
		B	0.35	0.29-1.06	0.035	0.035	0.10mm	0.40	
		C	0.35	0.29-1.06	0.035	0.035	0.10mm	0.40	
		TP304	0.08	2.00	0.040	0.030	0.75	18.0-20.0	
		TP304H	0.04-0.10	2.00	0.040	0.030	0.75	18.0-20.0	
		TP304L	0.035	2.00	0.040	0.030	0.75	18.0-20.0	
		TP316L	0.035	2.00	0.040	0.030	0.75	18.0-18.0	
		TP321	0.08	2.00	0.040	0.030	0.75	17.0-20.0	
		P5	0.15	0.30-0.60	0.025	0.025	0.50	4.00-6.00	
		P56	0.15	0.30-0.60	0.025	0.025	1.00-2.00	4.00-6.00	
		P45	0.12	0.30-0.60	0.025	0.025	0.50	4.00-6.00	
		P9	0.15	0.30-0.60	0.025	0.025	0.50-1.00	8.00-10.0	
		P11	0.05-0.15	0.30-0.60	0.025	0.025	0.50-1.00	1.00-1.50	
		P12	0.05-0.15	0.30-0.61	0.025	0.025	0.50	0.80-1.25	
		P22	0.05-0.15	0.30-0.60	0.025	0.025	0.50	1.90-2.60	
		P91	0.08-0.12	0.30-0.60	0.020	0.010	0.20-0.50	8.00-9.5	
	ASTM A350/A350M	60	0.24	0.98	0.035	0.035	0.13-0.45	—	
		65	0.28	0.98	0.035	0.035	0.13-0.45	—	
		70	0.31	1.30	0.035	0.035	0.13-0.45	—	
板 PLATE	ASTM A515/A515M	60	0.24	0.98	0.035	0.035	0.13-0.45	—	
		65	0.28	0.98	0.035	0.035	0.13-0.45	—	

●材料的化学成分和力学性能指标会因为某些条件的规定而有所改变，使用时请查阅标准。

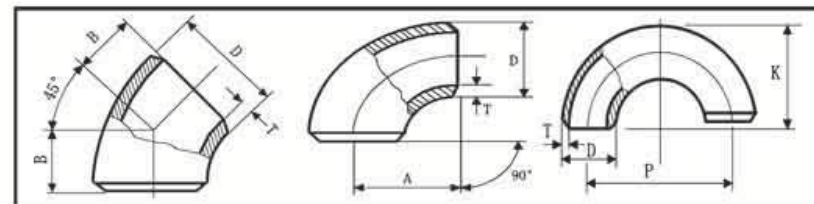
美国压力管道管件常用材料

The General Material For American Pressure Piping Fittings

力学性能 Mechanical performance							
Mo	Cu	Other	σ _b MPa min	σ _t MPa min	σ _{0.2} MPa min	σ _b Max	Other
≤0.15	≤0.40	≤0.40	V 0.08	415-585	240	22	197
≤0.15	≤0.40	≤0.40	V 0.08	455-655	275	22	197
0.44-0.65	—	—	—	380-550	205	22	197
0.44-0.65	—	—	—	415-585	220	22	197
0.44-0.65	—	—	—	455-655	275	22	197
0.44-0.65	—	—	—	415-585	205	22	197
0.44-0.65	—	—	—	455-655	275	22	197
0.44-0.65	—	—	—	520-690	310	22	197
0.87-1.13	—	—	—	415-585	205	22	197
0.87-1.13	—	—	—	520-690	310	22	197
0.44-0.65	—	—	—	415-585	205	22	217
0.44-0.65	—	—	—	520-690	310	22	217
0.90-1.10	—	—	—	415-585	205	22	217
0.90-1.10	—	—	—	520-690	310	22	217
—	1.60-2.24	0.75-1.25	—	435-605	315	20/28	217
0.85-1.05	≤0.40	—	see standard	565-760	415	20	248
0.90-1.10	≤0.40	—	see standard	620-840	440	20	248
—	8.0-11.0	—	—	515	205	28	—
—	8.0-11.0	—	—	515	205	28	—
—	8.0-12.0	—	—	485	170	28	—
—	8.0-11.0	—	N2 0.10-0.16	515	205	28	—
—	8.0-11.0	—	N2 0.10-0.16	550	240	28	—
—	12.0-15.0	—	—	515	205	28	—
—	19.0-22.0	—	—	515	205	28	—
2.00-3.00	10.0-14.0	—	—	515	205	28	—
2.00-3.00	10.0-14.0	—	—	515	205	28	—
2.00-3.00	11.0-13.0	—	N2 0.10-0.16	515	205	28	—
2.00-3.00	10.0-16.0	—	—	485	170	28	—
2.00-3.00	10.0-13.0	—	N2 0.10-0.16	560	204	28	—
3.0-4.0	11.0-15.0	—	—	515	205	28	—
3.0-4.0	11.0-15.0	—	—	515	205	28	—
—	8.0-12.0	—	Ti 5c-0.7	515	205	28	—
—	8.0-12.0	—	Ti 4c-0.7	515	205	28	—
—	9.0-12.0	—	Nb+Ta 10c-1.10	515	205	28	—
—	9.0-12.0	—	Nb+Ta 8c-1.00	515	205	28	—
—	9.0-12.0	—	Ta 0.10	515	205	28	—
—	9.0-12.0	—	Ta 0.10	515	205	28	—
0.12	0.40	0.40	Cb 0.02-v 0.06	415-585	240	22	—
—	1.60-2.24	0.75-1.25	—	435-610	315	20	—
—	3.2-3.8	—	—	450-620	240	22	—
—	8.4-9.6	—	—	690-865	515	16	—
2.05-3.05	4.50-6.50	—	N 0.08-0.20	620-795	450	25	290
0.12	0.40	0.40	V 0.05-Nb 0.02	485-600	290	22	187
0.44-0.65	—	—	—	415	205	20	121-174
0.44-0.65	—	—	—	485	275	20.0	143-207
0.44-0.65	—	—	—	515	310	20	156-207
0.44-0.65	—	—	—	415	205	20	121-174
0.44-0.65	—	—	—	485	275	20.0	143-207
—	8.0-11.0	—	N 0.10	515	205	30	—
—	8.0-11.0	—	—	515	205	30	—
—	8.0-13.0	—	N 0.10	485	170	30	—
2.00-3.00	10.0-15.0	—	N 0.10	485	170	30	—
3.0-4.0	10.0-15.0	—	—	515	205	30	—
—	9.0-12.0	—	Ti 5c%-0.7	515	205	30	—
—	9.0-13.0	—	Ti 10c%-1.10	515	205	30	—
0.15	0.40	0.40	v 0.06	415	240	22	—
0.15	0.40	0.40	v 0.08	415	204	22	—
0.15	0.40	0.40	v 0.08	485	275	20	—
—	8.0-11.0	—	—	515	205	35	—
—	8.0-11.0	—	—	515	205	35	—
—	8.0-13.0	—	—	485	170	35	—
2.00-3.00	10.0-15.0	—	—	485	170	35	—
—	9.0-13.0	—	Ti 5c%-0.7	515	205	35	—
0.45-0.65	—	—	—	415	205	22	—
0.45-0.65	—	—	—	415	205	22	—
0.45-0.65	—	—	Ti 4c%-0.7	415	205	22	—
0.90-1.10	—	—	—	415	205	22	—
0.44-0.65	—	—	—	415	205	22	—
0.44-0.65	—	—	—	415	220	22	—
0.87-1.13	—	—	—	415	205	22	—
0.85-1.05	0.40	—	See standard	585	415	20	—
—	—	—	—	415-550	220	25	—
—	—	—	—	450-585	240	23	—
—	—	—	—	485	260	23	—

NOMINAL PIPE SIZE		OUTSIDE DIAMETER		NOMINAL WALL THICKNESS															
A	B	ASME	JIS	DIN	JIS(1)	DIN(2)	SCH10	SCH20	SCH30	STD	SCH40	SCH60	XS	SCH80	SCH100	SCH120	SCH140	SCH160	XXS
15	1/2"	21.3	21.7	21.3	2.8	2.8	2.1	-	2.41	2.77	2.77	-	3.73	3.73	-	-	-	4.78	7.47
20	3/4"	26.7	27.2	26.9	2.8	2.3	2.11	-	2.41	2.67	2.87	-	3.91	3.91	-	-	-	5.56	7.82
25	1"	33.4	34.0	33.7	3.2	2.6	2.77	-	2.90	3.38	3.38	-	4.55	4.55	-	-	-	6.35	9.09
32	1 1/4"	42.2	42.7	42.4	3.5	2.6	2.77	-	2.97	3.56	3.56	-	4.85	4.85	-	-	-	6.35	9.70
40	1 1/2"	48.3	48.6	48.3	3.5	2.8	2.77	-	3.18	3.68	3.68	-	5.08	5.08	-	-	-	7.14	10.15
50	2"	60.3	60.5	60.3	3.8	2.9	2.77	-	3.18	3.91	3.91	-	5.54	5.54	-	-	-	8.74	11.07
65	2 1/2"	73.0	76.3	76.1	4.2	2.9	3.05	-	4.78	5.16	5.16	-	7.01	7.01	-	-	-	9.53	14.02
80	3"	88.9	89.1	88.9	4.2	3.2	3.05	-	4.78	5.49	5.49	-	7.62	7.62	-	-	-	11.13	15.24
90	3 1/2"	101.6	101.6	-	4.2	-	3.05	-	4.78	5.74	5.74	-	8.08	8.08	-	-	-	-	-
100	4"	114.3	114.3	114.3	4.5	3.6	3.05	-	4.78	6.02	6.02	-	8.56	8.56	-	-	-	-	-
125	5"	141.3	139.8	139.7	4.5	4.0	3.40	-	-	6.55	6.55	-	9.53	9.53	-	-	-	-	-
150	6"	168.3	165.2	168.3	5.0	4.5	3.40	4.5	-	7.11	7.11	-	10.97	10.97	-	-	-	-	-
200	8"	219.1	216.3	219.1	5.8	6.3	3.76	6.35	7.04	8.18	8.18	10.31	12.70	12.70	15.09	16.26	20.62	23.01	22.23
250	10"	273.0	267.4	273.0	6.8	6.3	4.19	6.35	7.60	9.27	9.27	12.70	12.70	12.70	15.09	16.26	21.44	25.40	25.40
300	12"	323.8	318.5	323.9	6.9	7.1	4.57	6.35	8.38	9.53	10.31	14.27	12.70	17.48	17.48	21.44	25.40	28.58	33.32
350	14"	355.6	355.6	355.6	7.9	8.0	6.35	7.92	9.53	9.53	11.13	15.09	12.70	19.05	23.83	27.79	31.75	35.71	-
400	16"	406.4	406.4	406.4	7.9	8.8	6.35	7.92	9.53	9.53	12.70	16.66	12.70	21.44	26.19	30.96	36.53	40.49	-
450	18"	457.2	457.2	457.0	7.9	10.0	6.35	7.92	11.13	9.53	14.27	19.05	12.70	23.83	29.36	34.93	39.67	45.24	-
500	20"	508.0	508.0	508.0	7.9	11.0	6.35	9.53	12.70	9.53	15.09	20.62	12.70	26.19	32.54	38.10	44.45	50.01	-
550	22"	558.8	558.8	-	-	-	6.35	9.53	12.70	9.53	-	22.23	12.70	28.58	34.93	41.28	47.63	53.98	-
600	24"	609.6	609.6	610.0	-	-	6.35	9.53	14.27	9.53	17.48	24.61	12.70	30.96	38.89	46.02	52.37	59.54	-
650	26"	660.4	660.4	-	-	-	7.92	12.70	-	9.53	-	-	12.70	-	-	-	-	-	-
700	28"	711.2	711.2	711.0	-	-	7.92	12.70	15.88	9.53	-	-	12.70	-	-	-	-	-	-
750	30"	762.0	762.0	-	-	-	7.92	12.70	15.88	9.53	-	-	12.70	-	-	-	-	-	-
800	32"	812.8	812.8	813.0	-	-	7.92	12.70	15.88	9.53	17.48	-	12.70	-	-	-	-	-	-
850	34"	863.6	863.6	-	-	-	7.92	12.70	15.88	9.53	17.48	-	12.70	-	-	-	-	-	-
900	36"	914.4	914.4	914.0	-	-	7.92	12.70	15.88	9.53	19.05	-	12.70	-	-	-	-	-	-
950	38"	965.2	965.2	-	-	-	7.92	12.70	15.88	9.53	-	-	12.70	-	-	-	-	-	-
1000	40"	1016.0	1016.0	1016.0	-	-	12.5	-	-	9.53	-	-	12.70	-	-	-	-	-	-
1050	42"	1066.8	1066.8	-	-	-	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-
1100	44"	1117.6	1117.6	-	-	-	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-
1150	46"	1168.4	1168.4	-	-	-	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-
1200	48"	1219.2	1219.2	1220.0	-	-	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-

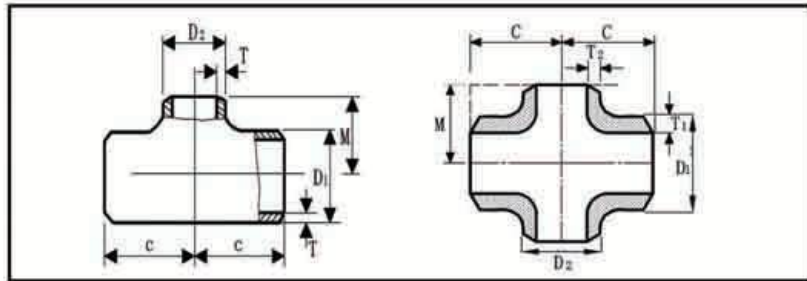
NOTE: (1) THE WALL THICKNESS SPECIFIED IS GRADE IS GRADE F502 OF JIS B2311:1997
(2) THE WALL THICKNESS SPECIFIED IS FOR SERIES 3 OF DIN 2605 (PART 1):02.91



对焊弯头尺寸 ASME/ANSI B16.9、B16.28
Dimensions of Elbows and Returns

公称通径 Nominal Pipe size DN(in.)	端部外 径 Outside Diameter at Bevel D	中心至端面 Center to End			中心至中心 Center to Center		背面至端面 Back to Faces							
		45° 弯头 Elbows	90° 弯头 Elbows		180° 弯头 Elbows									
					B		A		P		K			
					长半径		长半径		短半径		长半径		短半径	
					Long Radius	Long Radius	Short Radius	Long Radius	Short Radius	Long Radius	Long Radius	Short Radius	Short Radius	
1/2	21.3	15.7	38.1	-	76.2	-	47.8	-						
3/4	26.7	19.1	38.1	-	76.2	-	50.8	-						
1	33.4	22.4	38.1	25.4	76.2	50.8	55.6	41.1						
1 1/4	42.2	25.4	47.8	31.8	95.3	63.6	69.9	52.3						
1 1/2	48.3	28.4	57.2	38.1	114.3	76.2	82.6	62.0						
2	60.3	35.1	76.2	50.8	152.4	101.6	106.4	81.0						
2 1/2	73.0	44.5	95.3	63.5	190.5	127.0	131.8	100.1						
3	88.9	50.8	114.3	76.2	228.6	152.4	158.8	120.7						
3 1/2	101.6	57.2	133.4	88.9	266.7	177.8	184.2	139.7						
4	114.3	63.5	152.4	101.6	304.8	203.2	209.6	158.8						
5	141.3	79.2	190.5	127.0	381.0	254.0	261.9	196.9						
6	168.3	95.3	228.6	152.4	457.2	304.8	312.7	236.5						
8	219.1	127.0	304.8	203.2	609.6	406.4	414.3	312.7						
10	273.1	158.8	381.0	254.0	762.0	508.0	517.7	390.7						
12	323.9	190.5	457.2	304.8	914.4	609.6	619.3	466.9						
14	355.6	222.3	533.4	355.6	1066.8	711.2	711.2	533.4						
16	406.4	254.0	609.6	406.4	1219.2	812.8	812.8	609.6						
18	457.2	285.8	685.8	457.2	1371.6	914.4	914.4	685.8						
20	508.0	317.5	762.0	508.0	1524.0	1016.0	1016.0	762.0						
22	558.8	342.9	838.2	558.8	1676.4	1117.6	1117.6	838.2						
24	609.6	381.0	914.4	609.6	1828.8	1219.2	1219.2	914.4						
26	660.4	406.0	990.6	-	-	-	-	-						
28	711.2	438.2	1066.8	-	-	-	-	-						
30	762.0	469.9	1143.0	-	-	-	-	-						
32	812.8	501.7	1219.2	-	-	-	-	-						
34	863.6	533.4	1295.4	-	-	-	-	-						
36	914.4	565.2	1371.6	-	-	-	-	-						
38	965.2	599.9	1447.8	-	-	-	-	-						
40	1016.0	632.0	1524.0	-	-	-	-	-						
42	1066.8	660.4	1600.2	-	-	-	-	-						
44	1117.6	695.5	1676.4	-	-	-	-	-						
46	1168.4	726.9	1752.6	-	-	-	-	-						
48	1219.2	758.9	1828.8	-	-	-	-	-						

注：1）表中长半径弯头取自 ASME/ANSI B16.9，短半径取自 ASME/ANSI B16.28。
2）壁厚 T 见 21 页壁厚表。



对焊等径三通、四通尺寸
ASME/ANSI B16.9
Dimensions of Straight Tees
And Crosses

公称口径 Nominal Pipe size DN (in.)	端部外径 Outside Diameter at Bevel D	中心至端面 Center to End	
		C	M
1/2	21.3	25.4	
3/4	26.7	28.4	
1	33.4	38.1	
1.1/2	42.2	47.8	
1.3/4	48.3	57.2	
2	60.3	63.5	
2.1/2	73.0	76.2	
3	88.9	85.9	
3.1/2	101.6	95.3	
4	114.3	104.6	
5	141.3	124.0	
6	168.3	142.7	
8	219.1	177.8	
10	273.1	215.9	
12	323.9	254.0	
14	355.6	279.4	
16	406.4	304.8	
18	457.2	342.9	
20	508.0	381.0	
22	558.8	419.1	
24	609.6	431.8	
26	660.4	495.3	
28	711.2	520.7	
30	762.0	558.8	
32	812.8	596.9	
34	863.6	635.0	
36	914.4	673.1	
38	965.2	711.2	
40	1016.0	749.3	
42	1066.8	787.4	
44	1117.6	825.5	
46	1168.4	863.6	
48	1219.2	901.7	

对焊异径三通、四通尺寸
ASME/ANSI B16.9
Dimensions of Reducing outlet Tees
and Reducing outlet Crosses

公称口径 Nominal Pipe size DN (in.)	端部外径 Outside Diameter at Bevel D1 × D2	中心至端面 Center to End	
		C	M
1/2 × 3/8	21.3 × 17.1	25.4	
1/2 × 1/4	21.3 × 13.7	25.4	
3/4 × 1/2	26.7 × 21.3	28.4	
3/4 × 3/8	26.7 × 17.1	28.4	
1 × 3/4	33.4 × 26.7	38.1	
1 × 1/2	33.4 × 21.3	38.1	
1.1/2 × 1	42.2 × 33.4	47.8	
1.1/2 × 3/4	42.2 × 26.7	47.8	
1.1/2 × 1/2	42.2 × 21.3	47.8	
1.1/2 × 1.1/2	48.3 × 42.2	57.2	
1.1/2 × 1	48.3 × 33.4	57.2	
1.1/2 × 3/4	48.3 × 26.7	57.2	
1.1/2 × 1/2	48.3 × 21.3	57.2	
2 × 1.1/2	60.3 × 48.3	63.5	
2 × 1.1/2	60.3 × 42.2	63.5	
2 × 1	60.3 × 33.4	63.5	
2 × 3/4	60.3 × 26.7	63.5	
2.1/2 × 2	73.0 × 60.3	76.2	
2.1/2 × 1.1/2	73.0 × 48.3	76.2	
2.1/2 × 1.1/2	73.0 × 42.2	76.2	
2.1/2 × 1	73.0 × 33.4	76.2	
3 × 2.1/2	88.9 × 73.0	85.9	
3 × 2	88.9 × 60.3	85.9	
3 × 1.1/2	88.9 × 48.3	85.9	
3 × 1.1/2	88.9 × 42.2	85.9	
3.1/2 × 3	101.6 × 88.9	95.3	
3.1/2 × 2.1/2	101.6 × 73.0	95.3	
3.1/2 × 2	101.6 × 60.3	95.3	
3.1/2 × 1.1/2	101.6 × 48.3	95.3	
4 × 3.1/2	114.3 × 101.6	104.6	
4 × 3	114.3 × 88.9	104.6	
4 × 2.1/2	114.3 × 73.0	104.6	
4 × 2	114.3 × 60.3	104.6	

对焊异径三通、四通尺寸 ASME/ANSI B16.9
Dimensions of Reducing outlet Tees
and Reducing outlet Crosses

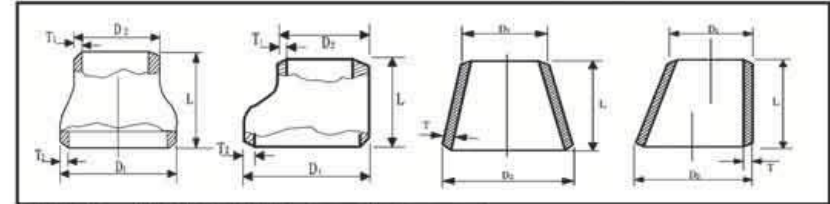
公称口径 Nominal Pipe size DN (in.)	端部外径 Outside Diameter at Bevel D1 × D2	中心至端面 Center to End	
		C	M
4 × 1.1/2	114.3 × 48.3	104.6	85.9
5 × 4	141.3 × 114.3	124.0	117.3
5 × 3.1/2	141.3 × 101.6	124.0	114.3
5 × 3	141.3 × 88.9	124.0	111.3
5 × 2.1/2	141.3 × 73.0	124.0	108.0
5 × 2	141.3 × 60.3	124.0	104.6
6 × 5	168.3 × 141.3	142.7	136.7
6 × 4	168.3 × 114.3	142.7	130.7
6 × 3.1/2	168.3 × 101.6	142.7	127.0
6 × 3	168.3 × 88.9	142.7	124.0
6 × 2.1/2	168.3 × 73.0	142.7	120.7
8 × 6	219.1 × 168.3	177.8	168.1
8 × 5	219.1 × 141.3	177.8	162.1
8 × 4	219.1 × 114.3	177.8	155.4
8 × 3.1/2	219.1 × 101.6	177.8	152.4
10 × 8	273.1 × 219.1	215.9	203.2
10 × 6	237.1 × 168.3	215.9	193.5
10 × 5	273.1 × 141.3	215.9	190.5
10 × 4	273.1 × 114.3	215.9	184.2
12 × 10	323.9 × 273.1	254.0	241.3
12 × 8	323.9 × 219.1	254.0	228.6
12 × 6	323.9 × 168.3	254.0	218.9
12 × 5	323.9 × 141.3	254.0	215.9
14 × 12	355.6 × 323.9	292.1	269.7
14 × 10	355.6 × 273.1	292.1	257.0
14 × 8	355.6 × 219.1	292.1	247.7
14 × 6	355.6 × 168.3	292.1	238.3
16 × 14	406.4 × 355.6	330.2	304.8
16 × 12	406.4 × 323.9	330.2	295.1
16 × 10	406.4 × 273.1	330.2	282.4
16 × 8	406.4 × 219.1	330.2	273.1
16 × 6	406.4 × 168.3	330.2	263.7
18 × 16	457.2 × 406.4	368.3	330.2
18 × 14	457.2 × 355.6	368.3	320.2
18 × 12	457.2 × 323.9	368.3	320.2
18 × 10	457.2 × 273.1	368.3	307.8
18 × 8	457.2 × 219.1	368.3	298.5
20 × 18	508.0 × 457.2	406.4	368.3
20 × 16	508.0 × 406.4	406.4	355.6
20 × 14	508.0 × 355.6	406.4	345.9
20 × 12	508.0 × 323.9	406.4	345.9
20 × 10	508.0 × 273.1	406.4	333.2
20 × 8	508.0 × 219.1	406.4	323.9
22 × 20	558.8 × 508.0	444.5	406.4
22 × 18	558.8 × 457.2	444.5	393.7
22 × 16	558.8 × 406.4	444.5	393.7

公称口径 Nominal Pipe size DN (in.)	端部外径 Outside Diameter at Bevel D1 × D2	中心至端面 Center to End	
		C	M
22 × 14	558.8 × 355.6	419.1	387.0
22 × 12	558.8 × 323.9	419.1	371.3
22 × 10	558.8 × 273.1	419.1	358.6
24 × 22	609.6 × 558.8	431.8	431.8
24 × 20	609.6 × 508.0	431.8	431.8
24 × 18	609.6 × 457.2	431.8	419.1
24 × 16	609.6 × 406.4	431.8	406.4
24 × 14	609.6 × 355.6	431.8	406.4
24 × 12	609.6 × 323.9	431.8	396.7
24 × 10	609.6 × 273.1	431.8	384.0
26 × 24	660.4 × 609.6	495.3	482.6
26 × 22	660.4 × 558.8	495.3	469.9
26 × 20	660.4 × 508.0	495.3	457.2
26 × 18	660.4 × 457.2	495.3	444.5
26 × 16	660.4 × 406.4	495.3	431.8
26 × 14	660.4 × 355.6	495.3	431.8
26 × 12	660.4 × 323.9	495.3	422.1
28 × 26	711.2 × 660.4	520.7	520.7
28 × 24	711.2 × 609.6	520.7	508.0
28 × 22	711.2 × 558.8	520.7	495.3
28 × 20	711.2 × 508.0	520.7	482.6
28 × 18	711.2 × 457.2	520.7	469.9
28 × 16	711.2 × 406.4	520.7	457.2
28 × 14	711.2 × 355.6	520.7	457.2
28 × 12	711.2 × 323.9	520.7	447.5
30 × 28	762.0 × 711.2	558.8	546.1
30 × 26	762.0 × 660.4	558.8	546.1
30 × 24	762.0 × 609.6	558.8	533.4
30 × 22	762.0 × 558.8	558.8	520.7
30 × 20	762.0 × 508.0	558.8	508.0
30 × 18	762.0 × 457.2	558.8	495.3
30 × 16	762.0 × 406.4	558.8	482.6
30 × 14	762.0 × 355.6	558.8	482.6
30 × 12	762.0 × 323.9	558.8	463.8
30 × 10	762.0 × 273.1	558.8	460.2
32 × 30	812.8 × 762.0	596.9	584.2
32 × 28	812.8 × 711.2	596.9	571.5
32 × 26	812.8 × 660.4	596.9	571.5
32 × 24	812.8 × 609.6	596.9	558.8
32 × 22	812.8 × 558.8	596.9	546.1
32 × 20	812.8 × 508.0	596.9	533.4
32 × 18	812.8 × 457.2	596.9	520.7
32 × 16	812.8 × 406.4	596.9	508.0
32 × 14	812.8 × 355.6	596.9	508.0
34 × 32	863.6 × 812.8	635.0	622.3
34 × 30	863.6 × 762.0	635.0	609.6

对焊异径三通、四通尺寸 ASME/ANSI B16.9
Dimensions of Reducing outlet Tees
and Reducing outlet Crosses

公称通径 Nominal Pipe size DN(in.)	端部外径 Outside Diameter at Bevel $D_1 \times D_2$	中心至端面 Center to End		公称通径 Nominal Pipe size DN(in.)	端部外径 Outside Diameter at Bevel $D_1 \times D_2$	中心至端面 Center to End	
		C	M			C	M
34×28	863.6×711.2	635.0	596.9	42×28	1066.8×711.2	762.0	698.5
34×26	863.6×660.4		596.9	42×26	1066.8×660.4		698.5
34×24	863.6×609.6		584.2	42×24	1066.8×609.6		660.4
34×22	863.6×558.8		571.5	42×22	1066.8×558.8		660.4
34×20	863.6×508.0		558.8	42×20	1066.8×508.0		660.4
34×18	863.6×457.2		546.1	42×18	1066.8×457.2		647.7
34×16	863.6×406.4		533.4	42×16	1066.8×406.4		635.0
36×34	914.4×863.6		660.4	44×42	1117.6×1066.8		762.0
36×32	914.4×812.8		647.7	44×40	1117.6×1016.0		749.3
36×30	914.4×762.0		635.0	44×38	1117.6×965.2		736.6
36×28	914.4×711.2	673.1	622.3	44×36	1117.6×914.4	812.8	723.9
36×26	914.4×660.4		622.3	44×34	1117.6×863.6		723.9
36×24	914.4×609.6		609.6	44×32	1117.6×812.8		711.2
36×22	914.4×558.8		596.9	44×30	1117.6×762.0		711.2
36×20	914.4×508.0		584.2	44×28	1117.6×711.2		698.5
36×18	914.4×457.2		571.5	44×26	1117.6×660.4		698.5
36×16	914.4×406.4		558.8	44×24	1117.6×609.6		698.5
38×36	965.2×914.4		711.2	44×22	1117.6×558.8		685.8
38×34	965.2×863.6		698.5	44×20	1117.6×508.0		685.8
38×32	965.2×812.8		685.8	46×44	1168.4×1117.6	850.9	800.1
38×30	965.2×762.0		673.1	46×42	1168.4×1066.8		787.4
38×28	965.2×711.2	711.2	647.7	46×40	1168.4×1016.0		774.7
38×26	965.2×660.4		647.7	46×38	1168.4×965.2		762.0
38×24	965.2×609.6		635.0	46×36	1168.4×914.4		762.0
38×22	965.2×558.8		622.3	46×34	1168.4×863.6		749.3
38×20	965.2×508.0		609.6	46×32	1168.4×812.8		749.3
38×18	965.2×457.2		596.9	46×30	1168.4×762.0		736.6
40×38	1016.0×965.2		749.3	46×28	1168.4×711.2		736.6
40×36	1016.0×914.4		736.6	46×26	1168.4×660.4		736.6
40×34	1016.0×863.6		723.9	46×24	1168.4×609.6		723.9
40×32	1016.0×812.8		711.2	46×22	1168.4×558.8		723.9
40×30	1016.0×762.0	749.3	698.5	48×46	1219.2×1168.4	889.0	838.2
40×28	1016.0×711.2		673.1	48×44	1219.2×1117.6		838.2
43×26	1016.0×660.4		673.1	48×42	1219.2×1066.8		812.8
40×24	1016.0×609.6		660.4	48×40	1219.2×1016.0		812.8
40×22	1016.0×558.8		647.7	48×38	1219.2×965.2		812.8
40×20	1016.0×508.0		635.0	48×36	1219.2×914.4		787.4
40×18	1016.0×457.2		622.3	48×34	1219.2×863.6		787.4
42×40	1066.8×1016.0		711.2	48×32	1219.2×812.8		787.4
42×38	1066.8×965.2		711.2	48×30	1219.2×762.0		762.0
42×36	1066.8×914.4	762.0	711.2	48×28	1219.2×711.2		762.0
42×34	1066.8×863.6		711.2	48×26	1219.2×660.4		762.0
42×32	1066.8×812.8		711.2	48×24	1219.2×609.6		736.6
42×30	1066.8×762.0		711.2	48×22	1219.2×558.8		736.6

注：壁厚 T 见第 21 页壁厚表。



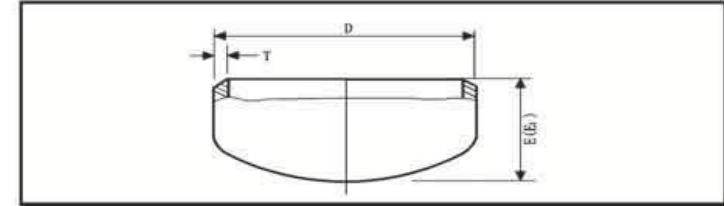
对焊同心、偏心异径管尺寸 ASME/ANSI B16.9
Dimensions of Concentric & Eccentric Reducers

公称通径 Nominal Pipe size DN(in.)	端部外径 Outside Diameter at Bevel $D_1 \times D_2$	长度 End to End L	公称通径 Nominal Pipe size DN(in.)	端部外径 Outside Diameter at Bevel $D_1 \times D_2$	长度 End to End L
3/4×1/2	26.7×21.3	38.1	4×2 _{1/2}	114.3×73.0	101.6
3/4×3/8	26.7×17.1		4×2	114.3×60.3	
1×3/4	33.4×26.7	50.8	4×1 _{1/2}	114.3×48.3	
1×1/2	33.4×21.3		5×4	141.3×114.3	127.0
1 _{1/4} ×1	42.2×33.4	50.8	5×3 _{1/2}	141.3×101.6	
1 _{1/4} ×3/4	42.2×26.7		5×3	141.3×88.9	
1 _{1/2} ×1/2	42.2×21.3		5×2 _{1/2}	141.3×73.0	
1 _{1/2} ×1 _{1/4}	48.3×42.2	63.5	5×2	141.3×60.3	
1 _{1/2} ×1	48.3×33.4		6×5	168.3×141.3	139.7
1 _{1/2} ×3/4	48.3×26.7		6×4	168.3×114.3	
1 _{1/2} ×1/2	48.3×21.3		6×3 _{1/2}	168.3×101.6	
2×1 _{1/2}	60.3×48.3	76.2	6×3	168.3×88.9	
2×1 _{1/4}	60.3×42.2		6×2 _{1/2}	168.3×73.0	
2×1	60.3×33.4		8×6	219.1×168.3	152.4
2×3/4	60.3×26.7		8×5	219.1×141.3	
2 _{1/2} ×2	73.0×60.3	88.9	8×4	219.1×114.3	
2 _{1/2} ×1 _{1/2}	73.0×48.3		8×3 _{1/2}	219.1×101.6	
2 _{1/2} ×1 _{1/4}	73.0×42.2		10×8	273.1×219.1	177.8
2 _{1/2} ×1	73.0×33.4	88.9	10×6	273.1×168.3	
3×2 _{1/2}	88.9×73.0		10×5	273.1×141.3	
3×2	88.9×60.3		10×4	273.1×114.3	
3×1 _{1/2}	88.9×48.3		12×10	323.9×273.1	203.2
3×1 _{1/4}	88.9×42.2		12×8	323.9×219.1	
3 _{1/2} ×3	101.6×88.9	101.6	12×6	323.9×168.3	
3 _{1/2} ×2 _{1/2}	101.6×73.0		12×5	323.9×141.3	
3 _{1/2} ×2	101.6×60.3		14×12	355.6×323.9	330.2
3 _{1/2} ×1 _{1/2}	101.6×48.3		14×10	355.6×273.1	
3 _{1/2} ×1 _{1/4}	101.6×42.2		14×8	355.6×219.1	
4×3 _{1/2}	114.3×101.6	101.6	14×6	355.6×168.3	
4×3	114.3×88.9		16×14	406.6×355.6	

对焊同心、偏心异径管尺寸 ASME/ANSI B16.9
Dimensions of Concentric & Eccentric Reducers

公称通径 Nominal Pipe size DN (in.)	端部外径 Outside Diameter at Bevel D ₁ × D ₂	长度 End to End L
16×12	406.4×323.9	355.6
16×10	406.4×273.1	
16×8	406.4×219.1	
18×16	457.2×406.4	381.0
18×14	457.2×355.6	
18×12	457.2×323.9	
18×10	457.2×273.1	
20×18	508.0×457.2	508.0
20×16	508.0×406.4	
20×14	508.0×355.6	
20×12	508.0×323.9	
22×20	558.8×508.0	508.0
22×18	558.8×457.2	
22×16	558.8×406.4	
22×14	558.8×355.6	
24×22	609.6×558.8	508.0
24×20	609.6×508.0	
24×18	609.6×457.2	
24×16	609.6×406.4	
26×24	660.4×609.6	609.6
26×22	660.4×558.8	
26×20	660.4×508.8	
26×18	660.4×457.2	
28×26	711.2×660.4	
28×24	711.2×609.6	609.6
28×20	711.2×508.0	
28×18	711.2×457.2	
30×28	762.0×711.2	609.6
30×26	762.0×660.4	
30×24	762.0×609.6	
30×20	762.0×508.0	
32×30	812.8×762.0	609.6
32×28	812.8×711.2	
32×26	812.8×660.4	
32×24	812.8×609.6	
34×32	863.6×812.8	609.6
34×30	863.6×762.0	

公称通径 Nominal Pipe size DN (in.)	端部外径 Outside Diameter at Bevel D ₁ × D ₂	长度 End to End L
34×26	863.6×660.4	609.6
34×24	863.6×609.6	
36×34	914.4×863.6	609.6
36×32	914.4×812.8	
36×30	914.4×762.0	
36×26	914.4×660.4	
36×24	914.4×609.6	
38×36	965.2×914.4	609.6
38×34	965.2×863.6	
38×32	965.2×812.8	
38×30	965.2×762.0	
38×28	965.2×711.2	
38×26	965.2×660.4	609.6
40×38	1016.0×965.2	
40×36	1016.0×914.4	
40×34	1016.0×863.6	
40×32	1016.0×812.8	
40×30	1016.0×762.0	609.6
42×40	1066.8×1016.0	
42×38	1066.8×965.2	
42×36	1066.8×914.4	
42×34	1066.8×863.6	
42×32	1066.8×812.8	609.6
42×30	1066.8×762.0	
44×42	1117.6×1066.8	609.6
44×40	1117.6×1016.0	
44×38	1117.6×965.2	
44×36	1117.6×914.4	
46×44	1168.4×1117.6	711.2
46×42	1168.4×1066.8	
46×40	1168.4×1016.0	
46×38	1168.4×965.2	711.2
48×46	1219.2×1168.4	
48×44	1219.2×1117.6	
48×42	1219.2×1066.8	
48×40	1219.2×1016.0	



对焊管帽尺寸 ASME/ANSI B16.9

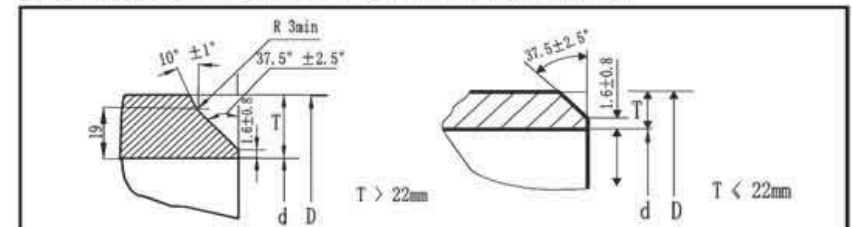
Dimensions of Caps

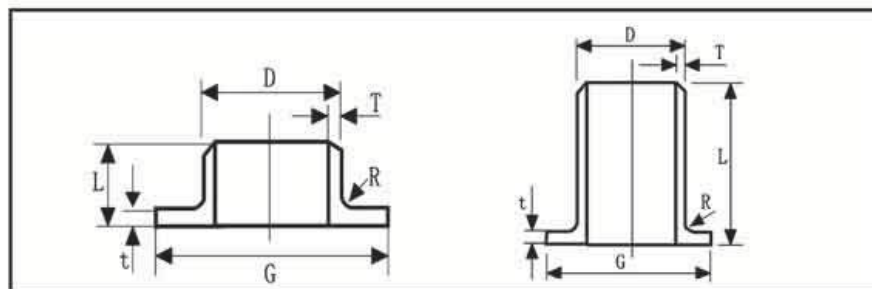
公称通径 Nominal Pipe Size DN (in.)	端部外径 Outside Diameter at Bevel D	全长 Length E	对尺寸E 的限制厚度 Limiting Wall Thickness for Length E
1/2	21.3	25.4	3.73
3/4	26.7	25.4	3.91
1	33.4	38.1	4.55
1 1/4	42.2	38.1	4.85
1 1/2	48.3	38.1	5.08
2	60.3	38.1	5.54
2 1/2	73.0	38.1	7.01
3	88.9	50.8	7.62
3 1/2	101.6	63.5	8.08
4	114.3	63.5	8.56
5	141.3	76.2	8.99
6	168.3	88.9	10.97
8	219.1	101.6	12.70
10	273.1	127.0	15.24
12	323.9	152.4	17.78
14	355.6	165.1	19.05
16	406.4	177.8	20.32

公称通径 Nominal Pipe Size DN (in.)	端部外径 Outside Diameter at Bevel D	全长 Length E	对尺寸E 的限制厚度 Limiting Wall Thickness for Length E
18	457.2	203.2	22.86
20	508.0	228.6	25.40
22	558.8	254.0	28.00
24	609.6	266.7	30.48
26	660.4	266.7	—
28	711.2	266.7	—
30	762.0	266.7	—
32	812.8	266.7	—
34	863.6	266.7	—
36	914.4	266.7	—
38	956.2	304.8	—
40	1016.0	304.8	—
42	1066.8	304.8	—
44	1117.6	342.9	—
46	1168.4	342.9	—
48	1219.2	342.9	—

注：1) 管帽的全长不大于限制厚度时为E，超过限制厚度时为E₁。

2) 壁厚 T 见 21 页壁厚表。

ASME/ANSI B16.9、B16.28 规定的对焊管件焊端坡口的结构形式
End Preparation of Butt-Welding Fittings to ASME/ANSI B16.9、B16.28



翻边短节尺寸 MSS SP-43 (A型)

Dimensions of Lap Joint Stub Ends

公称口径 Nominal Pipe Size DN (in.)	端部外径 Outside Diameter at Bevel D	长度 Length L	圆角半径 Radius of fillet R	搭接直径 Diameter of Lap G
1/2	21.3	50.8	3.0	35.0
3/4	26.7	50.8	3.0	42.9
1	33.4	50.8	3.0	50.8
1 1/8	42.2	50.8	4.8	63.5
1 1/2	48.3	50.8	6.4	73.2
2	60.3	63.5	7.9	91.5
2 1/2	73.0	63.5	7.9	104.6
3	88.9	63.5	9.6	127.0
3 1/2	101.6	76.2	9.6	139.7
4	114.3	76.2	11.2	157.2
5	141.3	76.2	11.2	185.7
6	168.3	88.9	12.7	215.9
8	219.1	101.6	12.7	269.7
10	273.1	127.0	12.7	323.9
12	323.9	152.4	12.7	381.0
14	355.6	152.4	12.7	412.8
16	406.4	152.4	12.7	469.9
18	457.2	152.4	12.7	533.4
20	508.0	152.4	12.7	584.2
24	609.6	152.4	12.7	692.2

- 注：1) 搭接厚度 t 不小于公称管壁厚。
 2) 搭接平面可按用户要求加工成同心的锯齿状槽或螺旋纹槽。
 3) 适用于与 Sch40s 或更薄的不锈钢管子联接。
 4) R 尺寸符合 ANSI B16.5 中为搭接法兰凸缘所规定的半径。

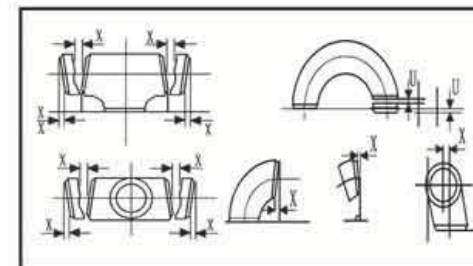
ASME/ANSI B16.9、B16.28 及 MSS-43 中对焊管件尺寸的极限偏差
Tolerances for Butt-Welding Fittings

项 目	管件种类	公 称 通 径 DN(in.)							
		1/2~2 _{1/2}	3~3 _{1/2}	4	5~8	10~18	20~24	26~30	32~48
		极 限 偏 差							
端部外径 D、D ₁ 、D ₂	所有管件	+1.52 -0.76	±1.52		+2.29 -1.52	+4.06 -3.05	+6.35 -4.83		
端部内径 d		±0.76	±1.52			±3.05	±4.83		
壁厚 T、T ₁ 、T ₂		不小于公称壁厚的 87.5%							
中心至端面 A、B、C、M	45° 弯头 90° 弯头 三通、四通	±1.52				±2.29	±3.05	±4.83	
中心至中心 P	180° 弯头	±6.35				±9.65	—		
背面至端面 K		±6.35				—			
U		±0.76				±1.52	—		
长 度 L	异径管、翻边短节	±1.52				±2.29	±4.83		
全 长 E、E ₁	管 帽	±3.05			±6.35		±9.65		
搭接直径 G	翻边短节	0 -0.76				0 -1.52		—	
搭接厚度 t		+1.52 0						—	
圆角半径 R		0 -0.76		0 -1.52				—	

- 注：1) 端部内径除用户有特殊要求，应优先保证端部外径和公称壁厚的极限偏差。
 2) 端部内径为端部外径与两倍的公称壁厚的差。

ASME/ANSI B16.9、ASME/ANSI B16.28 中对焊管件的形位公差
Angularity Tolerance of Butt-Welding Fittings

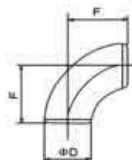
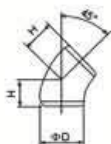
公称口径 DN(in.)	弯头、三通、四通	
	X	Y
1/2~4	0.76	1.52
5~8	1.52	3.05
10~12	2.29	4.83
14~16	2.29	6.35
18~24	3.05	9.65
26~30	4.83	9.65
32~42		12.70
44~48		19.05



日标45°、90°长半径、短半径弯头

America standard reducing tee and reducer

JISB2311-1997

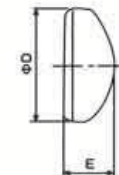
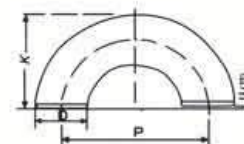


Nominal diameter		Outside diameter D	Dimension from the center line to the end face			Approx.Weight	
			45° Elbows H	90° Elbows E		45° Elbows	90° Elbows
A	B		Long	Long	Short	Long	Long
15	1/2	21.7	15.8	38.1	—	0.039	0.078
20	3/4	27.2	15.8	38.1	—	0.050	0.100
25	1	34.0	15.8	38.1	25.4	0.073	0.146
32	1 1/4	42.7	19.7	47.6	31.8	0.126	0.252
40	1 1/2	48.6	23.7	57.2	38.1	0.175	0.350
50	2	60.5	31.6	76.2	50.8	0.317	0.634
65	2 1/2	76.3	39.5	95.3	63.5	0.56	1.12
80	3	89.1	47.3	114.3	76.2	0.79	1.58
90	3 1/2	101.6	55.3	133.4	88.9	1.06	2.11
100	4	114.3	63.1	152.4	101.6	1.46	2.91
125	5	139.8	78.9	190.5	127.0	2.25	4.49
150	6	165.2	94.7	228.6	152.4	3.55	7.09
200	8	216.3	126.3	304.8	203.2	7.20	14.40
250	10	267.4	157.8	381.0	254.0	12.70	25.40
300	12	318.5	189.4	457.2	304.8	19.05	38.10
350	14	355.6	220.9	533.4	355.6	28.35	56.70
400	16	406.4	252.5	609.6	406.4	37.15	74.30
450	18	457.2	284.1	685.8	457.2	47.10	94.20
500	20	508.0	315.6	762.0	508.0	59	117
550	22	558.8	347.2	838.2	558.8	71	141
600	24	609.6	378.7	914.4	609.6	84	168
650	26	660.4	410.3	990.6	660.4	99	198
700	28	711.2	441.9	1066.8	711.2	115	229
750	30	762.0	473.4	1143.0	762.0	132	264
800	32	812.8	505.0	1219.2	812.8	150	300
850	34	863.6	536.6	1295.4	863.6	169	338
900	36	914.4	568.1	1371.6	914.4	180	360
950	38	965.2	599.7	1447.8	965.2	212	424
1000	40	1016.0	631.2	1524.0	1016.0	235	470
1050	42	1066.8	662.8	1600.2	1066.8	259	518
1100	44	1117.6	694.4	1676.4	1117.6	284	569
1150	46	1168.4	725.9	1752.6	1168.4	311	622
1200	48	1219.2	757.5	1828.8	1219.2	339	677

日标180°弯管及管帽

America standard reducing tee and reducer

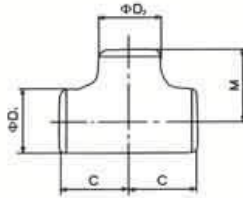
JIS B2311-1997



Nominal diameter		Outside diameter <i>D</i>	Centerline dimension		Dimension from the back to the end face			Approx.Weight	
			180° Elbows <i>P</i>		180° Elbows <i>K</i>		Caps <i>E</i>	180° Elbows <i>K</i>	
			Long	Short	Long	Short		Long	Short
A	B								
15	1/2	21.7	76.2	—	49.0	—	25.4	0.156	—
20	3/4	27.2	76.2	—	51.7	—	25.4	0.200	—
25	1	34.0	76.2	50.8	55.1	42.4	38.1	0.292	0.195
32	1 1/4	42.7	95.2	63.6	69.0	53.2	38.1	0.504	0.336
40	1 1/2	48.6	114.4	76.2	81.5	62.4	38.1	0.700	0.467
50	2	60.5	152.4	101.6	106.5	81.1	38.1	1.268	0.845
65	2 1/2	76.3	190.6	127.0	133.5	101.7	38.1	2.24	1.49
80	3	89.1	228.6	152.4	158.9	120.8	50.8	3.16	2.11
90	3 1/2	101.6	266.8	177.8	184.2	139.7	63.5	4.22	2.81
100	4	114.3	304.8	203.2	209.6	158.8	63.5	5.82	3.88
125	5	139.8	381.0	254.0	260.4	196.9	76.2	8.98	5.99
150	6	165.2	457.2	304.8	311.2	235.0	88.9	14.18	9.45
200	8	216.3	609.6	406.4	413.0	311.4	101.6	28.80	19.20
250	10	267.4	762.0	508.0	514.7	387.7	127.0	50.80	33.86
300	12	318.5	914.4	609.6	616.5	464.1	152.4	76.20	50.79
350	14	355.6	1066.8	711.2	711.2	533.4	165.1	113.40	75.59
400	16	406.4	1219.2	812.8	812.8	609.6	177.8	148.60	99.06
450	18	457.2	—	—	—	—	203.2	—	—
500	20	508.0	—	—	—	—	228.6	—	—

日标同径三通

JIS Equal tee



JIS B2311-1997

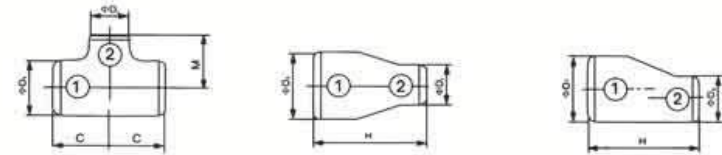
Nominal diameter		Outside diameter		Dimension from the centerline to the end face	
A	B	D1	D2	C	M
15	1/2	21.7	21.7	25.4	25.4
20	3/4	27.2	27.2	28.6	28.6
25	1	34.0	34.0	38.1	38.1
32	1 1/4	42.7	42.7	47.6	47.6
40	1 1/2	48.6	48.6	57.2	57.2
50	2	60.5	60.5	63.5	63.5
65	2 1/2	76.3	76.3	76.2	76.2
80	3	89.1	89.1	85.7	85.7
90	3 1/2	101.6	101.6	95.3	95.3
100	4	114.3	114.3	104.8	104.8
125	5	139.8	139.8	123.8	123.8
150	6	165.2	165.2	142.9	142.9
200	8	216.3	216.3	177.8	177.8
250	10	267.4	267.4	215.9	215.9
300	12	318.5	318.5	254.0	254.0
350	14	355.6	355.6	279.4	279.4
400	16	406.4	406.4	304.8	304.8
450	18	457.2	457.2	342.9	342.9
500	20	508.0	508.0	381.0	381.0
550	22	558.8	558.8	419.1	419.1
600	24	609.6	609.6	431.8	431.8
650	26	660.4	660.4	495.3	495.3
700	28	711.2	711.2	520.7	520.7
750	30	762.0	762.0	558.8	558.8
800	32	812.8	812.8	596.9	596.9
850	34	863.6	863.6	635.0	635.0
900	36	914.4	914.4	673.1	673.1
950	38	965.2	965.2	711.2	711.2
1000	40	1016.0	1016.0	749.3	749.3
1050	42	1066.8	1066.8	762.0	711.2
1100	44	1117.6	1117.6	812.8	762.0
1150	46	1168.4	1168.4	850.9	800.1
1200	48	1219.2	1219.2	889.0	838.2

Remarks: The dimension M of 350 A(14B) or over in nominal diameter may be altered to smaller than that as given in the table above, subject to the agreement between the parties concerned with delivery.

日标异径三通及异径管

JIS standard reducing
tee and reducer

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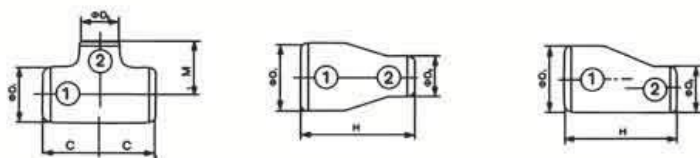
Nominal diameter $\phi \times \phi$		Outside diameter		Overall Length H	Dimension from the centerline to the end face	
A	B	D1	D2		C	M
20 × 15	1/2 × 3/4	27.2	21.7	38.1	28.6	28.6
25 × 20	3/4 × 1	34.0	27.2	50.8	38.1	38.1
25 × 15	1/2 × 3/4	34.0	21.7	50.8	38.1	38.1
32 × 25	1 1/4 × 1	42.7	34.0	50.8	47.6	47.6
32 × 20	1 1/4 × 3/4	42.7	27.2	50.8	47.6	47.6
32 × 15	1 1/4 × 3/4	42.7	21.7	50.8	47.6	47.6
40 × 32	1 1/2 × 1 1/4	48.6	42.7	63.5	57.2	57.2
40 × 25	1 1/2 × 1	48.6	34.0	63.5	57.2	57.2
40 × 20	1 1/2 × 3/4	48.6	27.2	63.5	57.2	57.2
40 × 15	1 1/2 × 3/4	48.6	21.7	63.5	57.2	57.2
50 × 40	2 × 1 1/2	60.5	48.6	76.2	63.5	60.3
50 × 32	2 × 1 1/4	60.5	42.7	76.2	63.5	57.2
50 × 25	2 × 1	60.5	34.0	76.2	63.5	50.8
50 × 20	2 × 3/4	60.5	27.2	76.2	63.5	44.5
65 × 50	2 1/2 × 2	76.3	60.5	88.9	76.2	69.9
65 × 40	2 1/2 × 1 1/2	76.3	48.6	88.9	76.2	66.7
65 × 32	2 1/2 × 1 1/4	76.3	42.7	88.9	76.2	63.5
65 × 25	2 1/2 × 1	76.3	34.0	88.9	76.2	57.2
80 × 65	3 × 2 1/2	89.1	76.3	88.9	85.7	82.6
80 × 50	3 × 2	89.1	60.5	88.9	85.7	76.2
80 × 40	3 × 1 1/2	89.1	48.6	88.9	85.7	73.0
80 × 32	3 × 1 1/4	89.1	42.7	88.9	85.7	69.0
90 × 80	3 1/2 × 3	101.6	89.1	101.6	95.3	92.1
90 × 65	3 1/2 × 2 1/2	101.6	76.3	101.6	95.3	88.9
90 × 50	3 1/2 × 2	101.6	60.5	101.6	95.3	82.6
90 × 40	3 1/2 × 1 1/2	101.6	48.6	101.6	95.3	79.4
90 × 32	3 1/2 × 1 1/4	101.6	42.7	101.6	-	-
100 × 90	4 × 3 1/2	114.3	101.6	101.6	104.8	101.6
100 × 80	4 × 3	114.3	89.1	101.6	104.8	98.4

日标异径三通及异径管

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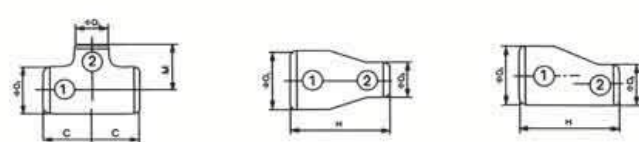
Nominal diameter $\Phi \times \Phi$		Outside diameter		Overall Length H	Dimension from the centerline to the end face	
A	B	D1	D2		C	M
100 × 65	4 × 2 1/2	114.3	76.3	101.6	104.8	95.3
100 × 50	4 × 2	114.3	60.5	101.6	104.8	88.9
100 × 40	4 × 1 1/2	114.3	48.6	101.6	104.8	85.7
125 × 100	5 × 4	139.8	114.3	127.0	123.8	117.5
125 × 90	5 × 3 1/2	139.8	101.6	127.0	123.8	114.3
125 × 80	5 × 3	139.8	89.1	127.0	123.8	111.1
125 × 65	5 × 2 1/2	139.8	76.3	127.0	123.8	108.0
125 × 50	5 × 2	139.8	60.5	127.0	123.8	104.8
150 × 125	6 × 5	165.2	139.8	139.7	142.9	136.5
150 × 100	6 × 4	165.2	114.3	139.7	142.9	130.2
150 × 90	6 × 3 1/2	165.2	101.6	139.7	142.9	127.0
150 × 80	6 × 3	165.2	89.1	139.7	142.9	123.8
150 × 65	6 × 2 1/2	165.2	76.3	139.7	142.9	120.7
200 × 150	8 × 6	216.3	165.2	152.4	177.8	168.3
200 × 125	8 × 5	216.3	139.8	152.4	177.8	161.9
200 × 100	8 × 4	216.3	114.3	152.4	177.8	155.6
200 × 90	8 × 3	216.3	101.6	152.4	177.8	152.4
250 × 200	10 × 8	267.4	216.3	177.8	215.9	203.2
250 × 150	10 × 6	267.4	165.2	177.8	215.9	193.7
250 × 125	10 × 5	267.4	139.8	177.8	215.9	190.5
250 × 100	10 × 4	267.4	114.3	177.8	215.9	184.2
300 × 250	12 × 10	318.5	267.4	203.2	254.0	241.3
300 × 200	12 × 8	318.5	216.3	203.2	254.0	228.6
300 × 150	12 × 6	318.5	165.2	203.2	254.0	219.1
300 × 125	12 × 5	318.5	139.8	203.2	254.0	215.9
350 × 300	14 × 12	355.6	318.5	330.2	279.4	269.9
350 × 250	14 × 10	355.6	267.4	330.2	279.4	257.2
350 × 200	14 × 8	355.6	216.3	330.2	279.4	247.7
350 × 150	14 × 6	355.6	165.2	330.2	279.4	238.1

日标异径三通及异径管

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Unit:mm

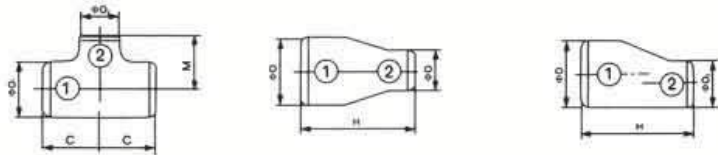
Nominal diameter $\Phi \times \Phi$		Outside diameter		Overall Length H	Dimension from the centerline to the end face	
A	B	D1	D2		C	M
400 × 350	16 × 14	406.4	355.6	355.6	304.8	304.8
400 × 300	16 × 12	406.4	318.5	355.6	304.8	295.3
400 × 250	16 × 10	406.4	267.4	355.6	304.8	282.6
400 × 200	16 × 8	406.4	216.3	355.6	304.8	273.1
400 × 150	16 × 6	406.4	165.2	—	304.8	263.5
450 × 400	18 × 16	457.2	406.4	381.0	342.9	330.2
450 × 350	18 × 14	457.2	355.6	381.0	342.9	330.2
450 × 300	18 × 12	457.2	318.5	381.0	342.9	320.7
450 × 250	18 × 10	457.2	267.4	381.0	342.9	308.0
500 × 450	20 × 18	508.0	457.2	508.0	381.0	368.3
500 × 400	20 × 16	508.0	406.4	508.0	381.0	355.6
500 × 350	20 × 14	508.0	355.6	508.0	381.0	355.6
500 × 300	20 × 12	508.0	318.5	508.0	381.0	346.1
500 × 250	20 × 10	508.0	267.4	—	381.0	333.4
500 × 200	20 × 8	508.0	216.3	—	381.0	323.9
550 × 500	22 × 20	558.8	508.3	508.0	419.1	406.4
550 × 450	22 × 18	558.8	457.2	508.0	419.1	393.7
550 × 400	22 × 16	558.8	406.4	508.0	419.1	381.0
550 × 350	22 × 14	558.8	355.6	508.0	—	—
600 × 550	24 × 22	609.6	558.8	508.0	431.8	431.8
600 × 500	24 × 20	609.6	508.0	508.0	431.8	431.8
600 × 450	24 × 18	609.6	457.2	508.0	431.8	419.1
600 × 400	24 × 16	609.6	406.4	508.0	—	—
650 × 600	26 × 24	660.4	609.6	609.6	495.3	482.6
650 × 550	26 × 22	660.4	558.8	609.6	495.3	469.8
650 × 500	26 × 20	660.4	508.0	609.6	495.3	457.2
650 × 450	26 × 18	660.4	457.2	609.6	—	—
700 × 650	28 × 26	711.2	660.4	609.6	520.7	520.7
700 × 600	28 × 24	711.2	609.6	609.6	520.7	508.0
700 × 500	28 × 22	711.2	558.8	609.6	520.7	495.3
700 × 500	28 × 20	711.2	508.0	609.6	—	—
750 × 700	30 × 28	762.0	711.2	609.6	558.8	546.1
750 × 650	30 × 26	762.0	660.4	609.6	558.8	546.1
750 × 600	30 × 24	762.0	609.6	609.6	558.8	533.4
750 × 550	30 × 22	762.0	558.8	609.6	—	—
800 × 750	32 × 30	812.8	762.0	609.6	596.9	584.2
800 × 700	32 × 28	812.8	711.2	609.6	596.9	571.5

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Nominal diameter $\phi \times \phi$		Outside diameter		Overall Length H	Dimension from the centerline to the end face	
A	B	D1	D2		C	M
800 × 650	32 × 26	812.8	660.4	609.6	596.9	571.5
800 × 600	32 × 24	812.8	609.6	609.6	—	—
850 × 800	34 × 32	863.6	812.8	609.6	635.0	622.3
850 × 750	34 × 30	863.6	762.0	609.6	635.0	609.6
850 × 700	34 × 28	863.6	711.2	609.6	635.0	596.9
850 × 650	34 × 26	863.6	660.4	609.6	—	—
900 × 850	36 × 34	914.4	863.6	609.6	673.1	660.4
900 × 800	36 × 32	914.4	812.8	609.6	673.1	947.7
900 × 750	36 × 30	914.4	762.0	609.6	673.1	635.0
900 × 700	36 × 28	914.4	711.2	609.6	—	—
950 × 900	38 × 36	965.2	914.4	609.6	711.2	711.2
950 × 850	38 × 34	965.2	863.6	609.6	711.2	698.5
950 × 800	38 × 32	965.2	812.8	609.6	711.2	685.8
950 × 750	38 × 30	965.2	762.0	609.6	—	—
1000 × 950	40 × 38	1016.0	965.2	609.6	749.3	749.3
1000 × 900	40 × 36	1016.0	914.4	609.6	749.3	736.6
1000 × 850	40 × 34	1016.0	863.6	609.6	749.3	723.9
1000 × 800	40 × 32	1016.0	812.8	609.6	—	—
1050 × 1000	42 × 40	1066.8	1016.0	609.6	762.0	711.2
1050 × 950	42 × 38	1066.8	965.2	609.6	762.0	711.2
1050 × 900	42 × 36	1066.8	914.4	609.6	762.0	711.2
1050 × 850	42 × 34	1066.8	863.6	609.6	—	—
1100 × 1050	44 × 42	1117.6	1066.8	609.6	812.8	762.0
1100 × 1000	44 × 40	1117.6	1016.0	609.6	812.8	749.3
1100 × 950	44 × 38	1117.6	965.2	609.6	812.8	736.6
1100 × 900	44 × 36	1117.6	914.4	609.6	—	—
1150 × 1100	46 × 44	1168.4	1117.6	711.2	850.9	800.1
1150 × 1050	46 × 42	1168.4	1066.8	711.2	850.9	787.4
1150 × 1000	46 × 40	1168.4	1016.0	711.2	850.9	774.7
1150 × 950	46 × 38	1168.4	965.2	711.2	—	—
1200 × 1150	48 × 46	1219.2	1168.4	711.2	809.0	838.2
1200 × 1100	48 × 44	1219.2	1117.6	711.2	809.0	838.2
1200 × 1050	48 × 42	1219.2	1066.8	711.2	809.0	812.8
1200 × 1000	48 × 40	1219.2	1016.0	711.2	—	—

日标管件端头坡口尺寸

Dimensional Tolerances and Permissible Values

JIS B2311-1997

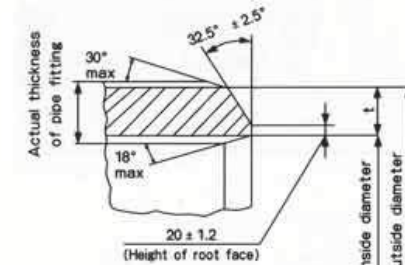


Fig.2 Shape and dimensions of bevel

Unit:mm

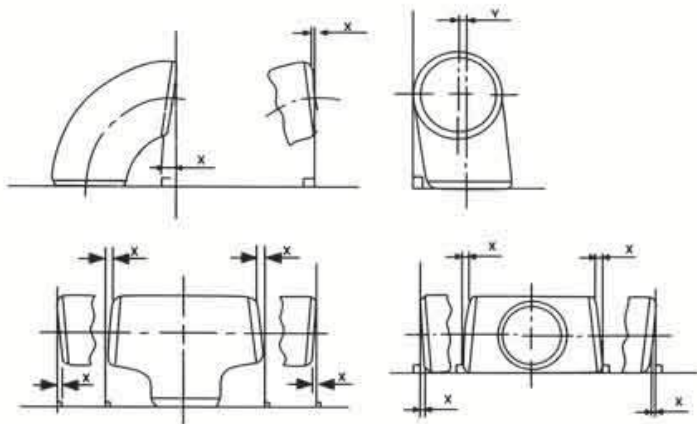
Item	Types of pipe fittings	Nominal diameter							
		A	15 to 65	80 to 100	125 to 200	250 to 450	500 to 600	650 to 750	800 to 1200
		B	1/2, to 2	3 to 4	5 to 8	10 to 18	20 to 24	26 to 30	32 to 48
Tolerance									
Outside diameter at end	All types of (of fittings)	± 2.0	± 2.5	± 3.5	+5.0 -4.5	-6.4 -4.8			
Inside diameter at end face		± 2.0	± 2.5	± 3.5	± 4.5	± 4.8			
Thickness		+not specified -15%							
Bevel angle		See Fig.2							
Height of root face		See Fig.2							
Dimension from center line to end face (H/F)		45° elbows 90° elbows	± 2.0		± 3.2			± 4.8	
Centerline dimension (P)		180° elbows	± 6.4		± 9.5		-		
Dimension from back to end face (K)			± 6.4				-		
Alignment of end faces (U) (max.)	1.6		3.2		-				
Overall length (H)	Reducers	± 2.0		± 3.2			± 4.8		
Dimension from centerline to end face (CM)	Tees	± 2.0		± 3.2			± 4.8		
Dimension from back to end face (E)	Caps	± 3.2		± 6.4			-		
Outer peripheral length at end	All types of pipe fittings	-						± 0.5%	

- Remarks 1 For the dimensional tolerances for H of reducers and M of reducing tees, the tolerances specified for the larger diameter side shall apply.
- 2 For the galvanized part of white pipe fittings, the above-mentioned tolerances shall be applicable before galvanizing.

日标弯头三通形位公差

Tolerances on Alignment of Pipe Fittings

JISB2311-1997

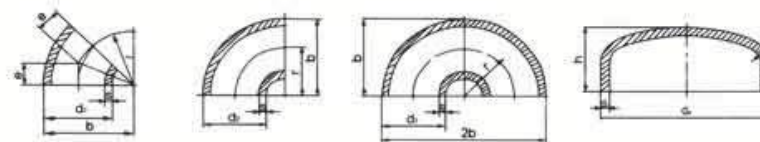


Item	Types of pipe fittings	Nominal diameter									
		A	15 to 100	125 to 200	250 to 300	350 to 400	450 to 600	650 to 750	800 to 1050	1100 to 1200	
		B	1/2 to 4	5 to 8	10 to 12	14 to 16	18 to 24	26 to 30	32 to 42	44 to 48	
		Tolerance									
Off angle(X)	Elbows,reducers,tees	0.8	1.6	2.4		3.2	4.8				
Off angle(Y)	Elbows,tees	1.6	3.2	4.8	6.4	9.5		12.7	19.1		

Remarks 1 For the tolerances on alignment of reducers and reducing tees, the tolerances specified for larger diameter side shall apply.
2 For the galvanized part of white pipe fittings, the above-mentioned tolerances shall be applicable before galvanizing.

德标管各尺寸

Dimensional of Germany standard pipe fittings

DIN2605-1991
DIN2617-1991

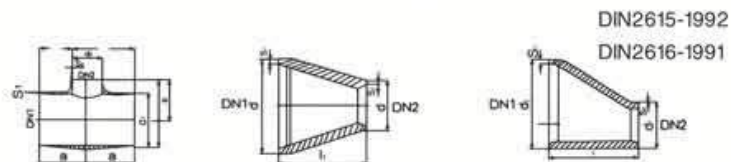
Nominal Size DN	Outside Diameter da	Wall Thickness s, for series 3	r	b	e	h	Approx. Weight (kg)		
							45° Elbows	90° Elbows	180° Elbows
15	21.3	2.0	28.0	38	12	25	0.02	0.04	0.08
20	26.9	2.3	29.0	43	12	25	0.04	0.07	0.14
25	33.7	2.6	38.0	56	16	38	0.06	0.12	0.24
32	42.4	2.6	48.0	69	20	38	0.10	0.19	0.38
40	48.3	2.6	57.0	82	24	38	0.14	0.27	0.54
50	60.3	2.9	76	106	32	38	0.25	0.49	0.98
65	76.1	2.9	95	133	39	38	0.40	0.79	1.58
80	88.9	3.2	114	159	47	51	0.61	1.22	2.44
100	114.3	3.6	152	210	63	64	1.19	2.37	4.74
125	139.7	4.0	190	260	79	76	2.02	4.04	8.08
150	168.3	4.5	229	313	95	89	3.25	6.50	13.00
200	219.1	5.9	305	414	126	102	7.95	15.9	31.8
250	273	6.3	381	518	158	127	12.45	24.9	49.8
300	323.9	7.1	457	619	189	152	20	40	80
350	355.6	8.0	533	711	221	165	28.6	57.2	114.4
400	406.4	8.8	610	813	253	178	41.1	82.2	164.4
450	457	10	686	914	284	203	60	119	238
500	508	11	762	1016	316	229	81	162	324
600	610	12.5	914	1219	379	267	136	271	542
700	711	12.5	1067	1422	422	267	177	353	706
800	813	12.5	1219	1626	505	267	231	461	922
900	914	12.5	1372	1829	568	267	-	-	-
1000	1016	12.5	1524	2032	631	305	-	-	-
1200	1220	-	1830	2440	758	343	-	-	-

TOLERANCES

Nominal Size DN	Limit Deviations for Dimension				Lower Limit Deviations for Wall Thickness	
	45° Elbows b	90° Elbows b	180° Elbows 2b	Caps h		
15-65	+/-6.0	+/-2.5	+/-8.0	+/-4	+15%/-12.5% for all sizes and wall thickness	+15% -12.5%
80-100	+/-7.0	+/-3.0	+/-9.0	+/-4		
125-200	+/-8.5	+/-3.5	+/-10.0	+/-7		
250	+/-9.5	+/-4.0	+/-14.0	+/-7		
300-450	+/-12.0	+/-5.0	+/-14.0	+/-7		
500-600	+/-14.5	+/-6.0	+/-16.0	+/-7		+15% -0.50mm
700	+/-14.5	+/-6.0	To Be Agreed	+/-10		
800-1200	+/-19.0	+/-8.0	Agreed	+/-10		

德标三通及异径管尺寸

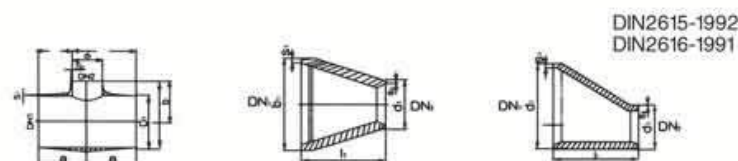
Dimensions of Germany standard reducing tee and reducer



Nominal Size DN1	Outside Diameter d_1	Wall Thickness s_1 , for series 3	Nominal Size DN2	Nominal Size d_2	Wall Thickness s_2 , for series 3	Tess		Reducers
						a	b	
15	21.3	2.0	15	21.3	2.0	25	25	-
20	26.9	2.3	20	26.9	2.3	29	29	-
20	26.9	2.3	15	21.3	2.0	29	29	38
25	33.7	2.6	25	33.7	2.6	38	38	-
25	33.7	2.6	20	26.9	2.3	38	38	50
25	33.7	2.6	15	21.3	2.0	38	38	50
32	42.4	2.6	32	42.4	2.6	48	48	-
32	42.4	2.6	25	33.7	2.6	48	48	50
32	42.4	2.6	20	26.9	2.3	48	48	50
32	42.4	2.6	15	21.3	2.0	48	48	50
40	48.3	2.6	40	48.3	2.6	57	57	-
40	48.3	2.6	32	42.4	2.6	57	57	64
40	48.3	2.6	25	33.7	2.6	57	57	64
40	48.3	2.6	20	26.9	2.3	57	57	64
50	60.3	2.9	50	60.3	2.9	64	64	-
50	60.3	2.9	40	48.3	2.6	64	60	76
50	60.3	2.9	32	42.4	2.6	64	57	76
50	60.3	2.9	25	33.7	2.6	64	51	76
50	60.3	2.9	20	26.9	2.3	64	44	76
65	76.1	2.9	65	76.1	2.9	76	76	-
65	76.1	2.9	50	60.3	2.9	76	70	90
65	76.1	2.9	40	48.3	2.6	76	67	90
65	76.1	2.9	32	42.4	2.6	76	64	90
65	76.1	2.9	25	33.7	2.6	76	57	90
80	88.9	3.2	80	88.9	3.2	86	86	-
80	88.9	3.2	65	76.1	2.9	86	83	90
80	88.9	3.2	50	60.3	2.9	86	76	90
80	88.9	3.2	40	48.3	2.6	86	73	90
80	88.9	3.2	32	42.4	2.6	86	70	90
100	114.3	3.6	100	114.3	3.6	105	105	-
100	114.3	3.6	80	88.9	3.2	105	98	100
100	114.3	3.6	65	76.1	2.9	105	95	100
100	114.3	3.6	50	60.3	2.9	105	89	100
100	114.3	3.6	40	48.3	2.6	105	86	100
125	139.7	4.0	125	139.7	4.0	124	124	-
125	139.7	4.0	100	114.3	3.6	124	117	127
125	139.7	4.0	80	88.9	3.2	124	111	127
125	139.7	4.0	65	76.1	2.9	124	108	127
125	139.7	4.0	50	60.3	2.9	124	105	127
150	168.3	4.5	150	168.3	4.5	143	143	-
150	168.3	4.5	125	139.7	4.0	143	137	140
150	168.3	4.5	100	114.3	3.6	143	130	140
150	168.3	4.5	80	88.9	3.2	143	124	140
150	168.3	4.5	65	76.1	2.9	143	121	140

德标三通及异径管尺寸

Dimensions of Germany standard reducing tee and reducer



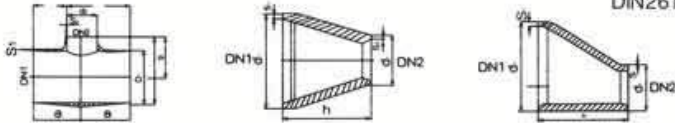
Nominal Size DN1	Outside Diameter d_1	Wall Thickness s_1 , for series 3	Nominal Size DN2	Nominal Size d_2	Wall Thickness s_2 , for series 3	Tess		Reducers 17
						a	b	
200	219.1	6.3	200	219.1	6.3	178	178	—
200	219.1	6.3	150	168.3	4.5	178	168	152
200	219.1	6.3	125	139.7	4.0	178	162	152
200	219.1	6.3	100	114.3	3.6	178	156	152
200	219.1	6.3	80	88.9	3.2	178	152	152
250	273	6.3	250	273	6.3	216	216	—
250	273	6.3	200	219.1	6.3	216	203	178
250	273	6.3	150	168.3	4.5	216	194	178
250	273	6.3	125	139.7	4.0	216	191	178
250	273	6.3	100	114.3	3.6	216	184	178
300	323.9	7.1	300	323.9	7.1	254	254	—
300	323.9	7.1	250	273	6.3	254	241	203
300	323.9	7.1	200	219.1	6.3	254	229	203
300	323.9	7.1	150	168.3	4.5	254	219	203
300	323.9	7.1	125	139.7	4.0	254	216	203
350	355.6	8.0	350	355.6	8.0	279	279	—
350	355.6	8.0	300	323.9	7.1	279	270	330
350	355.6	8.0	250	273	6.3	279	257	330
350	355.6	8.0	200	219.1	6.3	279	248	330
350	355.6	8.0	150	168.3	4.5	279	238	330
400	406.4	8.8	400	406.4	8.8	305	305	—
400	406.4	8.8	350	355.6	8.0	305	305	355
400	406.4	8.8	300	323.9	7.1	305	295	355
400	406.4	8.8	250	273	6.3	305	283	355
400	406.4	8.8	200	219.1	6.3	305	273	355
400	406.4	8.8	150	168.3	4.5	305	264	355
450	457	10	450	457	10	343	343	—
450	457	10	400	406.4	8.8	343	330	381
450	457	10	350	355.6	8.0	343	330	381
450	457	10	300	323.9	7.1	343	321	381
450	457	10	250	273	6.3	343	308	381
450	457	10	200	219.1	6.3	343	298	381
500	508	11	500	508	11	381	381	—
500	508	11	450	457	10	381	368	508
500	508	11	400	406.4	8.8	381	356	508
500	508	11	350	355.6	8.0	381	356	508
500	508	11	300	323.9	7.1	381	346	508
500	508	11	250	273	6.3	381	333	508
500	508	11	200	219.1	6.3	381	324	508
600	610	12.5	600	610	12.5	432	432	—

德标三通异径管尺寸

Dimensions of Germany standard reducing tee and reducer

DIN2615-1992

DIN2616-1991



Nominal Size DN1	Outside Diameter d1	Wall Thickness s1, for series 3	Nominal Size DN2	Nominal Size d2	Wall Thickness s2, for series 3	Tees			Reducers
						a	b	h	
600	610	12.5	500	508	11	432	432	508	
600	610	12.5	450	457	10	432	419	508	
600	610	12.5	400	406.4	8.8	432	406	508	
600	610	12.5	350	355.6	8.0	432	406	508	
600	610	12.5	300	323.9	7.1	432	397	508	
600	610	12.5	250	273	6.3	432	384	508	
700	711	12.5	700	711	12.5	521	521	-	
700	711	12.5	600	610	12.5	521	508	610	
700	711	12.5	500	508	11	521	483	610	
700	711	12.5	450	457	10	521	470	610	
700	711	12.5	400	406.4	8.8	521	457	610	
700	711	12.5	350	355.6	8.0	521	457	610	
700	711	12.5	300	323.9	7.1	521	448	610	
800	813	12.5	800	813	12.5	597	597	-	
800	813	12.5	700	711	12.5	597	572	610	
800	813	12.5	600	610	12.5	597	559	610	
800	813	12.5	500	508	11	597	533	610	
800	813	12.5	450	457	10	597	521	610	
800	813	12.5	400	406.4	8.8	597	508	610	
800	813	12.5	350	355.6	8.0	597	508	610	
900	914	12.5	900	914	12.5	673	673	-	
900	914	12.5	800	813	12.5	673	648	610	
900	914	12.5	700	711	12.5	673	622	610	
900	914	12.5	600	610	12.5	673	610	610	
900	914	12.5	500	508	11	673	584	610	
900	914	12.5	450	457	10	673	572	610	
900	914	12.5	400	406.4	8.8	673	559	610	
1000	1016	12.5	1000	1016	12.5	749	749	-	
1000	1016	12.5	900	914	12.5	749	737	610	
1000	1016	12.5	800	813	12.5	749	711	610	
1000	1016	12.5	700	711	12.5	749	673	610	
1000	1016	12.5	600	610	12.5	749	660	610	
1000	1016	12.5	500	508	11	749	635	610	
1000	1016	12.5	450	457	10	749	622	610	

Nominal Size DN	Limit Deviations for Dimension		Lower Limit Deviations for Wall Thickness	
	Tees a and b	Reducers h	Tees	Reducers
15 - 65		+/-2.5		
80 - 100	+/-2.0	+/-3.0		
125 - 200		+/-3.5		
250		+/-4.0		
300 - 450	+/-3.0	+/-5.0		
500 - 600				
600 - 700				
800		+/-6.0		
900 - 1000	+/-5.0	+/-8.0		

CARBON STEEL & ALLOY STEEL

WEIGHT LIST

90° Long Radius Elbows 90°长半径弯头														Unit: kg			
S10	S20	S30	STD	S40	S60	XS	S80	S100	S120	S140	S160	XXS	DIN	SGP			
1/2			0.08	0.08		0.10	0.10				0.12	0.15	0.04	0.08	1/2		
3/4			0.10	0.10		0.13	0.13				0.17	0.22	0.06	0.10	3/4		
1			0.15	0.15		0.19	0.19				0.25	0.33	0.12	0.15	1		
1-1/4			0.25	0.25		0.33	0.33				0.42	0.58	0.19	0.25	1-1/4		
1-1/2			0.36	0.36		0.49	0.49				0.65	0.86	0.26	0.35	1-1/2		
2			0.65	0.65		0.89	0.89				1.33	1.61	0.49	0.64	2		
2-1/2			1.29	1.29		1.71	1.71				2.23	3.05	0.78	1.12	2-1/2		
3			2.03	2.03		2.74	2.74				3.83	4.97	1.21	1.58	3		
3-1/2			2.84	2.84		3.90	3.90						1.82	2.11	3-1/2		
4			3.85	3.85		5.34	5.34		6.78		8.02	9.82	2.35	2.92	4		
5			6.51	6.51		9.26	9.26		12.0		14.7	17.2	4.00	4.49	5		
6			10.1	10.1		15.3	15.3		19.5		24.2	28.4	6.52	7.09	6		
8	15.9	17.6	20.4	20.4	25.4	30.9	30.9	36.3	43.3	48.3	53.2	51.6	15.8	14.4	8		
10	25.0	30.5	36.1	36.1	48.8	48.8	57.4	68.6	79.6	92.8	103	92.8	24.8	25.4	10		
12	35.7	46.8	53.0	57.2	78.2	70.0	94.8	115	134	149	171	134	39.8	38.1	12		
14	45.8	56.9	68.1	79.2	106	89.9	132	163	188	212	236		57.4	56.7	14		
16	60.0	74.5	89.3	89.3	118	153	195	235	274	319	350		82.6	74.3	16		
18	76.0	94.5	132	113	168	222	274	334	392	440	495		119	94.2	18		
20	94.0	140	186	140	219	296	372	456	528	608	676		161	117	20		
22	114	170	225	170		387	225	492	594	693	790	884		141	22		
24	136	202	301	202	368	510	268	634	786	918	1033	1159		264	24		

45° Long Radius Elbows 45°长半径弯头																Unit:kg			
	S10	S20	S30	STD	S40	S60	XS	S80	S100	S120	S140	S160	XXS	SGP	DIN				
1/2				0.04	0.04		0.05	0.05				0.06	0.08	0.04	0.02	1/2			
3/4				0.05	0.05		0.07	0.07				0.09	0.11	0.05	0.03	3/4			
1				0.08	0.08		0.10	0.10				0.13	0.17	0.08	0.06	1			
1-1/4				0.13	0.13		0.17	0.17				0.21	0.29	0.13	0.10	1-1/4			
1-1/2				0.18	0.18		0.25	0.25				0.33	0.43	0.18	0.13	1-1/2			
2				0.33	0.33		0.45	0.45				0.67	0.81	0.32	0.25	2			
2-1/2				0.65	0.65		0.86	0.86				1.12	1.53	0.56	0.39	2-1/2			
3				1.02	1.02		1.37	1.37				1.92	2.49	0.79	0.61	3			
3-1/2				1.42	1.42		1.95	1.95						1.06	0.91	3-1/2			
4				1.93	1.93		2.67	2.67		3.39		4.01	4.91	1.46	1.18	4			
5				3.26	3.26		4.63	4.63		6.00		7.35	8.60	2.25	2.00	5			
6				5.05	5.05		7.65	7.65		9.75		12.1	14.2	3.55	3.26	6			
8		7.95	8.80	10.2	10.2	12.7	15.5	15.5	18.2	21.7	24.2	26.6	25.8	7.20	7.90	8			
10		12.5	15.3	18.1	18.1	24.4	24.4	28.7	34.3	39.8	46.4	51.5	46.4	12.7	12.4	10			
12		17.9	23.4	26.5	26.6	39.1	35	47.4	57.5	67.0	74.5	85.5	67.0	19.1	19.9	12			
14	22.9	28.5	34.4	34.1	39.6	53.0	45	66.0	81.5	94.0	106	118		28.4	28.7	14			
16	30.0	37.3	44.7	44.7	59	76.5	59	97.5	118	137	160	175		37.2	41.3	16			
18	38.0	47.3	66.0	56.5	84	111	75	137	167	196	220	248		47.1	59.5	18			
20	47.0	70.0	93.0	70	110	148	93	186	228	264	304	338		58.5	80.5	20			
22	57.0	85.0	113	85		194	113	246	297	347	395	442		70.5		22			
24	68.0	101	151	101	183	255	134	317	393	459	517	580		84.0	132	24			

CARBON STEEL & ALLOY STEEL

WEIGHT LIST

90° Short Radius Elbows										90°短半径弯头					Unit:kg				
	S10	S20	S30	STD	S40	S60	XS	S80	S100	S120	S140	S160	XXS	SGP	DIN				
1				0.10	0.10		0.13	0.13				0.17	0.22	0.10	0.08	1			
1-1/4				0.17	0.17		0.22	0.22				0.28	0.39	0.17	0.13	1-1/4			
1-1/2				0.24	0.24		0.33	0.33				0.43	0.57	0.23	0.17	1-1/2			
2				0.43	0.43		0.59	0.59				0.89	1.07	0.43	0.33	2			
2-1/2				0.86	0.86		1.14	1.14				1.49	2.03	0.75	0.52	2-1/2			
3				1.35	1.35		1.83	1.83				2.55	3.31	1.05	0.81	3			
3-1/2				1.89	1.89		2.60	2.60						1.41	1.21	3-1/2			
4				2.57	2.57		3.56	3.56		4.52		5.35	6.55	1.95	1.57	4			
5				4.34	4.34		6.17	6.17		8.00		9.80	11.5	2.99	2.67	5			
6				6.73	6.73		10.2	10.2		13.0		16.1	18.9	4.73	4.35	6			
8		10.6	11.7	13.6	13.6	16.9	20.6	20.6	24.2	28.9	32.2	35.5	34.4	9.60	10.5	8			
10		16.7	20.3	24.1	24.1	32.5	32.5	38.3	45.7	53.1	61.9	68.7	61.9	16.9	16.5	10			
12		23.8	31.2	35.3	38.1	52.1	46.7	63.2	76.7	89.3	99.3	114	89.3	25.4	26.5	12			
14	30.5	37.9	45.4	45.4	52.8	70.7	59.9	88.0	109	125	141	157		37.8	38.3	14			
16	40.0	49.7	59.5	59.5	78.7	102	78.7	130	157	183	213	233		49.5	55.1	16			
18	50.7	63.0	88	75.3	112	148	100	183	223	261	293	330		62.8	79.3	18			
20	62.7	93.3	124	93.3	146	197	124	248	304	352	405	451		78.0	107	20			
22	76.0	113	150	113		258	150	328	396	462	527	589		94.0		22			
24	90.7	135	201	135	244	340	179	423	524	612	689	773		112	176	24			

Caps 管帽										Unit:kg						
	S10	S20	S30	STD	S40	S60	XS	S80	S100	S120	S140	S160	XXS	SGP	DIN	
1/2				0.04	0.04		0.05	0.05				0.06	0.10	0.03	0.03	1/2
3/4				0.06	0.06		0.08	0.08				0.11	0.16	0.04	0.05	3/4
1				0.11	0.11		0.14	0.14				0.20	0.28	0.08	0.09	1
1-1/4				0.14	0.14		0.20	0.20				0.26	0.40	0.11	0.10	1-1/4
1-1/2				0.17	0.17		0.23	0.23				0.32	0.46	0.15	0.12	1-1/2
2				0.23	0.23		0.33	0.33				0.52	0.66	0.23	0.17	2
2-1/2				0.40	0.40		0.53	0.53				0.72	1.06	0.34	0.24	2-1/2
3				0.66	0.66		0.92	0.92				1.34	1.84	0.51	0.39	3
3-1/2				0.97	0.97		1.36	1.36						0.71	0.62	3-1/2
4				1.20	1.20		1.67	1.67		2.17		2.63	3.34	0.88	0.73	4
5				1.93	1.93		2.81	2.81		3.74		4.68	5.82	1.29	1.18	5
6				2.92	2.92		4.47	4.47		5.81		7.44	8.94	1.99	1.85	6
8		4.03	4.48	5.20	5.20	6.55	8.05	8.05	9.56	11.6	13.1	14.6	14.1	3.61	4.00	8
10		6.25	7.70	9.15	9.15	12.5	12.5	16.8	20.3	23.9	28.3	31.8	28.3	6.33	6.22	10
12		8.85	11.8	13.4	14.4	19.9	17.7	27.1	33.2	39.4	44.3	51.7	39.4	9.43	10.0	12
14	10.6	13.2	15.9	15.9	18.6	25.2	21.2	34.9	43.7	50.9	58.2	61.2		13.2	13.3	14
16	13.4	16.6	20.0	20.0	26.7	35.0	26.7	49.0	59.9	70.8	83.5	92.8		16.6	18.5	16
18	17.1	21.2	29.8	25.5	41.5	55.2	34.1	69.0	85.0	101	115	131		21.2	26.8	18
20	21.3	31.8	42.5	31.8	54.1	73.9	42.5	93.7	116	136	159	179		26.4	36.7	20
22	25.9	38.8	51.7	38.8		90.2	51.7	116	142	168	193	219		31.5		22
24	30.1	45.1	67.5	45.1	90.1	127	60.1	160	201	238	271	307		36.6	59.2	24

CARBON STEEL & ALLOY STEEL

WEIGHT LIST

Tees 三通										Unit: kg					
	S10	S20	S30	STD	S40	S60	XS	S80	S100	S120	S140	S160	XXS	SGP	DIN
1/2 x 1/2				0.10	0.10		0.12	0.12				0.15	0.19	0.10	0.07
3/4 x 3/4				0.14	0.14		0.18	0.18				0.24	0.30	0.14	0.11
x 1/2				0.12	0.12		0.16	0.16				0.21	0.26	0.12	0.10
1 x 1				0.28	0.28		0.36	0.36				0.47	0.60	0.27	0.22
x 3/4				0.25	0.25		0.32	0.32				0.41	0.53	0.24	0.19
x 1/2				0.24	0.24		0.30	0.30				0.39	0.50	0.23	0.18
1-1/4 x 1-1/4				0.47	0.47		0.61	0.61				0.77	1.07	0.46	0.35
x 1				0.41	0.41		0.53	0.53				0.67	0.94	0.40	0.31
x 3/4				0.39	0.39		0.51	0.51				0.65	0.90	0.39	0.29
x 1/2				0.38	0.38		0.50	0.50				0.63	0.87	0.37	0.29
1-1/2 x 1-1/2				0.67	0.67		0.89	0.89				1.19	1.57	0.64	0.48
x 1-1/4				0.59	0.59		0.78	0.78				1.04	1.37	0.56	0.42
x 1				0.56	0.56		0.75	0.75				1.00	1.32	0.54	0.40
x 3/4				0.55	0.55		0.73	0.73				0.97	1.28	0.52	0.39
x 1/2				0.53	0.53		0.71	0.71				0.95	1.25	0.51	0.38
2 x 2				0.97	0.97		1.33	1.33				1.98	2.39	0.95	0.73
x 1-1/2				0.85	0.85		1.16	1.16				1.73	2.09	0.83	0.64
x 1-1/4				0.81	0.81		1.12	1.12				1.66	2.01	0.80	0.61
x 1				0.79	0.79		1.08	1.08				1.61	1.95	0.77	0.59
x 3/4				0.77	0.77		1.06	1.06				1.58	1.91	0.76	0.58
x 1/2				0.77	0.77		1.05	1.05				1.57	1.89	0.75	0.58
2-1/2 x 2-1/2				1.83	1.83		2.42	2.42				3.16	4.32	1.57	1.10
x 2				1.60	1.60		2.12	2.12				2.77	3.78	1.37	0.96
x 1-1/2				1.54	1.54		2.03	2.03				2.65	3.63	1.32	0.92
x 1-1/4				1.49	1.49		1.97	1.97				2.57	3.52	1.28	0.90
x 1				1.46	1.46		1.93	1.93				2.52	3.45	1.25	0.88
x 3/4				1.45	1.45		1.91	1.91				2.50	3.42	1.24	0.87
3 x 3				2.64	2.64		3.57	3.57				4.99	6.47	2.06	1.58
x 2-1/2				2.31	2.31		3.12	3.12				4.37	5.66	1.80	1.38
x 2				2.22	2.22		3.00	3.00				4.19	5.43	1.73	1.33
x 1-1/2				2.15	2.15		2.91	2.91				4.07	5.27	1.68	1.29
x 1-1/4				2.11	2.11		2.85	2.85				3.98	5.17	1.64	1.26
x 1				2.09	2.09		2.82	2.82				3.94	5.11	1.63	1.25
3-1/2 x 3-1/2				3.47	3.47		4.77	4.77						2.58	2.23
x 3				3.04	3.04		4.17	4.17						2.26	1.95
x 2-1/2				2.91	2.91		4.01	4.01						2.17	1.87
x 2				2.83	2.83		3.89	3.89						2.10	1.82
x 1-1/2				2.77	2.77		3.81	3.81						2.06	1.78
x 1-1/4				2.74	2.74		3.77	3.77						2.04	1.76
4 x 4				4.46	4.46		6.20	6.20		7.86		9.31	11.4	3.38	2.73
x 3-1/2				3.90	3.90		5.43	5.43		6.88		8.15	10.0	2.96	2.39
x 3				3.75	3.75		5.21	5.21		6.60		7.82	9.58	2.84	2.29
x 2-1/2				3.63	3.63		5.05	5.05		6.40		7.59	9.29	2.75	2.22
x 2				3.56	3.56		4.95	4.95		6.28		7.43	9.10	2.70	2.18
x 1-1/2				3.53	3.53		4.90	4.90		6.21		7.36	9.01	2.67	2.16
5 x 5				7.10	7.10		10.1	10.1		13.1		16.0	18.7	4.91	4.38
x 4				6.21	6.21		8.84	8.84		11.5		14.0	16.4	4.30	3.83
x 3-1/2				5.96	5.96		8.48	8.48		11.0		13.4	15.7	4.12	3.68
x 3				5.79	5.79		8.23	8.23		10.7		13.0	15.2	4.00	3.57
x 2-1/2				5.67	5.67		8.06	8.06		10.5		12.8	14.9	3.92	3.50
x 2				5.61	5.61		7.98	7.98		10.4		12.6	14.8	3.88	3.46
6 x 6				10.5	10.5		15.9	15.9		20.2		25.2	29.5	7.39	6.77
x 5				9.19	9.19		13.9	13.9		17.7		22.1	25.8	6.47	5.92
x 4				8.82	8.82		13.4	13.4		17.0		21.2	24.8	6.21	5.69
x 3-1/2				8.56	8.56		13.0	13.0		16.5		20.5	24.0	6.02	5.52
x 3				8.38	8.38		12.7	12.7		16.1		20.1	23.6	5.90	5.41
x 2-1/2				8.30	8.30		12.6	12.6		16.0		19.9	23.3	5.84	5.35

CARBON STEEL & ALLOY STEEL

WEIGHT LIST

Tees 三通	Unit: kg															
	S10	S20	S30	STD	S40	S60	XS	S80	S100	S120	S140	S160	XXS	SGP	DIN	
8 x 8		15.3	16.9	19.5	19.5	24.4	29.7	29.7	34.9	41.5	46.4	51.1	49.6	13.9	15.2	
x 6		13.4	14.8	17.1	17.1	21.4	26.0	26.0	30.5	36.3	40.6	44.7	43.4	12.2	13.3	
x 5		12.9	14.2	16.4	16.4	20.5	24.9	24.9	29.3	34.9	39.0	42.9	41.7	11.7	12.6	
x 4		12.5	13.8	15.9	15.9	19.9	24.2	24.2	28.4	33.8	37.8	41.6	40.4	11.3	12.4	
x 3-1/2		12.2	13.5	15.6	15.6	19.5	23.7	23.7	27.9	33.1	37.1	40.8	39.6	11.1	12.1	
x 3		12.1	13.4	15.4	15.4	19.3	23.5	23.5	27.6	32.8	36.7	40.4	39.2	11.0	12.0	
10 x 10		23.2	28.3	33.4	33.4	45.2	53.2	53.2	63.6	73.8	86.0	95.5	86.0	23.7	23.0	
x 8		20.3	24.8	29.2	29.2	39.6	39.6	46.6	55.7	64.6	75.3	83.6	75.3	20.7	20.1	
x 6		19.5	23.8	28.1	28.1	38.0	38.0	44.7	53.4	62.0	72.2	80.2	72.2	19.9	19.3	
x 5		18.9	23.1	27.2	27.2	36.8	36.8	43.3	51.8	60.1	70.1	77.8	70.1	19.3	18.7	
x 4		18.5	22.6	26.7	26.7	36.1	36.1	42.5	50.8	58.9	68.7	76.3	68.7	18.9	18.4	
x 3-1/2		18.3	22.4	26.4	26.4	35.7	35.7	42.1	50.3	58.3	68.0	75.5	68.0	18.7	18.2	
12 x 12		32.4	42.4	48.1	51.9	70.9	63.4	86.0	104	122	135	155	122	34.7	36.1	
x 10		28.4	37.1	42.1	45.4	62.0	55.5	75.3	91.0	107	118	136	107	30.4	31.6	
x 8		27.2	35.6	40.4	43.6	59.6	53.3	72.2	87.4	102	113	130	102	29.1	30.3	
x 6		26.4	34.5	39.2	42.3	57.8	51.7	70.1	84.7	99.4	110	126	99.4	28.3	29.4	
x 5		25.9	33.9	38.4	41.4	56.6	50.6	68.7	83.0	97.4	108	124	97.4	27.7	28.8	
x 4		25.6	33.5	38.0	41.0	56.0	50.1	68.0	82.2	96.4	107	123	96.4	27.4	28.5	
14 x 14	39.2	48.6	56.3	58.3	67.7	90.8	76.9	113	140	161	182	202		48.5	49.1	
x 12	34.3	42.5	51.0	51.0	59.2	79.5	67.3	98.9	123	141	159	177		42.4	43.0	
x 10	32.9	40.8	49.0	49.0	56.9	76.3	64.6	94.9	118	135	153	170		40.7	41.2	
x 8	31.9	39.6	47.5	47.5	55.2	74.0	62.7	92.1	114	131	148	165		39.5	40.0	
x 6	31.3	38.8	46.6	46.6	54.1	72.5	61.4	90.2	112	129	145	161		38.7	39.2	
x 5	31.0	38.4	46.1	46.1	53.5	71.8	60.8	89.3	111	127	144	160		38.3	38.8	
16 x 16	48.4	60.1	72.0	72.0	95.2	124	95.2	157	190	221	257	282		59.9	66.6	
x 14	42.4	52.6	63.0	63.0	83.3	109	83.3	137	166	193	225	247		52.4	58.3	
x 12	40.7	50.5	60.5	60.5	80.0	104	80.0	132	160	186	216	237		50.3	55.9	
x 10	39.4	49.0	58.7	58.7	77.6	101	77.6	128	155	180	209	230		48.8	54.3	
x 8	38.6	48.0	57.5	57.5	76.0	99.0	76.0	125	152	178	205	225		47.8	53.2	
x 6	38.3	47.5	56.9	56.9	75.3	98.0	75.3	124	150	175	203	223		47.4	52.6	
18 x 18	61.3	76.2	106	91.4	135	179	121	221	269	316	355	399		76.0	95.8	
x 16	53.6	66.7	92.8	80.0	118	157	106	193	235	277	311	349		66.5	83.8	
x 14	51.5	64.0	89.0	76.8	113	150	102	186	226	265	298	335		63.8	80.5	
x 12	49.9	62.1	86.4	74.5	110	146	98.6	180	219	257	289	325		61.9	78.1	
x 10	48.9	60.8	84.8	73.0	108	143	96.6	176	215	252	283	319		60.7	76.5	
x 8	48.5	60.2	83.8	72.3	107	142	95.7	175	213	250	281	315		60.1	75.7	
20 x 20	75.8	113	150	113	177	239	150	300	368	426	490	545		94.0	130	
x 18	66.3	98.9	131	98.9	155	209	131	263	322	373	429	477		82.3	114	
x 16	63.7	94.9	126	94.9	149	201	126	252	309	358	412	458		79.0	109	
x 14	61.8	92.1	122	92.1	144	195	122	244	300	347	399	444		76.6	106	
x 12	60.5	90.2	120	90.2	141	191	120	240	294	340	391	435		75.1	104	
x 10	59.9	89.3	119	89.3	140	189	119	237	291	337	387	431		74.3	103	
22 x 22	91.8	137	182	137		312	182	397	479	559	637	713		114		
x 20	80.3	120	159	120		273	159	347	419	489	557	624		100		
x 18	77.1	115	153	115		262	153	333	402	470	535	599		95.8		
x 16	74.8	112	148	112		254	148	323	390	455	519	581		92.9		
x 14	73.3	109	145	109		249	145	317	382	446	509	569		91.0		
x 12	72.6	108	144	108		247	144	314	379	442	504	564		90.1		
24 x 24	102	152	226	152	275	382	201	476	589	689	775	870		126	198	
x 22	89.3	133	198	133	241	334	176	417	515	603	678	761		110	173	
x 20	85.7	128	190	128	231	321	169	400	495	579	651	731		106	166	
x 18	83.1	124	184	124	224	311	164	388	480	561	631	709		103	161	
x 16	81.4	121	180	121	220	305	160	380	470	550	619	695		101	158	
x 14	80.6	120	179	120	217	302	159	376	466	545	613	688		100	157	

CARBON STEEL & ALLOY STEEL

WEIGHT LIST

Reducers 异径管											Unit: kg				
	S10	S20	S30	STD	S40	S60	XS	S80	S100	S120	S140	S160	XXS	SGP	DIN
3/4 x 1/2				0.06	0.06		0.08	0.08				0.10	0.13	0.08	0.05
1 x 3/4				0.12	0.12		0.15	0.15				0.20	0.26	0.11	0.09
x 1/2				0.12	0.12		0.14	0.14				0.19	0.25	0.11	0.09
1-1/4 x 1				0.16	0.16		0.21	0.21				0.26	0.37	0.16	0.12
x 3/4				0.15	0.15		0.20	0.20				0.25	0.36	0.15	0.12
x 1/2				0.15	0.15		0.20	0.20				0.24	0.34	0.15	0.11
1-1/2 x 1-1/4				0.24	0.24		0.32	0.32				0.43	0.56	0.23	0.17
x 1				0.23	0.23		0.31	0.31				0.41	0.54	0.22	0.16
x 3/4				0.22	0.22		0.30	0.30				0.40	0.52	0.21	0.16
x 1/2				0.22	0.22		0.29	0.29				0.39	0.51	0.21	0.16
2 x 1-1/2				0.38	0.38		0.53	0.53				0.78	0.95	0.37	0.29
x 1-1/4				0.36	0.36		0.51	0.51				0.75	0.91	0.36	0.28
x 1				0.35	0.35		0.49	0.49				0.73	0.88	0.34	0.27
x 3/4				0.35	0.35		0.48	0.48				0.71	0.87	0.34	0.26
x 1/2				0.34	0.34		0.48	0.48				0.70	0.86	0.33	0.26
2-1/2 x 2				0.71	0.71		0.94	0.94				1.23	1.68	0.61	0.43
x 1-1/2				0.68	0.68		0.90	0.90				1.18	1.61	0.59	0.41
x 1-1/4				0.66	0.66		0.88	0.88				1.15	1.56	0.57	0.40
x 1				0.65	0.65		0.86	0.86				1.12	1.53	0.56	0.39
x 3/4				0.64	0.64		0.85	0.85				1.11	1.52	0.55	0.39
3 x 2-1/2				0.93	0.93		1.26	1.26				1.76	2.28	0.72	0.56
x 2				0.89	0.89		1.21	1.21				1.69	2.19	0.69	0.54
x 1-1/2				0.87	0.87		1.17	1.17				1.64	2.12	0.67	0.52
x 1-1/4				0.85	0.85		1.15	1.15				1.61	2.08	0.66	0.51
x 1				0.84	0.84		1.14	1.14				1.59	2.06	0.65	0.51
3-1/2 x 3				1.28	1.28		1.75	1.75						0.95	0.82
x 2-1/2				1.23	1.23		1.68	1.68						0.91	0.79
x 2				1.19	1.19		1.63	1.63						0.88	0.76
x 1-1/2				1.17	1.17		1.60	1.60						0.87	0.75
x 1-1/4				1.16	1.16		1.58	1.58						0.86	0.74
4 x 3-1/2				1.51	1.51		2.10	2.10		2.66		3.15	3.86	1.15	0.92
x 3				1.45	1.45		2.02	2.02		2.55		3.02	3.71	1.10	0.88
x 2-1/2				1.41	1.41		1.96	1.96		2.48		2.93	3.59	1.07	0.86
x 2				1.38	1.38		1.92	1.92		2.43		2.87	3.52	1.05	0.84
x 1-1/2				1.36	1.36		1.90	1.90		2.40		2.85	3.49	1.04	0.83
5 x 4				2.58	2.56		3.84	3.64		4.73		5.77	6.75	1.76	1.57
x 3-1/2				2.46	2.46		3.49	3.49		4.54		5.54	6.48	1.69	1.51
x 3				2.38	2.38		3.39	3.39		4.40		5.37	6.29	1.64	1.46
x 2-1/2				2.34	2.34		3.32	3.32		4.32		5.27	6.16	1.61	1.43
x 2				2.31	2.31		3.29	3.29		4.27		5.21	6.10	1.59	1.42
6 x 5				3.65	3.65		5.50	5.50		7.00		8.73	10.2	2.55	2.35
x 4				3.50	3.50		5.28	5.28		6.72		8.38	9.79	2.45	2.26
x 3-1/2				3.40	3.40		5.12	5.12		6.52		8.13	9.50	2.37	2.19
x 3				3.33	3.33		5.02	5.02		6.39		7.97	9.31	2.33	2.14
x 2-1/2				3.30	3.30		4.97	4.97		6.32		7.89	9.22	2.30	2.12

CARBON STEEL & ALLOY STEEL

WEIGHT LIST

Reducers 异径管		Unit: kg															
		S10	S20	S30	STD	S40	S60	XS	S80	S100	S120	S140	S160	XXS	SGP	DIN	
8 x 6		4.7	5.19	6.00	6.00	7.48	9.11	9.11	10.7	12.7	14.2	15.7	15.2	4.24	4.66		
	x 5	4.51	4.98	5.76	5.76	7.18	8.75	8.75	10.3	12.2	13.6	15.1	14.6	4.07	4.47		
	x 4	4.38	4.83	5.59	5.59	6.97	8.48	8.48	10.0	11.8	13.2	14.6	14.2	3.95	4.34		
	x 3-1/2	4.29	4.74	5.48	5.48	6.83	8.31	8.31	9.76	11.6	13.0	14.3	13.9	3.87	4.25		
	x 3	4.25	4.69	5.42	5.42	6.76	8.23	8.23	9.67	11.5	12.8	14.2	13.7	3.83	4.21		
10 x 8		6.87	8.39	9.92	9.92	13.4	13.4	15.8	18.9	21.9	25.5	28.3	25.5	6.98	6.81		
	x 6	6.60	8.05	9.52	9.52	12.9	12.9	15.2	18.1	21.0	24.5	27.2	24.5	6.70	6.54		
	x 5	6.40	7.81	9.24	9.24	12.5	12.5	14.7	17.6	20.4	23.7	26.4	23.7	6.50	6.34		
	x 4	6.27	7.66	9.05	9.05	12.2	12.2	14.4	17.2	20.0	23.3	25.8	23.3	6.37	6.21		
	x 3-1/2	6.21	7.58	8.96	8.96	12.1	12.1	14.3	17.1	19.8	23.0	25.6	23.0	6.31	6.15		
12 x 10		9.35	12.3	13.9	15.0	20.5	18.3	24.8	30.1	35.1	39.1	44.9	35.1	10.0	10.4		
	x 8	8.98	11.8	13.3	14.4	19.7	17.6	23.8	28.9	33.7	37.5	43.1	33.7	9.60	10.0		
	x 6	8.71	11.5	12.9	14.0	19.1	17.0	23.1	28.0	32.7	36.4	41.8	32.7	9.31	9.68		
	x 5	8.53	11.2	12.7	13.7	18.7	16.7	22.6	27.5	32.0	35.7	41.0	32.0	9.13	9.49		
	x 4	8.45	11.1	12.6	13.6	18.5	16.5	22.4	27.2	31.7	35.3	40.6	31.7	9.03	9.40		
14 x 12		16.7	20.7	24.8	24.8	28.9	38.7	32.8	48.3	59.5	68.6	77.4	86.0		20.7	20.9	
	x 10	16.0	19.9	23.8	23.8	27.7	37.2	31.5	46.4	57.1	65.9	74.3	82.6		19.9	20.1	
	x 8	15.6	19.3	23.1	23.1	26.9	36.0	30.5	45.0	55.4	63.9	72.1	80.1		19.3	19.5	
	x 6	15.2	18.9	22.6	22.6	26.4	35.3	29.9	44.1	54.3	62.6	70.6	78.5		18.9	19.1	
	x 5	15.1	18.7	22.4	22.4	26.1	35.0	29.6	43.6	53.8	62.0	69.9	77.7		18.7	18.9	
16 x 14		20.7	25.6	30.7	30.7	40.6	52.7	40.6	66.9	80.8	94.3	110	120		25.5	26.4	
	x 12	19.9	24.6	29.5	29.5	39.0	50.6	39.0	64.2	77.6	90.5	106	115		24.5	27.3	
	x 10	19.3	23.8	28.6	28.6	37.8	49.1	37.8	62.3	75.2	87.8	102	112		23.7	26.4	
	x 8	18.9	23.4	28.0	28.0	37.1	48.1	37.1	61.1	73.7	86.1	100	110		23.3	25.9	
	x 6	18.7	23.1	27.7	27.7	36.7	47.6	36.7	60.4	73.0	85.2	99.4	108		23.0	25.7	
18 x 16		25.0	30.9	43.1	37.1	54.9	72.5	49.1	89.8	109	128	144	162		30.8	38.8	
	x 14	24.0	29.7	41.4	35.6	52.7	69.6	47.1	86.2	105	123	138	156		29.6	37.2	
	x 12	23.3	28.8	40.1	34.5	51.1	67.5	45.7	83.6	102	119	134	151		28.7	36.1	
	x 10	22.8	28.2	39.3	33.9	50.1	66.2	44.8	81.9	99.5	117	131	148		28.1	35.4	
	x 8	22.6	27.9	38.9	33.5	49.6	65.5	44.4	81.1	98.5	116	130	146		27.8	35.1	
20 x 18		37.1	55.0	72.9	55.0	86.2	116	72.9	146	179	207	239	265		45.8	63.4	
	x 16	35.6	52.8	70.0	52.8	82.8	111	70.0	140	172	199	229	254		44.0	60.9	
	x 14	34.5	51.2	67.9	51.2	80.3	108	67.9	136	167	193	223	247		42.6	59.0	
	x 12	33.9	50.2	66.5	50.2	78.7	106	66.5	133	163	189	218	242		41.8	57.9	
	x 10	33.5	49.7	65.9	49.7	77.9	105	65.9	132	162	187	216	239		41.4	57.3	
22 x 20		40.9	60.7	80.4	60.7		138	80.4	176	212	248	282	316		50.4		
	x 18	39.3	58.3	77.2	58.3		132	77.2	169	204	238	271	303		48.4		
	x 16	38.1	56.5	74.9	56.5		129	74.9	164	197	231	263	294		46.9		
	x 14	37.3	55.4	73.4	55.4		126	73.4	161	193	226	257	288		46.0		
	x 12	37.0	54.8	72.6	54.8		125	72.6	159	192	224	255	285		45.5		
24 x 22		44.7	66.3	98.4	66.3	120	167	87.8	208	257	301	338	380		55.1	86.5	
	x 20	42.9	63.6	94.5	63.6	115	160	84.3	200	247	289	324	365		52.9	83.0	
	x 18	41.6	61.7	91.6	61.7	112	156	81.8	194	239	280	315	354		51.3	80.5	
	x 16	40.8	60.5	89.8	60.5	110	152	80.1	190	235	275	308	347		50.3	78.9	
	x 14	40.4	59.9	88.9	59.9	108	151	79.3	188	232	272	305	343		49.8	78.1	

企业文化篇
Corporate culture

企业精神：
超越自我 追求卓越

企业文化：
顾客满意 员工满意 求实创新 感恩与诚信 和谐共赢

价值理念：
创造财富 回馈社会

经营理念：
科技创新谋求快速发展 科学管理实现健康成长

管理理念：
关注细节 让品质最优 强化学习 让员工成才 团结协作 让客户满意

人才理念：
为人才构筑舞台 让业绩证明能力

