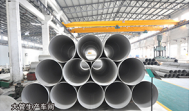
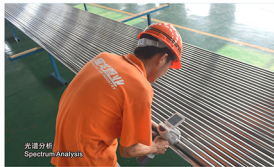




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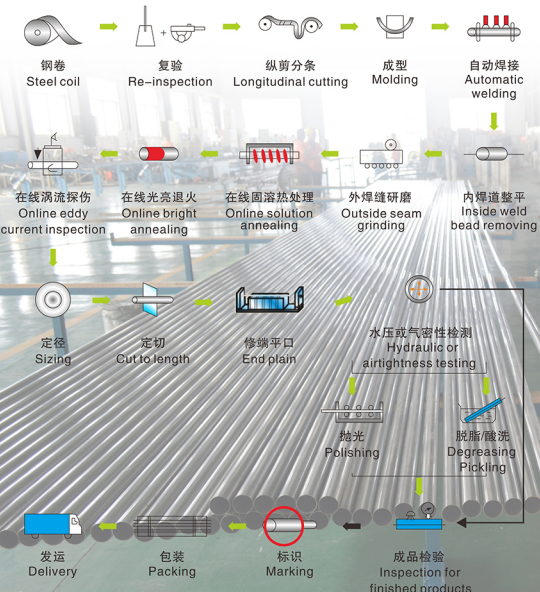




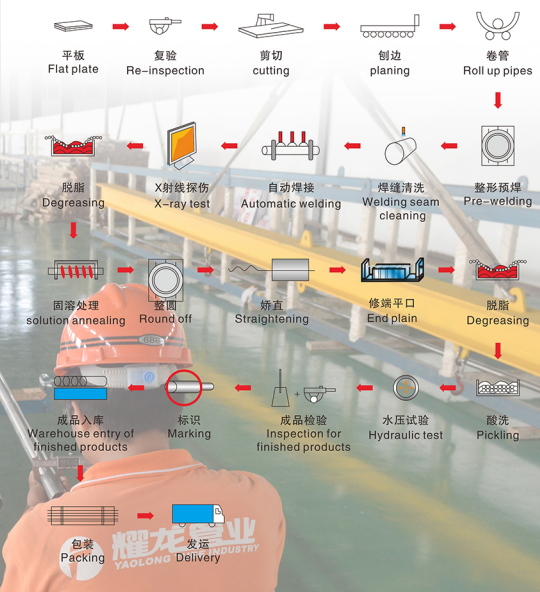




Process flow chart of small-diameter industrial welded pipes



Process flow chart of large-caliber industrial welded pipes



耀龙管业  
YALONG INDUSTRY

## 热交换器用管公差 (Tolerance of heat exchanger tubes)

项目	公差	HG20537.2				ASTM A249(A1016)		GB/T 24593	
		I		II		<25.4	≥10	≤25	≥10
外径 Outside Diameter(mm)	<25	±0.10	>10~30	±0.20	≥25.4~<38.1	±0.15	>25~40	±0.15	
	≥25~38	±0.15	>30~50	±0.30	≥38.1~<50.8	±0.20	>40~50	±0.20	
	>35~51	±0.20	>50	±0.8%	≥50.8~<63.5	±0.25	>50~65	±0.25	
	>51~63	±0.25			≥63.5~<76.2	±0.31	>65~75	±0.30	
	>63~76	±0.30					>75~100	±0.38	
壁厚 Thickness(mm)		±10%S				±10%S		±10%S	
长度 Length(mm)		+5		-0		D<50.8		+5	
		-0				D≥50.8		-0	



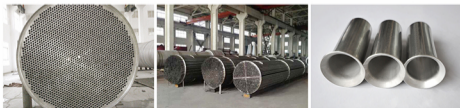
## 钢管的推荐热处理规范及力学性能 (源自GB/T 24593标准)

Recommended Heat treatment and mechanical properties of the steel pipe

序号 NO.	GB/T 20878 中序号 In No.	统一数字 代号 Unified Numbering	牌号 Trademark	推荐热处理规范 Recommended Heat Treatment Specification	拉伸性能 Tensile Properties			硬度 Hardness
					抗拉强度 Tensile Strength	规定塑性 延伸强度 Provisions of plastic extension strength	断后 伸长率 Elongation after fracture	
					不小于			不大于
1	13	S30210	12Cr18Ni9	≥1040℃ 急冷	515	205	35	90
2	17	S30408	06Cr19Ni10	≥1040℃ 急冷	515	205	35	90
3	18	S30403	022Cr19Ni10	≥1040℃ 急冷	485	170	35	90
4	19	S30409	07Cr19Ni10	≥1040℃ 急冷	515	205	35	90
5	23	S30458	06Cr19Ni10N	≥1040℃ 急冷	550	240	35	90
6	25	S30453	022Cr19Ni10N	≥1040℃ 急冷	515	205	35	90
7	26	S30510	10Cr18Ni12	≥1040℃ 急冷	515	205	35	90
8	32	S30908	06Cr23Ni13	≥1040℃ 急冷	515	205	35	90
9	35	S31008	06Cr25Ni20	≥1040℃ 急冷	515	205	35	90
10	38	S31608	06Cr17Ni12Mo2	≥1040℃ 急冷	515	205	35	90
11	39	S31603	022Cr17Ni12Mo2	≥1040℃ 急冷	485	170	35	90
12	41	S31668	06Cr17Ni12Mo2Ti	≥1040℃ 急冷	515	205	35	90
13	43	S31658	06Cr17Ni12Mo2N	≥1040℃ 急冷	550	240	35	90
14	44	S31653	022Cr17Ni12Mo2N	≥1040℃ 急冷	515	205	35	90
15	49	S31708	06Cr19Ni13Mo3	≥1040℃ 急冷	515	205	35	90
16	50	S31703	022Cr19Ni13Mo3	≥1040℃ 急冷	515	205	35	90
17	55	S32168	06Cr18Ni11Ti	≥1040℃ 急冷	515	205	35	90
18	62	S34778	06Cr18Ni11Nb	≥1040℃ 急冷	515	205	35	90
19	63	S34779	07Cr18Ni11Nb	≥1040℃ 急冷	515	205	35	90

## 不锈钢机械性质 (Stainless steel mechanical properties)

规格 (Grade)	抗拉强度 Tensile strength	降伏强度 Yield strength	伸长率 Elongation	硬度 Hardness	固熔化热处理(℃) Solution Annealing	
	kgf/mm <sup>2</sup> (N/mm <sup>2</sup> )	kgf/mm <sup>2</sup> (N/mm <sup>2</sup> )	%	HRB(HV)		
美标 ASTM	TP304	≥53 (515)	≥21 (205)	≥35	≤90 (200)	1040~1150℃ 水急冷 Water Quenching
	TP304L	≥50 (485)	≥17 (170)	≥35	≤90 (200)	
	TP316	≥53 (515)	≥21 (205)	≥35	≤90 (200)	
	TP316L	≥50 (485)	≥17 (170)	≥35	≤90 (200)	
日标 JIS	SUS304	≥53 (520)	≥21 (205)	≥35	≤90 (200)	1010~1150℃ 水急冷 Water Quenching
	SUS304L	≥49 (480)	≥18 (175)	≥35	≤90 (200)	
	SUS316	≥53 (520)	≥21 (205)	≥35	≤90 (200)	
	SUS316L	≥49 (480)	≥18 (175)	≥35	≤90 (200)	
国标 GB	06Cr19Ni10	≥53 (520)	≥21 (210)	≥35	≤90 (200)	1010~1150℃ 水急冷 Water Quenching
	022Cr19Ni10	≥49 (480)	≥18 (180)	≥35	≤90 (200)	
	06Cr17Ni12Mo2	≥53 (520)	≥21 (210)	≥35	≤90 (200)	
	022Cr17Ni12Mo2	≥50 (480)	≥18 (180)	≥35	≤90 (200)	
欧标 EN	X5CrNi18-10; 1.4301	(500~700)	≥20 (195)	≥40	≤90 (200)	1000~1100℃ 水急冷 Water Quenching
	X2CrNi19-9; 1.4307	(470~670)	≥18 (180)	≥40	≤90 (200)	1020~1120℃ 水急冷 Water Quenching
	X5CrNi17-12-2; 1.4401	(510~710)	≥21 (205)	≥40	≤90 (200)	1020~1120℃ 水急冷 Water Quenching
	X2CrNi17-12-2; 1.4404	(490~690)	≥19 (195)	≥40	≤90 (200)	



材质: 304、304L、316、316L

应用范围: 啤酒、饮料、牛奶、制药等卫生级要求较高行业。

工艺特点: 内焊道整平处理, 在线光亮固溶处理, 内外机械抛光处理。

Material: 304、304L、316、316L

Range used: beer, beverage, pharmacy, etc, high sanitary industry requier.

Process characteristics: inner welded seam removed, online bright solution anneal, inner electro polish and mechanical polish

### DIN标准 (DIN11850)

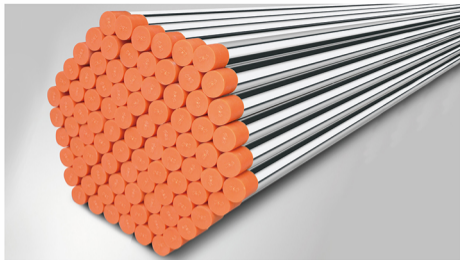
SIZE	DN10	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100	DN125	DN150	DN200	DN250
外径ΦD	12	18	22	28	34	40	52	70	85	104	129	154	204	254
壁厚T	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2	2	2	2	2	2	2
长度L	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m

### ISO标准

SIZE	8A	10A	15A	1/2"	3/4"	1"	1 1/4"	1.5"	2"	2.5"	3"	3.5"	4"	4.5"
外径ΦD	13.8	17.3	21.7	12.7	19.05	25.4	31.8	38.1	50.8	63.5	76.3	89.1	101.6	114.3
壁厚T	1.65	1.65	1.65	1.5	1.5	1.2	1.2	1.2	1.5	2	2	2	2	2
长度L	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m	4m/6m

### 3A标准钢管对照表 3A standard steel pipe comparative table

SIZE	1/4"	3/8"	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"
外径ΦD	6.35	9.53	12.7	19.05	25.4	38.1	50.8	63.5	76.2	101.6
壁厚T	0.89	0.89	1.25	1.65	1.65	1.65	1.65	1.65	1.65	2.11
重量kg/m	0.124	0.196	0.357	0.721	0.981	1.500	2.030	2.555	3.080	5.256



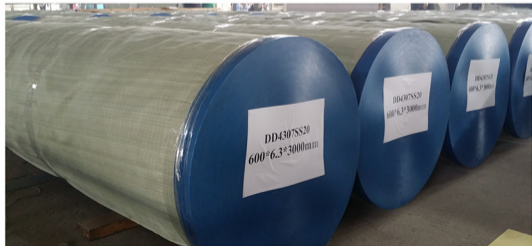
### ASTM A270食品级卫生用不锈钢管尺寸公差

The dimension tolerance of the stainless steel welded sanitary tube

用途 Use	规格 Guage	项目 Item	外径(mm) outside diameter	外径公差(mm) Thickness of outer diameter	厚度公差(mm) Tolerance of Thickness	长度(mm) Length
食品级卫生用管 Pipes for food hygiene	ASTM A270		≤25.4	±0.13	±10%	OD≤101.6 +3.2 -0
			≥25.4-50.80	±0.20		
			≥50.80-76.20	±0.25		
			≥76.20-101.60	±0.38		
			≥101.60-139.70	±0.38		
			≥139.70-203.20	±0.76		
			≥203.20-304.80	±1.27		OD≥101.6 +4.8 -0

### 表面亮度(Surface brightness)

项目 ITEM	圆管 ROUND TUBING		方管 长方管 SQUARE & RECTANGULAR TUBING	
	表面 FINISH	说明 DESCRIPTION	表面 FINISH	说明 DESCRIPTION
表面亮度 SURFACE FINISH	Mil Finish	As welded	Mil Finish	As welded
	180 #	Buffed after polishing by 180 #	180 #	Buffed after polishing by 180 #
	400 #	Buffed after polishing by 400 #	400 #	Buffed after polishing by 400 #
	600 #	Buffed after polishing by 600 #		
	180 # Hairline	Hairline finished after polishing 180 #	180 # Hairline	Hairline finished after polishing 180 #
	240 # Hairline	Hairline finished after polishing 240 #	240 # Hairline	Hairline finished after polishing 240 #



尺寸公差表 ( Dimension tolerance table )

标准 standard	外径 ( mm ) outside diameter		厚度 ( mm ) Thickness	长度 ( mm ) Length
ASTM A312	≤48.26	+0.40 -0.80	+未特别规定 ( unspecified ) -12.50%	指定长度 Definite cut length +6.40 -0
	>48.26-114.30	+0.80 -0.80		
	>114.30-219.08	+1.60 -0.80		
	>219.08-457.20	+2.40 -0.80		
	>457-660	+3.20/ -0.80		
	>660-864	+4.00/ -0.80		
	>864-1219	+4.48/ -0.80		
HG 20537.3/4	Dn≤150 150<DN<300 Dn≥300	±0.75%, min±0.3mm ±1% ±1%	±10%S, min ± 0.3mm	+6.00 -0
GB/T 12771	<13.00 13.00-40.00 ≥40.00	±0.20 ±0.30 ±0.80%	≤4.00 +0.50 -0.60 >4.00 ±10%	+20.00 -0
EN 10217-7	D1±1.50% with ±0.75mm(min) D2±1.00% with ±0.50mm(min) D3±1.75% with ±0.30mm(min) D4±0.50% with ±0.10mm(min) EN ISO 1127	T1±15.00% with ±0.60mm(min) T2±12.5% with ±0.40mm(min) T3±10.00% with ±0.20mm(min) T4±7.50% with ±0.15mm(min) T5±5.00% with ±0.10mm(min) EN ISO 1127		≤6000 +5.00 -0 6000-12000 +10.00 -0

ASTM A312/ASTM A778规格尺寸表 ( Specification )

称呼外径 Nominal Diameter		外径 Outside Diameter	厚度 Nominal Wall Thickness		
N.B	NPS		SCH 5S	SCH 10S	SCH 40S
8	1/4"	13.72			2.24
10	3/8"	17.15			2.31
15	1/2"	21.34	1.65	2.11	2.77
20	3/4"	26.67	1.65	2.11	2.87
25	1"	33.4	1.65	2.77	3.38
32	1-1/4"	42.16	1.65	2.77	3.56
40	1-1/2"	48.26	1.65	2.77	3.68
50	2"	60.33	1.65	2.77	3.91
65	2-1/2"	73.03	2.11	3.05	5.16
80	3"	88.90	2.11	3.05	5.49
90	3-1/2"	101.60	2.11	3.05	5.74
100	4"	114.30	2.11	3.05	6.05
125	5"	141.30	2.77	3.4	6.55
150	6"	168.28	2.77	3.4	7.11
200	8"	219.08	2.77	3.76	8.18
250	10"	273.05	3.40	4.19	9.27
300	12"	323.85	3.96	4.57	9.52

ASTM A269尺寸公差表 ( Dimension tolerance table )

项目 Item Specification	规格 Gauge	外径 outside diameter	外径公差 Thickness of outer diameter	厚度公差 Tolerance of Thickness	长度 Length
ASTM A269		<38.1mm	±0.13mm	OD<12.7 ±15%	OD<38.1 +3.2 -0
		≥38.1-88.9mm	±0.25mm		
		≥88.9-139.7mm	±0.38mm		
		≥139.7-203.2mm	±0.76mm	OD≥12.7 ±10%	OD<38.1 +4.8 -0
		≥203.2-304.8mm	±1.01mm		
	≥304.8-355.6mm	±1.26mm			

GB12770尺寸公差表 ( Dimension tolerance table )

类别 Category	外径 outside diameter	允许偏差 Allowable deviation		
		高级 ( PC )	较高级 ( PR )	普通级 ( PA )
热处理状态 T	<13	±0.10	±0.20	±0.25
	≥13-<25	±0.13	±0.20	±0.40
	≥25-<40	±0.25	±0.30	±0.60
	≥40-<63	±0.30	±0.50	±0.80
	≥63-<90	±0.51	±0.60	±1.0
	≥90-<159	±0.64	±0.80	±1.0
	≥159-<300	±0.7%D	±0.8%D	±1.0%D
	≥300-<500	±0.8%D	±1.0%D	±1.25%D
	≥500	按协议	按协议	按协议
冷拔 ( 轧 ) 状态 W 磨 ( 抛 ) 光状态 SP	<25	±0.10	±0.12	±0.15
	≥25-<40	±0.13	±0.15	±0.18
	≥40-<50	±0.15	±0.18	±0.20
	≥50-<60	±0.18	±0.20	±0.23
	≥60-<70	±0.25	±0.28	±0.30
	≥70-<80	±0.25	±0.28	±0.30
	≥80-<90	±0.25	±0.28	±0.30
	≥90-<100	±0.30	±0.35	±0.40
	≥100-<200	按协议	±0.4%D	±0.5%D
≥200	按协议	按协议	按协议	

GB12770壁厚公差要求 ( Wall thickness tolerances )

类别 Category	壁厚 Wall thickness	壁厚公差 Wall thickness tolerance
冷轧钢板 ( 带 ) 或冷轧纵剪钢带 Cold-rolled steel plate (coil) cold rolled slitting strip	≤0.5mm	±0.05mm
	>0.5-1.0mm	±0.11mm
	>1.0-2.0mm	±0.17mm
	>2.0-3.0mm	±7%Smm
	≥3.0-4.0mm	±6%Smm
	>4.0-5.0mm	±5%Smm

JIS G3459规格表 ( Specification )

称呼外径 (Nomina Diameter)		外径 (Outside Diameter)	厚度 (Nominal Wall Thickness)			
			SCH 5S	SCH 10S	SCH 20S	SCH 40S
(A)	(B)	mm	mm	mm	mm	mm
8	1/4"	13.8	1.2	1.65	2.0	2.2
10	3/8"	17.3	1.2	1.65	2.0	2.3
15	1/2"	21.7	1.65	2.1	2.5	2.8
20	3/4"	27.2	1.65	2.1	2.5	2.9
25	1"	34.0	1.65	2.8	3.0	3.4
32	1-1/4"	42.7	1.65	2.8	3.0	3.6
40	1-1/2"	48.6	1.65	2.8	3.0	3.7
50	2"	60.5	1.65	2.8	3.5	3.9
65	2-1/2"	76.3	2.1	3.0	3.5	5.2
80	3"	89.1	2.1	3.0	4.0	5.5
90	3-1/2"	101.6	2.1	3.0	4.0	5.7
100	4"	114.3	2.1	3.0	4.0	6.0
125	5"	139.8	2.8	3.4	5.0	6.6
150	6"	165.2	2.8	3.4	5.0	7.1
200	8"	216.3	2.8	4.0	6.5	8.2
250	10"	267.4	3.4	4.0	6.5	9.3
300	12"	318.5	4.0	4.5	6.5	10.3

大口径配管用不锈钢管

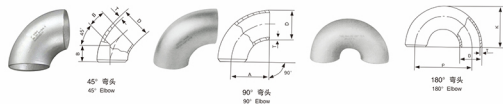
Large diameter stainless steel pipe

ASTM A312/ASTM A778规格尺寸表 ( Specification )

称呼外径 (Nomina Diameter)		外径 (Outside Diameter)	厚度 (Nominal Wall Thickness)			
			SCH 5S	SCH 10S	SCH 20S	SCH 40S
(A)	(B)	mm	mm	mm	mm	mm
350	14"	355.6	3.96	4.78	7.92	11.13
400	16"	406.4	4.19	4.78	7.92	12.7
450	18"	457.2	4.19	4.78	7.92	14.27
500	20"	508.0	4.78	5.54	9.53	15.09
550	22"	558.8	4.78	5.54	9.53	15.09
600	24"	609.6	5.54	6.35	9.53	17.48
650	26"	660.4	5.54	7.92	12.7	17.48
700	28"	711.2	5.54	7.92	12.7	17.48
750	30"	762.0	6.35	7.92	12.7	17.48
800	32"	812.8		7.92	12.7	17.48
850	34"	863.6		7.92	12.7	17.48
900	36"	914.4		7.92	12.7	19.05
1000	40"	1016.0		9.53		

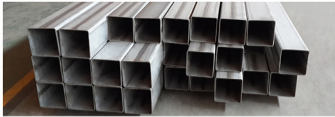
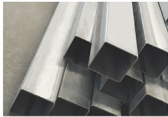
不锈钢方矩管 Stainless steel square & rectangular tubes

□ 径	厚度	0.70	0.80	0.90	1.00	1.20	1.50	2.00	2.50	3.00	4.00	5.00
10x10												
12x12												
15x15												
18x18												
20x20												
22x22												
25x25												
30x30												
32x32												
35x35												
38x38												
40x40												
45x45												
50x50												
60x60												
70x70												
75x75												
80x80												
80x90												
100x100												
120x120												
150x150												
200x200												
300x300												
400x400												
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30x80												
40x50												
40x60												
40x80												
40x100												
45x75												
45x95												
50x100												
50x150												
60x100												
60x120												
75x95												
100x200												
120x180												
100x150												
150x200												
150x300												
300x400												



对焊弯头尺寸GB/T12459 GB/T13401  
Dimensions of Elbows and Returns

公称口径 Nominal Pipe Size DN	端部外径 Outside Diameter Bevel D		中心至端面Center to End			中心至中心Center to Center				
			45° 弯头 Elbows		90° 弯头 Elbows		180° 弯头 Elbows			
			B		A		P			
			长半径 Long Radius	短半径 Short Radius	长半径 Long Radius	短半径 Short Radius	长半径 Long Radius	短半径 Short Radius	长半径 Long Radius	短半径 Short Radius
15	21.3	18	16	38	---	76	---	48	---	
20	26.7	25	16	38	---	76	---	51	---	
25	33.7	32	16	38	25	76	51	56	41	
32	42.4	38	20	48	32	95	64	70	52	
40	48.3	45	24	57	38	114	76	83	62	
50	60.3	57	32	76	51	152	102	108	81	
65	76.1	76	40	95	64	191	127	132	100	
80	88.9	89	47	114	76	229	152	159	121	
90	101.6	---	55	133	89	267	178	184	140	
100	114.3	108	63	152	102	305	203	210	159	
125	139.7	133	79	190	127.0	381	254	262	197	
150	168.3	159	95	229	152	457	305	313	237	
200	219.1	219	126	305	203	610	406	414	313	
250	273.0	273	158	381	254	762	508	518	391	
300	323.9	325	189	457	305	914	610	619	467	
350	355.6	377	211	533	356	1067	711	711	533	
400	406.4	426	253	610	406	1219	713	813	610	
450	457.2	478	284	686	457	1372	914	914	686	
500	508.0	529	316	762	508	1534	1016	1016	762	
600	610	630	379	914	610	1829	1219	1219	914	
700	711	720	436	1076	---	---	---	---	---	
800	813	820	500	1219	---	---	---	---	---	
900	914	920	564	1372	---	---	---	---	---	
1000	1016	1020	630	1524	---	---	---	---	---	
1100	1118	1120	694	1676	---	---	---	---	---	
1200	1220	1220	757	1829	---	---	---	---	---	



偏心异径管  
Eccentric Reducer

对焊同心、偏心异径管 GB/T12459 GB/T13401  
Welding Concentric&Eccentric Reducers

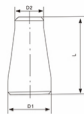
公称通径 Normial Pipe Size DN	端部外径Outside Diameter ai Bevel				长度 End to End L
	D1		D2		
	A系列 Series A	B系列 Series B	A系列 Series A	B系列 Series B	
550x500 550x450 550x400 550x350	559 559 559 559	- - - -	580 457 406 356	- - - -	508
600x550 600x500 600x450 600x400	610 610 610 610	- 630 630 630	559 508 457 406	- 530 480 426	508
650x600 650x550 650x500 650x450	660 660 660 660	- - - -	610 559 508 457	- - - -	610
700x650 700x600 700x550 700x500	711 711 711 711	- 720 720 720	660 610 559 508	630 630 630 630	610
750x700 750x650 750x600 750x550	762 762 762 762	- - - -	711 660 610 559	- 1020 1016 1020	610
800x750 800x700 800x650 800x600	813 813 813 813	- 820 820 820	762 711 660 610	- 720 630 630	610
850x800 850x750 850x700 850x650	864 864 864 864	- - - -	813 762 711 660	- - - -	610

公称通径 Normial Pipe Size DN	端部外径Outside Diameter ai Bevel				长度 End to End L
	D1		D2		
	A系列 Series A	B系列 Series B	A系列 Series A	B系列 Series B	
900x850 900x800 900x750 900x700	914 914 914 914	- 920 - 920	864 813 762 711	- 820 - 720	610
950x900 950x850 950x800 950x750	965 965 965 965	- - - -	914 864 813 762	- - - -	610
1000x950 1000x900 1000x850 1000x800	1016 1016 1016 1016	- 1020 - 1020	965 914 864 813	- 920 - 820	610
1050x1000 1050x950 1050x900 1050x850	1067 1067 1067 1067	- - - -	1016 965 914 864	- - - -	610
1100x1050 1100x1000 1100x950 1100x900	1118 1118 1118 1118	- 1120 - 1120	1067 1016 965 914	- 1020 - 920	610
1150x1100 1150x1050 1150x1000 1150x950	1168 1168 1168 1168	- - - -	1118 1067 1016 965	- - - -	711
1200x1150 1200x1100 1200x1050 1200x1000	1220 1220 1220 1220	- 1220 - 1220	1168 1118 1067 1016	- 1120 - 1020	711



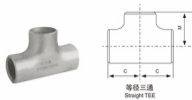
对焊同心、偏心异径管 GB/T12459 GB/T13401  
Butt-Welding Concentric&Eccentric Reducers

公称通径 Normial Pipe Size DN	端部外径Outside Diameter ai Bevel				长度 End to End L
	D1		D2		
	A系列 Series A	B系列 Series B	A系列 Series A	B系列 Series B	
20x15 25x20 25x15	26.9 33.7 33.7	25 32 32	21.3 26.9 21.3	18 25 18	38 51 51
30x25 32x20 32x15	42.4 42.4 42.4	38 38 38	33.7 26.9 21.3	32 25 18	51 51 51
40x32 40x25 40x20 40x15	48.3 48.3 48.3 48.3	45 45 45 45	42.4 33.7 26.9 21.3	38 32 25 18	64 64 64 64
50x40 50x32 50x25 50x20	60.3 60.3 60.3 60.3	57 57 57 57	48.3 42.4 33.7 26.9	45 38 32 25	76 76 76 76
65x50 65x40 65x32 65x25	76.1(73) 76.1(73) 76.1(73) 76.1(73)	76 76 76 76	60.3 48.3 42.4 33.7	57 45 38 32	89 89 89 89
80x65 80x50 80x40 80x32	88.9 88.9 88.9 88.9	89 89 89 89	76.1(73) 60.3 48.3 42.4	76 57 45 38	89 89 89 89
90x80 90x65 90x50 90x40 90x32	101.6 101.6 101.6 101.6 101.6	- - - - -	88.9 76.1(73) 60.3 48.3 42.4	- - - - -	102 102 102 102 102
100x90 100x80 100x65 100x50 100x40	114.3 114.3 114.3 114.3 114.3	- 108 108 108 108	101.6 88.9 76.1(73) 60.3 48.3	- 89 76 57 45	102 102 102 102 102
125x100 125x90 125x80 125x65 125x50	139.7 139.7 139.7 139.7 139.7	133 133 133 133 133	114.3 101.6 88.9 76.1(73) 60.3	108 102 89 76 57	127 127 127 127 127

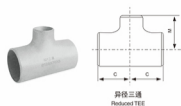


同心异径管  
Concentric Reducers

公称通径 Normial Pipe Size DN	端部外径Outside Diameter ai Bevel				长度 End to End L
	D1		D2		
	A系列 Series A	B系列 Series B	A系列 Series A	B系列 Series B	
150x125 150x100 150x90 150x80 150x65	168.3 168.3 168.3 168.3 168.3	159 159 - 159 159	139.7 114.3 101.6 88.9 76.1(73)	133 108 89 89 76	140 140 140 140 140
200x150 200x125 200x100 200x90	219.1 219.1 219.1 219.1	219 219 219 -	168.3 139.7 114.3 101.6	159 133 108 -	152 152 152 152
250x200 250x150 250x125 250x100	273.0 273.0 273.0 273.0	273 273 273 273	219.1 168.3 139.7 114.3	219 159 133 108	178 178 178 178
300x250 300x200 300x150 300x125	323.9 323.9 323.9 323.9	325 325 325 325	273.0 219.1 168.3 139.7	273 219 159 133	203 203 203 203
350x300 350x250 350x200 350x150	355.6 355.6 355.6 355.6	377 377 377 377	323.9 273.0 219.1 168.3	325 273 219 159	330 330 330 330
400x350 400x300 400x250 400x200	406.4 406.4 406.4 406.4	426 426 426 426	355.6 323.9 273.0 219.1	377 325 273 219	356 356 356 356
450x400 450x350 450x300 450x250	457.2 457.2 457.2 457.2	478 478 478 478	406.4 355.6 323.9 273.0	426 377 325 273	381 381 381 381
500x450 500x400 500x350 500x300 500x250	508.0 508.0 508.0 508.0 508.0	529 529 529 529 529	457.2 406.4 355.6 323.9 273.0	426 377 325 273 219	508 508 508 508 508



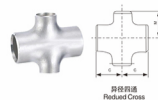
等径三通  
Straight TEE



异径三通  
Reduced TEE



等径四通  
Straight Cross



异径四通  
Reduced Cross

对焊等径三通、异径三通、四通 GB/T12459 GB/T13401

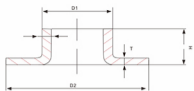
公称通径 Norminal Pipe Size DN	端部外径Outside Diameter at Bevel				中心至端面 Center to End	
	D1		D2		C	M
	A系列 Series A	B系列 Series B	A系列 Series A	B系列 Series B		
20x15	26.9	25	21.3	18	29	
20x20			26.9	25		
25x25	33.7	32	33.7	32	38	
25x20			26.9	25		
25x15			21.3	18		
32x32	42.4	38	42.4	38	48	
32x25			33.7	32		
32x20			26.9	25		
32x15			21.3	18		
40x40	48.3	45	48.3	45	57	
40x32			42.4	38		
40x25			33.7	32		
40x20			26.9	25		
40x15			21.6	18		
50x50	60.3	57	60.3	57	64	
50x40			48.3	45		
50x32			42.6	38		
50x25			33.7	32		
50x20			26.9	25		
65x65	76.1	76	76.1	76	76	
65x50	76.1(73)	76	60.3	57	70	
65x40	76.1(73)	76	48.3	45	67	
65x32	76.1(73)	76	42.4	38	64	
65x25	76.1(73)	76	33.7	32	57	

公称通径 Norminal Pipe Size DN	端部外径Outside Diameter at Bevel				中心至端面 Center to End		
	D1		D2		C	M	
	A系列 Series A	B系列 Series B	A系列 Series A	B系列 Series B			
80x80	88.9	89	88.9	89	86		
80x65			76.1(73)	76			83
80x50			60.3	57			76
80x40			48.3	45			73
80x32			42.4	38			70
90x90	101.6	-	101.6	-	95		
90x80			88.9	-			92
90x65			76.1(73)	-			89
90x50			60.3	-			83
90x40			48.3	-			79
100x100	114.3	108	114.3	108	105		
100x90			101.6	-			102
100x80			88.9	89			98
100x65			76.1(73)	76			95
100x50			60.3	57			89
100x40			48.3	45			86
125x125	139.7	133	139.7	133	124		
125x100			114.3	108			117
125x90			101.6	-			114
125x80			88.9	89			111
125x65			76.1(73)	76			108
125x50			60.3	57			105
150x150	168.3	159	168.3	159	143		
150x125			139.7	133			137
150x100			114.3	108			130
150x90			101.6	-			127
150x80			88.9	89			124
150x65			76.1(73)	76			121
200x200	219.1	219	219.1	219	178		
200x150			168.3	159			168
200x125			139.7	133			162
200x100			114.3	108			156
200x90			101.6	-			152

对焊等径异径三通、四通尺寸 GB/T12459 GB/T13401  
Dimensions of Reducing Outlet Tees and Reducing Outlet Crosses

公称通径 Norminal Pipe Size DN	端部外径 Outside Diameter at Bevel				中心至端面 Center to End			
	D1		D2		C	M		
	A系列 Series A	B系列 Series B	A系列 Series A	B系列 Series B				
250x250	273	273	273.0	273	216			
250x200			219.1	219			208	
250x150			168.3	159			216	194
250x125			139.7	133			191	
250x100			114.3	108			184	
300x300	323.9	325	323.9	325	254			
300x250			273.0	273			241	
300x200			219.1	219			264	229
300x150			168.3	159			219	
300x125			139.7	133			216	
350x350	355.6	377	355.6	377	279			
350x300			323.9	325			270	
350x250			273.0	273			279	257
350x200			219.1	219			248	
350x150			168.3	159			238	
400x400	406.4	426	406.4	426	305			
400x350			355.6	377			305	
400x300			323.9	325			295	
400x250			273.0	273			283	
400x200			219.1	219			273	
400x150			168.3	159			264	
450x450	457.2	478	457.2	478	343			
450x400			406.4	426			330	
450x350			355.6	377			331	
450x300			323.9	325			320	
450x250			273.0	273			308	
450x200			219.1	219			298	
500x500	508	529	508	529	381			
500x450			457.2	478			368	
500x400			406.4	426			356	
500x350			355.6	377			381	356
500x300			323.9	325			346	
500x250			273.0	273			333	
500x200	219.1	219	324					
550x550	559	-	-	559	419			
550x500			-	508			-	406
550x450			-	457			-	394
550x400			-	406			-	381
600x600	610	630	610	630	432			
600x550			-	559			-	432
600x500			630	508			530	432
600x450			630	457			480	419
650x650	660	610	-	660	495			
650x600			-	610			-	483
650x550			-	559			-	470
650x500			-	508			-	457
700x700	711	720	-	711	521			
700x650			-	660			-	508
700x600			711	610			630	521
700x550			-	599			-	495

公称通径 Norminal Pipe Size DN	端部外径 Outside Diameter at Bevel				中心至端面 Center to End			
	D1		D2		C	M		
	A系列 Series A	B系列 Series B	A系列 Series A	B系列 Series B				
750x750	762	-	-	762	559			
750x700			-	711			-	546
750x650			-	660			-	546
750x600			-	610			-	533
800x800	813	820	-	813	597			
800x750			-	762			-	584
800x700			-	711			720	597
800x650			-	660			-	572
850x850	864	-	-	864	635			
850x800			-	813			-	622
850x750			-	762			-	610
850x700			-	711			-	597
900x900	914	920	-	914	673			
900x850			-	864			-	660
900x800			-	813			820	673
900x750			-	762			-	635
950x950	965	-	-	965	711			
950x900			-	914			-	711
950x850			-	864			-	698
950x800			-	813			-	686
1000x1000	1016	1020	-	1016	749			
1000x950			-	965			-	749
1000x900			-	914			920	749
1000x850			-	864			-	724
1050x1050	1067	-	-	1067	762			
1050x1000			-	1016			-	762
1050x950			-	965			-	711
1050x900			-	914			-	711
1100x1100	1118	1120	-	1118	813			
1100x1050			-	1067			-	762
1100x1000			-	1016			1020	749
1100x950			-	965			-	737
1150x1150	1168	-	-	1168	851			
1150x1100			-	1118			-	800
1150x1050			-	1067			-	787
1150x1000			-	1016			-	775
1200x1200	1220	1220	-	1220	889			
1200x1150			-	1168			-	838
1200x1100			-	1118			1120	889
1200x1050			-	1067			-	813

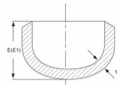


### 翻边短节尺寸: (HG20599-97)

Dimensions of Lap Joint Stub Ends

公称直径 DN	钢管外径 D1		PN0.6MPa			PN1.0MPa			PN1.6MPa			PN2.5MPa			PN4.0MPa		
	A系列 SeriesA	B系列 SeriesB	D2	H	T	D2	H	T	D2	H	T	D2	H	T	D2	H	T
10	17.2	14	33	28	1.8	41	35	1.8	41	35	1.8	41	35	1.8	41	35	1.8
15	21.3	18	38	30	2.0	46	38	2.0	46	38	2.0	46	38	2.0	46	38	2.0
20	26.9	25	48	32	2.3	56	40	2.3	56	40	2.3	56	40	2.3	56	40	2.3
25	33.7	32	58	35	2.6	65	40	2.6	65	40	2.6	65	40	2.6	65	40	2.6
32	42.2	38	69	35	2.6	76	42	2.6	76	42	2.6	76	42	2.6	76	42	2.6
40	48.3	45	78	38	2.6	84	45	2.6	84	45	2.6	84	45	2.6	84	45	2.6
50	60.3	57	88	38	2.9	99	48	2.9	99	48	2.9	99	48	2.9	99	48	2.9
65	76.2	76	108	38	2.9	118	48	2.9	118	48	2.9	118	52	2.9	118	52	2.9
80	88.9	89	124	42	3.2	132	50	3.2	132	50	3.2	132	58	3.2	132	58	3.2
100	114.3	108	144	45	3.6	156	52	3.6	156	52	3.6	156	65	3.6	156	65	3.6
125	141.3	133	174	48	4.0	184	55	4.0	184	55	4.0	184	68	4.0	184	68	4.0
150	168.3	159	199	48	4.5	211	55	4.5	211	55	4.5	211	75	4.5	211	75	4.5
200	219.1	219	254	55	5.9	266	62	5.9	266	62	5.9	274	80	6.3	284	88	6.3
250	273	273	309	60	6.3	319	68	6.3	319	70	6.3	330	88	7.1	345	105	7.1
300	323.9	325	363	62	7.1	370	68	7.1	370	78	7.1	389	92	8.0	409	115	8.0
350	355.6	377	413	62	7.1	429	68	7.1	429	82	8.0	448	100	8.0	465	125	8.8
400	406.4	426	463	65	7.1	480	72	7.1	480	85	8.0	503	110	8.8	535	135	11
450	457.2	480	518	65	7.1	530	72	7.1	548	87	8.0	548	110	8.8	560	135	12.5
500	508	530	568	68	7.1	582	75	7.1	609	90	8.8	609	125	10	615	140	14.2
600	610	630	667	70	7.1	682	80	7.1	720	95	7.1	720	125	11	735	150	16

注: 表中壁厚为参考尺寸, 客户可按实际需要设计壁厚, 本厂均可生产



管帽 Cap

### 对焊管帽 GB/T12459 GB/T13401

Butt-Welding Caps

公称直径 Nominal Pipe Size DN	罐部外径 Outside Diameter at Bevel D		全长 Length		对尺寸E的 限制厚度 Limiting Wall Thickness for Length E
	A系列 SeriesA	B系列 SeriesB	E	E <sub>1</sub>	
15	21.3	18	25	-	-
20	26.9	25	25	-	-
25	33.7	32	38	-	-
32	42.4	38	38	-	-
40	48.3	45	38	-	-
50	60.3	57	38	44	5.5
65	76.1(73)	76	38	51	7.0
80	88.9	89	51	64	7.6
90	101.6	-	64	76	8.1
100	114.3	108	64	76	8.8
125	139.7	133	76	89	9.5
150	168.3	159	89	102	11.0
200	219.1	219	102	127	12.7
250	273.0	273	127	152	12.7
300	323.9	325	152	178	12.7
350	355.6	377	165	191	12.7
400	406.4	426	178	203	12.7
450	457.2	478	203	229	12.7
500	508.0	529	229	254	12.7

公称直径 Nominal Pipe Size DN	罐部外径 Outside Diameter at Bevel D		全长 Length
	A系列 SeriesA	B系列 SeriesB	
550	559	-	254
600	610	630	267
650	660	-	267
700	711	720	267
750	762	-	267
800	813	820	267
850	864	-	267
900	914	920	267
950	965	-	305
1000	1016	1020	305
1050	1067	-	305
1100	1118	1120	343
1150	1168	-	343
1200	1220	1220	343

注: 1) DN600D的管帽, 当壁厚超过13mm时其E值改为305mm。  
2) 尽可能不采用括号内的数值。  
3) 管帽的全长不大于限制厚度时为E, 超过限制与厚度为E<sub>1</sub>。



平焊法兰  
Flat Welding Flange



对焊法兰  
Butt Welding Flange



螺纹法兰  
Thread Flange



承插焊法兰  
Socket welding Flange



法兰盖  
Flange Flange

法兰类型	密封面形式	压力等级PN, Mpa
 板式平焊法兰(PL)Plate-type Flat Welding Flange	突面 (RF)	0.25-2.5
	全平面 (FF)	0.25-1.6
 带颈平焊法兰(SO)Slip-on Neck Flange	突面 (RF)	0.6-4.0
	凹凸面 (MFM)	1.0-4.0
 带颈对焊法兰(WN)Butt Welding Neck Flange	榫槽面 (TG)	0.6-1.61
	全平面 (FF)	1.0-25.0
	榫突面 (RF)	1.0-16.0
	凹凸面 (MFM)	1.0-16.0
 承插焊法兰(SW)Socket Welding Flange	榫槽面 (TG)	6.3-25.0
	环连接面 (RJ)	1.0-1.6
	全平面 (FF)	1.0-10.0
	突面 (RF)	1.0-10.0
 螺纹法兰(TH)Thread Flange	榫槽面 (TG)	0.6-0.4
	突面 (RF)	0.6-1.6
 对焊环松套法兰(PJ/SE)Butt Welding Ring Loose Flange	全平面 (FF)	0.6-4.0
	突面 (RF)	0.6-1.6
 平焊环松套法兰(PJ/PR)Flat Welding Ring Loose Flange	突面 (RF)	1.6-1.6
	凹凸面 (MFM)	1.0-1.6
	榫槽面 (TG)	1.0-1.6
 法兰盖(BL)Blind Flange	突面 (RF)	0.25-0.25
	凹凸面 (MFM)	1.0-1.6
	榫槽面 (TG)	1.0-1.6
	环连接面 (RJ)	6.3-25.0
	全平面 (FF)	0.25-1.6
 衬里法兰盖(BL(s))Lining Blind Flange	突面 (RF)	0.6-4.0
	凸面 (M)	1.0-4.0
	榫面 (T)	1.0-4.0