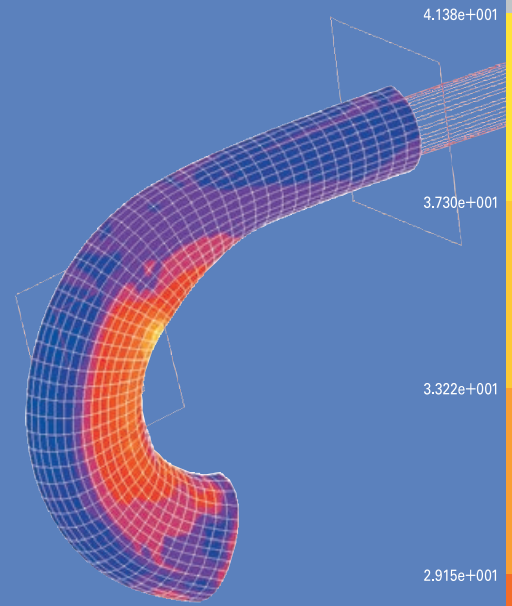


溶接式管継手 BUTT-WELDING FITTINGS

CARBON & ALLOY STEEL
STAINLESS STEEL



Awaji

淡路マテリア株式会社

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Butt-welding Fittings

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180°エルボ(ショート)P32
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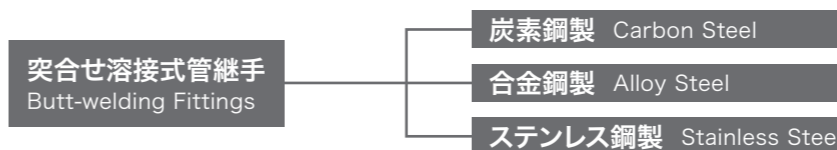
同径TP33
Dimensions of Straight Tee













径違いTP34-35
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レジュースP36-37
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管継手の種類 | MAIN PRODUCTS



90°エルボ 90°Elbow	ロング Long		ショート Short		
45°エルボ 45°Elbow	ロング Long		ショート Short		
180°エルボ 180°Elbow	ロング Long		ショート Short		
T(ティー) Tee	同径 Straight		径違い Reducing		
レジュース Reducer	同心 Concentric		偏心 Eccentric		
キャップ Cap	キャップ Cap		ラップジョイント Lap joint	ラップジョイント Lap joint	

管継手の規格・鋼種 / MATERIAL SPECIFICATION FOR FITTINGS

JIS

- JIS B 2311 一般配管用鋼製突合せ溶接式管継手
- JIS B 2312 配管用鋼製突合せ溶接式管継手
- JIS B 2313 配管用鋼板製突合せ溶接式管継手

ASME

- ASME B 16.9 Factory-Made Wrought Butt Welding Fittings

ASTM

- A234 Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
- A420 Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low-Temperature Service
- A403 Wrought Austenitic Stainless Steel Piping Fittings
- A960 Standard Specification for Common Requirements for Wrought Steel Piping Fittings

	JIS		ASTM		
	規格	種類の記号		Code	Grade
		鋼管製	鋼板製 B2313		
炭素鋼 Carbon Steel	JIS B2311	FSGP	-	-	-
		PY400	-	-	-
	JIS B2312 JIS B2313	PG370	PG370W	A234	WPB
		PS410	PS410W		WPC
		PS480	PS480W		WPB
		PT370	PT370W		WPC
		PT410	PT410W	A420	WPL6
		PT480	PT480W		
		PL380	PL380W		
		PL380	PL380W		
合金鋼 Alloy Steel	JIS B2312 JIS B2313	PA12	PA12W	A234	WP1
		PA22	PA22W		WP12CL1
		PA23	PA23W		WP11CL1
		PA24	PA24W		WP22CL1
		PA25	PA25W	A420	WP5
		PA26	PA26W		WP9
		PL450	PL450W		WPL3
		PL690	PL690W		WPL8
ステンレス鋼 Stainless Steel (Excerpt)	JIS B2312 JIS B2313	SUS304	SUS304W	A403	WP304
		SUS304H	-		WP304H
		SUS304L	SUS304LW		WP304L
		SUS309S	SUS309SW		WP309
		SUS310S	SUS310SW		WP310
		SUS316	SUS316W		WP316
		SUS316H	-		WP316H
		SUS316L	SUS316LW		WP316L
		SUS321	SUS321W		WP321
SUS347	SUS347W	WP347			

注) JIS規格とASTM規格は同一ではありません。

Note: JIS Standard and ASTM Standard is not identical

管継手の化学成分と機械的性質 / CHEMICAL COMPOSITION AND MECHANICAL PROPERTY FOR FITTINGS

JIS (EXCERPT)

JIS	材料による種類の記号	鋼管規格		化学成分(最大値 または 範囲)								機械的性質(最小値)			
		規格	種類の記号	C %	Si %	Mn %	P %	S %	Ni %	Cr %	Mo %	引張強さ N/mm ²	降伏点又は耐力 N/mm ²	伸び ※1	
				縦方向		横方向									
JIS B2311	FSGP	JIS G 3452 配管用炭素鋼管	SGP	-	-	-	0.040	0.040	-	-	-	290	-	30	25
	PY400	JIS G 3457 配管用アーク溶接炭素鋼管	STPY400	0.25	-	-	0.040	0.040	-	-	-	400	225	-	18
JIS B2312	PG370	JIS G 3454 圧力配管用炭素鋼管	STPG370	0.25	0.35	0.30-0.90	0.040	0.040	-	-	-	370	215	30	25
			STPG410	0.30	0.35	0.30-1.00	0.040	0.040	-	-	-	410	245	25	20
	-	JIS G 3455 高圧配管用炭素鋼管	STS370	0.25	0.10-0.35	0.30-1.10	0.035	0.035	-	-	-	370	215	30	25
			STS410	0.30	0.10-0.35	0.30-1.40	0.035	0.035	-	-	-	410	245	25	20
			STS480	0.33	0.10-0.35	0.30-1.50	0.035	0.035	-	-	-	480	275	25	20
	PT370	JIS G 3456 高温配管用炭素鋼管	STPT370	0.25	0.10-0.35	0.30-0.90	0.035	0.035	-	-	-	370	215	30	25
	PT410		STPT410	0.30	0.10-0.35	0.30-1.00	0.035	0.035	-	-	-	410	245	25	20
	PT480		STPT480	0.33	0.10-0.35	0.30-1.00	0.035	0.035	-	-	-	480	275	25	20
	PL380	JIS G 3460 低温配管用鋼管	STPL380	0.25	0.35	1.35	0.035	0.035	-	-	-	380	205	35	25
	-	JIS G 3458 配管用合金鋼管	STPA12	0.10-0.20	0.10-0.50	0.30-0.80	0.035	0.035	-	-	0.45-0.65	380	205	30	25
			STPA20	0.10-0.20	0.10-0.50	0.30-0.60	0.035	0.035	-	0.50-0.80	0.40-0.65	410	205	30	25
			STPA22	0.15	0.50	0.30-0.60	0.035	0.035	-	0.80-1.25	0.45-0.65	410	205	30	25
			STPA23	0.15	0.50-1.00	0.30-0.60	0.030	0.030	-	1.00-1.50	0.45-0.65	410	205	30	25
			STPA24	0.15	0.50	0.30-0.60	0.030	0.030	-	1.90-2.60	0.87-1.13	410	205	30	25
			STPA25	0.15	0.50	0.30-0.60	0.030	0.030	-	4.00-6.00	0.45-0.65	410	205	30	25
			STPA26	0.15	0.25-1.00	0.30-0.60	0.030	0.030	-	8.00-10.00	0.90-1.10	410	205	30	25
PL450			JIS G 3460 低温配管用鋼管	STPL450	0.18	0.10-0.35	0.30-0.60	0.030	0.030	3.20-3.80	-	-	450	245	30
PL690	STPL690	0.13		0.10-0.35	0.90	0.030	0.030	8.50-9.50	-	-	690	520	21	15	
SUS304	JIS G 3459 配管用ステンレス鋼管	SUS304TP	0.08	1.00	2.00	0.045	0.030	8.00-11.00	18.00-20.00	-	520	205	35	25	
SUS304L		SUS304LTP	0.030	1.00	2.00	0.045	0.030	9.00-13.00	18.00-20.00	-	480	175	35	25	
SUS316		SUS316TP	0.08	1.00	2.00	0.045	0.030	10.00-14.00	16.00-18.00	2.00-3.00	520	205	35	25	
SUS316L		SUS316LTP	0.030	1.00	2.00	0.045	0.030	12.00-16.00	16.00-18.00	2.00-3.00	480	175	35	25	

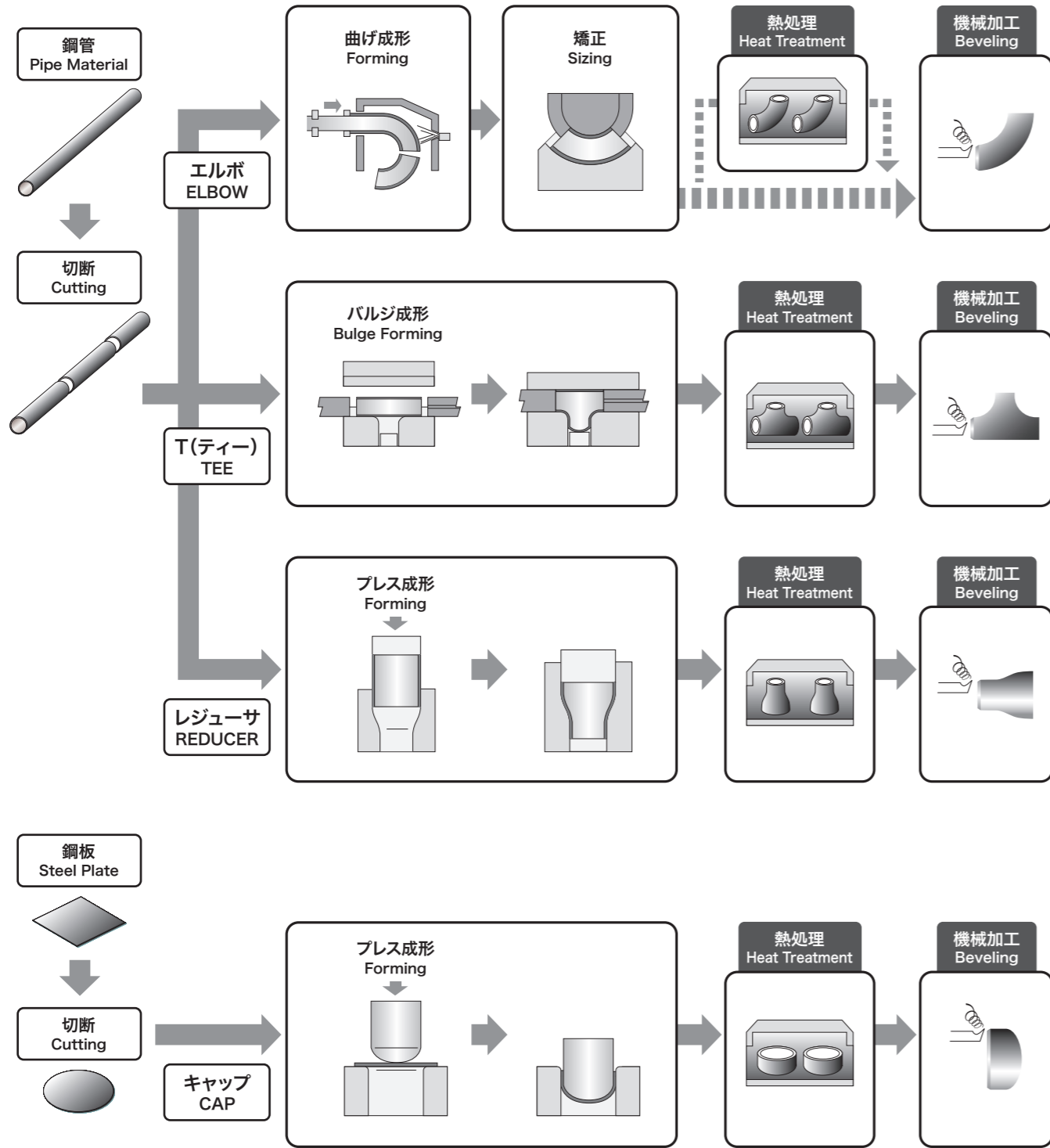
※1: 機械的性質の伸びは、縦方向はJIS11号または12号試験片による値、横方向はJIS1A号、5号試験片による値。(例外的にJIS4号試験片などを使用する場合があります)

ASTM (EXCERPT)

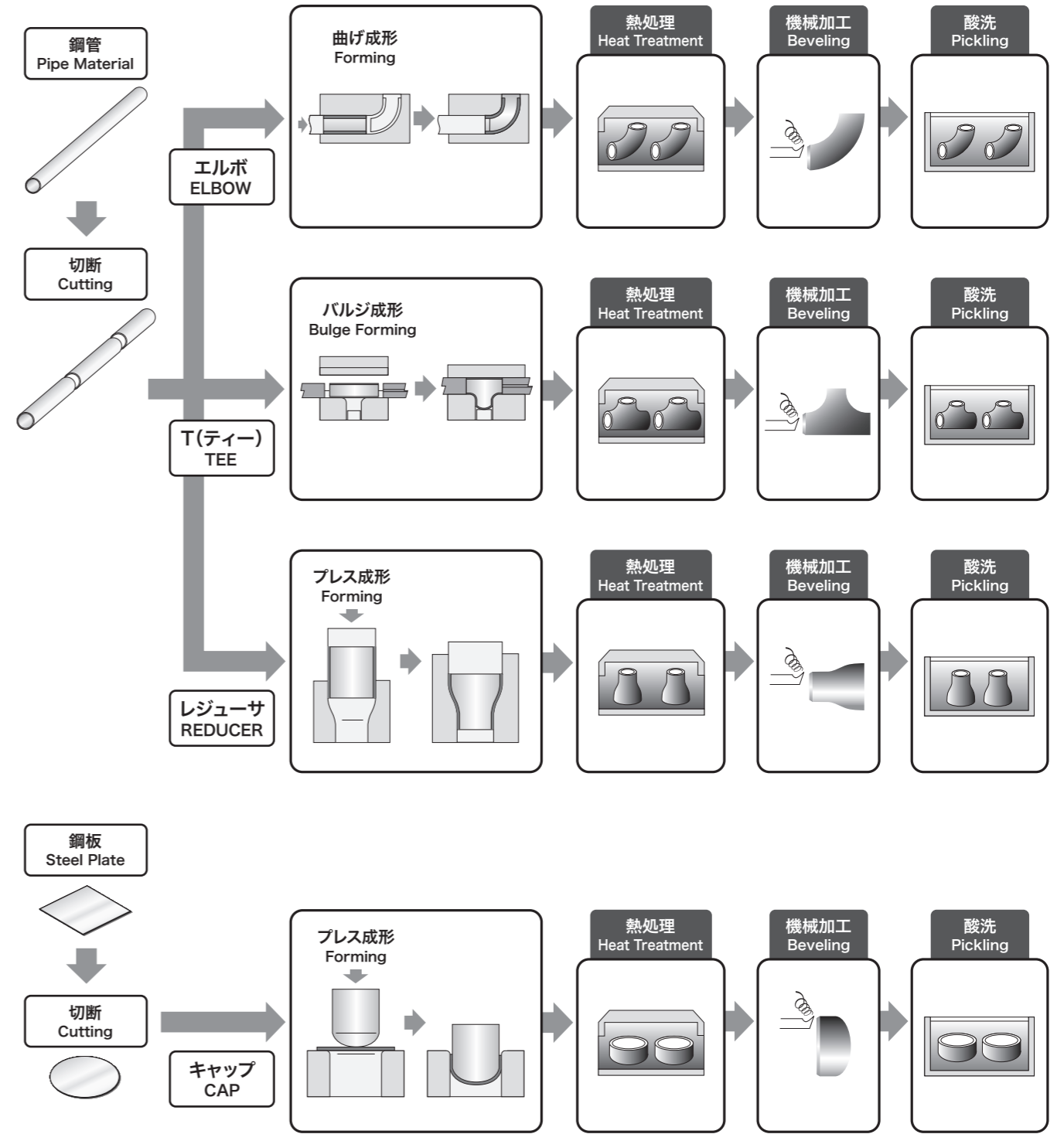
ASTM	Grade	CHEMICAL COMPOSITION											MECHANICAL PROPERTY (MINIMUM)			Code	Grade
		C %	Mn %	P %	S %	Si %	Cr %	Mo %	Ni %	Cu %	V %	Nb (Cb) %	Tensile Strength	Yield Strength	Elongation		
A234	WPB	0.30max	0.29-1.06	0.050max	0.058max	0.10min	0.40max	0.15max	0.40max	0.40max	0.08max	-	415	240	30	A106	Gr. B
	WPC	0.35max	0.29-1.06	0.050max	0.058max	0.10min	0.40max	0.15max	0.40max	0.40max	0.08max	-	485	275	30		Gr. C
	WP1	0.28max	0.30-0.90	0.045max	0.045max	0.10-0.50	-	0.44-0.65	-	-	-	-	380-550	205	30	A335	P1
	WP12CL1	0.05-0.20	0.30-0.80	0.045max	0.045max	0.60max	0.80-1.25	0.44-0.65	-	-	-	-	415	220	30		P12
	WP11CL1	0.05-0.15	0.30-0.60	0.030max	0.030max	0.50-1.00	1.00-1.50	0.44-0.65	-	-	-	-	415	205	30		P11
	WP22CL1	0.05-0.15	0.30-0.60	0.040max	0.040max	0.50max	1.90-2.60	0.87-1.13	-	-	-	-	415	205	30		P22
	WP5CL1	0.15max	0.30-0.60	0.040max	0.030max	0.50max	4.0-6.0	0.44-0.65	-	-	-	-	415	205	30		P5
	WP9CL1	0.15max	0.30-0.60	0.030max	0.030max	1.00max	8.0-10.0	0.90-1.10	-	-	-	-	415	205	30		P9
	A420	WPL6	0.30max	0.50-1.35	0.035max	0.040max	0.15-0.40	0.30max	0.12max	0.40max	0.40max	0.08max	0.02max	415-655	240		30
WPL3		0.20max	0.31-0.64	0.05max	0.05max	0.13-0.37	-	-	3.2-3.8	-	-	-	450-620	240	30	Gr. 3	
WPL8		0.13max	0.90max	0.030max	0.030max	0.13-0.37	-	-	8.4-9.6	-	-	-	690-865	515	22	Gr. 8	
A403	WP304	0.08max	2.00max	0.045max	0.030max	1.00max	18.0-20.0	-	8.0-11.0	-	-	-	515	205	28	A312	TP304
	WP304L	0.03max	2.00max	0.045max	0.030max	1.00max	18.0-20.0	-	8.0-12.0	-	-	-	485	170	28		TP304L
	WP316	0.08max	2.00max	0.045max	0.030max	1.00max	16.0-18.0	2.00-3.00	10.0-14.0	-	-	-	515	205	28		TP316
	WP316L	0.03max	2.00max	0.045max	0.030max	1.00max	16.0-18.0	2.00-3.00	10.0-14.0	-	-	-	485	170	28		TP316L

※2: Rectangular specimen for wall thickness 5/16 in. [7.94mm] and over, and for all small sizes tested in full section; min % in 2 in. [50mm]

炭素鋼、合金鋼製溶接式管継手 | CARBON & ALLOY STEEL FITTINGS



ステンレス製溶接式管継手 | STAINLESS STEEL FITTINGS



JIS 管継手の厚さ / WALL THICKNESS

単位: mm

径の呼び		外径		呼び厚さ														呼び厚さ					外径		径の呼び	
				炭素鋼、合金鋼の厚さ										ステンレス鋼の厚さ												
				B2311	B2311、B2313			JIS B2312				その他の厚さ*1						B2312、B2313								
A	B	JIS	(ASME)*4	FSGP	LG	STD	XS	Sch40	Sch80	Sch120	Sch160	Sch10	Sch20	Sch30	Sch60	Sch100	Sch140	Sch5S	Sch10S	Sch20S	Sch40	Sch80	JIS	(ASME)*4	A	B
15	1/2	21.7	21.3	2.8	-	-	-	2.8	3.7	-	4.7	-	-	-	3.2	-	-	1.65	2.1	2.5	2.8	3.7	21.7	21.3	15	1/2
20	3/4	27.2	26.7	2.8	-	-	-	2.9	3.9	-	5.5	-	-	-	3.4	-	-	1.65	2.1	2.5	2.9	3.9	27.2	26.7	20	3/4
25	1	34.0	33.4	3.2	-	-	-	3.4	4.5	-	6.4	-	-	-	3.9	-	-	1.65	2.8	3.0	3.4	4.5	34.0	33.4	25	1
32	1-1/4	42.7	42.2	3.5	-	-	-	3.6	4.9	-	6.4	-	-	-	4.5	-	-	1.65	2.8	3.0	3.6	4.9	42.7	42.2	32	1-1/4
40	1-1/2	48.6	48.3	3.5	-	-	-	3.7	5.1	-	7.1	-	-	-	4.5	-	-	1.65	2.8	3.0	3.7	5.1	48.6	48.3	40	1-1/2
50	2	60.5	60.3	3.8	-	-	-	3.9	5.5	-	8.7	-	3.2	-	4.9	-	-	1.65	2.8	3.5	3.9	5.5	60.5	60.3	50	2
65	2-1/2	76.3	73.0	4.2	-	-	-	5.2	7.0	-	9.5	-	4.5	-	6.0	-	-	2.1	3.0	3.5	5.2	7.0	76.3	73.0	65	2-1/2
80	3	89.1	88.9	4.2	-	-	-	5.5	7.6	-	11.1	-	4.5	-	6.6	-	-	2.1	3.0	4.0	5.5	7.6	89.1	88.9	80	3
90	3-1/2	101.6	101.6	4.2	-	-	-	5.7	8.1	-	-	-	4.5	-	7.0	-	-	2.1	3.0	4.0	5.7	8.1	101.6	101.6	90	3-1/2
100	4	114.3	114.3	4.5	-	-	-	6.0	8.6	11.1	13.5	-	4.9	-	7.1	-	-	2.1	3.0	4.0	6.0	8.6	114.3	114.3	100	4
125	5	139.8	141.3	4.5	-	-	-	6.6	9.5	12.7	15.9	-	5.1	-	8.1	-	-	2.8	3.4	5.0	6.6	9.5	139.8	141.3	125	5
150	6	165.2	168.3	5.0	5.0	-	-	7.1	11.0	14.3	18.2	-	5.5	-	9.3	-	-	2.8	3.4	5.0	7.1	11.0	165.2	168.3	150	6
175	7	190.7	-	5.3	-	-	-	*2(8.2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	190.7	-	175	7
200	8	216.3	219.1	5.8	5.8	-	-	8.2	12.7	18.3	23.0	-	6.4	7.0	10.3	15.1	20.6	2.8	4.0	6.5	8.2	12.7	216.3	219.1	200	8
225	9	241.8	-	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241.8	-	225	9
250	10	267.4	273.0	6.6	6.6	-	-	9.3	15.1	21.4	28.6	-	6.4	7.8	12.7	18.3	25.4	3.4	4.0	6.5	9.3	15.1	267.4	273.0	250	10
300	12	318.5	323.8	6.9	6.9	-	-	10.3	17.4	25.4	33.3	-	6.4	8.4	14.3	21.4	28.6	4.0	4.5	6.5	10.3	17.4	318.5	323.8	300	12
350	14	355.6	355.6	7.9	7.9	*3(9.5)	*3(12.7)	11.1	19.0	27.8	35.7	6.4	7.9	9.5	15.1	23.8	31.8	4.0	5.0	8.0	11.1	19.1	355.6	355.6	350	14
400	16	406.4	406.4	7.9	7.9	*3(9.5)	*3(12.7)	12.7	21.4	30.9	40.5	6.4	7.9	9.5	16.7	26.2	36.5	4.5	5.0	8.0	12.7	21.4	406.4	406.4	400	16
450	18	457.2	457	7.9	7.9	*3(9.5)	*3(12.7)	14.3	23.8	34.9	45.2	6.4	7.9	11.1	19.0	29.4	39.7	4.5	5.0	8.0	14.3	23.8	457.2	457	450	18
500	20	508.0	508	7.9	7.9	9.5	*3(12.7)	15.1	26.2	38.1	50.0	6.4	9.5	12.7	20.6	32.5	44.4	5.0	5.5	9.5	15.1	26.2	508.0	508	500	20
550	22	558.8	559	*2(7.9)	7.9	9.5	12.7	15.9	28.6	41.3	54.0	6.4	9.5	12.7	22.2	34.9	47.6	5.0	5.5	9.5	15.9	28.6	558.8	559	550	22
600	24	609.6	610	*2(7.9)	7.9	9.5	12.7	17.5	31.0	46.0	59.5	6.4	9.5	14.3	24.6	38.9	52.4	5.5	6.5	9.5	17.5	31.0	609.6	610	600	24
650	26	660.4	660	-	7.9	9.5	12.7	18.9	34.0	49.1	64.2	7.9	12.7	-	26.4	41.6	56.6	5.5	8.0	12.7	18.9	34.0	660.4	660	650	26
700	28	711.2	711	-	7.9	9.5	12.7	-	-	-	-	-	-	-	-	-	-	5.5	8.0	12.7	-	-	711.2	711	700	28
750	30	762.0	762	-	7.9	9.5	12.7	-	-	-	-	-	-	-	-	-	-	6.5	8.0	12.7	-	-	762.0	762	750	30
800	32	812.8	813	-	7.9	9.5	12.7	-	-	-	-	-	-	-	-	-	-	-	8.0	12.7	-	-	812.8	813	800	32
850	34	863.6	864	-	7.9	9.5	12.7	-	-	-	-	-	-	-	-	-	-	-	8.0	12.7	-	-	863.6	864	850	34
900	36	914.4	914	-	7.9	9.5	12.7	-	-	-	-	-	-	-	-	-	-	-	8.0	12.7	-	-	914.4	914	900	36
950	38	965.2	965	-	7.9	9.5	12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	965.2	965	950	38
1000	40	1016.0	1016	-	7.9	9.5	12.7	-	-	-	-	-	-	-	-	-	-	-	9.5	14.3	-	-	1016.0	1016	1000	40
1050	42	1066.8	1067	-	-	9.5	12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1066.8	1067	1050	42
1100	44	1117.6	1118	-	-	9.5	12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1117.6	1118	1100	44
1150	46	1168.4	1168	-	-	9.5	12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1168.4	1168	1150	46
1200	48	1219.2	1219	-	-	9.5	12.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1219.2	1219	1200	48

*1: 鋼管規格のJIS G3454、G3455、G3456、G3458 及び G3460 に依ります。

*2: 淡路マテリアの社内規定に依ります。

*3: JIS B2313 に適応します。

*4: ASME 外径寸法は参考です。

JIS 管継手の寸法許容差 / JIS B2311, B2312, B2313 / TOLERANCES

単位: mm

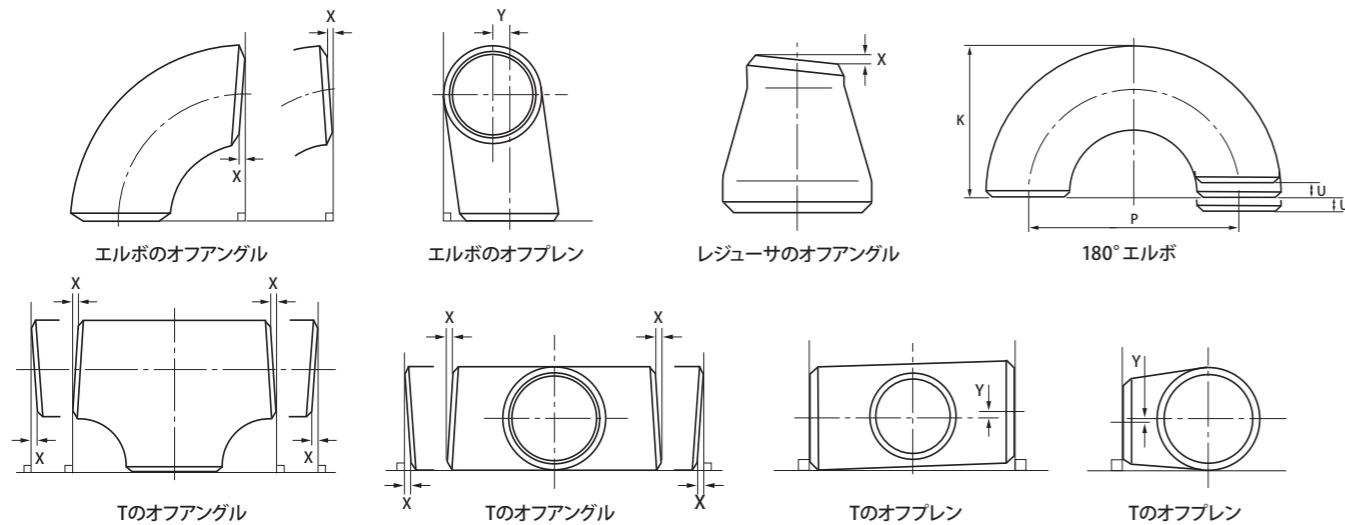
項目	管継手の種類	JIS B2311 (FSGP, PY400の管継手)							JIS B2312, B2313 (FSGP, PY400以外の管継手)								
		径の呼び							径の呼び								
		A	15~65	80~100	125~200	250~450	500~600	650~750	800~1200	A	15~65	80~100	125~200	250~450	500~600	650~750	800~1200
		B	1/2~2 1/2	3~4	5~8	10~18	20~24	26~30	32~48	B	1/2~2 1/2	3~4	5~8	10~18	20~24	26~30	32~48
		許容差							許容差								
端部の外径 (φD)	すべての管継手		±2.0	±2.5	±3.5	+5.0 -4.5		+6.4 -4.8		+1.6 -0.8	±1.6	+2.4 -1.6	+4.0 -3.2		+6.4 -4.8		
端面の内径			±2.0	±2.5	±3.5	±4.5		±4.8		±0.8	±1.6		±3.2		±4.8		
厚さ (t)			+規定しない -15%							+規定しない -12.5%							
中心から端面までの距離 (H,F)	45°エルボ、90°エルボ		±2.0				±3.2		±4.8		±1.6		±2.4		±3.2		±4.8
中心から中心までの距離 (P)	180°エルボ		±6.4			±9.5		-		±6.4		±9.5		-			
背から端面までの距離 (K)			±6.4					-		±6.4				-			
端面と端面とのずれ (U) (最大)			1.6		3.2				-	1.6		3.2					
端面から端面までの距離 (H)	レジャーサ		±2.0			±3.2		±4.8		±1.6		±2.4		±4.8			
中心から端面までの距離 (C,M)	T (ティー)		±2.0			±3.2		±4.8		±1.6		±2.4		±3.2		±4.8	
背から端面までの距離 (E)	キャップ		±3.2			±6.4		-		±3.2		±6.4		±9.5			
端部の外周長	すべての管継手					-		±0.5%						-			±0.5%

注1: レジャーサのH及び径違いTのM寸法の許容差は、大径側の許容差を適用する。
注2: 白管継手の垂鉛めつき付着部は、めつき前に適用する。

JIS 管継手の直角度の許容値 / TOLERANCES

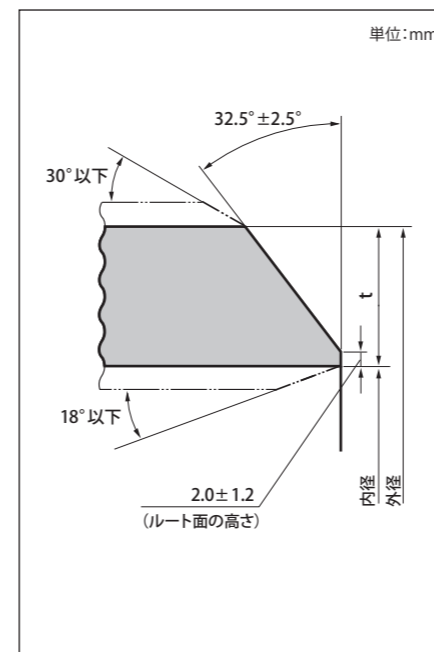
項目	管継手の種類	径の呼び								
		A	15~100	125~200	250~300	350~400	450~600	650~750	800~1050	1100~1200
		B	1/2~4	5~8	10~12	14~16	18~24	26~30	32~42	44~48
		許容値								
オフアングル (X)	エルボ、レジャーサ、T	0.8	1.6	2.4	3.2	4.8				
オフプレ (Y)	エルボ、T	1.6	3.2	4.8	6.4	9.5	12.7	19.1		

注1: レジャーサ及び径違いTの直角度の許容値は、大径側の許容値を適用する。
注2: 白管継手の垂鉛めつき付着部は、めつき前に適用する。

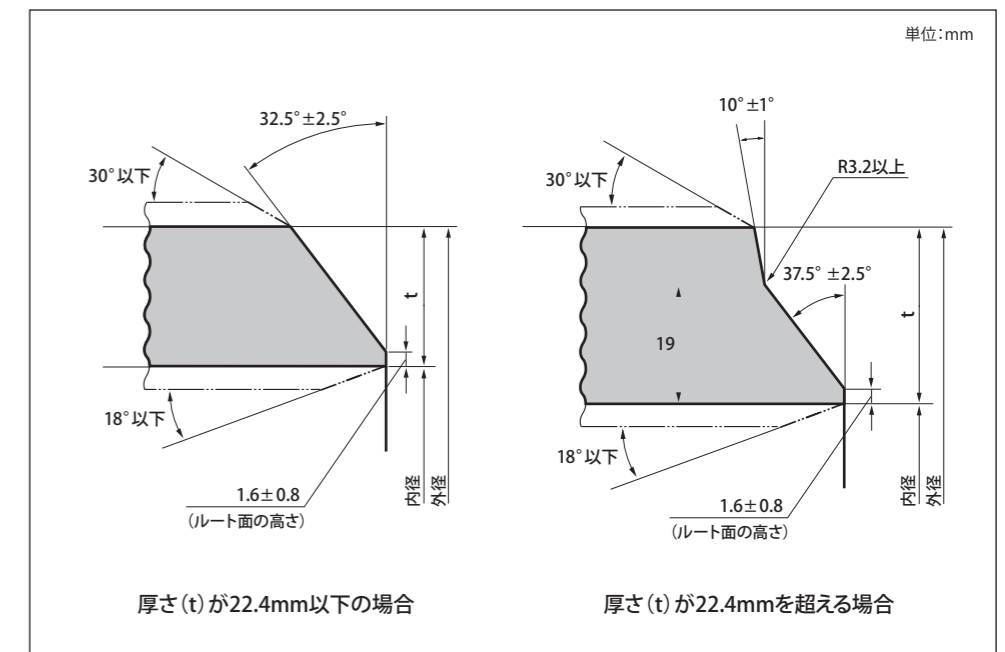


JIS ベベルエンドの形状・寸法 / WELDING END PREPARATION

JIS B2311 (FSGP, PY400の管継手)



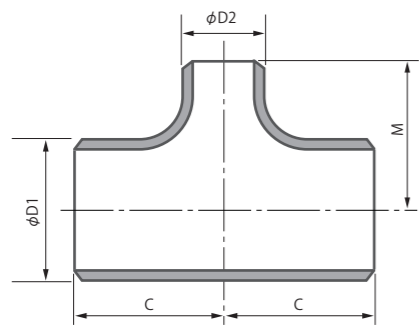
JIS B2312, B2313 (FSGP, PY400以外の管継手)



厚さ (t) が22.4mm以下の場合

厚さ (t) が22.4mmを超える場合

JIS 径違いTの形状・寸法・重量 / DIMENSIONS OF REDUCING TEE



径違いT

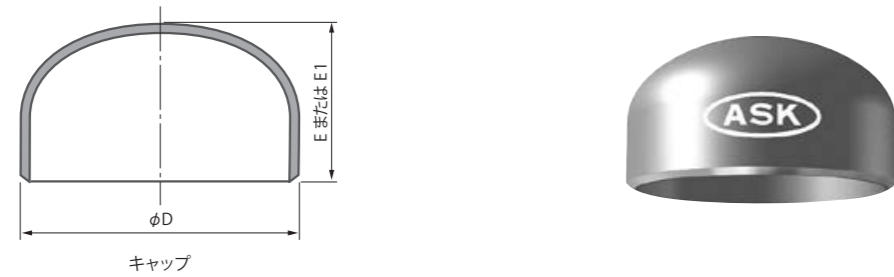


Table with columns for nominal diameters (A, B), outer diameters (phi D1, phi D2), center-to-end distance (C, M), and weight (kg) for carbon steel/alloy steel and stainless steel. Includes rows for sizes from 20x15 up to 125x100.

*:()は淡路マテリアル社内規定による肉厚7.9mmの概略重量です。
*:本表以外の段落、厚さ及び径の呼び48B(1200A)を超えるものも製造可能ですので別途ご相談ください。

Large table continuing the specifications for reducing tees, providing weight data for various sizes and standards like FSGP, Sch40, Sch80, etc., for both carbon steel/alloy steel and stainless steel.

JIS キャップの形状・寸法・重量 / DIMENSIONS OF CAP

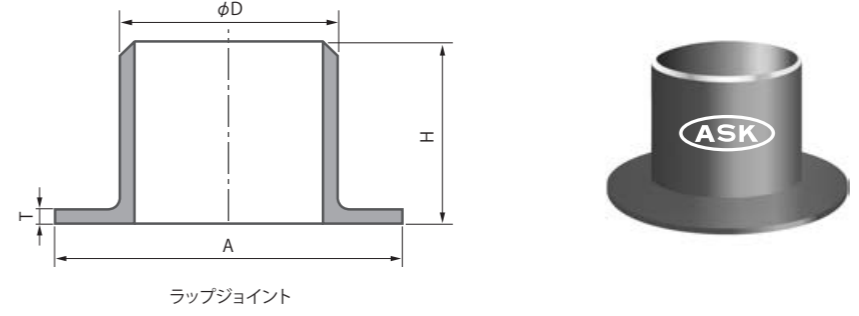


キャップ

径の呼び		外径 単位:mm	背から端面 までの距離 ⁽¹⁾ 単位:mm		限界厚さ 単位:mm (JIS B 2312 に適用)	概略重量(炭素鋼、合金鋼) 単位:kg										概略重量(ステンレス鋼) 単位:kg								
A	B		E	E1		呼び厚さ										呼び厚さ								
		φD				FSGP	Sch40	Sch80	Sch120	Sch160	Sch10	Sch20	Sch30	7.9(LG)	STD	XS	Sch10S	Sch20S	Sch40	Sch80				
15	1/2	21.7	25.4	-	-	0.100	0.100	0.150	-	0.190	-	-	-	-	-	-	0.078	0.100	0.100	0.150				
20	3/4	27.2	25.4	-	-	0.100	0.100	0.150	-	0.190	-	-	-	-	-	-	0.078	0.100	0.100	0.150				
25	1	34.0	38.1	-	-	0.103	0.109	0.165	-	0.205	-	-	-	-	-	-	0.090	0.110	0.110	0.167				
32	1 1/4	42.7	38.1	-	-	0.141	0.145	0.197	-	0.270	-	-	-	-	-	-	0.110	0.146	0.146	0.199				
40	1 1/2	48.6	38.1	-	-	0.162	0.171	0.236	-	0.325	-	-	-	-	-	-	0.130	0.172	0.172	0.238				
50	2	60.5	38.1	44.5	5.5	0.228	0.234	0.330	-	0.520	-	0.234	-	-	-	-	0.170	0.240	0.240	0.330				
65	2 1/2	76.3	38.1	50.8	7.0	0.339	0.420	0.560	-	0.770	-	0.420	-	-	-	-	0.245	0.420	0.420	0.565				
80	3	89.1	50.8	63.5	7.6	0.507	0.664	0.917	-	1.350	-	0.664	-	-	-	-	0.365	0.664	0.664	0.917				
90	3 1/2	101.6	63.5	76.2	8.1	0.706	0.958	1.360	-	-	-	0.958	-	-	-	-	-	-	-	-				
100	4	114.3	63.5	76.2	8.6	0.877	1.170	1.680	2.680	2.520	-	1.170	-	-	-	-	0.591	0.740	1.170	1.680				
125	5	139.8	76.2	88.9	9.5	1.290	1.900	2.730	3.640	4.100	-	1.900	-	-	-	-	0.990	1.450	1.900	2.730				
150	6	165.2	88.9	101.6	11.0	1.990	2.830	4.380	6.280	6.580	-	2.830	-	-	-	-	1.370	2.000	2.830	4.380				
200	8	216.3	101.6	127.0	12.7	3.610	5.110	7.910	13.20	16.70	-	5.110	5.110	-	-	-	2.520	4.100	5.110	7.910				
250	10	267.4	127.0	152.4	12.7	6.330	8.920	16.40	23.30	33.40	-	8.920	8.920	-	-	-	3.870	6.300	9.000	16.20				
300	12	318.5	152.4	177.8	12.7	9.430	14.10	26.40	38.60	50.60	-	14.10	14.10	-	-	-	6.890	8.900	14.00	26.20				
350	14	355.6	165.1	190.5	12.7	13.20	18.60	34.90	51.10	65.60	15.90	15.90	15.90	-	-	-	-	-	-	-				
400	16	406.4	177.8	203.2	12.7	16.60	26.70	49.00	70.80	92.80	20.00	20.00	20.00	16.60	20.00	26.70	-	-	-	-				
450	18	457.2	203.2	228.6	12.7	21.20	41.50	69.00	101.0	131.0	25.50	25.50	34.10	21.20	25.50	34.10	-	-	-	-				
500	20	508.0	228.6	254.0	12.7	25.00	54.10	93.80	136.0	179.0	31.80	31.80	42.50	26.40	31.80	42.50	-	-	-	-				
550	22	558.8	254.0	254.0	12.7	(32.20)	64.80	116.0	168.0	220.0	26.10	26.10	51.70	31.50	38.80	51.70	-	-	-	-				
600	24	609.6	266.7	304.8	12.7	(45.00)	89.70	160.0	237.0	306.0	45.10	45.10	89.70	36.60	45.10	60.10	-	-	-	-				
650	26	660.4	266.7	-	-	-	-	-	-	-	-	-	-	41.00	50.50	67.30	-	-	-	-				
700	28	711.2	266.7	-	-	-	-	-	-	-	-	-	-	45.50	56.20	74.90	-	-	-	-				
750	30	762.0	266.7	-	-	-	-	-	-	-	-	-	-	50.30	62.10	82.80	-	-	-	-				
800	32	812.8	266.7	-	-	-	-	-	-	-	-	-	-	55.40	68.40	91.20	-	-	-	-				
850	34	863.6	266.7	-	-	-	-	-	-	-	-	-	-	62.30	75.40	100.0	-	-	-	-				
900	36	914.4	266.7	-	-	-	-	-	-	-	-	-	-	68.00	81.90	109.0	-	-	-	-				
950	38	965.2	304.8	-	-	-	-	-	-	-	-	-	-	79.00	94.70	126.0	-	-	-	-				
1000	40	1016.0	304.8	-	-	-	-	-	-	-	-	-	-	95.00	102.0	137.0	-	-	-	-				
1050	42	1066.8	304.8	-	-	-	-	-	-	-	-	-	-	98.00	110.0	147.0	-	-	-	-				
1100	44	1117.6	342.9	-	-	-	-	-	-	-	-	-	-	103.0	126.0	167.0	-	-	-	-				
1150	46	1168.4	342.9	-	-	-	-	-	-	-	-	-	-	111.0	134.0	179.0	-	-	-	-				
1200	48	1219.2	342.9	-	-	-	-	-	-	-	-	-	-	118.0	143.0	191.0	-	-	-	-				

*:()は淡路マテリア社内規定による肉厚7.9mmの概略重量です。
 *:28B(700A)以上は当社の社内規格によります。
 *:48B(1200A)を超える径の呼び及び本表以外の厚さについても製造可能ですので別途ご相談ください。

JIS ラップジョイントの形状・寸法・重量 / DIMENSIONS OF LAPJOINT



ラップジョイント

径の呼び		外径 単位:mm	厚さ 単位:mm	ツバの直径(A) 単位:mm	高さ 単位:mm	概略重量(炭素鋼) 単位:kg
A	B					
50	2	60.5	3.8	96.0	50.0	0.400
65	2 1/2	76.3	4.2	112.0	80.0	0.780
80	3	89.1	4.2	126.0	80.0	1.000
100	4	114.3	4.5	150.0	100.0	1.500
125	5	139.8	4.5	182.0	125.0	2.270
150	6	165.2	5.0	210.0	130.0	3.000
200	8	216.3	5.8	260.0	140.0	4.950
250	10	267.4	6.6	324.0	140.0	7.350

公差	±2.0	-15%	±2.0	+0 -0.8
	±2.5			
	±3.5		±3.2	+0,-1.6
	+5.0,-4.5			

注) 概略寸法は基準寸法による計算値であり、ステンレス鋼(SUS304)の比重7.93/cm³を使用しています。

ASME 管継手の厚さ / WALL THICKNESS

Unit : mm

Nominal Pipe Size		Outside Diameter		Nominal Wall Thickness																	Outside Diameter		Nominal Pipe Size	
				Carbon & Alloy Steel												Stainless Steel								
				ASME B36.10M												ASME B36.19M								
DN	NPS	(inch)	(mm)	STD	XS	XXS	Sch10	Sch20	Sch30	Sch40	Sch60	Sch80	Sch100	Sch120	Sch140	Sch160	Sch5S	Sch10S	Sch40S	Sch80S	(inch)	(mm)	DN	NPS
15	1/2	0.840	21.3	2.77	3.73	7.47	2.11	-	2.41	2.77	-	3.73	-	-	-	4.78	1.65	2.11	2.77	3.73	0.840	21.3	15	1/2
20	3/4	1.050	26.7	2.87	3.91	7.82	2.11	-	2.41	2.87	-	3.91	-	-	-	5.56	1.65	2.11	2.87	3.91	1.050	26.7	20	3/4
25	1	1.315	33.4	3.38	4.55	9.09	2.77	-	2.90	3.38	-	4.55	-	-	-	6.35	1.65	2.77	3.38	4.55	1.315	33.4	25	1
32	1-1/4	1.660	42.2	3.56	4.85	9.70	2.77	-	2.97	3.56	-	4.85	-	-	-	6.35	1.65	2.77	3.56	4.85	1.660	42.2	32	1-1/4
40	1-1/2	1.900	48.3	3.68	5.08	10.15	2.77	-	3.18	3.68	-	5.08	-	-	-	7.14	1.65	2.77	3.68	5.08	1.900	48.3	40	1-1/2
50	2	2.375	60.3	3.91	5.54	11.07	2.77	-	3.18	3.91	-	5.54	-	-	-	8.74	1.65	2.77	3.91	5.54	2.375	60.3	50	2
65	2-1/2	2.875	73.0	5.16	7.01	14.02	3.05	-	4.78	5.16	-	7.01	-	-	-	9.53	2.11	3.05	5.16	7.01	2.875	73.0	65	2-1/2
80	3	3.500	88.9	5.49	7.62	15.24	3.05	-	4.78	5.49	-	7.62	-	-	-	11.13	2.11	3.05	5.49	7.62	3.500	88.9	80	3
90	3-1/2	4.000	101.6	5.74	8.08	-	3.05	-	4.78	5.74	-	8.08	-	-	-	-	2.11	3.05	5.74	8.08	4.000	101.6	90	3-1/2
100	4	4.500	114.3	6.02	8.56	17.12	3.05	-	4.78	6.02	-	8.56	-	11.13	-	13.49	2.11	3.05	6.02	8.56	4.500	114.3	100	4
125	5	5.563	141.3	6.55	9.53	19.05	3.40	-	-	6.55	-	9.53	-	12.70	-	15.88	2.77	3.40	6.55	9.53	5.563	141.3	125	5
150	6	6.625	168.3	7.11	10.97	21.95	3.40	-	-	7.11	-	10.97	-	14.27	-	18.26	2.77	3.40	7.11	10.97	6.625	168.3	150	6
200	8	8.625	219.1	8.18	12.70	22.23	3.76	6.35	7.04	8.18	10.31	12.70	15.09	18.26	20.62	23.01	2.77	3.76	8.18	12.70	8.625	219.1	200	8
250	10	10.750	273.0	9.27	12.70	25.40	4.19	6.35	7.80	9.27	12.70	15.09	18.26	21.44	25.40	28.58	3.40	4.19	9.27	12.70	10.750	273.0	250	10
300	12	12.750	323.8	9.53	12.70	25.40	4.57	6.35	8.38	10.31	14.27	17.48	21.44	25.40	28.58	33.32	3.96	4.57	9.53	12.70	12.750	323.8	300	12
350	14	14.000	355.6	9.53	12.70	-	6.35	7.92	9.53	11.13	15.09	19.05	23.83	27.79	31.75	35.71	3.96	4.78	9.53	12.70	14.000	355.6	350	14
400	16	16.000	406.4	9.53	12.70	-	6.35	7.92	9.53	12.70	16.66	21.44	26.19	30.96	36.53	40.49	4.19	4.78	9.53	12.70	16.000	406.4	400	16
450	18	18.000	457	9.53	12.70	-	6.35	7.92	11.13	14.27	19.05	23.83	29.36	34.93	39.67	45.24	4.19	4.78	9.53	12.70	18.000	457	450	18
500	20	20.000	508	9.53	12.70	-	6.35	9.53	12.70	15.09	20.62	26.19	32.54	38.10	44.45	50.01	4.78	5.54	9.53	12.70	20.000	508	500	20
550	22	22.000	559	9.53	12.70	-	6.35	9.53	12.70	-	22.23	28.58	34.93	41.28	47.63	53.98	4.78	5.54	-	-	22.000	559	550	22
600	24	24.000	610	9.53	12.70	-	6.35	9.53	14.27	17.48	24.61	30.96	38.89	46.02	52.37	59.54	5.54	6.35	9.53	12.70	24.000	610	600	24
650	26	26.000	660	9.53	12.70	-	7.92	12.70	-	-	-	-	-	-	-	-	-	-	-	-	26.000	660	650	26
700	28	28.000	711	9.53	12.70	-	7.92	12.70	15.88	-	-	-	-	-	-	-	-	-	-	-	28.000	711	700	28
750	30	30.000	762	9.53	12.70	-	7.92	12.70	15.88	-	-	-	-	-	-	-	6.35	7.92	-	-	30.000	762	750	30
800	32	32.000	813	9.53	12.70	-	7.92	12.70	15.88	17.48	-	-	-	-	-	-	-	-	-	-	32.000	813	800	32
850	34	34.000	864	9.53	12.70	-	7.92	12.70	15.88	17.48	-	-	-	-	-	-	-	-	-	-	34.000	864	850	34
900	36	36.000	914	9.53	12.70	-	7.92	12.70	15.88	19.05	-	-	-	-	-	-	-	-	-	-	36.000	914	900	36
950	38	38.000	965	9.53	12.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38.000	965	950	38
1000	40	40.000	1016	9.53	12.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40.000	1016	1000	40
1050	42	42.000	1067	9.53	12.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42.000	1067	1050	42
1100	44	44.000	1118	9.53	12.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44.000	1118	1100	44
1150	46	46.000	1168	9.53	12.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46.000	1168	1150	46
1200	48	48.000	1219	9.53	12.70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48.000	1219	1200	48

ASME 管継手の寸法許容差 / TOLERANCES

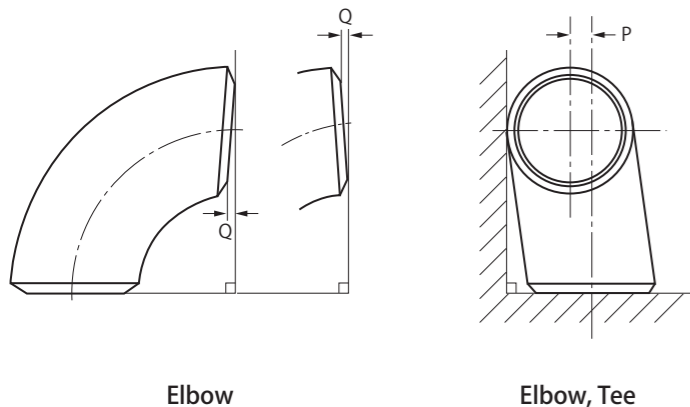
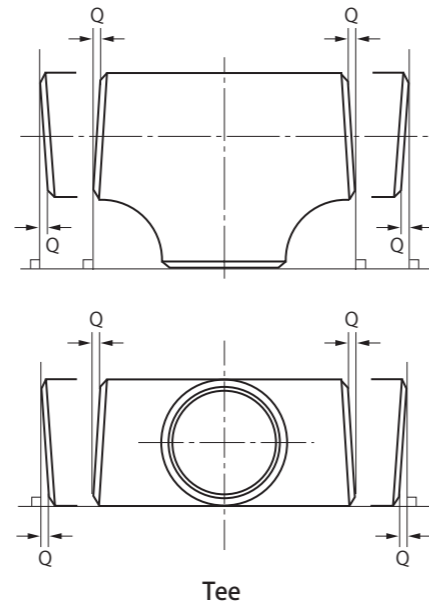
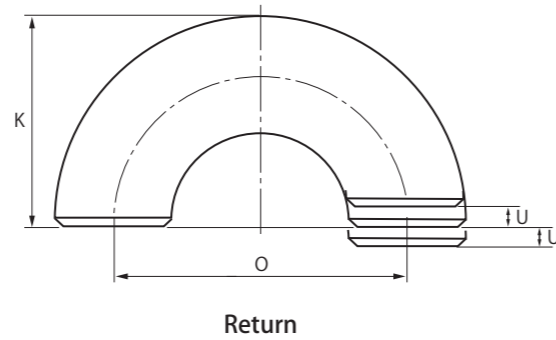
ASME B 16.9
Unit : mm

(NPS)	All Fittings			45 Deg Elbows 90 Deg Elbows Tees Reducers	Caps	Returns		
	Outside Diameter at Bevel	Inside Diameter at End	Wall Thickness			E	O	K
1/2 to 2-1/2	+1.52 -0.76	±0.76	Not less than 87.5% of nominal thickness	±1.52	±3.05	±6.35	±6.35	±0.76
3 to 4	±1.52	±1.52						
5 to 8	+2.29 -1.52	±3.05						
10 to 18	+4.06 -3.05	±3.05						
20 to 24	+6.35 -4.83	±4.83						

ASME 管継手の直角度の許容値 / TOLERANCES

Unit : mm

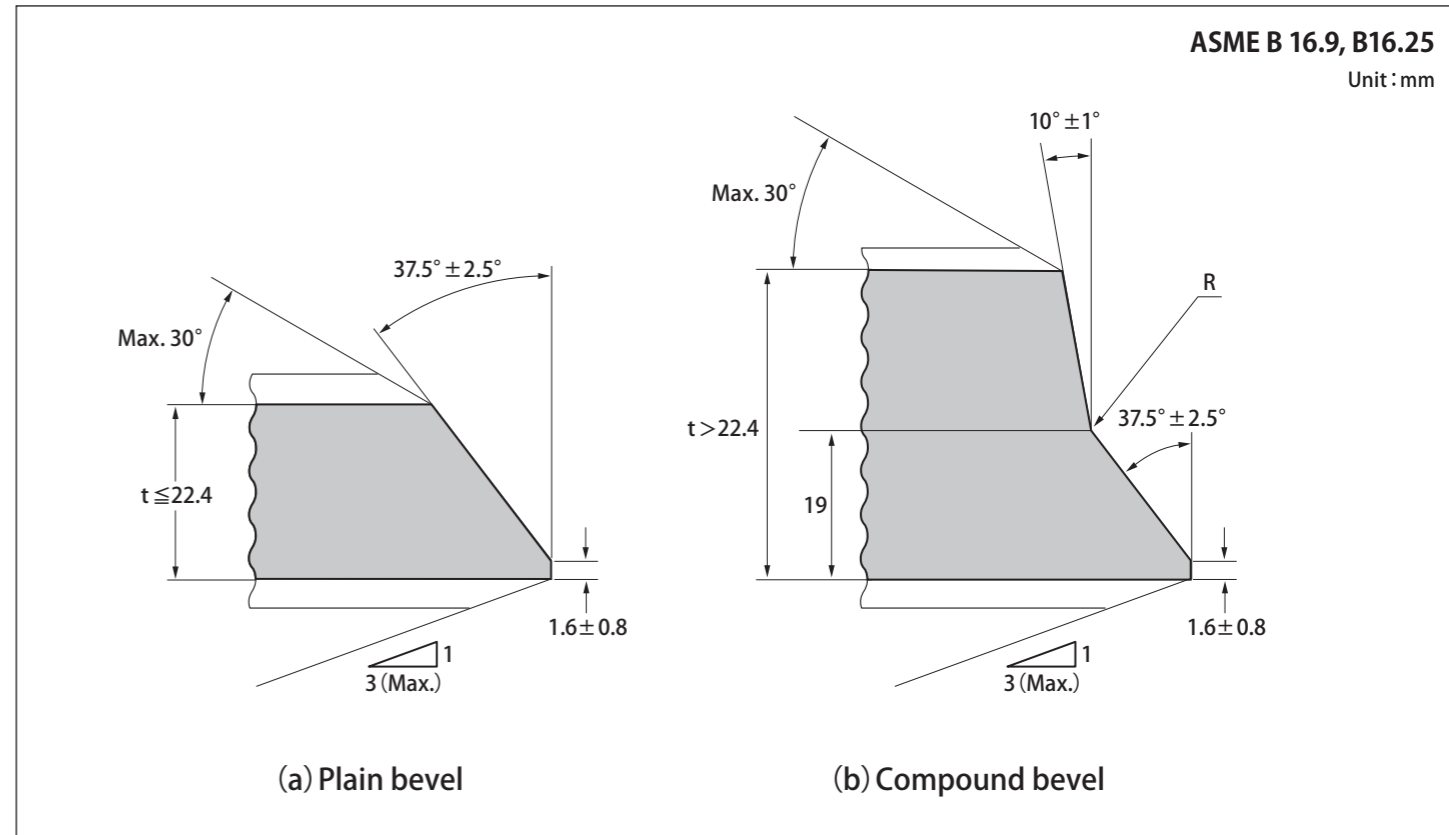
Nominal Pipe Size	Angularity Tolerances	
	Off Angle Q	Off Plane P
1/2 to 4	0.76	1.52
5 to 8	1.52	3.05
10 to 12	2.29	4.83
14 to 16	2.29	6.35
18 to 24	3.05	9.65



ASME ベベルエンドの形状・寸法 / WELDING END PREPARATION

ASME B 16.9, B16.25

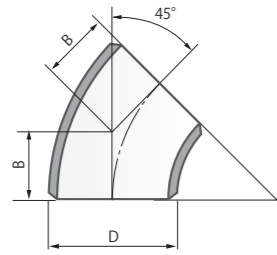
Unit : mm



Nominal Pipe Wall Thickness (t)	End Preparation
Less than X*	Cut square or slightly chamfer, at manufacturer's option.
X* to 22.4mm (0.88in.) incl.	Plain bevel as in sketch (a) above
More than 22.4mm (0.88in.)	Compound bevel as in sketch (b) above

X* = 5mm for carbon steel, ferritic alloy steel or wrought iron;
3mm for austenitic alloy steel

ASME 45°エルボ(ロング)の形状・寸法・重量 / DIMENSIONS OF LONG RADIUS ELBOW



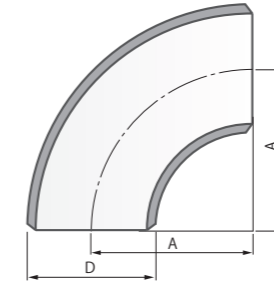
45° LONG RADIUS ELBOW



ASME B 16.9

Nominal Pipe Size (NPS)	Dimensions (Unit:mm)		Carbon & Alloy Steel Weight (Unit:kg)																Stainless Steel Weight (Unit:kg)			
	Outside Diameter at Bevel	Center-to-End 45 Deg Elbow	STD	XS	XXS	S40	S80	S120	S160	S10	S20	S30	S60	S100	S140	S10S	S40S	S80S	S160			
			D	B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1/2	21.3	16	0.038	0.048	0.076	0.038	0.048	-	0.058	-	-	-	-	-	-	0.030	0.040	0.050	0.060			
3/4	26.7	19	0.060	0.077	0.131	0.060	0.077	-	0.115	-	-	-	-	-	-	0.050	0.062	0.080	0.115			
1	33.4	22	0.106	0.137	0.231	0.106	0.137	-	0.180	-	-	-	-	-	-	0.070	0.107	0.140	0.180			
1-1/4	42.2	25	0.163	0.215	0.374	0.163	0.215	-	0.270	-	-	-	-	-	-	0.110	0.167	0.220	0.270			
1-1/2	48.3	29	0.218	0.292	0.515	0.218	0.292	-	0.390	-	-	-	-	-	-	0.160	0.220	0.295	0.395			
2	60.3	35	0.361	0.497	0.893	0.361	0.497	0.560	0.736	-	-	-	-	-	-	0.260	0.365	0.510	0.750			
2-1/2	73.0	44	0.728	0.961	1.720	0.728	0.961	0.740	1.260	-	-	-	-	-	-	0.420	0.735	0.970	1.270			
3	88.9	51	1.090	1.470	2.670	1.090	1.470	1.455	2.060	-	-	-	-	-	-	0.660	1.100	1.490	2.090			
3-1/2	101.6	57	1.470	2.020	3.690	1.470	2.020	-	3.020	-	-	-	-	-	-	0.820	1.510	2.050	3.050			
4	114.3	64	1.940	2.690	4.940	1.940	2.690	3.380	4.040	-	-	-	-	-	-	1.100	2.040	2.710	4.080			
5	141.3	79	3.270	4.650	8.630	3.270	4.650	6.000	7.380	-	-	-	-	-	-	2.010	3.460	4.690	7.450			
6	168.3	95	5.100	7.690	14.30	5.100	7.690	9.720	12.20	-	-	-	-	-	-	2.950	5.740	7.770	12.30			
8	219.1	127	10.20	15.60	26.00	10.20	15.60	21.70	26.80	-	10.20	10.20	-	-	-	5.150	10.30	15.80	-			
10	273.0	159	18.10	24.50	46.40	18.10	28.80	39.80	51.80	-	18.10	18.10	-	-	-	8.400	18.30	24.60	-			
12	323.8	190	26.70	35.20	67.00	28.80	47.60	67.00	85.50	-	26.70	26.70	39.10	-	-	14.30	26.75	35.35	-			
14	355.6	222	34.20	45.30	-	39.80	66.60	94.10	119.0	34.20	34.20	34.20	53.00	94.10	119.0	18.300	40.20	-	-			
16	406.4	254	44.90	59.40	-	59.40	97.90	137.0	176.0	44.90	44.90	44.90	76.50	137.0	176.0	36.10	60.00	-	-			
18	457.0	286	56.90	75.40	-	84.50	138.0	196.0	249.0	56.90	56.90	75.40	110.0	196.0	249.0	-	-	-	-			
20	508.0	318	70.50	93.40	-	110.0	187.0	264.0	338.0	70.50	70.50	93.40	148.0	264.0	338.0	-	-	-	-			
22	559.0	343	85.00	112.5	-	140.0	246.0	347.0	442.0	85.00	83.70	112.5	-	347.0	442.0	-	-	-	-			
24	610.0	381	102.0	135.0	-	184.0	319.0	459.0	580.0	102.0	102.0	184.0	255.0	459.0	580.0	-	-	-	-			

ASME 90°エルボ(ロング)の形状・寸法・重量 / DIMENSIONS OF LONG RADIUS ELBOW



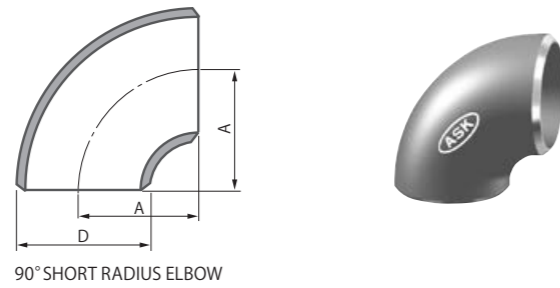
90° LONG RADIUS ELBOW



ASME B 16.9

Nominal Pipe Size (NPS)	Dimensions (Unit:mm)		Carbon & Alloy Steel Weight (Unit:kg)																Stainless Steel Weight (Unit:kg)			
	Outside Diameter at Bevel	Center-to-End 90 Deg Elbow	STD	XS	XXS	S40	S80	S120	S160	S10	S20	S30	S60	S100	S140	S10S	S40S	S80S	S160			
			D	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
1/2	21.3	38	0.078	0.097	0.152	0.078	0.097	-	0.117	-	-	-	-	-	-	0.060	0.080	0.100	0.120			
3/4	26.7	38	0.104	0.134	0.225	0.104	0.134	-	0.176	-	-	-	-	-	-	0.090	0.110	0.130	0.180			
1	33.4	38	0.150	0.194	0.326	0.150	0.194	-	0.253	-	-	-	-	-	-	0.130	0.160	0.200	0.255			
1-1/4	42.2	48	0.254	0.335	0.583	0.254	0.335	-	0.421	-	-	-	-	-	-	0.210	0.250	0.350	0.425			
1-1/2	48.3	57	0.364	0.486	0.858	0.364	0.486	-	0.651	-	-	-	-	-	-	0.300	0.390	0.500	0.658			
2	60.3	76	0.651	0.895	1.610	0.651	0.895	1.120	1.330	-	-	-	-	-	-	0.500	0.690	0.900	1.340			
2-1/2	73.0	95	1.290	1.710	3.050	1.290	1.710	1.480	2.230	-	-	-	-	-	-	0.800	1.340	1.750	2.250			
3	88.9	114	2.030	2.740	4.970	2.030	2.740	2.910	3.830	-	-	-	-	-	-	1.280	2.050	2.770	3.870			
3-1/2	101.6	133	2.820	3.900	7.130	2.820	3.900	-	5.830	-	-	-	-	-	-	1.620	2.870	3.950	5.890			
4	114.3	152	3.850	5.340	9.820	3.850	5.340	6.760	8.030	-	-	-	-	-	-	2.180	3.900	5.420	8.110			
5	141.3	191	6.510	9.260	17.20	6.510	9.260	12.00	14.70	-	-	-	-	-	-	3.960	6.580	9.300	14.80			
6	168.3	229	10.10	15.30	28.40	10.10	15.30	19.50	24.20	-	-	-	-	-	-	5.850	10.20	15.50	24.40			
8	219.1	305	20.40	30.90	51.70	20.40	30.90	43.20	53.30	-	20.40	20.40	-	-	-	10.30	21.60	31.20	-			
10	273.0	381	36.10	48.80	92.80	36.10	57.30	79.50	103.0	-	36.10	36.10	-	-	-	16.80	36.60	49.20	-			
12	323.8	457	53.00	70.00	134.0	57.20	94.70	134.0	171.0	-	53.00	53.00	78.20	134.0	171.0	28.60	53.50	70.70	-			
14	355.6	533	68.10	90.00	-	79.10	132.0	188.0	236.0	68.10	68.10	68.10	106.0	188.0	236.0	36.60	79.90	-	-			
16	406.4	610	89.20	118.0	-	118.0	195.0	274.0	350.0	89.20	89.20	89.20	153.0	274.0	350.0	72.10	180.7	-	-			
18	457.0	686	113.0	150.0	-	168.0	274.0	391.0	495.0	113.0	113.0	150.0	221.0	391.0	440.0	-	-	-	-			
20	508.0	762	140.0	186.0	-	219.0	372.0	528.0	676.0	140.0	140.0	186.0	296.0	528.0	676.0	-	-	-	-			
22	559.0	838	170.0	225.0	-	280.0	492.0	693.0	884.0	170.0	170.0	225.0	-	693.0	884.0	-	-	-	-			
24	610.0	914	202.0	269.0	-	366.0	634.0	918.0	1160	202.0	202.0	269.0	510.0	918.0	1160	-	-	-	-			

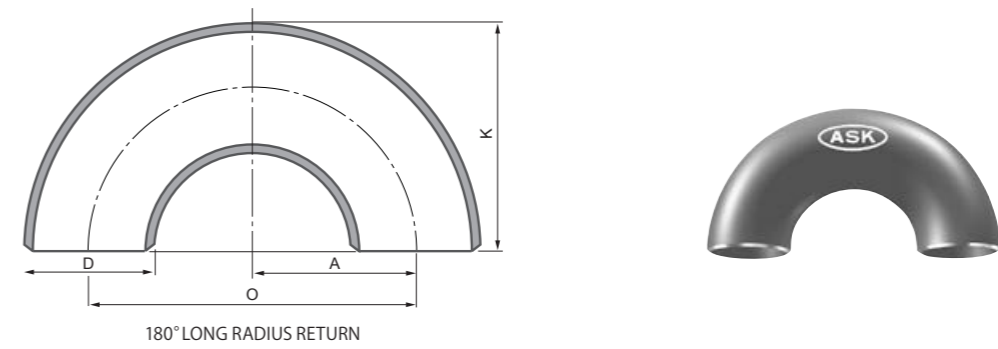
ASME 90°エルボ(ショート)の形状・寸法・重量 / DIMENSIONS OF SHORT RADIUS ELBOW



ASME B 16.9

Nominal Pipe Size (NPS)	Dimensions (Unit:mm)		Carbon & Alloy Steel Weight (Unit:kg)										Stainless Steel Weight (Unit:kg)			
	Outside Diameter at Bevel	Center-to-End 90 Deg Elbow	STD	XS	XXS	S40	S80	S120	S160	S10	S20	S30	S10S	S40S	S80S	S160
			D	A												
1	33.4	25	0.100	0.129	0.217	0.100	0.129	-	0.169	-	-	-	0.110	0.130	0.150	0.200
1-1/4	42.2	32	0.169	0.223	0.388	0.169	0.223	-	0.280	-	-	-	0.180	0.250	0.260	0.280
1-1/2	48.3	38	0.242	0.324	0.572	0.242	0.324	-	0.434	-	-	-	0.200	0.300	0.330	0.440
2	60.3	51	0.434	0.597	1.070	0.434	0.597	-	0.884	-	-	-	0.400	0.450	0.600	0.890
2-1/2	73.0	64	0.861	1.140	2.030	0.861	1.140	-	1.490	-	-	-	0.570	0.960	1.150	1.500
3	88.9	76	1.350	1.830	3.310	1.350	1.830	-	2.550	-	-	-	0.800	1.400	1.840	2.580
3-1/2	101.6	89	1.890	2.600	4.750	1.890	2.600	-	3.890	-	-	-	1.100	2.300	2.630	3.930
4	114.3	102	2.570	3.560	6.550	2.570	3.560	4.500	5.350	-	-	-	1.400	2.800	3.600	5.400
5	141.3	127	4.340	6.170	11.50	4.340	6.170	8.030	9.700	-	-	-	2.400	4.600	6.230	9.800
6	168.3	152	6.770	10.20	19.00	6.770	10.20	13.00	16.20	-	-	-	4.100	7.000	10.30	16.40
8	219.1	203	13.60	20.40	34.40	13.60	20.60	28.90	35.50	-	13.60	13.60	6.700	13.80	20.80	-
10	273.0	254	24.10	32.50	61.80	24.10	38.20	53.00	68.70	-	24.10	24.10	11.20	24.40	32.80	-
12	323.8	305	35.30	46.60	89.50	38.20	63.10	89.50	114.0	-	35.30	35.30	17.50	35.70	47.10	-
14	355.6	356	45.40	60.00	-	52.80	88.30	125.0	157.0	45.40	45.40	45.40	24.40	53.20	-	-
16	406.4	406	59.50	78.70	-	78.70	130.0	183.0	233.0	59.50	59.50	59.50	31.90	79.50	-	-
18	457.0	457	75.50	100.0	-	125.0	183.0	261.0	330.0	75.50	75.50	100.0	-	-	-	-
20	508.0	508	93.40	124.0	-	146.0	248.0	352.0	451.0	93.40	93.40	124.0	-	-	-	-
22	559.0	559	113.0	150.2	-	186.0	328.0	462.0	590.0	113.0	113.0	150.2	-	-	-	-
24	610.0	610	135.0	179.0	-	244.0	422.0	613.0	773.0	135.0	135.0	244.0	-	-	-	-

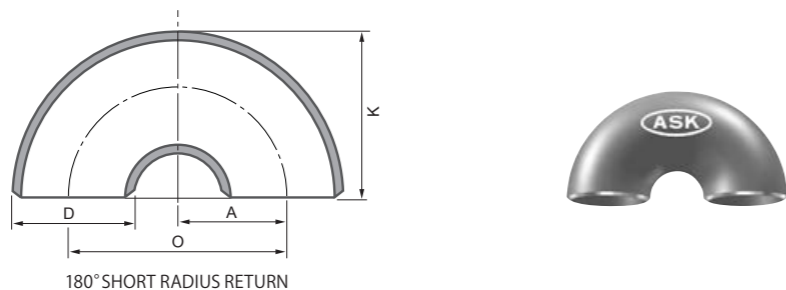
ASME 180°エルボ(ロング)の形状・寸法・重量 / DIMENSIONS OF LONG RADIUS RETURN



ASME B 16.9

Nominal Pipe Size (NPS)	Dimensions (Unit:mm)			Carbon & Alloy Steel Weight (Unit:kg)									
	Outside Diameter at Bevel	Center-to-Center	Back-to-Face	STD	XS	XXS	S40	S80	S120	S160	S10	S20	S30
				D	O	K							
1/2	21.3	76	48	0.152	0.194	0.304	0.152	0.194	-	0.234	-	-	-
3/4	26.7	76	51	0.208	0.268	0.450	0.208	0.268	-	0.352	-	-	-
1	33.4	76	56	0.300	0.388	0.652	0.300	0.388	-	0.506	-	-	-
1-1/4	42.2	95	70	0.508	0.670	1.170	0.508	0.670	-	0.842	-	-	-
1-1/2	48.3	114	83	0.728	0.972	1.720	0.728	0.972	-	1.300	-	-	-
2	60.3	152	106	1.300	1.790	3.220	1.300	1.790	-	2.660	-	-	-
2-1/2	73.0	190	132	2.580	3.420	6.100	2.580	3.420	-	4.460	-	-	-
3	88.9	229	159	4.080	5.480	9.940	4.080	5.480	-	7.660	-	-	-
3-1/2	101.6	267	184	5.680	7.800	14.30	5.680	7.800	-	11.60	-	-	-
4	114.3	305	210	7.700	10.70	19.60	7.700	10.70	13.50	16.00	-	-	-
5	141.3	381	262	13.00	18.50	34.40	13.00	18.50	23.80	29.40	-	-	-
6	168.3	457	313	20.20	30.60	56.80	20.20	30.60	38.20	48.40	-	-	-
8	219.1	610	414	40.80	61.80	103.4	40.80	61.80	85.10	106.0	-	40.80	40.80
10	273.0	762	518	72.20	97.60	185.6	72.20	114.0	155.0	206.0	-	72.20	72.20
12	323.8	914	619	106.0	140.0	268.0	114.0	189.0	264.0	342.0	-	106.0	106.0
14	355.6	1067	711	136.0	180.0	-	158.0	264.0	376.0	472.0	136.0	136.0	136.0
16	406.4	1219	813	178.0	236.0	-	236.0	390.0	548.0	700.0	178.0	178.0	178.0
18	457.0	1372	914	226.0	300.0	-	336.0	548.0	-	-	226.0	226.0	300.0
20	508.0	1524	1016	280.0	372.0	-	438.0	744.0	-	-	280.0	280.0	372.0

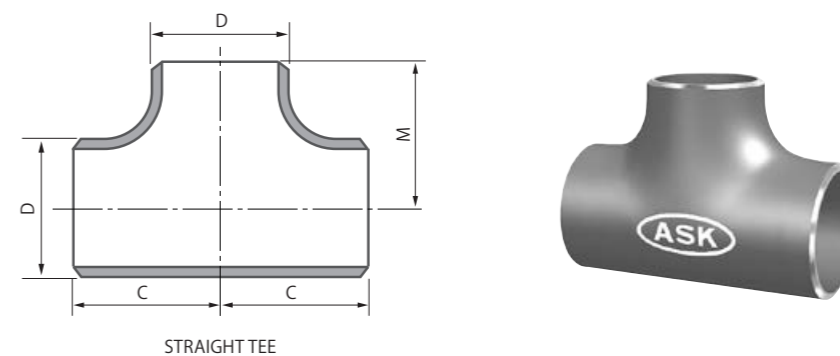
ASME 180°エルボ(ショート)の形状・寸法・重量 / DIMENSIONS OF SHORT RADIUS RETURN



ASME B 16.9

Nominal Pipe Size (NPS)	Dimensions (Unit:mm)			Carbon & Alloy Steel Weight (Unit:kg)																
	Outside Diameter at Bevel	Center - to - Center	Back - to - Face																	
				D	O	K	STD	XS	XXS	S40	S80	S120	S160	S10	S20	S30				
1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	33.4	51	41	0.200	0.258	0.434	0.200	0.258	-	0.338	-	-	-	-	-	-	-	-	-	-
1-1/4	42.2	64	52	0.338	0.446	0.676	0.338	0.446	-	0.560	-	-	-	-	-	-	-	-	-	-
1-1/2	48.3	76	62	0.484	0.648	1.140	0.484	0.648	-	0.868	-	-	-	-	-	-	-	-	-	-
2	60.3	102	81	0.868	1.190	2.140	0.868	1.190	-	1.770	-	-	-	-	-	-	-	-	-	-
2-1/2	73.0	127	100	1.720	2.280	4.060	1.720	2.280	-	2.980	-	-	-	-	-	-	-	-	-	-
3	88.9	152	121	2.700	3.660	6.620	2.700	3.660	-	5.100	-	-	-	-	-	-	-	-	-	-
3-1/2	101.6	178	140	3.780	5.200	9.500	3.780	5.200	-	7.780	-	-	-	-	-	-	-	-	-	-
4	114.3	203	159	5.140	7.120	13.10	5.140	7.120	10.70	10.70	-	-	-	-	-	-	-	-	-	-
5	141.3	254	197	8.680	12.30	23.00	8.680	12.30	19.40	19.60	-	-	-	-	-	-	-	-	-	-
6	168.3	305	237	13.50	20.40	38.00	13.50	20.40	32.40	32.40	-	-	-	-	-	-	-	-	-	-
8	219.1	406	313	27.20	41.20	68.80	27.20	41.20	71.00	71.00	-	27.20	27.20	-	-	-	-	-	-	-
10	273.0	508	391	48.20	65.00	136.0	48.20	76.40	106.0	137.0	-	48.20	48.20	-	-	-	-	-	-	-
12	323.8	610	467	70.60	93.20	179.0	76.40	126.0	179.0	228.0	-	70.60	70.60	-	-	-	-	-	-	-
14	355.6	711	533	90.80	120.0	-	106.0	177.0	250.0	314.0	90.80	90.80	90.80	-	-	-	-	-	-	-
16	406.4	813	610	119.0	157.0	-	157.0	260.0	366.0	466.0	119.0	119.0	119.0	-	-	-	-	-	-	-
18	457.0	914	686	151.0	200.0	-	224.0	366.0	-	660.0	-	-	-	-	-	-	-	-	-	-
20	508.0	1016	762	186.0	248.0	-	292.0	496.0	-	902.0	-	-	-	-	-	-	-	-	-	-

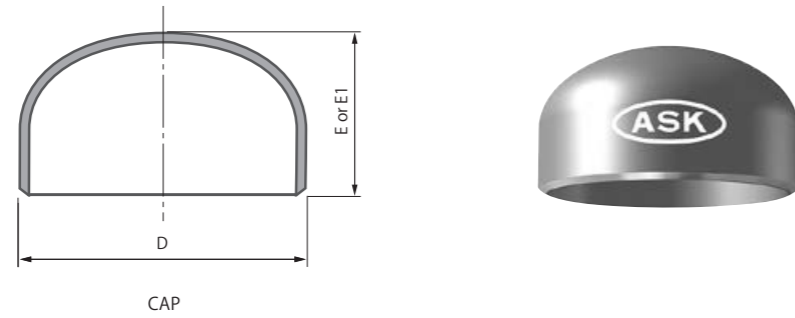
ASME 同径Tの形状・寸法・重量 / DIMENSIONS OF STRAIGHT TEE



ASME B 16.9

Nominal Pipe Size (NPS)	Dimensions (Unit:mm)			Carbon & Alloy Steel Weight (Unit:kg)														Stainless Steel Weight (Unit:kg)			
	Outside Diameter at Bevel	Center - to - End																			
		Run	Outlet																		
	D	C	M	STD	XS	XXS	S40	S80	S120	S160	S10	S20	S30	S60	S100	S140	S10S	S40S	S80S	S160	
1/2	21.3	25	25	0.102	0.118	0.170	0.102	0.118	-	0.139	-	-	-	-	-	-	0.100	0.120	0.120	0.150	
3/4	26.7	29	29	0.136	0.180	0.250	0.136	0.180	-	0.211	-	-	-	-	-	-	0.140	0.170	0.190	0.220	
1	33.4	38	38	0.300	0.388	0.544	0.300	0.388	-	0.424	-	-	-	-	-	-	0.310	0.350	0.390	0.430	
1-1/4	42.2	48	48	0.500	0.686	0.959	0.500	0.686	-	0.696	-	-	-	-	-	-	0.470	0.640	0.690	0.700	
1-1/2	48.3	57	57	0.720	0.990	1.620	0.720	0.990	-	1.230	-	-	-	-	-	-	0.680	0.850	1.000	1.240	
2	60.3	64	64	1.070	1.430	2.450	1.070	1.430	-	2.070	-	-	-	-	-	-	0.850	1.130	1.440	2.080	
2-1/2	73.0	76	76	2.070	2.760	4.590	2.070	2.760	-	3.420	-	-	-	-	-	-	1.360	2.090	2.790	3.450	
3	88.9	86	86	2.860	3.530	6.450	2.860	3.530	-	4.540	-	-	-	-	-	-	1.800	3.020	3.500	4.590	
3-1/2	101.6	95	95	3.630	5.070	8.200	3.630	5.070	-	6.550	-	-	-	-	-	-	2.120	3.600	5.440	-	
4	114.3	105	105	4.830	6.330	11.10	4.830	6.330	8.010	9.260	-	-	-	-	-	-	2.900	5.160	6.390	9.350	
5	141.3	124	124	7.720	10.00	18.10	7.720	10.00	13.30	15.70	-	-	-	-	-	-	4.480	7.600	10.10	15.90	
6	168.3	143	143	11.20	16.80	27.50	11.20	16.80	19.70	23.90	-	11.20	-	-	-	-	6.210	11.92	16.90	23.30	
8	219.1	178	178	20.50	30.00	47.00	20.50	30.00	39.20	47.00	-	20.50	20.50	24.30	32.40	42.10	11.70	20.30	30.30	-	
10	273.0	216	216	36.60	44.10	82.20	36.60	51.00	72.10	90.20	-	36.60	36.60	44.10	61.40	82.20	18.00	35.20	44.20	-	
12	323.8	254	254	48.60	69.50	107.0	50.20	95.80	111.0	147.0	-	48.60	48.60	78.20	93.70	113.0	23.70	45.80	70.80	-	
14	355.6	279	279	66.40	81.50	-	71.20	129.0	202.0	260.0	66.40	66.40	66.40	129.0	202.0	260.0	28.60	64.00	-	-	
16	406.4	305	305	71.30	110.0	-	110.0	173.0	277.0	354.0	71.30	71.30	71.30	173.0	277.0	354.0	35.20	90.00	-	-	
18	457.0	343	343	131.0	145.0	-	156.0	253.0	396.0	501.0	131.0	131.0	145.0	-	-	-	-	-	-	-	
20	508.0	381	381	173.0	175.0	-	204.0	353.0	535.0	684.0	173.0	173.0	175.0	-	-	-	-	-	-	-	
22	559.0	419	419	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
24	610.0	432	432	274.0	300.0	-	343.0	597.0	863.0	1090	274.0	274.0	348.0	-	-	-	-	-	-	-	

ASME キャップの形状・寸法・重量 / DIMENSIONS OF CAP



ASME B 16.9

Nominal Pipe Size (NPS)	Dimensions (Unit:mm)				Carbon & Alloy Steel Weight (Unit:kg)										Stainless Steel Weight (Unit:kg)			
	Outside Diameter at Bevel	Length (1)	Limiting wall Thickness For Length	Length (2)	STD	XS	XXS	S40	S80	S120	S160	S10	S20	S30	S10S	S40S	S80S	S160
	D	E	E	E1														
1/2	21.3	25	4.57	25	0.100	0.150	-	0.100	0.150	-	0.220	-	-	-	0.078	0.100	0.150	-
3/4	26.7	25	3.81	25	0.100	0.150	-	0.100	0.150	-	0.220	-	-	-	0.078	0.100	0.150	-
1	33.4	38	4.57	38	0.109	0.165	-	0.109	0.165	-	0.230	-	-	-	0.090	0.110	0.167	-
1-1/4	42.2	38	4.83	38	0.145	0.197	-	0.145	0.197	-	0.260	-	-	-	0.110	0.146	0.199	-
1-1/2	48.3	38	5.08	38	0.171	0.236	-	0.171	0.236	-	0.340	-	-	-	0.130	0.172	0.238	-
2	60.3	38	5.59	44	0.234	0.330	-	0.234	0.330	-	0.520	-	-	-	0.170	0.240	0.330	1.550
2-1/2	73.0	38	7.11	51	0.420	0.565	-	0.420	0.565	-	0.770	-	-	-	0.245	0.420	0.565	2.840
3	88.9	51	7.62	64	0.664	0.917	-	0.664	0.917	-	1.350	-	-	-	0.365	0.670	0.917	3.780
3-1/2	101.6	64	8.13	76	0.958	1.360	-	0.958	1.360	-	-	-	-	-	-	-	-	-
4	114.3	64	8.64	76	1.170	1.680	-	1.170	1.680	2.680	2.520	-	-	-	0.591	1.180	1.680	6.780
5	141.3	76	9.65	89	1.900	2.730	-	1.900	2.730	4.350	4.100	-	-	-	0.990	1.920	2.730	10.70
6	168.3	89	10.92	102	2.830	4.380	-	2.830	4.380	6.280	6.580	-	-	-	1.370	2.850	4.380	17.95
8	219.1	102	12.70	127	5.110	7.910	-	5.110	7.910	13.20	16.70	-	5.190	5.190	2.520	5.160	7.910	-
10	273.0	127	12.70	152	8.920	12.20	-	8.920	16.40	23.30	33.40	-	6.330	9.150	3.870	9.000	13.80	-
12	323.8	152	12.70	178	13.00	17.40	-	14.10	26.40	38.60	50.60	-	9.430	13.30	6.890	13.20	19.50	-
14	355.6	165	12.70	191	15.90	21.20	-	18.60	34.90	51.10	65.60	16.60	13.20	15.90	-	-	-	-
16	406.4	178	12.70	203	20.00	26.70	-	26.70	49.00	70.80	92.80	21.20	16.60	20.00	-	-	-	-
18	457.0	203	12.70	229	25.50	34.10	-	41.50	69.00	101.0	131.0	31.90	21.20	25.60	-	-	-	-
20	508.0	229	12.70	254	31.80	42.50	-	54.10	93.80	136.0	179.0	31.90	31.90	50.40	-	-	-	-
22	559.0	254	12.70	254	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24	610.0	267	12.70	305	45.10	60.10	-	89.70	160.0	237.0	306.0	45.10	45.10	82.70	-	-	-	-

NOTES:
 (1) Length E applies for thickness not exceeding that given in column "Limiting Wall Thickness for Length E".
 (2) Length E1 applies for thickness greater than that given in column "Limiting Wall Thickness" for NPS24 and smaller.



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FAX: 81-799-22-1730,1734

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◇ **東京支社**

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TEL(03)3295-1731(代) FAX(03)3295-1673

◇ **大阪営業所**

〒541-0042 大阪府大阪市中央区今橋4-3-6 淀屋橋NAOビル5階
TEL(06)6563-7473 FAX(06)6563-7474

◇ **東京物流センター**

〒306-0125 茨城県古河市仁連229-10
TEL(0280)76-0893(代) FAX(0280)76-0894

◇ **九州LC**

〒813-0023 福岡県福岡市東区蒲田8371-1
福山通運株式会社 福岡流通センター内3F
TEL(092)957-1731 FAX(092)957-1730

