



DAJA

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DAJA-UHP-2-5.2

High Purity Pipes & Pipe Fittings



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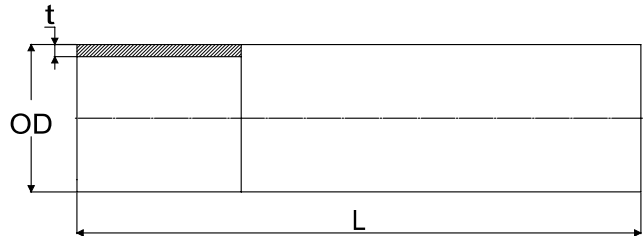
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High Purity Pipe

GROUP 1

High Purity Pipe (A Size Piping)



Dimensions Chart, 15A-800A

Unit=mm

Nominal Size	Outside Diameter	Wall Thickness t(t1, t2)		Type of Pipe		Surface Treatment / ID Polishing Method
		5S	10S	Seamless	Welded (ID Bead Cut)	
15A	21.7	1.65	2.1	⊙		Longitudinal
20A	27.2	1.65	2.1	⊙	⊙	Longitudinal
25A	34.0	1.65	2.8	⊙	⊙	Longitudinal
32A	42.7	1.65	2.8	⊙	⊙	Longitudinal
40A	48.6	1.65	2.8	⊙	⊙	Longitudinal
50A	60.5	1.65	2.8	⊙	⊙	Longitudinal
65A	76.3	2.1	3.0	⊙	⊙ (YES)	Spiral / Longitudinal
80A	89.1	2.1	3.0	⊙	⊙ (YES)	Spiral / Longitudinal
100A	114.3	2.1	3.0	⊙	⊙ (YES)	Spiral / Longitudinal
125A	139.8	2.8	3.4		⊙ (YES)	Spiral
150A	165.2	2.8	3.4		⊙ (YES)	Spiral
200A	216.3	2.8	4.0		⊙ (YES)	Spiral
250A	267.4	3.4	4.0		⊙ (YES)	Spiral
300A	318.5	4.0	4.5		⊙ (YES)	Spiral
350A	355.6	4.0	4.8		⊙ (YES)	Spiral
400A	406.4	4.2	4.8		⊙ (YES)	Spiral
450A	457.2	4.2	4.8		⊙ (YES)	Spiral
500A	508.0	4.8	5.5		2 (YES)	Spiral
550A	558.8	4.8	5.5		2 (YES)	Spiral
600A	609.6	5.5	6.4		2 (YES)	Spiral
800A	812.8	6.4	7.9		2 (YES)	Spiral

●"2" means "two seams" welded pipe.

Product Type and Grade

Product Grade	Material
AP	304, 304L, 316L
MP (BA)	304L, 316L
EP	316L

Specification of Chemical composition

Standard value	C (wt%)	Si (wt%)	Mn (wt%)	P (wt%)	S (wt%)	Ni (wt%)	Cr (wt%)	Mo (wt%)
ASTM A312 TP316L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	10.00~14.00	16.00~18.00	2.00~3.00
ASTM A312 TP304L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	8.00~13.00	18.00~20.00	—
ASTM A312 TP304	≤0.080	≤1.00	≤2.00	≤0.045	≤0.030	8.00~11.00	18.00~20.00	—
JIS G3459 SUS 316L TP	≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	12.00~16.00	16.00~18.00	2.00~3.00
JIS G3459 SUS 304L TP	≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	9.00~13.00	18.00~20.00	—
JIS G3459 SUS 304 TP	≤0.080	≤1.00	≤2.00	≤0.045	≤0.030	8.00~11.00	18.00~20.00	—

Tolerance of Dimensions

Description	Size	Tolerance
Outside Diameter	≤25A	±1%
	≥32A, ≤200A	±1%
	≥250A	±1%
Wall Thickness	<2mm	±10%
	≥2mm	±12.5%
Length	6000mm or 4000mm	as mill standard

High Purity Pipe

Manufacturing Process Of AP, MP (BA) and EP

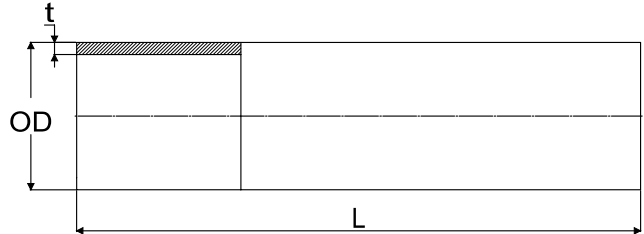
Grade Of Finish of Pipes	AP Finish	MP (BA) Finish	EP Finish
ID bead-cut, bead removed	NO	YES	—
ID mechanical polishing	NO	YES	—
RO Water Cleaning	YES	YES	—
DI Water Rinsing	NO	YES	YES
Chemical Passivation	Acid Pickled	YES	YES
Clean Room, Class 1000 Cleaning and Bagging	Option	YES	YES
Double Sleeve Bagging	Option	YES	YES

Inspection Criteria

Grade Of Finish of Pipes	ID Surface Roughness, Ra	Oil Residual	Particle Level
AP Finish	—	< 0.1mg/ft ²	—
MP (BA) Finish	OD ≤40A : Ra≤0.38μm	< 0.1mg/ft ²	> 0.1μm, Max. 5PC
	OD 50A-150A : Ra≤0.5μm		
	OD 200A-800A : Ra≤0.6μm		
EP Finish	OD ≤20A : Ra≤0.15μm	< 0.01mg/ft ²	> 0.1μm, Max. 1PC
	OD 25A-50A : Ra≤0.2μm		
	OD 65A-100A : Ra≤0.25μm		
	OD 125A-300A : Ra≤0.3μm		

GROUP 2

High Purity Tube (Inch Size Piping)



Dimensions Chart, 1/8"-6"

Unit=mm

Nominal Size	Outside Diameter	Wall Thickness	Type of Pipe		Surface Treatment / ID Polishing Method
			Seamless	Welded (ID Bead Cut)	
1/8"	3.18	0.7	⊙		
1/4"	6.35	1.0	⊙		
3/8"	9.52	1.0	⊙		
1/2"	12.7	1.0 · 1.24	⊙		
5/8"	15.88	1.24 · 1.65	⊙		
3/4"	19.05	1.24 · 1.65	⊙		
1"	25.4	1.65	⊙	⊙ (Option)	Longitudinal
1-1/4"	31.8	1.65	⊙	⊙ (Option)	Longitudinal
1-1/2"	38.1	1.65	⊙	⊙ (Option)	Longitudinal
2"	50.8	1.65	⊙	⊙ (Option)	Longitudinal
2-1/2"	63.5	1.65	⊙	⊙ (Option)	Longitudinal
3"	76.2	1.65	⊙	⊙ (Option)	Spiral / Longitudinal
4"	101.6	2.11	⊙	⊙ (Option)	Spiral / Longitudinal
5"	127.0	2.77		⊙ (Option)	Spiral
6"	152.4	2.77		⊙ (Option)	Spiral

High Purity Tube

Product Type and Grade

Product Grade	Material
AP	304, 304L, 316L
MP (BA)	304L, 316L
EP	316L

Specification of Chemical composition

Standard value	C (wt%)	Si (wt%)	Mn (wt%)	P (wt%)	S (wt%)	Ni (wt%)	Cr (wt%)	Mo (wt%)
ASTM A269 TP316L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	10.00~15.00	16.00~18.00	2.00~3.00
ASTM A269 TP304L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	8.00~12.00	18.00~20.00	—
ASTM A269 TP304	≤0.080	≤1.00	≤2.00	≤0.045	≤0.030	8.00~11.00	18.00~20.00	—
JIS G3459 SUS 316L TP	≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	12.00~16.00	16.00~18.00	2.00~3.00
JIS G3459 SUS 304L TP	≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	9.00~13.00	18.00~20.00	—
JIS G3459 SUS 304 TP	≤0.080	≤1.00	≤2.00	≤0.045	≤0.030	8.00~11.00	18.00~20.00	—

Tolerance of Dimensions

Description	Size	Tolerance
Outside Diameter	<38.1mm	±1%
	≥38.1mm, <88.9mm	±1%
	≥88.9mm, <139.8mm	±1%
	≥139.8mm	±1%
Wall Thickness	<2.1mm	±10%
	≥2.1mm	±12.5%
Length	6000mm or 4000mm	As mill Standard

Manufacturing Process of AP, MP (BA) and EP

Grade Of Finish of Pipes	AP Finish	MP (BA) Finish	EP Finish
ID bead-cut, bead removed	Option	YES	—
ID mechanical polishing	NO	YES	—
RO Water Cleaning	YES	YES	—
DI Water Cleaning	NO	YES	YES
Chemical Passivation	YES	YES	YES
Clean Room, Class 1000 Cleaning and Bagging	Option	YES	YES
Double Sleeve Bagging	Option	YES	YES

Inspection Criteria

Grade Of Finish of Pipes	ID Surface Roughness, Ra	Oil Residual	Particle Level
AP Finish	—	< 0.1mg/ft ²	—
MP (BA) Finish	OD ≤2" : Ra≤0.38μm	< 0.1mg/ft ²	> 0.1μm, Max. 5PC
	OD 2.5"-6" : Ra≤0.5μm		
EP Finish	OD ≤4" : Ra≤0.25μm	< 0.01mg/ft ²	> 0.1μm, Max. 1PC

SCF Fitting (Pipe Size)

GROUP 3**SCF Fitting (Pipe Size)****PART 3.1****Technical Information****Product Type and Grade**

Product Grade	Material
AP	304, 304L, 316L
MP(BA)	304L, 316L
EP	316L

Specification of Chemical Composition

Standard value	C (wt%)	Si (wt%)	Mn (wt%)	P (wt%)	S (wt%)	Ni (wt%)	Cr (wt%)	Mo (wt%)
ASTM A312 TP316L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	10.00~14.00	16.00~18.00	2.00~3.00
ASTM A312 TP304L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	8.00~13.00	18.00~20.00	—
ASTM A312 TP304	≤0.080	≤1.00	≤2.00	≤0.045	≤0.030	8.00~11.00	18.00~20.00	—
JIS G3459 SUS 316L TP	≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	12.00~16.00	16.00~18.00	2.00~3.00
JIS G3459 SUS 304L TP	≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	9.00~13.00	18.00~20.00	—
JIS G3459 SUS 304 TP	≤0.080	≤1.00	≤2.00	≤0.045	≤0.030	8.00~11.00	18.00~20.00	—

Dimensional Tolerance for Pipe Fittings Series

Type Of Fittings	Controlling Points		Nominal Pipe Size			
			15A-65A	80A-200A	250A-300A	350A-600A
General Tolerance For Pipe Size Fittings	Outer Diameter At Connecting Ends	OD1, d1 OD2, d2	±1%			
	Wall Thickness At Ends	T, t	Orbital Welding End:±10%			
			Manual Welding End:-12.5%			
Elbows, Tees	Center To End	A, B M, C	±1.6mm	±2.4mm	±2.4mm	
Caps	Back To End	E	±3.2mm			
Reducers, Cap Reducers	Over All Length, Face To Face	H,Q	±1.6mm	±2.4mm	±2.4mm	

Manufacturing Process

Grade Of Finish of Pipes	AP Finish		MP (BA) Finish		EP Finish
	Orbital Weld	Manual Weld	Orbital Weld	Manual Weld	Orbital Weld
ID bead-cut, bead removed	NO	NO	YES	YES	YES
ID mechanical polishing	NO	NO	YES	YES	YES
OD mechanical polishing#180	NO	NO	Option	Option	YES
RO Water Cleaning	YES	YES	YES	YES	YES
DI Water Cleaning	Option	Option	YES	YES	YES
Chemical Passivation	YES	YES	YES	YES	YES
Clean Room, Class 1000 Cleaning and Class 1000 Bagging	Option	Option	YES	YES	YES
One Layer Bagging	YES	YES	—	—	—
Double Bagging	Option	Option	YES	YES	YES

●Note : SCF, Super Clean Fittings

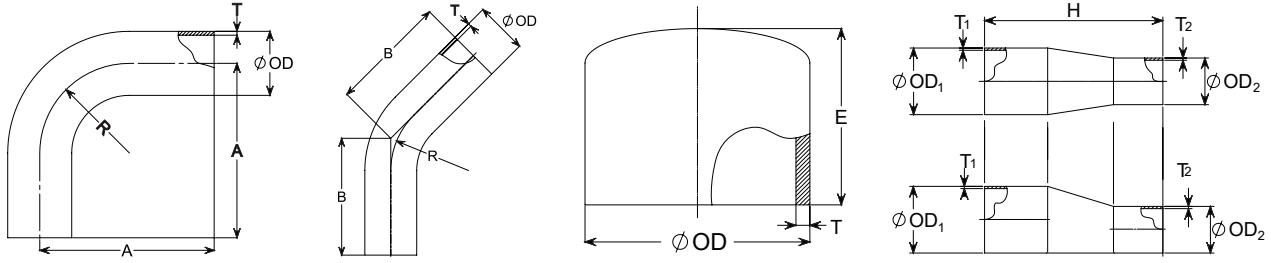
Inspection Criteria

Grade Of Finish of Pipes	ID Surface Roughness, Ra	Oil residual	Particle Level
AP Finish	—	< 0.1mg / ft ²	—
MP(BA)Finish	OD \leq 40A : Ra \leq 0.5 μ m	< 0.1 mg / ft ²	> 0.1 μ m, Max. 5PC
	OD 50A-800A : Ra \leq 0.6 μ m		
EP Finish	OD \leq 100A : Ra \leq 0.12 μ m	< 0.01 mg / ft ²	> 0.1 μ m, Max. 1PC

SCF Fitting (Pipe Size) - Orbital Welding Type

PART 3.2

Orbital Welding Fittings TYPE I, 5S to 5S, 15A-200A, Extended Tangent



Unit=mm

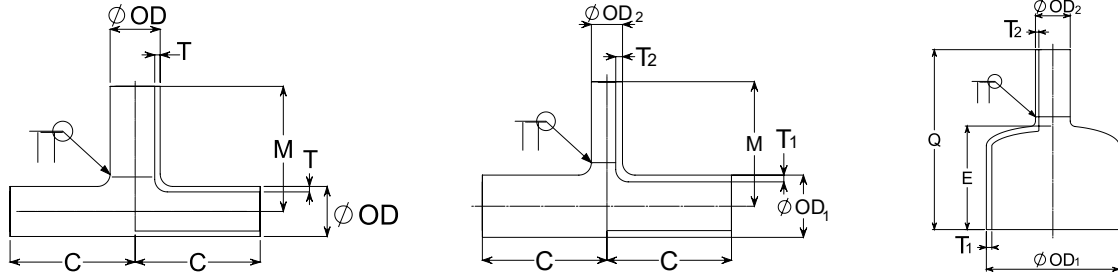
Nominal Pipe Size (*)	90 Degree Elbow		45 Degree Elbow		Cap	Reducer, Extended Tangent	
	90LR-U		45LR-U		CAP-U	Concentric CR-U	Eccentric ER-U
OD (OD1)	R	A	R	B	E	OD2, Small Diameter End	H
15A	38.1	75.0	38.1	52.0	25.4	[3/4", 1/2", 3/8", 1/4"]	100
20A	38.1	75.0	38.1	52.0	25.4	15A, [1", 3/4", 1/2", 3/8", 1/4"]	105
25A	38.1	75.0	38.1	52.0	38.1	20A, 15A, [1 1/4", 1", 3/4", 1/2", 3/8", 1/4"]	120
32A	47.6	94.0	47.6	66.0	38.1	25A, 20A, 15A, [1 1/2", 1 1/4"](1"~1/4")	125
40A	57.2	104.0	57.2	70.0	38.1	32A, 25A, 20A, 15A, [1 1/2", 1 1/4"](1 1/4"~1/4")	130
50A	76.2	123.0	76.2	78.0	38.1	40A, 32A, 25A, 20A, [2"] (15A, 1 1/2"~1/4")	140
65A	95.3	161.0	95.3	91.0	38.1	50A, 40A, 32A, 25A, [3", 2 1/2"] (20A~15A, 2~1/4")	165
80A	114.3	166.0	114.3	99.0	50.8	65A, 50A, 40A, 32A, [3"] (25A~15A, 2 1/2"~1/4")	170
100A	152.4	210.4	152.4	115.0	63.5	80A, 65A, 50A, 40A, [4"] (32A~15A, 3"~1/4")	200
125A	190.5	250.0	190.5	145.0	76.2	100A, 80A, 65A, 50A, [5"] (40A~15A, 4"~1/4")	250
150A	228.6	290.0	228.6	155.0	88.9	125A, 100A, 80A, 65A, [6"] (50A~15A, 5"~1/4")	260
200A	304.8	375.0	304.8	195.0	101.6	150A, 125A, 100A, 80A (80A~15A, 6"~1/4")	280

•"(*)", OD1 on CR, ER and R-Tee fittings represents the large end diameter, OD2 represents the small end diameter.

SCF Fitting (Pipe Size) - Orbital Welding Type

PART 3.3

Orbital Welding Fittings TYPE II, 5S to 5s, 15A-200A, Extended Tangent



Unit=mm

Nominal Pipe Size (*)	Equal Tee	Reducing Tee (R-Tee)			Cap Reducer	
	TEE-U	R-TEE-U				
OD(OD1)	C=M	OD2 (branch pipe)	C	M	E	Q
15A	52.0	1/2", 3/8", 1/4"	47.0	44.0	25.4	60.0
		3/4", 5/8"	52.0	52.0		67.0
20A	55.0	1/2", 3/8", 1/4"	47.0	47.0	25.4	60.0
		15A, 1", 3/4", 5/8"	55.0	55.0		67.0
25A	59.0	1/2", 3/8", 1/4"	47.0	50.0	38.1	73.0
		20A, 15A, 1 1/4", 3/4", 5/8"	59.0	59.0		80.0
32A	74.0	1/2", 3/8", 1/4"	57.0	54.0	38.1	73.0
		25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	68.0	62.0		80.0
40A	77.0	1/2", 3/8", 1/4"	57.0	57.0	38.1	73.0
		25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	68.0	65.0		80.0
		32A, 1 1/2"	77.0	77.0		90.0
50A	83.0	1/2", 3/8", 1/4"	57.0	63.0	38.1	73.0
		25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	68.0	71.0		80.0
		40A, 32A, 2", 1 1/2"	83.0	83.0		90.0
65A	97.0	1/2", 3/8", 1/4"	61.0	71.0	38.1	73.0
		25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	72.0	79.0		80.0
		50A, 40A, 32A, 2", 1 1/2"	88.0	90.0		90.0
		2 1/2"	97.0	97.0		100.0

SCF Fitting (Pipe Size) - Orbital Welding Type

Unit=mm

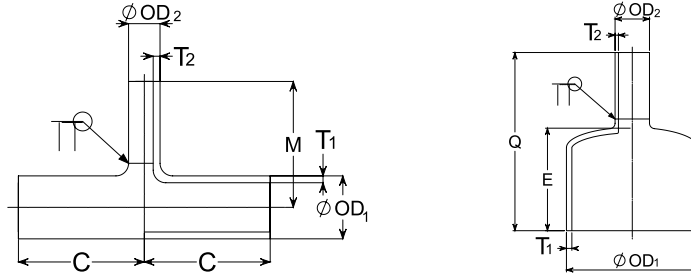
Nominal Pipe Size (*)	Equal Tee	Reducing Tee (R-Tee)			Cap Reducer	
	TEE-U	R-TEE-U				
OD(OD1)	C=M	OD2 (branch pipe)	C	M	E	Q
80A	103.0	1/2", 3/8", 1/4"	61.0	77.0	50.8	85.0
		25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	72.0	85.0		92.0
		50A, 40A, 32A, 2", 1 1/2"	88.0	96.0		102.0
		65A, 3", 2 1/2"	103.0	103.0		110.0
100A	145.0	1/2", 3/8", 1/4"	61.0	90.0	63.5	98.0
		25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	72.0	98.0		105.0
		50A, 40A, 32A, 2", 1 1/2"	88.0	109.0		115.0
		80A, 65A, 4", 3", 2 1/2"	116.0	116.0		125.0
125A	160.0	1/2", 3/8", 1/4"	80.0	110.0	76.2	120.0
		25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	100.0	120.0		130.0
		50A, 40A, 32A, 2", 1 1/2"	120.0	130.0		140.0
		100A, 80A, 65A, 4", 3", 2 1/2"	140.0	140.0		150.0
		5"	160.0	160.0		160.0
150A	170.0	1/2", 3/8", 1/4"	90.0	130.0	88.9	130.0
		25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	110.0	140.0		140.0
		50A, 40A, 32A, 2", 1 1/2"	130.0	150.0		150.0
		100A, 80A, 65A, 4", 3", 2 1/2"	150.0	160.0		160.0
		125A, 5"	170.0	170.0		170.0
200A	190.0	1/2", 3/8", 1/4"	100.0	150.0	101.6	140.0
		25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	120.0	160.0		150.0
		50A, 40A, 32A, 2", 1 1/2"	140.0	170.0		160.0
		100A, 80A, 65A, 4", 3", 2 1/2"	160.0	180.0		170.0
		150A, 125A, 6", 5"	180.0	190.0		180.0

●"(*)", OD1 on CR, ER and R-tee fittings represents the large end diameter; OD2 represents the small end diameter.

SCF Fitting (Pipe Size) - Manual to Orbital Welding Type

PART 3.4

Manual (10s) to Orbital (5s) Welding Fittings, 200A-800A, Extended Tangent



Unit=mm

Nominal Pipe Size (*)	Reducing Tee (R-Tee)			Cap Reducer	
	R-TEE-U			E	Q
OD1	OD2(branch pipe)	C	M		
200A	1/2", 3/8", 1/4"	100.0	150.0	101.6	140.0
	25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	120.0	160.0		150.0
	50A, 40A, 32A, 2", 1 1/2"	140.0	170.0		160.0
	80A, 65A, 3", 2 1/2"	160.0	180.0		170.0
	100A, 4"	180.0	216.2		209.6
	150A, 125A, 6", 5"	180.0	270.2		263.6
250A	1/2", 3/8", 1/4"	110.0	180.0	127.0	156.0
	25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	130.0	190.0		163.0
	50A, 40A, 32A, 2", 1 1/2"	150.0	200.0		173.0
	80A, 65A, 3", 2 1/2"	170.0	210.0		178.0
	100A, 4"	215.9	241.7		235.0
	150A, 125A, 6", 5"	215.9	295.7		289.0
300A	1/2", 3/8", 1/4"	120.0	200.0	152.4	181.4
	25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	140.0	210.0		188.4
	50A, 40A, 32A, 2", 1 1/2"	160.0	220.0		198.4
	80A, 65A, 3", 2 1/2"	180.0	230.0		203.4
	100A, 4"	254.0	267.3		260.4
	150A, 125A, 6", 5"	254.0	321.3		314.4

SCF Fitting (Pipe Size) - Manual to Orbital Welding Type

Unit=mm

Nominal Pipe Size (*)	Reducing Tee (R-Tee)			Cap Reducer	
	R-TEE-U			E	Q
OD1	OD2(branch pipe)	C	M		
350A	1/2", 3/8", 1/4"	130.0	220.0	165.1	194.1
	25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	150.0	230.0		201.1
	50A, 40A, 32A, 2", 1 1/2"	170.0	240.0		211.1
	80A, 65A, 3", 2 1/2"	190.0	250.0		216.1
	100A, 4"	279.4	285.8		273.1
	150A, 125A, 6", 5"	279.4	339.8		327.1
400A	1/2", 3/8", 1/4"	150.0	250.0	177.8	206.8
	25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	170.0	260.0		213.8
	50A, 40A, 32A, 2", 1 1/2"	190.0	270.0		223.8
	80A, 65A, 3", 2 1/2"	210.0	280.0		228.8
	100A, 4"	304.8	311.2		285.8
	150A, 125A, 6", 5"	304.8	365.2		339.8
450A	1/2", 3/8", 1/4"	160.0	270.0	203.2	232.2
	25A, 20A, 15A, 1 1/4", 1", 3/4", 5/8"	180.0	280.0		239.2
	50A, 40A, 32A, 2", 1 1/2"	200.0	290.0		249.2
	80A, 65A, 3", 2 1/2"	220.0	300.0		254.2
	100A, 4"	342.9	336.6		311.2
	150A, 125A, 6", 5"	342.9	390.6		365.2
500A	1/2", 3/8", 1/4"	170.0	300.0	228.6	257.6
	25A, 20A, 15A, 1 1/4", 3/4", 5/8"	190.0	310.0		264.6
	50A, 40A, 32A, 2", 1 1/2"	210.0	320.0		274.6
	80A, 65A, 3", 2 1/2"	230.0	330.0		279.6
	100A, 4"	381.0	362.0		336.6
	150A, 125A, 6", 5"	381.0	416.0		390.6
550A	1/2", 3/8", 1/4"	180.0	320.0	254	283
	25A, 20A, 15A, 1 1/4", 3/4", 5/8"	200.0	330.0		290
	50A, 40A, 32A, 2", 1 1/2"	220.0	340.0		300
	80A, 65A, 3", 2 1/2"	240.0	350.0		305
	100A, 4"	419.1	387.4		362
	150A, 125A, 6", 5"	419.1	441.4		416

SCF Fitting (Pipe Size) - Manual to Orbital Welding Type

Unit=mm

Nominal Pipe Size (*)	Reducing Tee (R-Tee)			Cap Reducer	
	R-TEE-U			E	Q
OD1	OD2(branch pipe)	C	M		
600A	1/2", 3/8", 1/4"	200.0	350.0	266.7	295.7
	25A, 20A, 15A, 1 1/4", 3/4", 5/8"	220.0	360.0		302.7
	50A, 40A, 32A, 2", 1 1/2"	240.0	370.0		312.7
	80A, 65A, 3", 2 1/2"	260.0	380.0		317.7
	100A, 4"	431.8	412.8		374.7
	150A, 125A, 6", 5"	431.8	466.8		428.7
650A	1/2", 3/8", 1/4"	210.0	380.0	(267)	—
	25A, 20A, 15A, 3/4"	230.0	390.0		—
	50A, 40A, 32A	250.0	400.0		—
	80A, 65A	270.0	410.0		—
	100A	495.3	438.2		—
	150A, 125A, 6", 5"	495.3	492.2		—
700A	1/2", 3/8", 1/4"	230.0	400.0	(267)	—
	25A, 20A, 15A, 3/4"	250.0	410.0		
	50A, 40A, 32A	270.0	420.0		
	80A, 65A	290.0	430.0		
	100A	520.7	463.6		
	150A, 125A, 6", 5"	520.7	517.6		
750A	1/2", 3/8", 1/4"	240.0	430.0	(267)	—
	25A, 20A, 15A, 3/4"	260.0	440.0		
	50A, 40A, 32A	280.0	450.0		
	80A, 65A	300.0	460.0		
	100A	558.8	489.0		
	150A, 125A, 6", 5"	558.8	543.0		
800A	1/2", 3/8", 1/4"	260.0	460.0	(267)	—
	25A, 20A, 15A, 3/4"	280.0	470.0		
	50A, 40A, 32A	300.0	480.0		
	80A, 65A	320.0	490.0		
	100A	596.9	514.4		
	150A, 125A, 6", 5"	596.9	568.4		

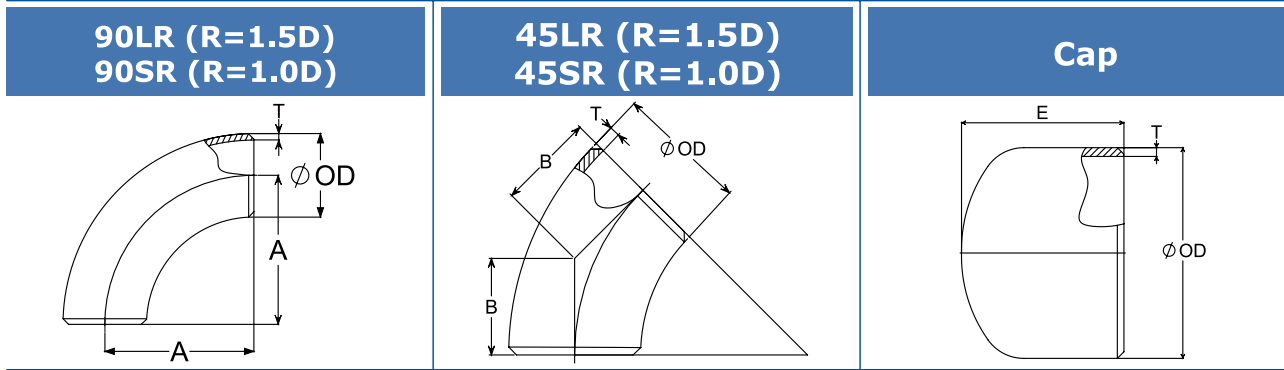
●please contact us for "E" value with "()" bracket when thickness is over 12.7mm.

●"(*)", OD1 represents the large side diameter with manual welding end; OD2 represents the small end diameter with orbital welding end.

SCF Fitting (Pipe Size) - Manual Welding Type

PART 3.5

Manual Welding Fittings TYPE I, 10S, 15A-800A



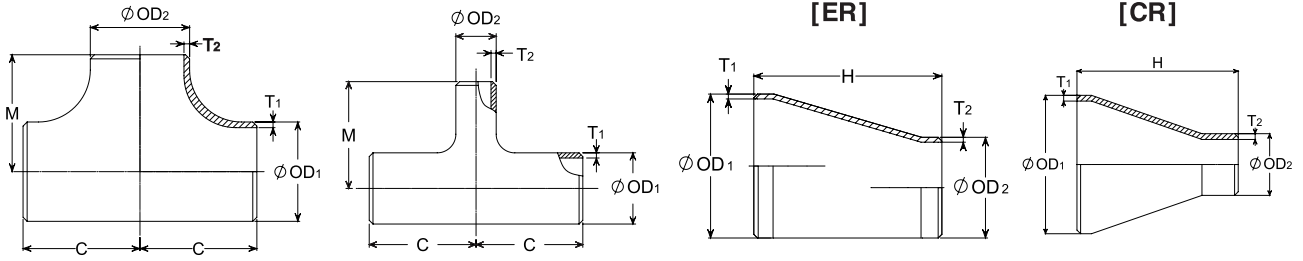
Unit=mm

Nominal Pipe Size (*)	90 Degree Elbow	45 Degree Elbow	90 Degree Short Elbow	45 Degree Short Elbow	Cap
	90LR	45LR	90SR	45SR	
OD (OD1)	A	B	A	B	E
15A	38.1	15.9	—	—	25.4
20A	28.45	11.1	—	—	25.4
25A	38.1	22.2	25.4	—	38.1
32A	47.8	25.4	31.8	—	38.1
40A	57.2	28.5	38.1	—	38.1
50A	76.2	35.0	50.8	—	38.1
65A	95.3	44.5	63.5	—	38.1
80A	114.3	50.8	76.2	—	50.8
100A	152.4	63.5	101.6	—	63.5
125A	190.5	79.3	127.0	—	76.2
150A	228.6	95.3	152.4	—	88.9
200A	304.8	127.0	203.2	—	101.6
250A	381.0	158.8	254.0	105.8	127.0
300A	457.2	190.5	304.8	127.0	152.4
350A	533.4	222.3	355.6	148.2	165.1
400A	609.6	254.0	406.4	169.3	177.8
450A	685.8	285.8	457.2	190.5	203.2
500A	762.0	317.5	508.0	211.7	228.6
550A	838.2	342.9	558.8	232.8	—
600A	914.4	381.0	609.6	254.0	266.7
800A	1,219.2	501.7	—	—	—

SCF Fitting (Pipe Size) - Manual Welding Type

PART 3.6

Manual Welding Fittings TYPE II, 10S to 10S, 20A-800A



Unit=mm

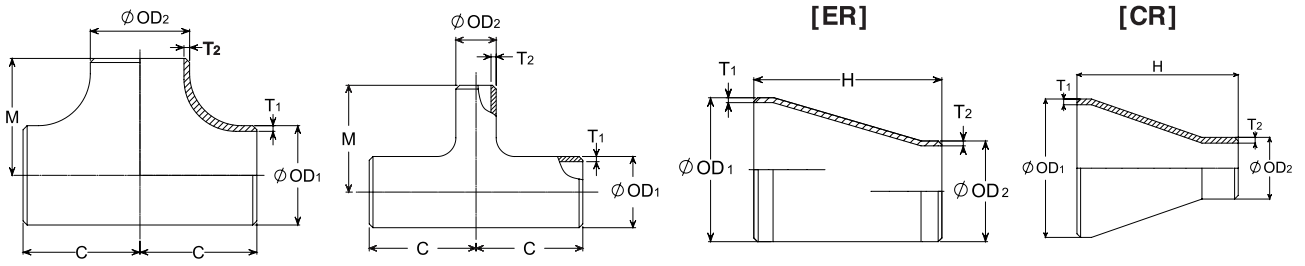
Nominal Pipe Size (*)	Equal Tee	Nominal Sizes Of Branch Pipe End OD2	Reducing Tee (R-Tee)		Concentric / Eccentric Reducer
	TEE-U	R-TEE-U		CR / ER	
OD (OD1)	C=M	OD2	C	M	H
20A	28.70	15A	28.70	28.7	38.1
25A	38.1	15A, 20A	38.1	38.1	50.8
32A	47.8	20A	47.8	47.8	—
		25A	47.8	47.8	50.8
40A	57.2	15A, 20A, 25A, 32A	57.2	57.2	63.5
50A	63.5	20A	63.5	44.5	76.2
		25A		50.8	
		32A		63.5	
		40A		60.5	
65A	76.2	25A	76.2	—	88.9
		32A		—	
		40A		66.8	
		50A		69.9	
80A	85.9	25A	—	—	88.9
		32A		—	
		40A	79.5	73.2	
		50A	85.9	76.2	
		65A		82.6	
100A	104.9	40A	104.9	85.9	101.6
		50A		88.9	
		65A		95.3	
		80A		98.6	
125A	124.0	80A	124.0	111.3	127.0
		100A		117.6	
150A	143.0	65A	143.0	120.6	139.7
		80A		124.0	
		100A		130.3	
		125A		136.7	

•"(*)", OD1 on CR, ER and R-tee fittings represents the large end diameter, OD2 represents the small end diameter.

SCF Fitting (Pipe Size) - Manual Welding Type

PART 3.6

Manual Welding Fitting TYPE II, 10S to 10S, 20A-800A



Unit=mm

Nominal Pipe Size (*)	Equal Tee	Nominal Sizes Of Branch Pipe End OD2	Reducing Tee (R-Tee)		Concentric / Eccentric Reducer
	TEE-U	R-TEE-U		CR / ER	
OD (OD1)	C=M	OD2	C	M	H
200A	177.8	100A	177.8	(128.2)*	152.4
		125A		162.1	
		150A		168.1	
250A	215.9	100A	215.9	(153.7)*	177.8
		125A		190.5	
		150A		193.5	
		200A		203.2	
300A	254.0	125A	254.0	(179.3)*	203.2
		150A		219.1	
		200A		228.6	
		250A		241.3	
350A	279.4	150A	279.4	(197.8)*	330.2
		200A		247.7	
		250A		257.2	
		300A		269.9	
400A	304.8	150A	304.8	(223.2)*	355.6
		200A		(228.2)*	
		250A		282.6	
		300A		295.3	
		350A		304.8	
450A	342.9	200A	342.9	(253.6)*	381.0
		250A		(253.6)*	
		300A		320.7	
		350A		330.2	
		400A		330.2	

SCF Fitting (Pipe Size) - Manual Welding Type

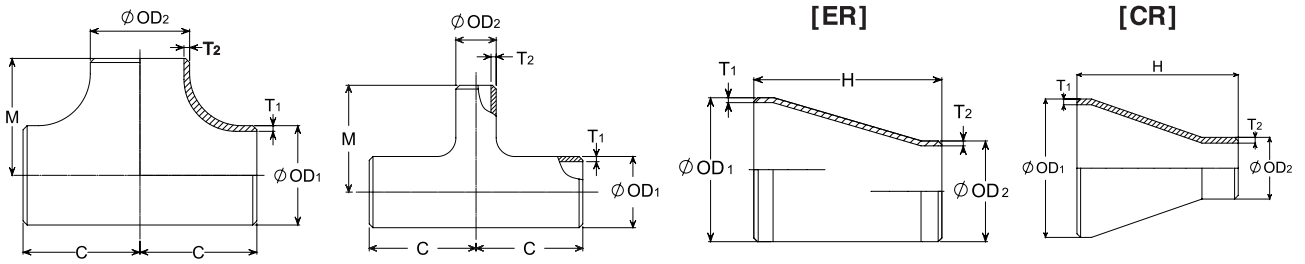
Unit=mm

Nominal Pipe Size (*)	Equal Tee	Nominal Sizes Of Branch Pipe End OD2	Reducing Tee (R-Tee)		Concentric / Eccentric Reducer
	TEE-U	R-TEE-U			CR / ER
OD (OD1)	C=M	OD2	C	M	H
500A	381.0	200A	381.0	(279)*	508.0
		250A		(279)*	
		300A		(284)*	
		350A		355.6	
		400A		355.6	
		450A		368.3	
550A	419.1	250A	419.1	(304.4)*	508.0
		300A		(309.4)*	
		350A		381.0	
		400A		381.0	
		450A		393.7	
		500A		406.4	
600A	431.8	250A	431.8	(329.8)*	508.0
		300A		(334.8)*	
		350A		406.4	
		400A		406.4	
		450A		419.1	
		500A		431.8	
		550A		431.8	
650A	495.3	300A	495.3	(360.2)*	609.6
		350A		431.8	
		400A		431.8	
		450A		444.5	
		500A		457.2	
		550A		469.9	
		600A		482.6	
700A	520.7	300A	520.7	(385.6)*	609.6
		350A		(390.6)*	
		400A		457.2	
		450A		469.9	
		500A		482.6	
		550A		495.3	
		600A		508.0	
		650A		520.7	

SCF Fitting (Pipe Size) - Manual Welding Type

PART 3.6

Manual Welding Fitting TYPE II, 10S to 10S, 20A-800A

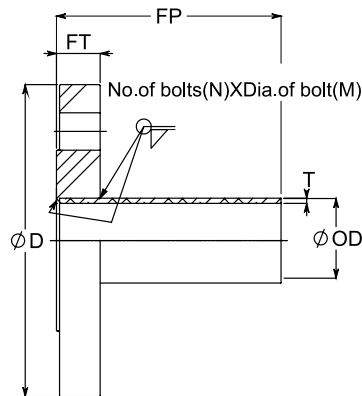


Unit=mm

Nominal Pipe Size (*)	Equal Tee	Nominal Sizes Of Branch Pipe End OD2	Reducing Tee (R-Tee)		Concentric / Eccentric Reducer
	TEE-U	R-TEE-U		CR / ER	
OD (OD1)	C=M	OD2	C	M	H
750A	558.8	250A	558.8	(406)*	609.6
		300A		(411)*	
		350A		(416)*	
		400A		482.6	
		450A		495.3	
		500A		508.0	
		550A		520.7	
		600A		533.4	
		650A		546.1	
		700A		546.1	
800A	596.9	350A	596.9	(441.4)*	609.6
		400A		(446.4)*	
		450A		(451.4)*	
		500A		(456.4)*	
		550A		546.1	
		600A		558.8	
		650A		571.5	
		700A		571.5	
750A	584.2				

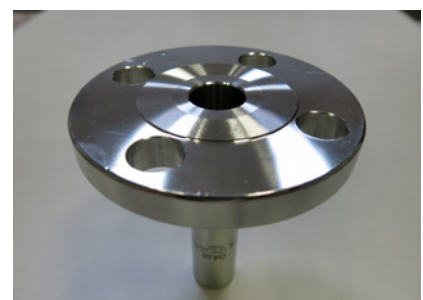
- Manual Welding type equal tees and reducing tees are formed by hydro-press.
- R-Tee, "M" value with " (*) " is draw forming. M is for reference.
- "(*)", OD1 on CR, ER and R-tee fittings represents the large end diameter; OD2 represents the small end diameter.

PART 3.7
Pipe Size Flange



Nominal Pipe Size (*)	Pipe Flange (unit : mm)				
	Length	JIS 10K			
		Outside dia.	Thickness	No. of bolt	Dia. of bolt
OD	FP	D	FT	N	M
15A	100	95	12	4	M12
20A	100	100	14	4	M12
25A	100	125	14	4	M16
32A	100	135	16	4	M16
40A	100	140	16	4	M16
50A	100	155	16	4	M16
65A	100	175	18	4	M16
80A	100	185	18	8	M16
100A	100	210	18	8	M16
125A	200	250	20	8	M20
150A	200	280	22	8	M20
200A	200	330	22	12	M20

- Flange sealing face is precision machining finish for leakage free performance.
- The standard product is suitable for Class 100 grade clean room.
For the product used in Class 10 or UHP environment, please contact us.
- All standard products are supplied for both SUS 304 and SUS 316L.
Flanges are formed by forging process.
- All the products are served by AP、BA & EP grade, oil free to 0.1 mg/ft²、
Particle < 0.3 μm, 10 pc, super clean & double pack in Class 1000 clean room.
- Pipe flange is RF type design.
- Please contact us when you need information about ANSI 150LB.
- Surface Roughness:



	EP grade	BA grade	AP grade
Interior of pipe	< 25A · Ra ≤ 0.15μm ≥ 25A · Ra ≤ 0.2μm	< 100A · Ra ≤ 0.5μm ≥ 100A · Ra ≤ 0.6μm	—
Outside of pipe	Mechanical polish / finish machining work	Mechanical polish / finish machining work	—

SCF Fitting (Tube Size)

GROUP 4**SCF Fittings (Tube Size)****PART 4.1****Technical Information****Product Type and Grade**

Product Grade	Material
AP	304, 304L, 316L
MP(BA)	304L, 316L
EP	316L

Specification of Chemical Composition

Standard value	C (wt%)	Si (wt%)	Mn (wt%)	P (wt%)	S (wt%)	Ni (wt%)	Cr (wt%)	Mo (wt%)
ASTM A269 TP316L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	10.00~15.00	16.00~18.00	2.00~3.00
ASTM A269 TP304L	≤0.035	≤1.00	≤2.00	≤0.045	≤0.030	8.00~12.00	18.00~20.00	—
ASTM A269 TP304	≤0.080	≤1.00	≤2.00	≤0.045	≤0.030	8.00~11.00	18.00~20.00	—
JIS G3459 SUS 316L TP	≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	12.00~16.00	16.00~18.00	2.00~3.00
JIS G3459 SUS 304L TP	≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	9.00~13.00	18.00~20.00	—
JIS G3459 SUS 304 TP	≤0.080	≤1.00	≤2.00	≤0.045	≤0.030	8.00~11.00	18.00~20.00	—

Dimensional Tolerance for Pipe Fittings Series

Type Of Fittings	Controlling Points		Nominal Pipe Size			
			1/8"-3/8"	1/2"-3/4"	1"-3"	4"-6"
General Tolerance For Pipe Size Fittings	Outer Diameter At Connecting Ends	OD1,d1 OD2,d2	±0.1mm	±1%		
	Wall Thickness At Ends	T, t	±10%			
Elbows, Tees	Center To End	A,B,M,C	±0.8mm		±1.6mm	
Caps	Back To End	E	±0.8mm		±3.2mm	
Reducers, Cap Reducers	Over All Length, Face To Face	H,Q	±0.8mm		±1.6mm	

●Note: SCF, Super Clean Fittings.

Manufacturing Process

Product Type	AP Finish		MP (BA) Finish		EP Finish
	Orbital Weld	Manual Weld	Orbital Weld	Manual Weld	Orbital Weld
ID bead-cut, bead removed	YES	YES	YES	YES	YES
ID mechanical polishing	NO	NO	YES	YES	YES
OD mechanical polishing#180	NO	NO	YES	YES	YES
RO Water Cleaning	YES	YES	YES	YES	YES
DI Water Cleaning	Option	Option	YES	YES	YES
Chemical Passivation	YES	YES	YES	YES	YES
Clean Room, Class 1000 Cleaning and Bagging	Option	Option	YES	YES	YES
One Layer Bagging	YES	YES	–	–	–
Double Bagging	Option	Option	YES	YES	YES

Inspection Criteria

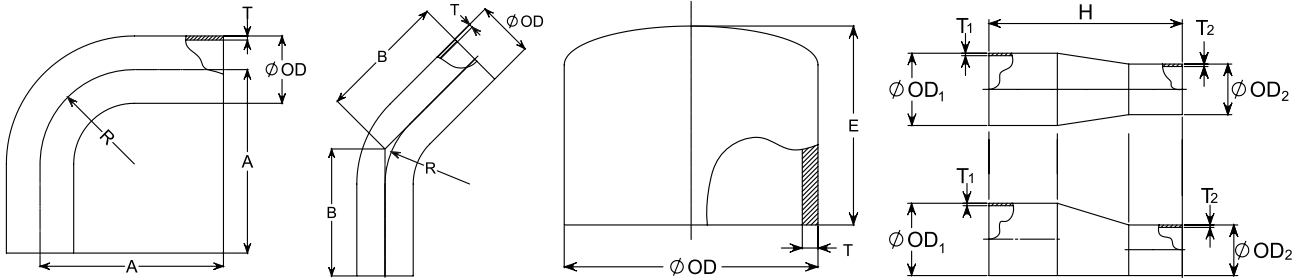
Grade Of Finish of Pipes	ID Surface Roughness, Ra	Oil residual	Particle Level
AP Finish	—	<0.1 mg/ft ²	—
MP(BA)Finish	OD ≤2" : Ra≤0.5µm	<0.1 mg/ft ²	>0.1µm, Max. 5PC
	OD 2.5"-6" : Ra≤0.6µm		
EP Finish	OD ≤4" : Ra≤0.12µm	<0.01 mg/ft ²	>0.1µm, Max. 1PC

SCF Fitting (Tube Size)

PART 4.2

UHP & JIS Standard

Orbital Welding Fittings Series Type I, 5S to 5S, 1/4"-6", Extended Tangent



Unit=mm

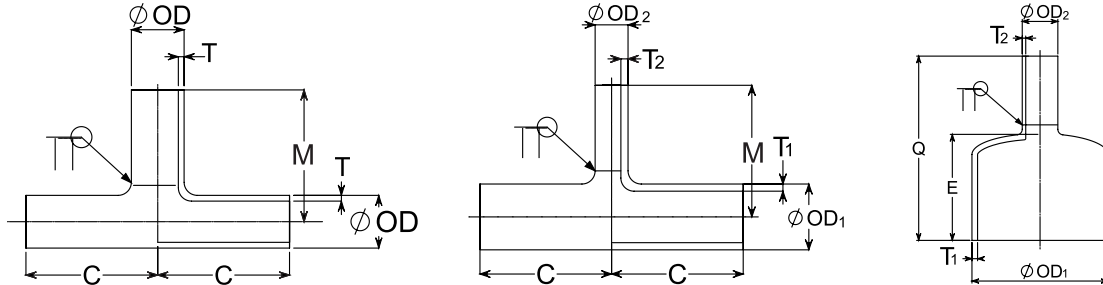
Nominal Pipe Size (*)	90 Degree Elbow		45 Degree Elbow		Cap	Reducer	
	90LR	A	45LR	B	CAP	Centric Reducer, Eccentric Reducer	
OD (OD1)	R	A	R	B	E	OD2, Small Dia. End	H
1/4"	20.0	49.0	20.0	38.0	12.7	—	—
3/8"	23.0	52.0	23.0	39.0	12.7	[1/4"]	CR70.0 ER80.0
1/2"	25.0	54.0	25.0	40.0	12.7	3/8", [1/4"]	CR75.0 ER85.0
5/8"	28.0	64.0	28.0	48.0	12.7	[1/2", 3/8", 1/4"]	90.0
3/4"	28.4	66.0	28.4	49.0	19.1	[5/8", 3/8", 1/4"] 1/2"	100.0
1"	38.1	69.0	38.1	50.0	25.4	[5/8", 3/8", 1/4", 15A] 3/4", 1/2"	105.0
1-1/4"	47.6	84.0	47.6	56.0	38.1	1", [1/4"~3/4", 15A~20A]	120.0
1-1/2"	57.2	104.0	57.2	70.0	38.1	1 1/4", 1" [1/4"~3/4"] 1 1/2", 1", [1 1/4", 1/4"~3/4", 15A~40A]	125.0
2"	76.2	123.0	76.2	78.0	38.1	1 1/2" 1" [1/4"~1 1/4", 15A~40A]	130.0
2-1/2"	95.3	147.0	95.3	91.0	38.1	2" 1 1/2" [1/4"~1 1/4"] [15A~50A]	140.0
3"	114.3	161.0	95.3	91.0	38.1	2 1/2" 2" [1 1/2"~1/4"] [15A~50A]	165.0
4"	133.4	185.0	133.4	107.0	63.5	3", 2 1/2", 2" [1 1/2"~1/4"] [15A~80A]	175.0
5"	190.5	250.0	190.5	140.0	—	[15A~100A, 1/4"~4"]	230.0
6"	228.6	290.0	228.6	155.0	—	[15A~125A, 1/4"~5"]	250.0

- "(*)", OD1 on CR, ER and R-tee fittings represents the large end diameter; OD2 represents the small end diameter.
- 90 degree and 45 degree long tangent elbow, 1/4"-4" is formed by one step bending process.
- please contact us for reducers which listed in [] bracket for both concentric and eccentric types.

PART 4.3

Tube Fittings

Orbital Welding Fittings Series Type II, 5S to 5S, 1/4"-6", Extended Tangent



Unit=mm

Nominal Pipe Size (*)	Equal Tee	Reducing Tee			Cap Reducer	
	Tee	R-Tee			CAP	
OD (OD1)	C=M	OD2	C	M	E	Q
1/4"	35.0	—	—	—	—	—
3/8"	37.0	1/4"	37.0	37.0	—	—
1/2"	39.0	3/8", 1/4"	39.0	39.0	—	—
5/8"	49.0	1/2", 3/8", 1/4"	47.0	44.0	—	—
3/4"	52.0	1/2", 3/8", 1/4"	47.0	44.0	19.1	54
		5/8"	52.0	52.0		60
1"	55.0	1/2", 3/8", 1/4"	47.0	47.0	25.4	60
		3/4", 5/8", 15A	55.0	55.0		67
1-1/4"	59.0	1/2", 3/8", 1/4"	47.0	50.0	38.1	73
		3/4", 5/8", 1", 20A, 15A	59.0	59.0		80
1-1/2"	74.0	1/2", 3/8", 1/4"	57.0	54.0	38.1	73
		1 1/4", 1", 3/4", 5/8", 25A, 20A, 15A	68.0	62.0		80
2"	77.0	1/2", 3/8", 1/4"	57.0	57.0	38.1	73
		1 1/4", 1", 3/4", 5/8", 25A, 20A, 15A	68.0	65.0		80
		1 1/2", 40A, 32A	77.0	77.0		90
2-1/2"	90.0	1/2", 3/8", 1/4"	61.0	63.0	38.1	73
		1 1/4", 1", 3/4", 5/8", 25A, 20A, 15A	72.0	71.0		80
		2", 1 1/2", 50A, 40A, 32A	90.0	83.0		90
3"	97.0	1/2", 3/8", 1/4"	61.0	71.0	38.1	73
		1 1/4", 1", 3/4", 5/8", 25A, 20A, 15A	72.0	79.0		80
		2", 1 1/2", 50A, 40A, 32A	90.0	90.0		90
		2 1/2", 65A	97.0	97.0		95
4"	110.0	1/2", 3/8", 1/4"	61.0	87.0	63.5	98
		1 1/4", 1", 3/4", 5/8", 25A, 20A, 15A	72.0	95.0		105
		2", 1 1/2", 50A, 40A, 32A	90.0	105.0		115
		3", 2 1/2", 80A, 65A	110.0	110.0		125
6"	160.0	4"	140.0	145.0	—	—

•"(*)", OD1 on CR, ER and R-tee fittings represents the large end diameter; OD2 represents the small end diameter.

Customization Services

GROUP 5

ODM, OEM & Electro-polishing Contract Service

ODM, OEM & EP Service :

Nickel, Stainless Steel Fittings, Tank, Valve Body, Pipes, Medical Instrument & Surgery Tools, Etc.



EP Fitting



EP Tank



EP fittings

Criteria Of Quality of EP Process	Capability and Measurement
SURFACE ROUGHNESS (Ra)	$Ra \leq 0.13\mu m$
Cr/Fe Ratio	≥ 1.5
CrO/FeO Ratio	≥ 2.0
Surface Defect Amount Check In SEM (3500times)	20, Max.
Effective Thickness Of Passivation	15 Å, Min.

•All data showing the quality as above are measured from surface profile-meter, ESCA (Electron Spectroscopy for Chemical Analysis), AES (Auger Electron Spectroscopy) and other methods.

Clean-Room Cleaning And Packaging Service

Clean- Room Grade	Process Ability and Quality Requirements
Class 10/100/1000 x 1	Fittings and parts smaller than 4" Oil residual < 0.01mg/ft ² , Particle 0.1µm<1PC
Class 100/1000 x 1	6 meters (20 feet) long pipe, < 800A (32") Oil residual < 0.1mg/ft ² , Particle 0.3µm<10

DAJA

High Purity Pipes & Pipe Fittings



Micro Butt-Welding Fittings



Iok-DJ® Compression Fittings



Metal Gasket Face Seal Fittings



HP Ball Valve



UHP CGA/DISS Fittings Series





Quality certification

1994: Certified to ISO 9002

1998: Certified to ISO 14001

2002: Certified to ISO 9001 (replacing ISO 9002)

2007: Certified to JIS MARK (JQA JIS B2312) (JQA JIS B2313)

2009: Certified to ISO 9001 : 2008

2013: Certified to JIS MARK (JQA JIS B2309)

2017: Certified to ISO 9001:2015

2020: Certified to NSF/ANSI 61-G

OUR PRODUCT & SERVICE

1. High Purity Pipe & Pipe Fitting.
2. High Purity Micro Butt-Welding Fittings.
3. High Purity Metal Gasket Face Seal Fittings.
4. UHP CGA/Diss Fittings Series.
5. Compression Fittings.
6. High Purity Ball Valves.
7. Manifold Pipe/Tube.
8. Contract Service: High Purity Welding components (in clean room).
9. Customized electro-polishing and UHP clean service.



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