

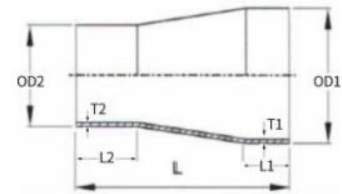
Huzhou Zhongrui Cleaning

AUTOMATIC WELDED TUBE FITTINGS



Available in stainless steel 316 material
Working pressure Max: 12KG
If you have other customization needs, please contact
the dedicated business manager.

WELDING REDUCER



ASME Fitting specification

Spec	OD1*T1	OD2*T2	L
3/8*1/4	9.53*0.89/1	6.35*0.89/1	70
1/2*1/4	12.7*1.24/1	6.35*0.89/1	75
1/2*3/8	12.7*1.24/1	9.53*0.89/1	75
5/8*1/4	15.88*1.24	6.35*0.89/1	75
5/8*3/8	15.88*1.24	9.53*0.89/1	75
5/8*1/2	15.88*1.24	12.7*0.89/1	75
3/4*1/4	19.05*1.65/1.24	6.35*0.89/1	100
3/4*3/8	19.05*1.65/1.24	9.53*0.89/1	100
3/4*1/2	19.05*1.65/1.24	12.7*1.24/]	100
3/4*5/8	19.05*1.65/1.24	15.88*1.24	100
1*1/4	25.4*1.65/1.24	6.35*0.89/1	105
1*3/8	25.4*1.65/1.24	9.53*0.89/1	105
1*1/2	25.4*1.65/1.24	12.7*1.24/1	105
1*5/8	25.4*1.65/1.24	15.88*1.24	105
1*3/4	25.4*1.65/1.24	19.05*1.65/1	105
1-1/4*1/4	31.8*1.65	6.35*0.89/1	105
1-1/4*3/8	31.8*1.65	9.53*0.89/1	105
1-1/4*1/2	31.8*1.65	12.7*1.24/1	105
1-1/4*5/8	31.8*1.65	15.88*1.24	105
1-1/4*3/4	31.8*1.65	19.05*1.65/1.24	105
1-1/4*1	31.8*1.65	25.4*1.65/1.24	105
1-1/2*1/4	38.1*1.65	6.35*0.89/1	133
1-1/2*3/8	38.1*1.65	9.53*0.89/1	133
1-1/2*1/2	38.1*1.65	12.7*1.24/1	133
1-1/2*5/8	38.1*1.65	15.88*1.24	133
1-1/2*3/4	38.1*1.65	19.05*1.65/1	133
1-1/2*1	38.1*1.65	25.4*1.65/1.24	133
1-1/2*1-1/4	38.1*1.65	31.8*1.65	133
2*1/4	50.8*1.65	6.35*0.89/1	140
2*3/8	50.8*1.65	9.53*0.89/1	140
2*1/2	50.8*1.65	12.7*1.24/1	140
2*5/8	50.8*1.65	15.88*1.24	140
2*3/4	50.8*1.65	19.05*1.65/1	140
2*1	50.8*1.65	25.4*1.65/1	140
2*1-1/4	50.8*1.65	31.8*1.65	140
2*1-1/2	50.8*1.65	38.1*1.65/1	140
2-1/2*1/4	63.5*1.65	6.35*0.89/1	146
2-1/2*3/8	63.5*1.65	9.53*0.89/1	146
2-1/2*1/2	63.5*1.65	12.7*1.24/1	146
2-1/2*5/8	63.5*1.65	15.88*1.24	146
2-1/2*3/4	63.5*1.65	19.05*1.65/1	146
2-1/2*1	63.5*1.65	25.4*1.65/1.24	146

Spec	OD1*T1	OD2*T2	L
2-1/2*1-1/4	63.5*1.65	31.8*1.65	146
2-1/2*1-1/2	63.5*1.65	38.1*1.65	146
2-1/2*2	63.5*1.65	50.8*1.65	146
3*1/4	76.2*1.65	6.35*0.89/1	165
3*3/8	76.2*1.65	9.53*0.89/1	165
3*1/2	76.2*1.65	12.7*1.24/1	165
3*5/8	76.2*1.65	15.88*1.24	165
3*3/4	76.2*1.65	19.05*1.65/]	165
3*1	76.2*1.65	25.4*1.65/1.24	165
3*1-1/4	76.2*1.65	31.8*1.65	165
3*1-1/2	76.2*1.65	38.1*1.65	165
3*2	76.2*1.65	50.8*1.65	165
3*2-1/2	76.2*1.65	63.5*1.65	165
4*1/2	101.6*2.11	12.7*1.24/1	175
4*5/8	101.6*2.11	15.88*1.24	175
4*3/4	101.6*2.11	19.05*1.65/]	175
4*1	101.6*2.11	25.4*1.65/1.24	175
4*1-1/4	101.6*2.11	31.8*1.65	175
4*1-1/2	101.6*2.11	38.1*1.65	175
4*2	101.6*2.11	50.8*1.65	175
4*2-1/2	101.6*2.11	63.5*1.65	175
4*3	101.6*2.11	76.2*1.65	175
5*1/2	127*2.11	12.7*1.24/1	230
5*5/8	127*2.11	15.88*1.24	230
5*3/4	127*2.11	19.05*1.65/]	230
5*1	127*2.11	25.4*1.65/1.24	230
5*1-1/4	127*2.11	31.8*1.65	230
5*1-1/2	127*2.11	38.1*1.65	230
5*2	127*2.11	50.8*1.65	230
5*2-1/2	127*2.11	63.5*1.65	230
5*3	127*2.11	76.2*1.65	230
5*4	127*2.11	101.6*2.11	230
6*5/8	152.4*2.77	15.88*1.24	292
6*3/4	152.4*2.77	19.05*1.65/]	292
6*1	152.4*2.77	25.4*1.65/1.24	292
6*1-1/4	152.4*2.77	31.8*1.65	292
6*1-1/2	152.4*2.77	38.1*1.65	292
6*2	152.4*2.77	50.8*1.65	292
6*2-1/2	152.4*2.77	63.5*1.65	292
6*3	152.4*2.77	76.2*1.65	292
6*4	152.4*2.77	101.6*2.11	292
6*5	152.4*2.77	127*2.11	292

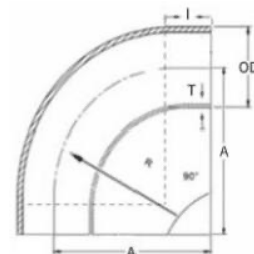
ZR AUTO Matic WELDED TUBE FITTINGS

A Japanese style tube fittings standard

Spec	OD1*T1	OD2*T2	L
8A*10A	17.3*1.20	13.8*1.20	90
15A*8A	21.7*1.65	13.8*1.20	100
15A*10A	21.7*1.65	17.3*1.20	100
20A*8A	27.2*1.65	13.8*1.20	105
20A*10A	27.2*1.65	17.3*1.20	105
20A*15A	27.2*1.65	21.7*1.65	105
25A*8A	34.0*1.65	13.8*1.20	120
25A*10A	34.0*1.65	17.3*1.20	120
25A*15A	34.0*1.65	21.7*1.65	120
25A*15A	34.0*1.65	27.2*1.65	120
25A*20A	34.0*1.65	13.8*1.20	120
32A*8A	42.7*1.65	17.3*1.20	125
32A*10A	42.7*1.65	21.7*1.65	125
32A*15A	42.7*1.68	27.2*1.65	125
32A*25A	42.7*1.65	34.0*1.65	125
40A*8A	48.6*1.65	13.8*1.20	130
40A*10A	48.6*1.65	17.3*1.20	130
40A*15A	48.6*1.65	21.7*1.65	130
40A*20A	48.6*1.65	27.2*1.65	130
40A*25A	48.6*1.65	34.0*1.65	130
40A*32A	48.6*1.65	42.7*1.65	130
50A*8A	60.5*1.65	13.8*1.20	140
50A*10A	60.5*1.65	17.3*1.20	140
50A*15A	60.5*1.65	21.7*1.65	140
50A*20A	60.5*1.65	27.2*1.65	140
50A*25A	60.5*1.65	34.0*1.65	140
50A*32A	60.5*1.65	42.7*1.65	140
50A*40A	60.5*1.65	48.6*1.65	140
65A*8A	76.3*2.1	13.8*1.20	165
65A*10A	76.3*2.1	17.3*1.20	165
65A*15A	76.3*2.1	21.7*1.65	165
65A*20A	76.3*2.1	27.2*1.65	165
65A*25A	76.3*2.1	34.0*1.65	165
65A*32A	76.3*2.1	42.7*1.65	165
65A*40A	76.3*2.1	48.6*1.65	165
65A*50A	76.3*2.1	60.5*1.65	165
80A*8A	89.1*2.1	13.8*1.20	170
80A*10A	89.1*2.1	17.3*1.20	170
80A*15A	89.1*2.1	21.7*1.65	170
80A*20A	89.1*2.1	27.2*1.65	170
80A*25A	89.1*2.1	34.0*1.65	170
80A*32A	89.1*2.1	42.7*1.65	170
80A*40A	89.1*2.1	48.6*1.65	170
80A*50A	89.1*2.1	60.5*1.65	170
80A*65A	89.1*2.1	76.3*2.1	170
100A*8A	114.3*2.1	13.8*1.20	180

Spec	OD1*T1	OD2*T2	L
100A*10A	114.3*2.1	17.3*1.20	180
100A*15A	114.3*2.1	21.7*1.65	180
100A*20A	114.3*2.1	27.2*1.65	180
100A*25A	114.3*2.1	34.0*1.65	180
100A*32A	114.3*2.1	42.7*1.65	180
100A*40A	114.3*2.1	48.6*1.65	180
100A*50A	114.3*2.1	60.5*1.65	180
100A*65A	114.3*2.1	76.3*2.1	180
100A*80A	114.3*2.1	89.1*2.1	180
125A*8A	139.8*2.8	13.8*1.20	250
125A*10A	139.8*2.8	17.3*1.20	250
125A*15A	139.8*2.8	21.7*1.65	250
125A*20A	139.8*2.8	27.2*1.65	250
125A*25A	139.8*2.8	34.0*1.65	250
125A*32A	139.8*2.8	42.7*1.65	250
125A*40A	139.8*2.8	48.6*1.65	250
125A*50A	139.8*2.8	60.5*1.65	250
125A*65A	139.8*2.8	76.3*2.1	250
125A*80A	139.8*2.8	89.1*2.1	250
125A*100A	139.8*2.8	114.3*2.1	250
150A*8A	165.2*2.8	13.8*1.20	260
150A*10A	165.2*2.8	17.3*1.20	260
150A*15A	165.2*2.8	21.7*1.65	260
150A*20A	165.2*2.8	27.2*1.65	260
150A*25A	165.2*2.8	34.0*1.65	260
150A*32A	165.2*2.8	42.7*1.65	260
150A*40A	165.2*2.8	48.6*1.65	260
150A*50A	165.2*2.8	60.5*1.65	260
150A*65A	165.2*2.8	76.3*2.1	260
150A*80A	165.2*2.8	89.1*2.1	260
150A*100A	165.2*2.8	114.3*2.1	260
150A*125A	165.2*2.8	139.8*2.8	260
200A*8A	216.3*2.8	13.8*1.20	280
200A*10A	216.3*2.8	17.3*1.20	280
200A*15A	216.3*2.8	21.7*1.65	280
200A*20A	216.3*2.8	27.2*1.65	280
200A*25A	216.3*2.8	34.0*1.65	280
200A*32A	216.3*2.8	42.7*1.65	280
200A*40A	216.3*2.8	48.6*1.65	280
200A*50A	216.3*2.8	60.5*1.65	280
200A*65A	216.3*2.8	76.3*2.1	280
200A*80A	216.3*2.8	89.1*2.1	280
200A*100A	216.3*2.8	114.3*2.1	280
200A*125A	216.3*2.8	139.8*2.8	280
200A*150A	216.3*2.8	165.2*2.8	280

THE WELDING ELBOW 90°



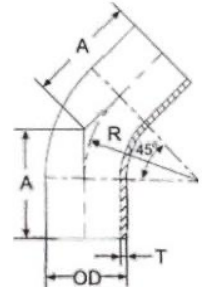
ASME Fitting standard

Specification	OD	T	A	R
1/4	6.35	0.89/1.0	66.68	15.88
3/8	9.53	0.89/1.0	66.68	23.8
1/2	12.7	1.24/1.0	76.2	19.05
3/4	19.05	1.65/1.24	76.2	28.6
1	25.4	1.65/1.24	101.6	38.1
1-1/4	31.8	1.65	85.7	47.70
1-1/2	38.1	1.65	95.25	57.15
2	50.8	1.65	120.65	76.2
2-1/2	63.5	1.65	139.7	95.25
3	76.2	1.65	158.75	114.3
4	101.6	2.11	203.2	152.4
6	152.4	2.77	355.6	228.6

A Japanese style tube fittings standard

Spec	OD	T	A		R
8A	13.8	1.2	55	29	25.4
10A	17.3	1.2	62	36	25.4
15A	21.7	1.65	75	36	38.1
20A	27.2	1.65	75	36	38.1
25A	34.0	1.65	75	36	38.1
32A	42.7	1.65	94	46	47.4
40A	48.6	1.65	104	46	57.2
50A	60.5	1.65	123	46	76.2
65A	76.3	2.1	147	51	95.3
80A	89.1	2.1	166	51	114.3
100A	114.3	2.1	204	51	152.4
125A	139.8	2.8	250	56	190.5
150A	165.5	2.8	290	56	228.6
200A	216.3	2.8	375	56	304.8

THE WELDING ELBOW 45°



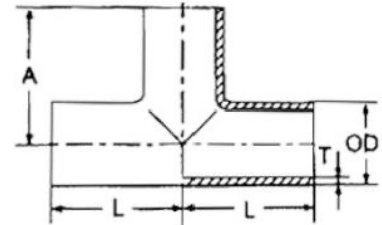
ASME Fitting standard

Specification	OD	T	A	R
1/4	6.35	0.89/1.0	51	15.88
3/8	9.53	0.89/1.0	51	23.80
1/2	12.7	1.24/1.0	64	19.05
3/4	19.05	1.65/1.24	64	28.70
1	25.4	1.65/1.24	79	38.10
1-1/2	38.1	1.65	64	57.15
2	50.8	1.65	76	76.20
2-1/2	63.5	1.65	86	95.25
3	76.2	1.65	92	114.30
4	101.6	2.11	114	152.40
6	152.4	2.77	222	228.60

A Japanese style tube fittings standard

Size	OD	T	A		R
8A	13.8	1.2	40	29	25.4
10A	17.3	1.2	47	36	25.4
15A	21.7	1.65	52	36	38.1
20A	27.2	1.65	52	36	38.1
25A	34.0	1.65	52	36	38.1
32A	42.7	1.65	66	46	47.4
40A	48.6	1.65	70	46	57.2
50A	60.5	1.65	78	46	76.2
65A	76.3	2.1	91	51	95.3
80A	89.1	2.1	99	51	114.3
100A	114.3	2.1	115	51	152.4
125A	139.8	2.8	145	56	190.5
150A	165.5	2.8	155	56	228.6
200A	216.3	2.8	195	56	304.8

WELDING EQUAL TEE



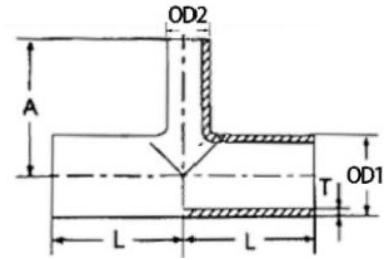
ASME Fitting standard

Specification	OD	T	L	A
1/4	6.35	0.89	44	44
3/8	9.53	0.89	44	44
1/2	12.7	1.24	54	54
3/4	19.05	1.65	54	54
1	25.4	1.65	64	64
1-1/2	38.1	1.65	70	70
2	50.8	1.65	83	83
2-1/2	63.5	1.65	89	89
3	76.2	1.65	140	140
4	101.6	2.11	152	152
6	152.4	2.77	270	270

A Japanese style tube fittings standard

Specification	OD	T	A	
8A	13.8	1.2	42	42
10A	17.3	1.2	49	49
15A	21.7	1.65	59	59
20A	27.2	1.65	65	65
25A	34.0	1.65	68	68
32A	42.7	1.65	88	88
40A	48.6	1.65	95	95
50A	60.5	1.65	102	102
65A	76.3	2.1	121	121
80A	89.1	2.1	130	130
100A	114.3	2.1	145	145
125A	139.8	2.8	160	160
150A	165.5	2.8	170	175
200A	216.3	2.8	190	190

WELDED REDUCING TEE



ASME Fitting standard

SPEC	OD1	OD2	A*L
3/8*1/4	9.53	6.35	44
1/2*1/4	12.7	6.35	54
1/2*3/8	12.7	9.53	54
5/8*1/4	15.88	6.35	54
5/8*3/8	15.88	9.53	54
5/8*1/2	15.88	12.7	54
3/4*1/4	19.05	6.35	54
3/4*3/8	19.05	9.53	54
3/4*1/2	19.05	12.7	54
3/4*5/8	19.05	15.88	54
1*1/4	25.4	6.35	64
1*3/8	25.4	9.53	64
1*1/2	25.4	12.7	64
1*5/8	25.4	15.88	64
1*3/4	25.4	19.05	64
1-1/4*1/4	31.8	6.35	64
1-1/4*3/8	31.8	9.53	64
1-1/4*1/2	31.8	12.7	64
1-1/4*5/8	31.8	15.88	64
1-1/4*3/4	31.8	19.05	64
1-1/4*1	31.8	25.4	64
1-1/2*1/4	38.1	6.35	70
1-1/2*3/8	38.1	9.53	70
1-1/2*1/2	38.1	12.7	70
1-1/2*5/8	38.1	15.88	70
1-1/2*3/4	38.1	19.05	70
1-1/2*1	38.1	25.4	70
1-1/2*1-1/4	38.1	31.8	70
2*1/4	50.8	6.35	83
2*3/8	50.8	9.53	83
2*1/2	50.8	12.7	83
2*5/8	50.8	15.88	83
2*3/4	50.8	19.05	83
2*1	50.8	25.4	83
2*1-1/4	50.8	31.8	83
2*1-1/2	50.8	38.1	83
2-1/2*1/4	63.5	6.35	89
2-1/2*3/8	63.5	9.53	89

SPEC	OD1	OD2	A*L
2-1/2*1/2	63.5	12.7	89
2-1/2*5/8	63.5	15.88	89
2-1/2*3/4	63.5	19.05	89
2-1/2*1	63.5	25.4	89
2-1/2*1-1/4	63.5	31.8	89
2-1/2*1-1/2	63.5	38.1	89
2-1/2*2	63.5	50.8	89
3*1/4	76.2	6.35	95
3*3/8	76.2	9.53	95
3*1/2	76.2	12.7	95
3*5/8	76.2	15.88	95
3*3/4	76.2	19.05	95
3*1	76.2	25.4	95
3*1-1/4	76.2	31.8	95
3*1-1/2	76.2	38.1	95
3*2	76.2	50.8	95
3*2-1/2	76.2	63.5	95
4*1/2	101.6	12.7	108
4*5/8	101.6	15.88	108
4*3/4	101.6	19.05	108
4*1	101.6	25.4	108
4*1-1/4	101.6	31.8	108
4*1-1/2	101.6	38.1	108
4*2	101.6	50.8	108
4*2-1/2	101.6	63.5	108
4*3	101.6	76.2	108
6*1/2	152.4	12.7	152
6*5/8	152.4	15.88	152
6*3/4	152.4	19.05	152
6*1	152.4	25.4	152
6*1-1/4	152.4	31.8	152
6*1-1/2	152.4	38.1	152
6*2	152.4	50.8	152
6*2-1/2	152.4	63.5	152
6*3	152.4	76.2	279
6*4	152.4	101.6	279
6*5	152.4	127	279

A Japanese style tube fittings standard

OD1	OD2	L	A
8A(13.8)	1/2"-1/4"	42	42
10A(17.3)	1/2"-1/4", 8A	47	44
15A(21.7)	1/2"-1/4", 8A	47	44
	3/4", 5/8", 10A	52	52
20A(27.2)	1/2"-1/4", 8A	47	47
	1", 3/4", 5/8", 15A, 10A	55	55
25A(34.0)	1/2"-1/4", 8A	47	50
	1-1/4", 1", 3/4", 5/8", 20A-10A	59	59
32A(42.7)	1/2"-1/4", 8A	57	54
	1-1/4", 1", 3/4", 5/8", 20A-10A	68	62
40A(48.6)	1/2"-1/4", 8A	57	57
	1-1/4", 1", 3/4", 5/8", 20A-10A	68	65
	1-1/2", 32A	77	77
50A(60.5)	1/2"-1/4", 8A	57	63
	1-1/4", 1", 3/4", 5/8", 20A-10A	68	71
	2", 1-1/2", 40A, 32A	83	83
65A(76.3)	1/2"-1/4", 8A	61	71
	1-1/4", 1", 3/4", 5/8", 20A-10A	72	79
	2", 1-1/2", 50A, 40A, 32A	88	90
	2-1/2"	97	97
80A(89.1)	1/2"-1/4", 8A	61	77
	1-1/4", 1", 3/4", 5/8", 20A-10A	72	85
	2", 1-1/2", 50A, 40A, 32A	88	96
	3", 2-1/2", 65A	103	103
100A(114.3)	1/2"-1/4", 8A	61	90
	1-1/4", 1", 3/4", 5/8", 20A-10A	72	98
	2", 1-1/2", 50A, 40A, 32A	88	109
	4", 3", 2-1/2", 80A, 65A	116	116
125A(139.8)	1/2"-1/4", 8A	80	110
	1-1/4", 1", 3/4", 5/8", 20A-10A	100	120
	2", 1-1/2", 50A, 40A, 32A	120	130
	4", 3", 2-1/2", 100A, 80A, 65A	140	140
	5"	160	160
150A(165.2)	1/2"-1/4", 8A	90	130
	1-1/4", 1", 3/4", 5/8", 20A-10A	110	140
	2", 1-1/2", 50A, 40A, 32A	130	150
	4", 3", 2-1/2", 100A, 80A, 65A	150	160
	5", 125A	170	170
200A(216.3)	1/2"-1/4", 8A	100	150
	1-1/4", 1", 3/4", 5/8", 20A-10A	120	160
	2", 1-1/2", 50A, 40A, 32A	140	170
	4", 3", 2-1/2", 100A, 80A, 65A	160	180
	6", 5", 150A, 125A	180	190

Huzhou Zhongrui Cleaning

CASTING TUBE FITTINGS

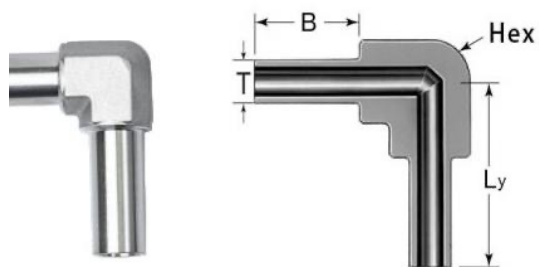


Stainless steel 316L structure

Welding method: suitable for automatic welding equipment and manual welding

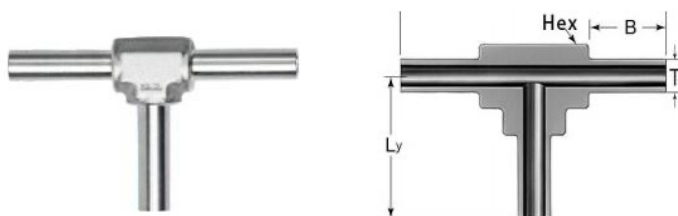
Finish: BA&EP level

CASTING ELBOW



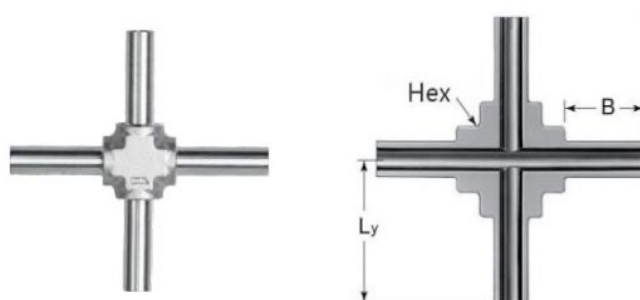
T	B	Ly	Hex	W. Thk	Pressure
1/4"	22	32	12.7	0.89	5100
3/8"	22	32	12.7	0.89	3300
1/2"	22	34	16	1.24	3700
3/4"	22	37	24	1.65	3300
1"	22	39	27	1.65	2400

CASTING TEE



T	B	Ly	Hex	W. Thk	Pressure
1/4"	22	30	11	0.89	5100
3/8"	22	30	11	0.89	3300
1/2"	22	32	14.3	1.24	3700
3/4"	22	37	22	1.65	3300
1"	22	38	27	1.65	2400

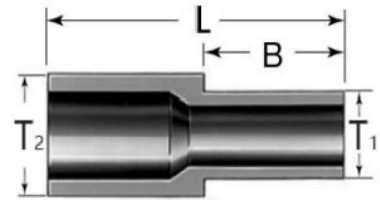
CASTING CROSS



T	B	Ly	Hex	W. Thk	Pressure
1/4"	22	30	11	0.89	5100
3/8"	22	30	11	0.89	3300
1/2"	22	32	14.3	1.24	3700

ZR CASTING TUBE FITTINGS

CASTING REDUCER



L	T2	W. Thk	B	T1	W. Thk	Pressure
38.2	3/8"	0.89	19.1	1/4"	0.89	3300
38.2	1/2"	1.24	19.1	1/4"	0.89	3700
38.2	1/2"	1.24	19.1	3/8"	0.89	3700
38.2	3/4"	1.65	19.1	1/4"	0.89	3300
38.2	3/4"	1.65	19.1	3/8"	0.89	3300
38.2	3/4"	1.65	19.1	1/2"	1.24	3300
38.2	1"	1.65	19.1	1/4"	0.89	2400
38.2	1"	1.65	19.1	3/8"	0.89	2400
38.2	1"	1.65	19.1	1/2"	1.24	2400
38.2	1"	1.65	19.1	3/4"	1.65	2400

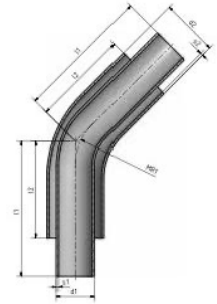
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DOUBLE CASING PARTS AND FITTINGS



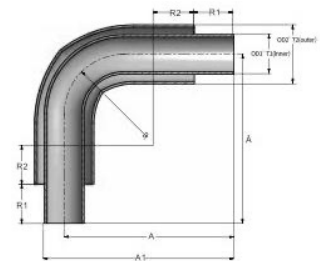
ZR DOUBLE CASING PARTS AND FITTINGS

COAX ELBOW 45°



SIZE				R	R1	R2
Inner OD	Inner Thk	Outer OD	Outer Thk			
1/4"	0.889	1/2"	1.24	25	40	29
3/8"	0.889	5/8"	1.24	28	40	36
1/2"	1.24	3/4"	1.24	35	40	36
3/4"	1.65	1"	1.65			
1"	1.65	1-1/4"	1.65			

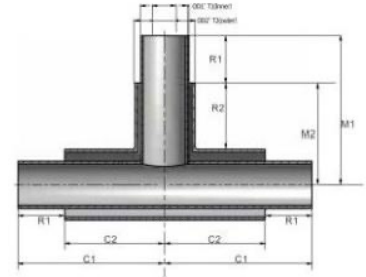
COAX ELBOW 90°



SIZE				R	R1	R2	A	A1
Inner OD	Inner Thk	Outer OD	Outer Thk					
1/4"	0.889	1/2"	1.24	25	40	29	94	97
3/8"	0.889	5/8"	1.24	28	40	36	104	112
1/2"	1.24	3/4"	1.24	35	40	36	106	112
3/4"	1.65	1"	1.65	35	40	36		
1"	1.65	1-1/4"	1.65	35	40	36		
1-1/4"	1.65	1-1/2"	1.65	47.6	40	36		

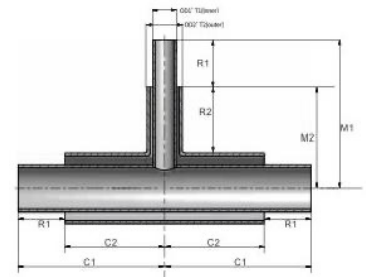
ZR DOUBLE CASING PARTS AND FITTINGS

COAX OF SAME DIAMETER TEE



SIZE				R1	R2	C1 (M1)	C2 (M2)	m1	m2
Inner tube O D	Inner Tube Thk	Outer Tube O D	Outer Tube Thk						
1/4"		1/2"		40	29	82	42		
3/8"		5/8"		40	36	89	49		
1/2"		3/4"		40	36	92	52		
3/4"		1"		40	44	95	55		
1"		1-1/4"		40	45	99	59		
1-1/4"		1-1/2"		46	51	114	68		

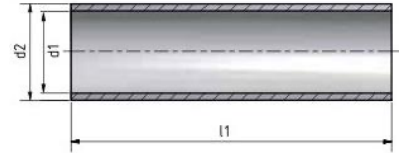
COAX REDUCING TEE



SIZE				R	R1	R2	A
Inner Tube O D	Inner Tube Thk	Outer Tube O D	Outer Tube Thk				
3/8"*1/4"		5/8"*1/2"		87	84	47	44
1/2"*1/4"		3/4"*1/2"		87	84	47	44
1/2"*3/8"		3/4"*5/8"		92	92	52	52
3/4"*1/4"		1"*1/2"		87	87	47	47
3/4"*3/8"		1"*5/8"		95	95	55	55
3/4"*1/2"		1"*3/4"		46	51	114	68
1"*1/4"		1-1/4"*1/2"		95	95	55	55
1"*3/8"		1-1/4"*5/8"		99	99	59	59
1"*1/2"		1-1/4"*3/4"		99	99	59	59
1"*3/4"		1-1/4"*1"		99	99	59	59
1-1/4"*1/4"		1-1/2"*1/2"		99	99	59	59
1-1/4"*3/8"		1-1/2"*5/8"		99	99	59	59
1-1/4"*1/2"		1-1/2"*3/4"		99	99	59	59
1-1/4"*3/4"		1-1/2"*1"		99	99	59	59
1-1/4"*1"		1-1/2"*1-1/4"		99	99	59	59

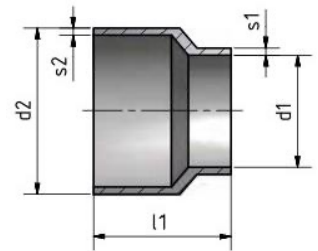
ZR DOUBLE CASING PARTS AND FITTINGS

SLIDING BUSH



T	D	D	D1	D2	L1
1/4"	6.35	12.7	12.9	15.88	101.6
3/8"	9.53	15.88	16.11	19.05	101.6
1/2"	12.7	19.05	19.3	22.23	101.6
3/4"	19.05	25.4	25.6	30	101.6
1"	25.4	38.1	38.4	42.4	101.6

CLOSING RING



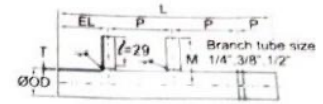
T	D	D	D1
1/4"	6.35	12.7	25.4
3/8"	9.53	15.88	25.4
1/2"	12.7	19.05	25.4
3/4"	19.05	25.4	31.75
1"	25.4	38.1	31.75

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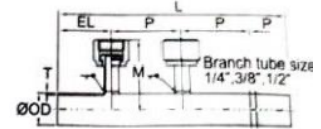
TUBE ARRANGEMENT TEE



ZR TUBE ARRANGEMENT TEE



Tube-end



Female

TUBE ARRANGEMENT TEE

Specification(American standard inch product standard)

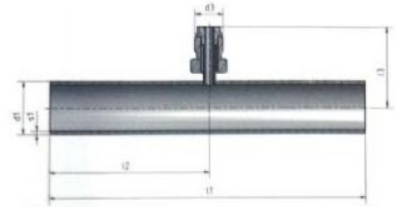
Nominal pipeline size	Pipe tee							height	
	Length	Strength	Total length				Ends	Inner hol	
			No. of branches						
OD	EL	P	2	3	4	5			
15A	60	125	245	370	495	620	44	39.5	
20A							47	42.5	
25A							50	46.5	
32A							54	51	
40A							57	54	
50A							63	60	
65A	70	145	285	430	575	720	71	68	
80A							77	74.5	
100A							90	87	

Specification(Japanese standard JIS G3459、JIS G3463、JIS G3468 product standard)

Nominal pipeline size	Pipe tee							Height	
	Length	Strength	Total length				Ends	Inner hole	
			No. of branches						
OD	EL	P	2	3	4	5			
1/4"	76.2	152.4	304.8	457.2	609.6	762	35	31.5	
3/8"							37	33.5	
1/2"							39	35	
5/8"							44	36.5	
3/4"							44	38	
1"							47	42	
1-1/4"							50	45.5	
1-1/2"							54	48	
2"							57	55	
2-1/2"							63	61.5	
3"							71	68	
4"							87	81	

ZR TUBE ARRANGEMENT TEE

COAX PURGE TEES



Imperial	Inner Tube		Outer Tube					VCR**
			d1	S1	l1	l2	l3	d3
Inch	mm						Inch	
1/4	6.35	0.89	12.70	1.24	146.00	73.00	33.30	1/4
3/8	9.53	0.89	15.88	1.24	152.40	76.20	34.80	1/4
1/2	12.70	1.24	19.05	1.65	152.40	76.20	36.40	1/4
3/4	19.05	1.65	25.40	1.65	165.10	82.55	39.60	1/4
1	25.40	1.65	38.10	1.65	165.10	82.55	45.85	1/4

Huzhou Zhongrui Cleaning

MICRO-WELDING JOINT

















Specification: 1/8 to 1 in.

Using high-purity stainless steel, providing high-purity(BA grade),ultra high-purity(EP)joint. Joint suitable for manual and automatic welding equipment

ZR MICRO-WELDING JOINT

Product contents

Micro-welded reducing joint MRUW series	
21	
Micro-welded elbow MEW series	
21	
Micro-welded single end extended elbow MEXW series	
22	
Micro-welded elbow MERW series	
22	
Micro-welded elbow 45° MEW45 series	
22	
Micro-welded tee joint MTW series	
22	
Micro-welded reducing tee joint MTRW series	
23	
Micro-welded Cross MCW series	
23	
Micro-welded 3D tee joint METW series	
23	
Welded reducing joint RW series	
24	
Welded joint EW series	
24	

Welded tee joint TW series	
25	
Welded tee reducing joint TRW series	
25	
Welded Cross CW series	
25	

Feature of welded joint

ZR Specializing in design and produce welded joint with high quality suitable for high-purity and ultra high-purity
All of welded products are produced and welded as SEMI F75,F81.

Structure material

Bar material, forge piece		
Material	Code	Standard
316L stainless steel	SS	Bar: ASME SA479 ASTM A276 Forge shape: ASME SA182
316L VAR stainless steel	SV	Bar: ASME SA479 ASTM A276 Forge shape: AS ME A182

Pressure rating

All of pressure rating comply with ASME specific pressure pipeline, ASME B31.3 specification values for power pipeline regulations
According to ASME B31.1 to be sure pressure rating of main pipe, making psig nominal multiply by 0.94.

The rating pressure is determined by the gasket material at room temperature.

Temperature rating		
Element	Material	Temperature°C(F)
Joint	316L stainless steel	537(1000)
	316L VAR stainless steel	537(1000)

Cleaing and ultra high purity process

Each joint has undergone special cleaning treatment to remove oil, grease and small particles. There are various types of joints with controllable surface finish, electro polishing and special cleaning to meet the requirements of ultra high purity systems.

ZR MICRO-WELDING JOINT

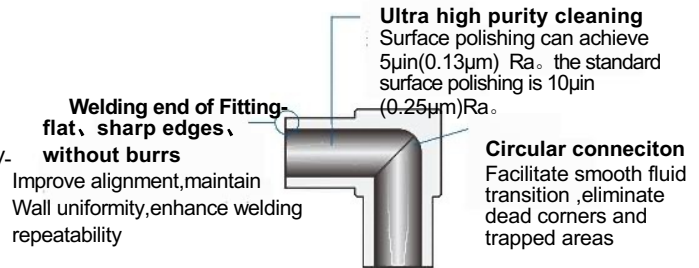
Micro sleeve welding joint

Compactness

- Adapting to miniaturized sleeve system.
- Allow for compact proximity of components.
- Provide flow rate and usage level equal to that of large-sized welded joints

Ordering information and dimensions

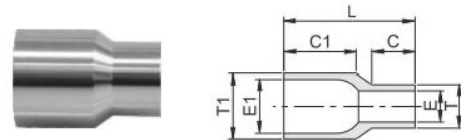
- Size only for reference, possible changes.
- Provide joint of high purity(BA),ultra high purity(EP)
If you need order pure(BA)316L stainless steel products,pls add SS- .Such as : SS-MEW-4, If you need electro polishing, pls add -EP after model. If you need order ultra high purity(EP)316L VAR stainless steel, pls change SS into SV, add -EP after model. Such as: SV-MEW-4-EP



Rounded subject-
Help prevent damage of other components during system installation and maintenance.

MINI REDUCING UNION

MRUW series



L		C1		C		E1		E		Tube O. D	Thk	Tube O. D	II Thk	
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	mm	inch	mm	inch
19.1	0.75	10.4	0.41	6.4	0.25	4.4	0.17	1.9	0.07	1/4	1.0	1/8		0.028
19.1	0.75	10.4	0.41	6.4	0.25	7.5	0.30	4.4	0.17	3/8	1.0	1/4	1.0	
19.1	0.75	10.4	0.41	6.4	0.25	10.2	0.40	4.4	0.17	1/2	0.049	1/4	1.0	
19.1	0.75	10.4	0.41	6.4	0.25	10.2	0.40	7.5	0.30	1/2	0.049	3/8	1.0	

MINI ELBOW

MEW series



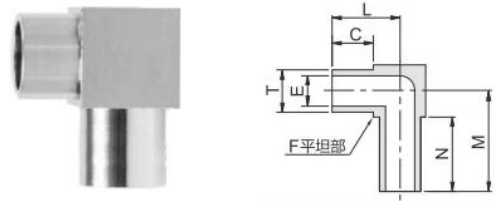
L		C		E		F	T	Thickness	
mm	inch	mm	inch	mm	inch	inch	Tube O. D	mm	inch
10.3	0.41	6.4	0.25	1.9	0.07	5/16	1/8		0.028
10.3	0.41	6.4	0.25	4.4	0.17	5/16	1/4	1.0	
11.9	0.47	6.4	0.25	7.5	0.30	7/16	3/8	1.0	
13.5	0.53	6.4	0.25	10.2	0.40	9/16	1/2		0.049

ZR MICRO-WELDING JOINT

MINI ELBOW

With single end extended elbow

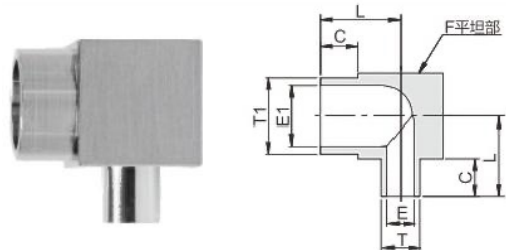
MEXW series



L		C		M		N		E		F	T	Tube O. D	Thk
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	mm
10.3	0.41	6.4	0.25	16.8	0.66	12.7	0.50	4.4	0.18	5/16	1/4	1/4	1.0
10.3	0.41	6.4	0.25	15.4	0.61	11.4	0.45	4.4	0.18	5/16	1/4	1/4	1.0
16.8	0.66	12.7	0.50	16.8	0.66	12.7	0.50	4.4	0.18	5/16	1/4	1/4	1.0

MINI ELBOW REDUCER

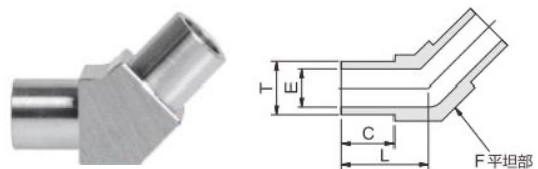
MERW series



L		C		E1		E		F	T1	T1	T	Thk	
mm	inch	mm	inch	mm	inch	mm	inch	inch	Tube O. D	Thk	Tube O. D	mm	inch
10.3	0.41	6.4	0.25	4.4	0.17	1.9	0.07	5/16	1/4"	1.0	1/8"		0.028
11.9	0.47	6.4	0.25	7.5	0.30	4.4	0.17	7/16	3/8"	1.0	1/4"	1.0	
13.5	0.53	6.4	0.25	10.2	0.40	4.4	0.17	9/16	1/2"		1/4"	1.0	
13.5	0.53	6.4	0.25	10.2	0.40	7.5	0.30	9/16	1/2"	0.049	3/8"	1.0	

MINI ELBOW 45°

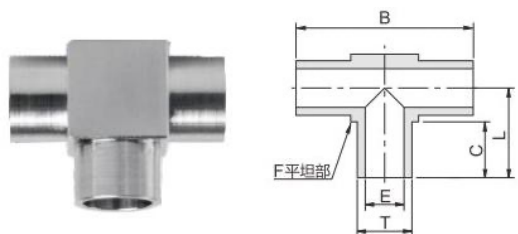
MEW45 series



L		C		E		F	T	Thk	
mm	inch	mm	inch	mm	inch	inch	Tube O. D	mm	inch
10.3	0.41	6.4	0.25	4.4	0.17	5/16	1/4	1.0	
11.9	0.47	6.4	0.25	7.5	0.30	7/16	3/8	1.0	
13.5	0.53	6.4	0.25	10.2	0.40	9/16	1/2		0.049

MINI TEE

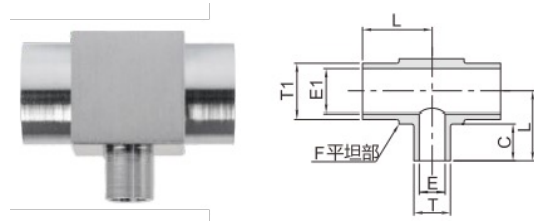
MTW series



L		B		C		E		F	T	Thk	
mm	inch	mm	inch	mm	inch	mm	inch	inch	Tube O. D	mm	inch
10.3	0.41	20.7	0.81	6.4	0.25	1.9	0.07	5/16	1/8		0.028
10.3	0.41	20.7	0.81	6.4	0.25	4.4	0.17	5/16	1/4	1.0	
11.9	0.47	23.9	0.94	6.4	0.25	7.5	0.30	7/16	3/8	1.0	
11.9	0.53	27.1	1.07	6.4	0.25	10.2	0.40	9/16	1/2		0.049

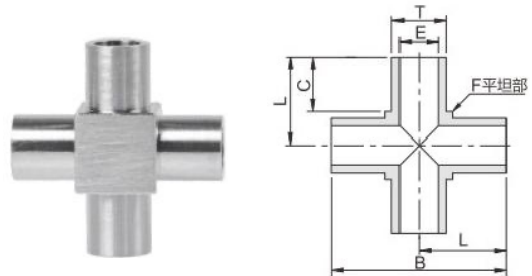
ZR MICRO-WELDING JOINT

MICRO WELDED REDUCTING TEE JOINT MTRW series



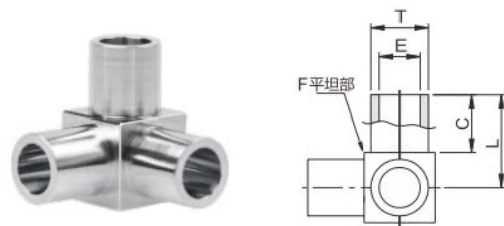
L		B		C		E1		E		F	T1 Tube O.D	T1 Thk	T Tube O.D	Thk		
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	mm	inch	inch	mm	inch
11.9	0.47	23.9	0.94	6.4	0.25	7.7	0.30	4.4	0.17	7/16	3/8	1.0		1/4	1.0	
13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	4.4	0.17	9/16	1/2	0.049		1/4	1.0	
13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	7.5	0.30	9/16	1/2	-	0.049	3/8	1.0	

MINI CROSS MCW series



L		B		C		E		F	T Tube O.D	Thk	
mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	mm	mc
10.3	0.41	20.7	0.81	6.4	0.25	1.9	0.07	5/16	1/8		0.028
10.3	0.41	20.7	0.81	6.4	0.25	4.4	0.17	5/16	1/4	1.0	
11.9	0.47	23.9	0.94	6.4	0.25	7.5	0.30	7/16	3/8	1.0	
13.5	0.53	27.1	1.07	6.4	0.25	10.2	0.40	9/16	1/2		0.049

MINI TRI-EL MTEW series



L		C		E		F	T Tube O.D	Thk	
mm	inch	mm	inch	mm	inch	inch	inch	mm	inch
10.3	0.41	6.4	0.25	1.9	0.07	5/16	1/8		0.028
10.3	0.41	6.4	0.25	4.4	0.17	5/16	1/4	1.0	
11.9	0.47	6.4	0.25	7.5	0.30	7/16	3/8	1.0	
13.5	0.53	6.4	0.25	10.2	0.40	9/16	1/2		0.049

Huzhou Zhongrui Cleaing

VACUUM COUPLING METAL FACE SEALED JOINT



Size: 1/8 to 1 in.

Using high purity stainless steel, proving joint of high purity(BA),ultra high purity(EP).

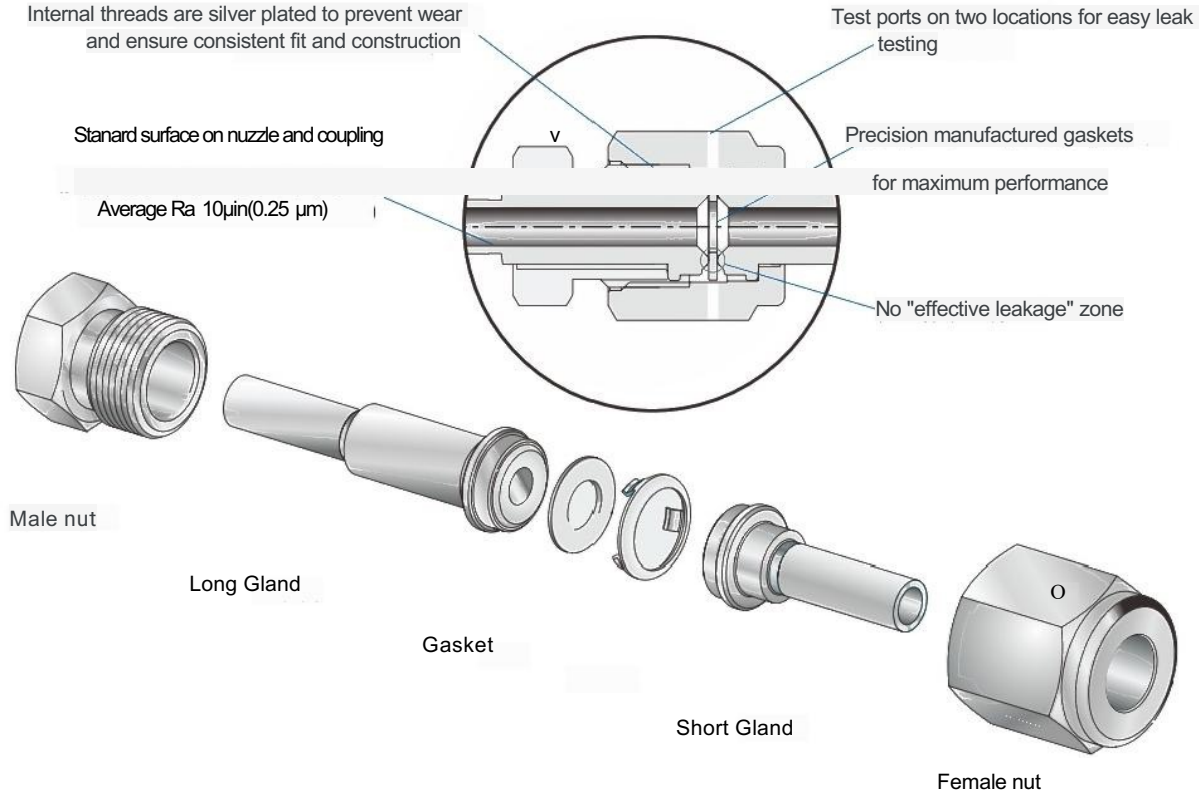
Provide leak free sealing within the range of vacuum to positive pressure

ZR VACUUM COUPLING METAL FACE SEAL JOINT

VCS feature of joint

VCS couplings feature a high-purity metal-to-metal seal, providing leak-free service from vacuum to positive pressure.

The seal on the VCJ assembly is completed when the gasket is compressed by the flanges on both sides during the engagement of the male nut or joint body hex with the female nut.



Structure material

Connection, nomenclature, nuts		
Material	Code	Standard
316L stainless steel	SS	Bar: ASME SA479 ASTM A276 Forge shape: ASME SA182
316L VAR Stainless steel	SV	Bar: ASME SA479 ASTM A276 Forge shape: ASME SA182

Gasket		
Material	Code	Standard
Nickel	NI	ASTM F3
316L stainless steel	SS	ASTM A240

Plating

VCS female nuts are silver plated. Cleaning that may damage the coating must be avoided. The chemical processes used in electropolishing and passivation, if the plating is damaged or lost, thread wear will occur, the fitting assembly will be damaged and a proper seal will not be obtained.

Pressure rating

All of pressure rating comply with ASME specific pressure pipeline, artwork pipeline, ASME B31.3 specification values for power pipeline regulations

According to ASME B31.1 to be sure pressure rating of main pipe, making psig nominal multiply by 0.94.

The rating pressure is determined by the gasket material at room temperature.

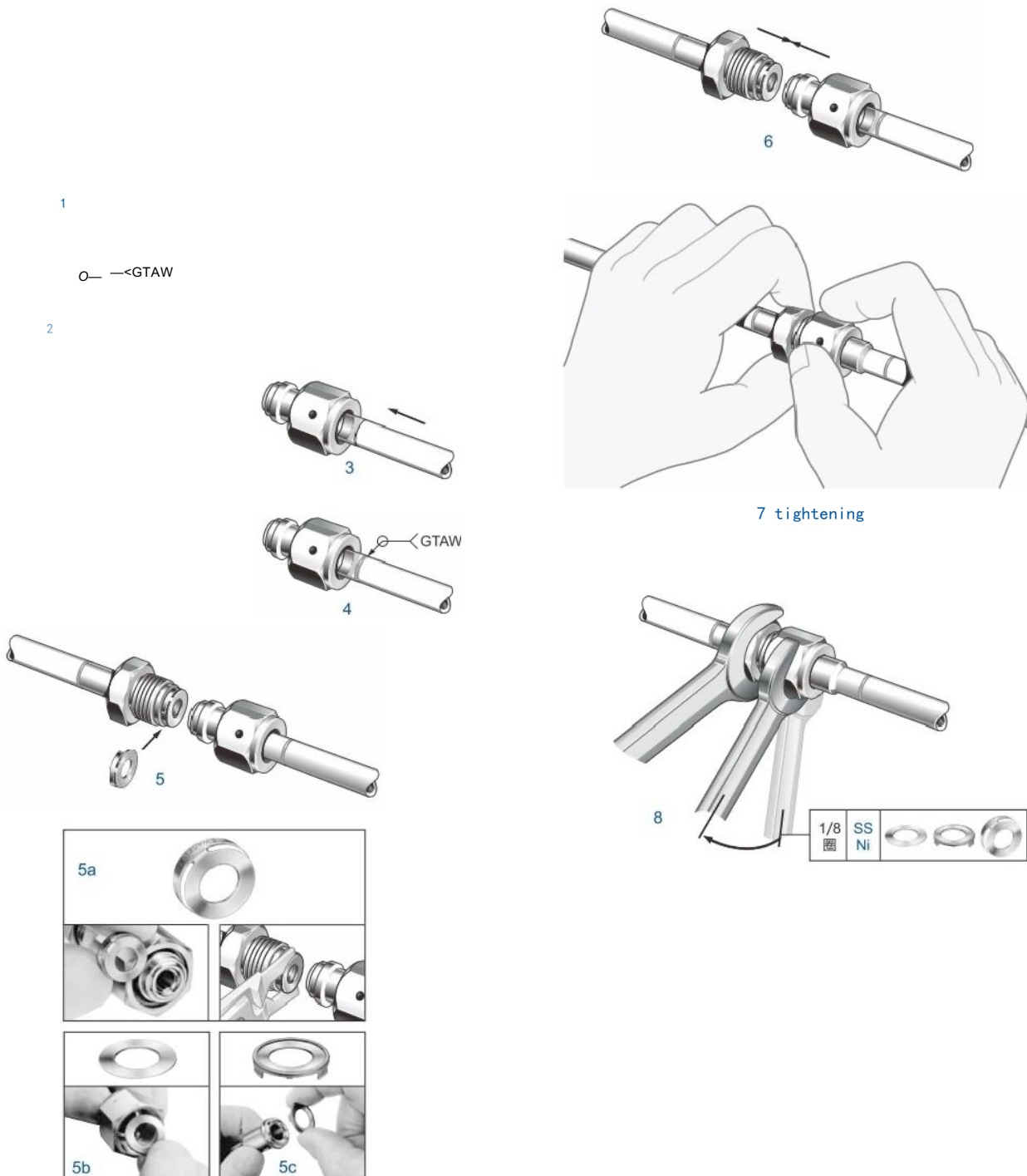
Temperature rating		
Component	Material	Temperature °C (F)
Joint	316L stainless steel	537 (1000)
	316L VAR stainless steel	537 (1000)
Gasket	316L stainless steel	537 (1000)
	Nickel	315 (600)

Clean and Ultra-High Purity Processes

Every joint is specially cleaned to remove oil, grease and tiny particles. A variety of VCJ face seal tubes and fitting bodies are available with controlled surface finish, electropolishing and special cleaning to meet ultra-high purity system requirements.


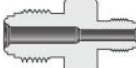
















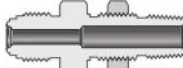

















ZR VACUUM COUPLING METAL FACE SEAL JOINT

VCS JOINT INSTALLATION GUIDELINES



ZR VACUUM COUPLING METAL FACE SEAL JOINT

Product contents

<p>Short gland SG series</p>  <p>7</p>	<p>Male reducing Union MRU series</p>  <p>11</p>	<p>Female Welding Tee FFTU series</p>  <p>14</p>
<p>Long gland LG series</p>  <p>7</p>	<p>Bulkhead Union BU series</p>  <p>11</p>	<p>Female Nut FN series</p>  <p>14</p>
<p>Socket weld gland SWG series</p>  <p>8</p>	<p>Bulkhead to tube Union BUW series</p>  <p>11</p>	<p>Male Nut MN series</p>  <p>14</p>
<p>Male weld gland MWG series</p>  <p>8</p>	<p>Male Elbow ME series</p>  <p>12</p>	<p>Short Male Nut SMN series</p>  <p>15</p>
<p>Gland GAT series</p>  <p>8</p>	<p>Male Elbow EU series</p>  <p>12</p>	<p>Female Cap FCAP series</p>  <p>15</p>
<p>Male to male NPT connector MC series</p>  <p>9</p>	<p>Male Tee TU series</p>  <p>12</p>	<p>Male Plug MP series</p>  <p>15</p>
<p>Male to NPT bulkhead connector MBC series</p>  <p>9</p>	<p>Cross Union CU series</p>  <p>12</p>	<p>Long high flow Gland LHFG series</p>  <p>16</p>
<p>Male to seal O-Ring connector MOC series</p>  <p>9</p>	<p>Female to male NPT Connector FMC series</p>  <p>13</p>	<p>High flow male to Tube HFMT series</p>  <p>16</p>
<p>Male to female NPT connector FC series</p>  <p>10</p>	<p>Female to female NPT Connector FFC series</p>  <p>13</p>	<p>High flow male Elbow HEU series</p>  <p>16</p>
<p>Male Union MGU series</p>  <p>10</p>	<p>Female Connector FGC series</p>  <p>13</p>	<p>High flow male Tee HTU series</p>  <p>17</p>
<p>Male to Bulkhead Union MB GU series</p>  <p>10</p>	<p>Female to female Union FFU series</p>  <p>13</p>	<p>High flow female NUT HPN series</p>  <p>17</p>
<p>Male Union MU series</p>  <p>11</p>	<p>Female micro welding Elbow FFEU series</p>  <p>14</p>	<p>High flow male NUT HMN series</p>  <p>17</p>

ZR VACUUM COUPLING METAL FACE SEAL JOINT

No spacer GA series	Support component RGA series	Side load support component BGA series
18	18	18

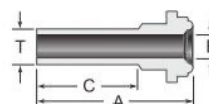
Ordering information and size

- Size only for reference, possibility for changes.
- Dimension E represents the minimum nominal inner diameter of the part
- Provide high purity (BA grade) and ultra high purity (EP grade) connectors.

If you want to order 316L stainless steel products, please add SS before the basic order model. For example: SS-SG-V4-4, if you need electrolytic polishing EP level, please add -EP after the model number. If you want to order ultra-high clean 316L VAR stainless steel material, please change the SS in front of the basic model to SV and add -EP at the end of the model. Example: SV-SG-V4-4-EP

SHORT GLAND

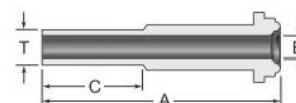
SG series



Size	A		C		E		T Tube O. D	Thickness	
inch	mm	inch	mm	inch	mm	inch	inch	mm	inch
1/8	27.4	1.08	19.1	0.75	1.9	0.07	1/8"		0.028
1/4	15.2	0.60	6.4	0.25	4.4	0.17	1/4"	1.0	
1/4	18.3	0.72	9.6	0.38	4.4	0.17	1/4"	1.0	
1/4	27.9	1.10	19.1	0.75	4.4	0.17	1/4"	1.0	
1/2	15.7	0.62	6.4	0.25	7.5	0.30	3/8"	1.0	
1/2	28.4	1.12	19.1	0.75	7.5	0.30	3/8"	1.0	
1/2	15.7	0.62	6.4	0.25	10.2	0.40	1/2"		0.049
1/2	18.8	0.74	9.6	0.38	10.2	0.40	1/2"		0.049
1/2	28.4	1.12	19.1	0.75	10.2	0.40	1/2"		0.049
3/4	29.0	1.14	19.1	0.75	15.8	0.62	3/4"	—	0.049
1	32.0	1.26	19.1	0.75	22.1	0.87	1"		0.065

LONG GLAND

LG series

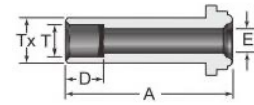


Size	A		C		E		T Tube O. D	Thickness	
inch	mm	inch	mm	inch	mm	inch	inch	mm	inch
1/8	36.1	1.42	19.1	0.75	1.9	0.07	1/8"		0.028
1/4	30.5	1.20	6.4	0.25	4.4	0.17	1/4"	1.0	
1/4	33.5	1.32	9.6	0.38	4.4	0.17	1/4"	1.0	
1/4	43.2	1.70	19.1	0.75	4.4	0.17	1/4"	1.0	
1/2	32.8	1.29	6.4	0.75	7.5	0.30	3/8"	1.0	
1/2	45.5	1.79	19.1	0.75	7.5	0.30	3/8"	1.0	
1/2	32.8	1.29	6.4	0.25	10.2	0.40	1/2"		0.049
1/2	35.8	1.41	9.6	0.38	10.2	0.40	1/2"		0.049
1/2	45.5	1.79	19.1	0.75	10.2	0.40	1/2"		0.049
3/4	51.6	2.03	19.1	0.75	15.8	0.62	3/4"		0.065
1	58.9	2.32	19.1	0.75	22.1	0.87	1"		0.065

ZR VACUUM COUPLING METAL FACE SEAL JOINT

SOCKET WELD GLAND

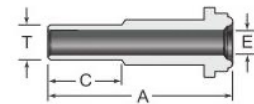
SWG series



VC. Size	A		E		D		TX		T Tube OD
inch	mm	inch	mm	inch	mm	inch	mm	inch	inch
1/8	17.8	0.70	2.4	0.09	2.5	0.10	5.1	0.20	1/8
1/4	33.3	1.31	4.6	0.18	7.1	0.28	8.9	0.35	1/4
1/4	19.1	0.75	4.6	0.18	7.1	0.28	8.9	0.35	1/4
1/4	12.7	0.50	4.6	0.18	7.1	0.28	8.9	0.35	1/4
1/2	38.1	1.50	7.1	0.28	7.9	0.31	15.2	0.60	3/8
1/2	38.1	1.50	10.2	0.40	9.6	0.38	15.2	0.60	1/2
3/4	50.8	2.00	15.7	0.62	11.2	0.44	22.4	0.88	3/4
1	56.4	2.22	22.1	0.87	15.7	0.62	30.2	1.19	1

MALE WELD GLAND

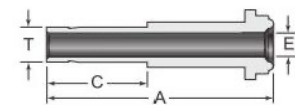
MWG series



VCJ Size	A		C		E		T Tube O. D
inch	mm	inch	mm	inch	mm	inch	inch
1/8	17.8	0.70	7.1	0.28	1.9	0.07	1/8
1/4	33.3	1.31	10.4	0.41	3.0	0.12	1/4
1/2	38.1	1.50	10.4	0.41	7.1	0.28	3/8
1/2	38.1	1.50	12.7	0.50	10.2	0.40	1/2
3/4	50.8	2.00	15.7	0.62	13.5	0.53	3/4
1	56.4	2.22	20.6	0.81	19.1	0.75	1

GLAND

GAT series

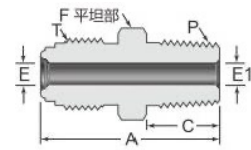


VC. Size	A		C		E		Tube O. D
inch	mm	inch	mm	inch	mm	inch	inch
1/4	41.2	1.62	15.9	0.62	4.3	0.17	1/4"
1/2	46.0	1.81	17.5	0.69	6.8	0.27	3/8"
1/2	49.3	1.94	24.4	0.96	9.4	0.37	1/2

ZR VACUUM COUPLING METAL FACE SEAL JOINT

MALE TO MALE NPT CONNECTOR

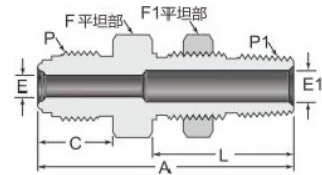
MC series



VCJ Size	A		C		E		E1		F	T Thread Size	P NPT-M
	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch
1/4	33.3	1.31	9.6	0.38	4.6	0.18	4.6	0.18	5/8	9/16-18	1/8
1/4	37.8	1.49	14.2	0.56	4.6	0.18	4.6	0.18	5/8	9/16-18	1/4
1/4	37.8	1.49	14.2	0.56	4.6	0.18	4.6	0.18	5/8	9/16-18	1/4 BSPT
1/2	41.9	1.65	14.2	0.56	10.2	0.40	7.1	0.28	15/16	7/8-14	1/4
1/2	41.9	1.65	14.2	0.56	9.6	0.38	9.6	0.38	15/16	7/8-14	3/8
1/2	46.7	1.84	19.0	0.75	10.2	0.40	10.2	0.40	15/16	7/8-14	1/2
3/4	55.6	2.19	19.0	0.75	15.8	0.62	15.8	0.62	15/16	11/4-18	3/4
1	62.7	2.47	23.9	0.94	22.2	0.87	22.2	0.87	15/8	11/2-20	1

MALE TO NPT BULKHEAD CONNECTOR

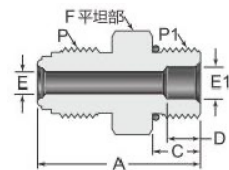
MBC series



VC Size	A		C		E		L		E1		F	F1	P Thread Size	P1 NPT	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	
1/4	56.1	2.21	15.8	0.62	4.6	0.18	31.5	1.24	7.1	0.28	13/16	13/16	9/16-18	1/4	21/32
1/2	59.4	2.34	19.1	0.75	10.2	0.40	31.5	1.24	7.1	0.28		15/16 13/16	7/8-14	1/4	21/32

MALE TO SEAL O-RING CONNECTOR

MOC series

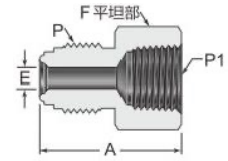


VC Size	A		C		D		E		E1		F	P Thread size	P1 Thread size	O-ring Size
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	
1/4	33.8	1.33	9.9	0.39	6.4	0.25	4.6	0.18	7.1	0.28	3/4	9/16-18	9/16-18	3-906
1/2	42.2	1.66	12.7	0.50	10.2	0.40	7.1	0.28	15.0	0.59	1	7/8-14	7/8-14	3-910
1/2	37.6	1.48	9.9	0.39	6.4	0.25	7.1	0.28	7.1	0.28	15/16	7/8-14	9/16-18	3-906

ZR VACUUM COUPLING METAL FACE SEAL JOINT

MALE TO FEMALE NPT CONNECTOR

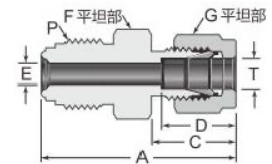
FC series



VCJ Size	A		E		F	P Thread Size	P1 NPT
inch	mm	inch	mm	inch	inch	inch	inch
1/4	35.8	1.41	4.6	0.18	5/8	9/16-18	1/8
1/4	39.1	1.54	4.6	0.18	3/4	9/16-18	1/4
1/2	39.1	1.54	10.2	0.40	15/16	7/8-14	1/4
1/2	44.7	1.76	10.2	0.40	15/16	7/8-14	3/8
1/2	50.5	1.99	10.2	0.40	1.1/16	7/8-14	1/2
3/4	59.9	2.36	15.8	0.62	15/16	11/4-18	3/4
1	63.8	2.51	22.1	0.87	15/8	11/2-20	1

MALE UNION

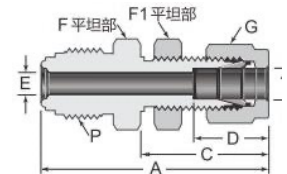
MGU series



VCJ Size	A		C		D		E		F	G	T Tube O.D.	P Thread Size
inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch
1/4	38.9	1.53	15.2	0.60	12.7	0.50	4.6	0.18	5/8	7/16	1/8	9/16-18
1/4	41.1	1.62	17.8	0.70	15.2	0.60	4.6	0.18	5/8	9/16	1/4	9/16-18
1/4	42.1	1.66	19.4	0.76	16.8	0.66	4.6	0.18	5/8	11/16	3/8	9/16-18
1/2	46.7	1.84	19.4	0.76	16.8	0.66	7.1	0.28	15/16	11/16	3/8	7/8-14
1/2	49.5	1.95	21.8	0.86	22.9	0.90	10.2	0.40	15/16	7/8	1/2	7/8-14

MALE TO BULKHEAD UNION

MBGU series

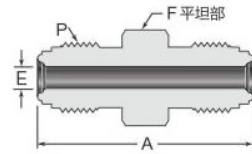


VC Size	A		C		D		E		F	F1	G	T Tube O.D.	P Thread Size	Panel aperture
inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch	nch
1/4	57.2	2.25	33.5	1.32	15.2	0.60	4.6	0.18	5/8	5/8	9/16	1/4	9/16-18	29/64
1/4	64.5	2.54	36.8	1.45	16.8	0.66	7.1	0.28	15/16	3/4	11/16	3/8	7/8-14	37/64
1/2	69.9	2.74	19.4	1.65	22.9	0.90	10.2	0.40	15/16	15/16	7/8	1/2	7/8-14	49/64

ZR VACUUM COUPLING METAL FACE SEAL JOINT

MALE UNION

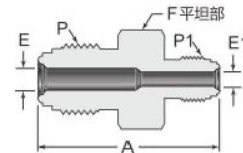
MU series



VCJ Size	A		E		F	P Thread Size
inch	mm	inch	mm	inch	inch	inch
1/4	39.4	1.55	4.6	0.18	5/8	9/16 -18
1/2	46.7	1.84	10.2	0.40	15/16	7/8-14
3/4	62.0	2.44	15.8	0.62	15/16	11/4-18
1	65.8	2.59	22.2	0.87	15/8	11/2-20

MALE REDUCING UNION

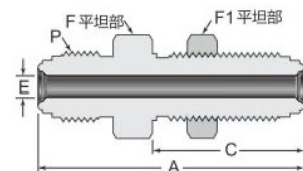
MRU series



VCJ Size	VCJ Size	A		E		E1		F	P Thread Size	P1 Thread Size
inch	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch
1/4	1/8	34.8	1.37	4.6	0.18	2.4	0.09	5/8	9/16-18	5/16-24
1/2	1/4	43.4	1.71	10.2	0.40	4.6	0.18	15/16	7/8-1/4	9/16 -18

BULKHEAD UNION

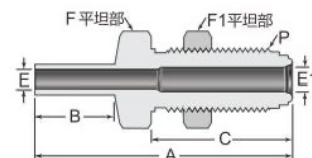
BU series



VCJ Size	A		C		E		F	F1	P Thread Size	Panel aperture
inch	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch
1/4	56.6	2.23	33.0	1.30	4.6	0.18	3/4	3/4	9/16 -18	19/32
1/2	65.3	2.57	37.6	1.48	10.2	0.40	11/16	11/16	7/8-14	29/32

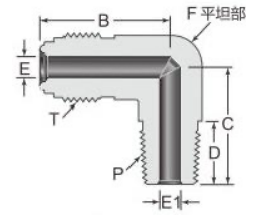
BULKHEAD TO TUBE UNION

BUW series



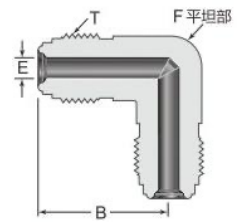
VCJ Size	A		C		B		E		F	F1	T Tube O.D	P Thread Size	Panel aperture
inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch
1/4	59.9	2.36	33.0	1.30	19.1	0.75	4.6	0.18	3/4	3/4	1/4	9/16-18	19/32
1/4	49.5	1.95	25.1	0.99	19.1	0.75	4.6	0.18	3/4	3/4	1/4	9/16-18	19/32

MALE ELBOW



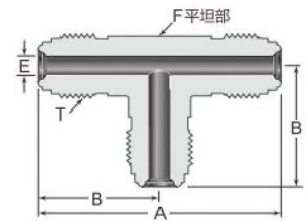
VCJ Size	B		C		D		E		E1		F	T	P
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	inch	Thread Size	NPT
1/4	27.2	1.07	26.7	1.05	14.2	0.56	4.6	0.18	4.6	0.18	1/2	9/16-18	1/4
1/2	36.8	1.45	36.8	1.45	19.0	0.75	10.2	0.40	10.2	0.40	13/16	7/8-14	1/2

ELBOW UNION



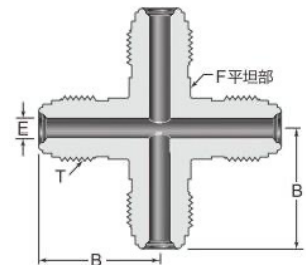
VC. Size	B		E		F	T
	mm	inch	mm	inch	inch	Thread Size
1/4	27.2	1.07	4.6	0.18	1/2	9/16-18
1/2	36.8	1.45	10.2	0.40	13/16	7/8-14

TEE UNION



VCJ Size	B		A		E		F	T
	mm	inch	mm	inch	mm	inch	inch	Thread Size
1/4	27.2	1.07	54.4	2.14	4.6	0.18	1/2	9/16-18
1/2	36.8	1.45	73.6	2.90	10.2	0.40	13/16	7/8-14

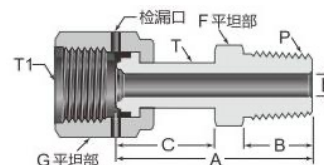
CROSS UNION



VCJ Size	B		E		F	T
	mm	inch	mm	inch	inch	Thread Size
1/4	27.2	1.07	4.6	0.18	1/2	9/16-18
1/2	36.8	1.45	10.2	0.40	13/16	7/8-14

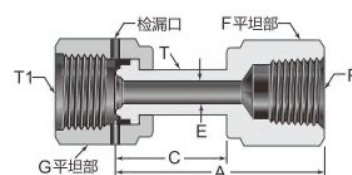
ZR VACUUM COUPLING METAL FACE SEAL JOINT

FEMALE TO MALE NPT CONNECTOR



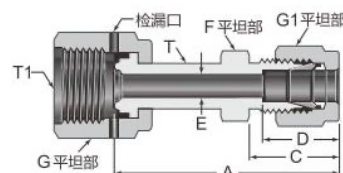
MC. RT	A		C		E		F	G	T Tube O. D	T1 Thread Size	P NPT
inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch
1/4	45.5	1.79	23.4	0.92	4.4	0.17	9/16	3/4	1/4	9/16-18	1/4
1/2	53.1	2.09	25.6	1.01	10.2	0.40	7/8	11/16	1/2	7/8-14	1/2

FEMALE TO FEMALE NPT CONNECTOR



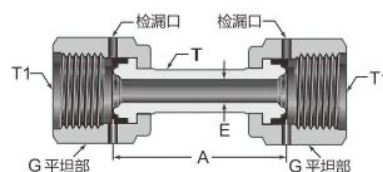
VCJ Size	A		C		E		F	G	T Tube O. D	Thread Size	P NPT
inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch
1/4	45.0	1.77	23.4	0.92	4.4	0.17	3/4	3/4	1/4	9/16-18	1/4
1/2	54.8	2.16	26.4	1.04	10.2	0.40	11/16	11/16	1/2	7/8-14	1/2

FEMALE CONNECTOR



VCJ Size	A		C		E		F	G	G1	T Tube O. D	T1 Thread Size
inch	mm	inch	mm	inch	mm	inch	inch	inch	inch	inch	inch
1/4	49.3	1.94	17.8	0.70	4.4	0.17	1/2	3/4	9/16	1/4	9/16 -18
1/2	56.6	2.23	21.8	0.86	10.2	0.40	13/16	11/16	7/8	1/2	7/8 -14

FEMALE TO FEMALE UNION



VCJ Size	A		E		G	T Tube O. D	T1 Thread Size
inch	mm	inch	mm	inch	inch	inch	inch
1/4	43.0	1.69	4.4	0.17	3/4	1/4	9/16-18
1/2	44.1	1.73	10.2	0.40	11/16	1/2	7/8-14