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COSMOIND

COSMOIND PE PIPE Total Solution Provider

We will provide One-Stop Service



COSMOIND

COSMOIND CO., LTD.

Based on products development and supply utilizing 100% of its own technology, COSMOIND CO., Ltd. provide one-stop service. Our extensive range of PE fittings and ball valves have been exporting and using to all of the world.



MAIN PRODUCTS

- PE Pipe supply
- PE Butt fusion fitting(Spigot)
- PE Butt fusion fitting(Segmented(Short) Spigot)
- PE Heat fusion fitting(Socket)
- PE Electrofusion fitting
- PE Ball valve
- Mold design and manufacture
- Installation tool



COSMOIND USA, Inc.

Based on products development and supply utilizing 100% of its own technology, COSMOIND USA, Inc. provide one-stop service. Our extensive range of PE fittings and ball valves have been exporting and using to all of the world.

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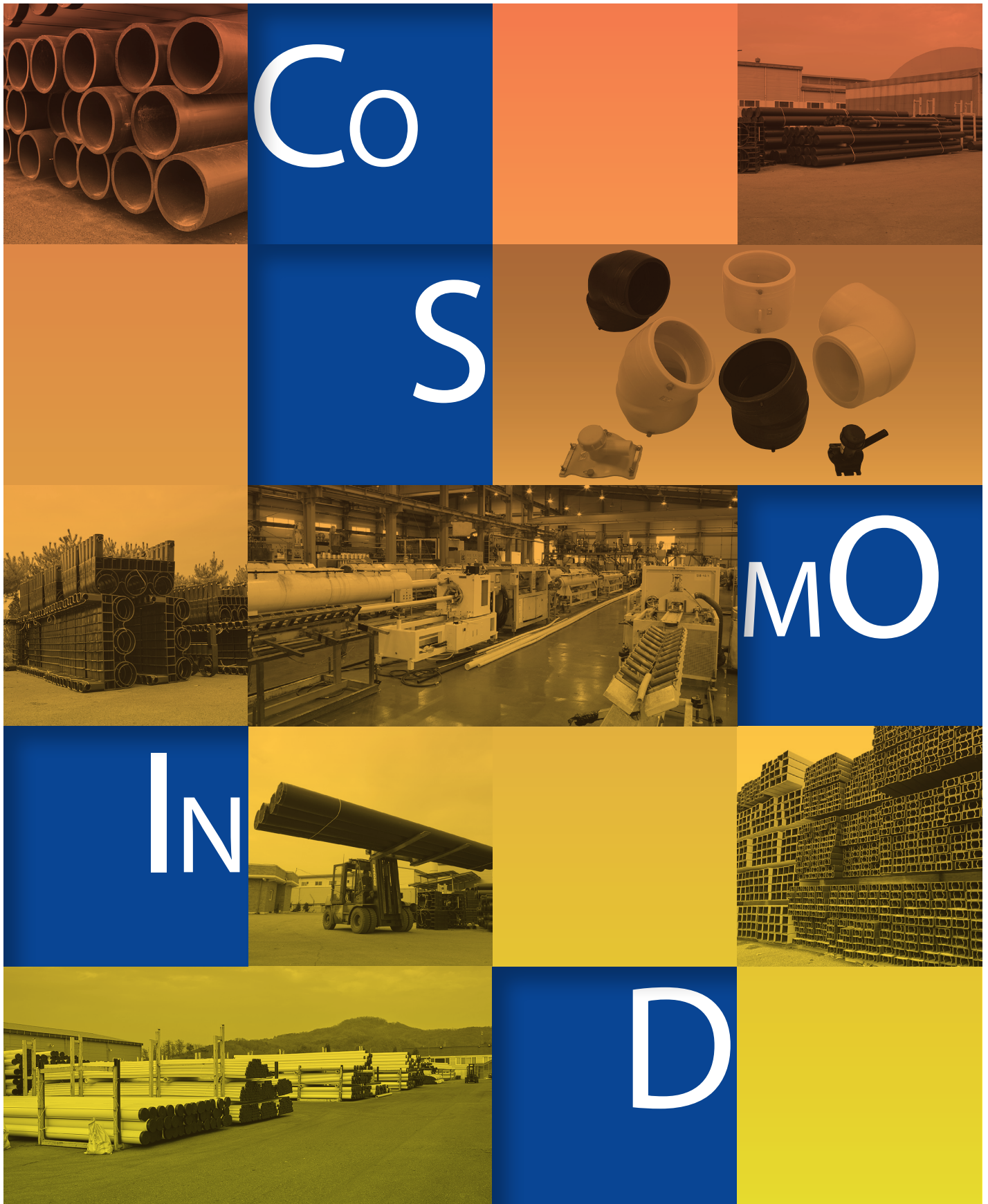
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COMPANY HISTORY

1987~
1999

- 1987. 5 COSMOIND CO., Ltd. establishment
- 1994. 8 Screw and fusion type mold design and manufacturing.
- 1996. 6 ISO 9002 certification.

2003~
2010

- 2003. 1 Production of polyethylene coupling pipe for gas.
- 2003. 10 Development and production of E/F coupling pipe mold for gas.
- 2006. 3 Development of e-sewage collection unit, rainwater collection unit, small-sized manholes and fusion socket.
- 2006. 9 Certification for environment new technology in environment part (No. 182).

2011~
2019

- 2011. 6 Shifted of factory (Jeonui-Myen).
- 2013. 1 Changed a company name(COSMOIND CO., Ltd).
- 2013. 2 Attached laboratory establishment.
- 2014. 4 Acquired ISO 14001
- 2015. 4 Acquired CE (ball valve)
- 2017. 9 Acquired NSF (PE ball valve, B/F, E/F fitting)
- 2017. 12 Acquisition of G-PASS certification.

2020~

- 2023. 1 COSMOIND USA, Inc. establishment.

Characteristics of PE PIPE



Joint characteristics

PE water pipes are easy to be arranged quickly and perfectly by using various fusion method according to field condition.



Corrosion Resistance

PE water pipes do not cause erosion or corrosion.



Flexibility

By superior flexibility and resilience, it has less constraint by land conditions, easy to construct, relatively safe in internal or external factors, and restorable by itself.



Easy installation

A variety of fittings for PE PIPE can be easy to weld even unskilled workers by using simple welding equipment.



Stability and Hygiene

As the PE material is widely used globally because of its proven stability and hygiene. Especially, PE water pipe has the optimum condition for drinking water.



Light weight

PE pipe that is lighter than iron pipe is easy to carry and quickly to construction.



Chemical resistance

Polyethylene is not corrosive to additives, alkalis, salts, etc. and does not multiply seaweed or bacteria, so it is safe from various corrosive substance.



Cold-weather resistance

Since the Polyethylene has excellent elasticity between molecules, it can maintain inherent durability even with a temperature change of 40°C



Flow characteristics

The smooth inner surface of PE water pipes allows more amounts of fluid transportation than other material's pipes with the same diameter.



Abrasion Resistance

PE water pipe is also suitable for transfer piping in slurry and dredging pipeline in the mine by the superior abrasion resistance of PE.



Impact Resistance

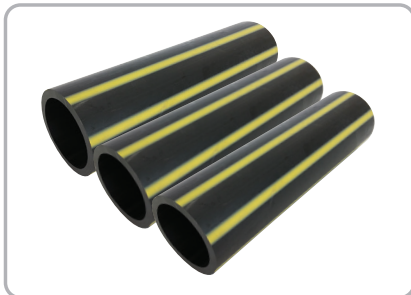
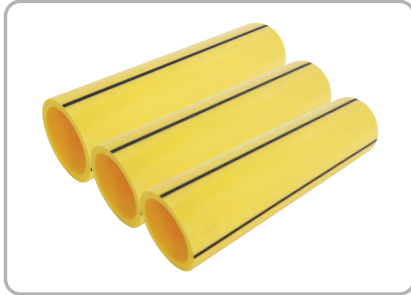
PE water pipes has superior resistance from external shocks in order to prevent water leak by damage on a pipe from an earthquake or land subsidence.



Economical Efficiency

Polyethylene's material cost is more cheaper and it has lower maintenance cost than other pipe material.

Mechanical & Physical characteristics of PE PIPE for gas



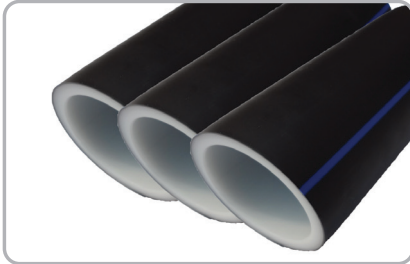
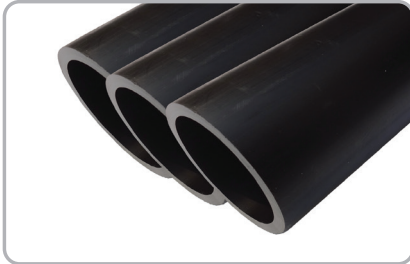
Class	Property	Standard	Typical Value
		Cell Classification	ASTM D3350
4	Density	ASTM D1505	0.949 g/cc - Natural 0.960 g/cc - Black
4	Melt Index	ASTM D1238	0.1g/10m
5	Flexural Modulus	ASTM D790	110,000 ~ 160,000 psi
5	Tensile Strength	ASTM D638	>3,500 psi
7	SCG(PENT)	ASTM F1473	>500 hours
4	HDB @73F	ASTM D2837	1,600 psi
C/E	Color; UV Stabilizer	ASTM D3350	Carbon Black/Color w/ UV stabilizer

Polyethylene Pipe for the supply of gaseous fuels

■ Usage Gaseous fuels supply ■ ASTM D2513 specification ■ PE2406 / 4710

Nominal diameter (IPS)	O.D	SDR 11	SDR 13.5	SDR 17	SDR 21
		Thickness			
		emin	emin	emin	emin
1/2"CTS	0.625	0.062	-	-	-
1"CTS	1.125	0.101	-	-	-
1/2"	0.840	0.076	-	-	-
3/4"	1.050	0.095	-	-	-
1"	1.315	0.120	0.097	-	-
1-1/4"	1.660	0.151	0.123	0.098	-
1-1/2"	1.900	0.173	0.141	0.112	-
2"	2.375	0.216	0.176	0.140	0.113
2-1/2"	2.875	0.261	0.213	0.169	0.137
3"	3.500	0.318	0.259	0.206	0.167
3-1/2"	4.000	0.363	0.296	0.236	0.190
4"	4.500	0.409	0.333	0.265	0.214
5"	5.563	0.506	0.412	0.327	0.265
6"	6.625	0.602	0.491	0.390	0.315
8'	8.625	0.784	0.639	0.507	0.411
10"	10.750	0.977	0.796	0.632	0.512
12"	12.750	1.159	0.944	0.750	0.607
14"	14.000	1.273	1.037	0.824	0.667
16"	16,000	1.455	1.185	0.941	0.762

Mechanical & Physical characteristics of PE PIPE for water



Class	Property	Standard	Typical Value
	Cell Classification	ASTM D3350	445574C
4	Density	ASTM D1505	0.949 g/cc - Natural 0.960 g/cc - Black
4	Melt Index	ASTM D1238	0.1g/10m
5	Flexural Modulus	ASTM D790	110,000 ~ 160,000 psi
5	Tensile Strength	ASTM D638	>3,500 psi
7	SCG(PENT)	ASTM F1473	>500 hours
4	HDB @73F	ASTM D2837	1,600 psi
C/E	Color; UV Stabilizer	ASTM D3350	Carbon Black/Color w/ UV stabilizer

Single wall and Double wall PE Pipe for water

■ **Usage** Water supply / agricultural water / Plant pipe / industrial water / Sea water supply / Slurry supply / Golf course / swimming pool / fire fighting piping / fishing industry

■ **ANSI/AWWA C901, C906 specification** ■ **PE 4710**

Nominal diameter (IPS)	O.D	SDR 11	SDR 13.5	SDR 17	SDR 21
		Thickness			
		emin	emin	emin	emin
1/2"CTS	0.625	0.069(SDR9)	-	-	-
1"CTS	1.125	0.102	-	-	-
1/2"	0.840	0.076	-	-	-
3/4"	1.050	0.095	0.078	-	-
1"	1.315	0.119	0.097	-	-
1-1/4"	1.660	0.151	0.123	-	-
1-1/2"	1.900	0.173	0.141	-	-
2"	2.375	0.216	0.176	0.140	0.113
2-1/2"	2.875	0.261	0.213	0.169	0.137
3"	3.500	0.318	0.259	0.206	0.167
4"	4.500	0.409	0.333	0.265	0.214
5"	5.563	0.506	0.412	0.327	0.265
6"	6.625	0.602	0.491	0.390	0.316
8"	8.625	0.784	0.639	0.507	0.411
10"	10.750	0.977	0.796	0.632	0.512
12"	12.750	1.159	0.944	0.750	0.607
14"	14.000	1.273	1.037	0.824	0.667
16'	16.000	1.455	1.185	0.941	0.762
18'	18.000	1.636	1.333	1.059	0.857
20"	20.000	1.818	1.481	1.176	0.952
22"	22.000	2.000	1.630	1.294	1.048
24"	24.000	2.182	1.778	1.412	1.143
26"	26.000	2.364	1.926	1.529	1.238
28'	28.000	2.545	2.074	1.647	1.333
32"	32.000	2.909	2.370	1.882	1.524
34"	34.000	3.091	2.519	2.000	1.619
36"	36.000	3.273	2.667	2.118	1.714
42"	42.000	3.818	3.111	2.471	2.000
48"	48.000	-	3.556	2.824	2.286

(1) PN value is calculated based on design coefficient C=1.25.

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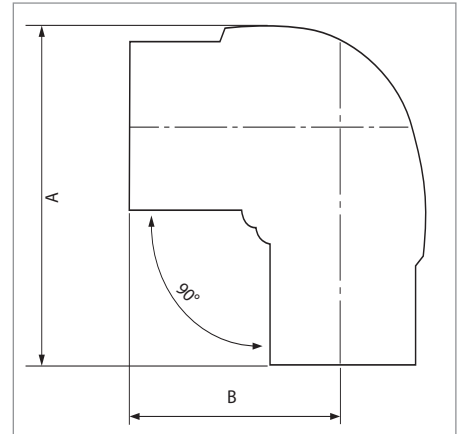
PE Buttfusion Fittings



PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ BF 90° ELBOW



Unit : inch

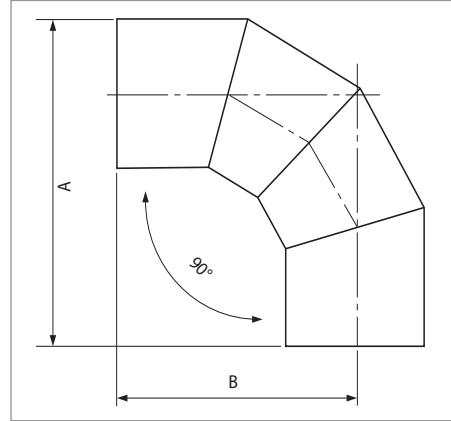
ASTM Spec[d]	Manufacturing Method	A	B	Item Code	
				Gas	Industrial
½" CTS	Injection(Socket)	1.535	1.063	COSB GCI0100	COSB WCI0100
½" IPS	Injection(Socket)	1.693	1.142	COSB GCI0101	COSB WCI0101
¾" IPS	Injection(Socket)	2.087	1.417	COSB GCI0102	COSB WCI0102
1" CTS	Injection(Socket)	2.441	2.441	COSB GCI0103	COSB WCI0103
1" IPS	Injection(Socket)	2.441	1.614	COSB GCI0104	COSB WCI0104
1¼" IPS	Injection(Socket)	2.913	1.890	COSB GCI0105	COSB WCI0105
1½" IPS	Injection(Socket)	3.425	3.425	COSB GCI0106	COSB WCI0106
2" IPS	Injection(Socket)	5.709	4.488	COSB GCI0107	COSB WCI0107
3" IPS	Injection	7.874	6.102	COSB GI0103	COSB WI0103
4" IPS	Injection	8.661	6.496	COSB GI0104	COSB WI0104
6" IPS	Injection	11.614	8.465	COSB GI0105	COSB WI0105
8" IPS	Injection	15.197	10.748	COSB GI0106	COSB WI0106
10" IPS	Injection	18.307	12.795	COSB GI0107	COSB WI0107
12" IPS	Injection	19.764	13.543	COSB GI0108	COSB WI0108
14" IPS	Injection	22.047	15.039	COSB GI0109	COSB WI0109
16" IPS	Injection	23.307	15.433	COSB GI0110	COSB WI0110

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ **BF 90° ELBOW**



Unit : inch

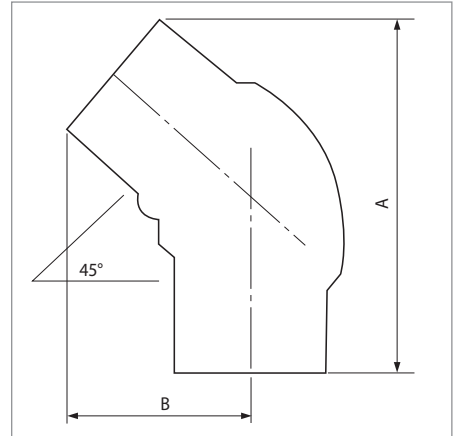
ASTM Spec[d]	Manufacturing Method	A	B	Item Code	
				Gas	Industrial
18" IPS	Fabricated	40.590	31.496	COSB I0117	COSB WI0117
20" IPS	Fabricated	44.134	34.291	COSB I0118	COSB WI0118
22" IPS	Fabricated	46.929	35.866	COSB I0119	COSB WI0119
24" IPS	Fabricated	50.354	37.913	COSB I0120	COSB WI0120
28" IPS	Fabricated	59.724	45.669	COSB I0121	COSB WI0121
32" IPS	Fabricated	62.913	47.087	COSB I0122	COSB WI0122
36" IPS	Fabricated	66.338	48.543	COSB I0123	COSB WI0123
42" IPS	Fabricated	71.653	51.890	COSB I0124	COSB WI0124
48" IPS	Fabricated	78.504	54.803	COSB I0125	COSB WI0125

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ BF 45° ELBOW



Unit : inch

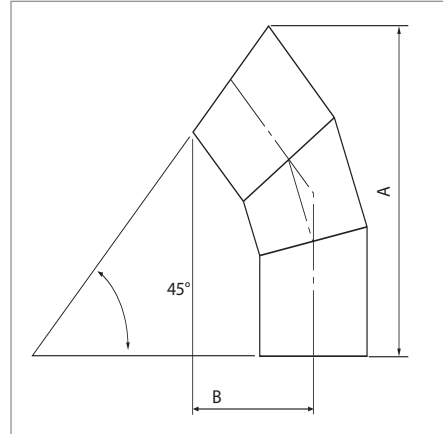
ASTM Spec[d]	Manufacturing Method	A	B	Item Code	
				Gas	Industrial
1/2" CTS	Injection(Socket)	2.283	1.220	COSB GCI0200	COSB WCI0200
1/2" IPS	Injection(Socket)	2.283	1.220	COSB GCI0201	COSB WCI0201
3/4" IPS	Injection(Socket)	2.323	1.181	COSB GCI0202	COSB WCI0202
1" CTS	Injection(Socket)	2.283	1.220	COSB GCI0203	COSB WCI0203
1" IPS	Injection(Socket)	2.638	1.417	COSB GCI0204	COSB WCI0204
1 1/4" IPS	Injection(Socket)	3.071	1.732	COSB GCI0205	COSB WCI0205
1 1/2" IPS	Injection(Socket)	3.543	1.890	COSB GCI0206	COSB WCI0206
2" IPS	Injection(Socket)	4.134	2.323	COSB GCI0207	COSB WCI0207
2" IPS	Injection	7.283	3.543	COSB GI0200	COSB WI0200
3" IPS	Injection	9.252	4.921	COSB GI0201	COSB WI0201
4" IPS	Injection	9.843	5.709	COSB GI0202	COSB WI0202
6" IPS	Injection	13.780	6.693	COSB GI0203	COSB WI0203
8" IPS	Injection	16.929	8.543	COSB GI0204	COSB WI0204
10" IPS	Injection	20.866	11.181	COSB GI0205	COSB WI0205
12" IPS	Injection	21.654	12.008	COSB GI0206	COSB WI0206
16" IPS	Injection	25.787	13.740	COSB GI0208	COSB WI0208

※ The product dimensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ **BF 45° ELBOW**



Unit : inch

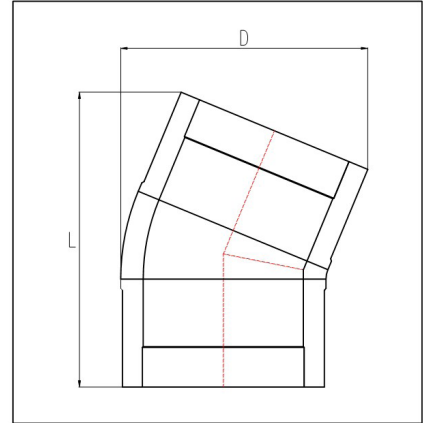
ASTM Spec[d]	Manufacturing Method	A	B	Item Code	
				Gas	Industrial
18" IPS	Fabricated	41.299	20.787	COSB GI0215	COSB WI0215
20" IPS	Fabricated	46.063	23.150	COSB GI0216	COSB WI0216
22" IPS	Fabricated	48.346	24.606	COSB GI0217	COSB WI0217
24" IPS	Fabricated	51.181	26.378	COSB GI0218	COSB WI0218
28" IPS	Fabricated	61.299	31.181	COSB GI0219	COSB WI0219
32" IPS	Fabricated	64.173	33.110	COSB GI0220	COSB WI0220
36" IPS	Fabricated	67.283	35.236	COSB GI0221	COSB WI0221
42" IPS	Fabricated	72.480	38.189	COSB GI0222	COSB WI0222
48" IPS	Fabricated	78.661	42.401	COSB GI0223	COSB WI0223

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ **BF 22.5° ELBOW**



Unit : inch

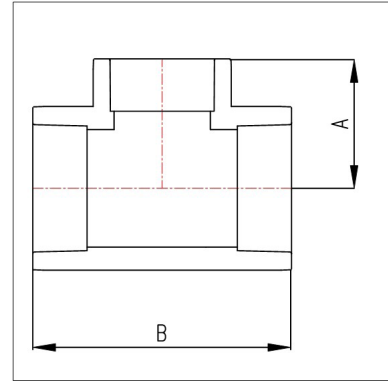
ASTM Spec[d]	Manufacturing Method	L	D	Item Code	
				Gas	Industrial
12" IPS	Injection	19.488	15.846	COSB GI0250	COSB WI0250
16" IPS	Injection	23.399	19.436	COSB GI0251	COSB WI0251

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ **BF EQUAL & UNEQUAL TEE**



Unit : inch

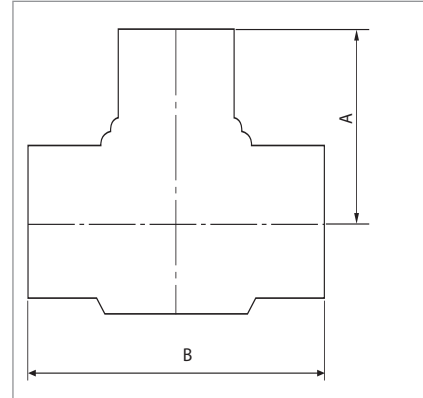
ASTM Spec[d]	Manufacturing Method	A	B	Item Code	
				Gas	Industrial
1/2CTS X 1/2CTS	Injection(Socket)	1.063	2.165	COSB GCI0300	COSB WCI0300
1/2IPS X 1/2CTS	Injection(Socket)	1.142	2.362	COSB GCI0301	COSB WCI0301
1/2IPS X 1/2IPS	Injection(Socket)	1.220	2.441	COSB GCI0302	COSB WCI0302
3/4IPS X 1/2CTS	Injection(Socket)	1.299	2.598	COSB GCI0303	COSB WCI0303
3/4IPS X 1/2IPS	Injection(Socket)	1.299	2.677	COSB GCI0304	COSB WCI0304
3/4IPS X 3/4IPS	Injection(Socket)	1.417	2.835	COSB GCI0305	COSB WCI0305
1IPS X 1/2CTS	Injection(Socket)	1.417	2.756	COSB GCI0306	COSB WCI0306
1IPS X 1/2IPS	Injection(Socket)	1.457	2.913	COSB GCI0307	COSB WCI0307
1IPS X 3/4IPS	Injection(Socket)	1.575	2.992	COSB GCI0308	COSB WCI0308
1IPS X 1IPS	Injection(Socket)	1.654	3.268	COSB GCI0309	COSB WCI0309
1 1/4IPS X 1/2CTS	Injection(Socket)	1.614	2.874	COSB GCI0310	COSB WCI0310
1 1/4IPS X 1/2IPS	Injection(Socket)	1.693	3.031	COSB GCI0311	COSB WCI0311
1 1/4IPS X 3/4IPS	Injection(Socket)	1.772	3.268	COSB GCI0312	COSB WCI0312
1 1/4IPS X 1IPS	Injection(Socket)	1.850	3.504	COSB GCI0313	COSB WCI0313
1 1/4IPS X 1 1/4IPS	Injection(Socket)	1.929	3.819	COSB GCI0314	COSB WCI0314
1 1/2IPS X 1/2CTS	Injection(Socket)	1.772	3.110	COSB GCI0315	COSB WCI0315
1 1/2IPS X 1/2IPS	Injection(Socket)	1.890	3.268	COSB GCI0316	COSB WCI0316
1 1/2IPS X 3/4IPS	Injection(Socket)	1.969	3.425	COSB GCI0317	COSB WCI0317
1 1/2IPS X 1IPS	Injection(Socket)	2.008	3.740	COSB GCI0318	COSB WCI0318
1 1/2IPS X 1 1/4IPS	Injection(Socket)	1.772	4.055	COSB GCI0319	COSB WCI0319
1 1/2IPS X 1 1/2IPS	Injection(Socket)	3.898	8.307	COSB GCI0320	COSB WCI0320
2IPS X 1/2IPS	Injection(Socket)	2.087	3.661	COSB GCI0321	COSB WCI0321
2IPS X 3/4IPS	Injection(Socket)	2.165	3.858	COSB GCI0322	COSB WCI0322
2IPS X 1IPS	Injection(Socket)	2.283	4.134	COSB GCI0323	COSB WCI0323
2IPS X 1 1/4IPS	Injection(Socket)	2.362	4.488	COSB GCI0324	COSB WCI0324
2IPS X 1 1/2IPS	Injection(Socket)	2.480	4.803	COSB GCI0325	COSB WCI0325
2IPS X 2IPS	Injection(Socket)	2.559	5.197	COSB GCI0326	COSB WCI0326
2 1/2IPS X 1IPS	Injection(Socket)	2.913	5.787	COSB GCI0327	COSB WCI0327
2 1/2IPS X 1 1/4IPS	Injection(Socket)	2.913	5.787	COSB GCI0328	COSB WCI0328
2 1/2IPS X 1 1/2IPS	Injection(Socket)	2.717	4.961	COSB GCI0329	COSB WCI0329
2 1/2IPS X 2IPS	Injection(Socket)	2.874	5.433	COSB GCI0330	COSB WCI0330
2 1/2IPS X 2 1/2IPS	Injection(Socket)	2.874	5.866	COSB GCI0331	COSB WCI0331

※ The product diemensions may change for quality improvement by manufacturer
 ※ Possible to provide fabricated BF TEE from 18" to 24"

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ BF EQUAL & UNEQUAL TEE



Unit : inch

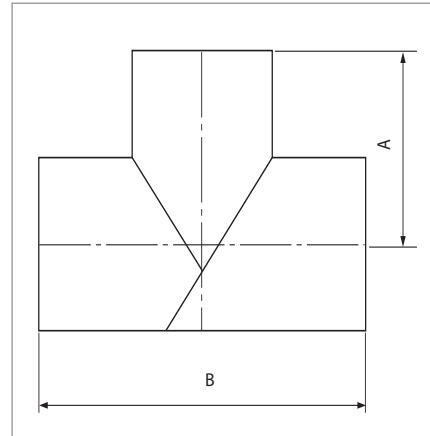
ASTM Spec[d]	Manufacturing Method	A	B	Item Code	
				Gas	Industrial
2IPS X 1/2IPS	Injection	2.087	3.661	COSB GI0302	COSB WI0302
2IPS X 3/4IPS	Injection	2.165	3.858	COSB GI0303	COSB WI0303
2IPS X 1IPS	Injection	2.283	4.134	COSB GI0304	COSB WI0304
2IPS X 1 1/4IPS	Injection	2.362	4.488	COSB GI0305	COSB WI0305
2IPS X 1 1/2IPS	Injection	2.480	4.803	COSB GI0306	COSB WI0306
2IPS X 2IPS	Injection	2.559	5.197	COSB GI0307	COSB WI0307
4IPS X 1 1/4IPS	Injection	5.400	12.008	COSB GI0324	COSB WI0324
4IPS X 1 1/2IPS	Injection	5.433	12.008	COSB GI0325	COSB WI0325
4IPS X 2IPS	Injection	5.512	12.008	COSB GI0326	COSB WI0326
4IPS X 3IPS	Injection	6.260	12.126	COSB GI0328	COSB WI0328
4IPS X 4IPS	Injection	6.417	12.598	COSB GI0329	COSB WI0329
6IPS X 2IPS	Injection	7.087	14.567	COSB GI0332	COSB WI0332
6IPS X 3IPS	Injection	7.480	14.764	COSB GI0333	COSB WI0333
6IPS X 4IPS	Injection	7.874	16.260	COSB GI0334	COSB WI0334
6IPS X 6IPS	Injection	8.189	16.220	COSB GI0336	COSB WI0336
10IPS X 10IPS	Injection	13.189	25.984	COSB GI0349	COSB WI0349
12IPS X 3IPS	Injection	11.417	20.866	COSB GI0350	COSB WI0350
12IPS X 4IPS	Injection	10.630	20.866	COSB GI0351	COSB WI0351
12IPS X 6IPS	Injection	11.693	20.866	COSB GI0353	COSB WI0353
12IPS X 8IPS	Injection	12.559	27.441	COSB GI0354	COSB WI0354
12IPS X 10IPS	Injection	13.661	27.559	COSB GI0355	COSB WI0355
12IPS X 12IPS	Injection	13.622	27.677	COSB GI0356	COSB WI0356
16IPS X 6IPS	Injection	13.913	34.843	COSB GI0369	COSB WI0369
16IPS X 8IPS	Injection	14.330	34.843	COSB GI0370	COSB WI0370
16IPS X 10IPS	Injection	14.724	34.843	COSB GI0371	COSB WI0371
16IPS X 12IPS	Injection	15.965	34.843	COSB GI0372	COSB WI0372
16IPS X 14IPS	Injection	16.555	34.943	COSB GI0373	COSB WI0373
16IPS X 16IPS	Injection	17.539	34.843	COSB GI0356	COSB WI0356

※ The product dimensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

► BF EQUAL & UNEQUAL TEE



Unit : inch

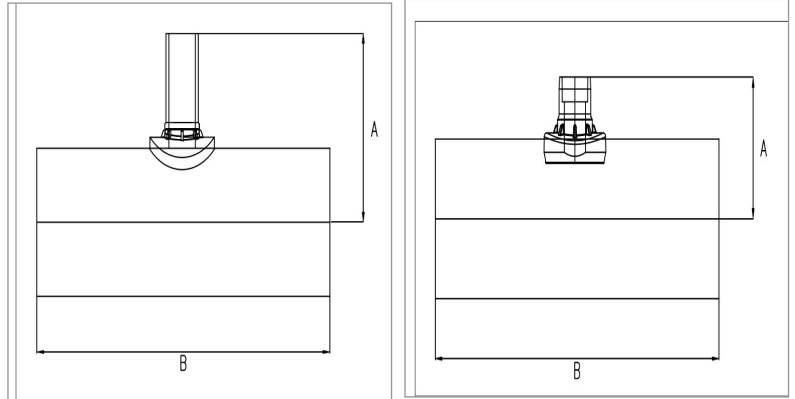
ASTM Spec[d]	Manufacturing Method	A	B	Item Code	
				Gas	Industrial
18IPS X 14IPS	Fabricated	20.669	45.669	COSB GI0408	COSB WI0408
18IPS X 16IPS	Fabricated	21.850	45.669	COSB GI0409	COSB WI0409
18IPS X 18IPS	Fabricated	21.850	45.669	COSB GI0410	COSB WI0410
20IPS X 16IPS	Fabricated	22.834	51.574	COSB GI0411	COSB WI0411
20IPS X 18IPS	Fabricated	22.834	51.574	COSB GI0412	COSB WI0412
20IPS X 20IPS	Fabricated	24.803	51.574	COSB GI0413	COSB WI0413
22IPS X 18IPS	Fabricated	24.015	55.511	COSB GI0414	COSB WI0414
22IPS X 20IPS	Fabricated	25.787	55.511	COSB GI0415	COSB WI0415
22IPS X 22IPS	Fabricated	25.984	55.511	COSB GI0416	COSB WI0416
24IPS X 20IPS	Fabricated	27.204	59.488	COSB GI0417	COSB WI0417
24IPS X 22IPS	Fabricated	27.401	59.488	COSB GI0418	COSB WI0418
24IPS X 24IPS	Fabricated	27.401	59.488	COSB GI0419	COSB WI0419
28IPS X 22IPS	Fabricated	28.976	75.590	COSB GI0420	COSB WI0420
28IPS X 24IPS	Fabricated	28.976	75.590	COSB GI0421	COSB WI0421
28IPS X 28IPS	Fabricated	37.677	75.590	COSB GI0422	COSB WI0422
32IPS X 24IPS	Fabricated	30.582	79.094	COSB GI0423	COSB WI0423
32IPS X 28IPS	Fabricated	33.850	79.094	COSB GI0424	COSB WI0424
32IPS X 32IPS	Fabricated	39.448	79.094	COSB GI0425	COSB WI0425
36IPS X 28IPS	Fabricated	35.866	82.992	COSB GI0426	COSB WI0426
36IPS X 32IPS	Fabricated	35.866	82.992	COSB GI0427	COSB WI0427
36IPS X 36IPS	Fabricated	41.496	82.992	COSB GI0428	COSB WI0428
42IPS X 32IPS	Fabricated	37.598	87.559	COSB GI0429	COSB WI0429
42IPS X 36IPS	Fabricated	37.992	87.559	COSB GI0430	COSB WI0430
42IPS X 42IPS	Fabricated	43.779	87.559	COSB GI0431	COSB WI0431
48IPS X 36IPS	Fabricated	41.929	90.590	COSB GI0432	COSB WI0432
48IPS X 42IPS	Fabricated	43.385	90.590	COSB GI0433	COSB WI0433
48IPS X 48IPS	Fabricated	47.244	90.590	COSB GI0434	COSB WI0434

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ BF SADDLE TEE



Unit : inch

ASTM Spec[d]	Manufacturing Method	A	B	Item Code	
				Gas	Industrial
18IPS X 2IPS	Fabricated	15.142	27.559	COSBT GI1000	COSBT WI1000
18IPS X 2 1/2IPS	Fabricated	16.362	27.559	COSBT GI1001	COSBT WI1001
18IPS X 3IPS	Fabricated	16.953	27.559	COSBT GI1002	COSBT WI1002
18IPS X 4IPS	Fabricated	18.134	27.559	COSBT GI1003	COSBT WI1003
18IPS X 6IPS	Fabricated	17.031	27.559	COSBT GI1004	COSBT WI1004
18IPS X 8IPS	Fabricated	17.031	27.559	COSBT GI1005	COSBT WI1005
20IPS X 2IPS	Fabricated	16.142	27.559	COSBT GI1006	COSBT WI1006
20IPS X 2 1/2IPS	Fabricated	17.362	27.559	COSBT GI1007	COSBT WI1007
20IPS X 3IPS	Fabricated	17.953	27.559	COSBT GI1008	COSBT WI1008
20IPS X 4IPS	Fabricated	19.134	27.559	COSBT GI1009	COSBT WI1009
20IPS X 6IPS	Fabricated	18.031	27.559	COSBT GI1010	COSBT WI1010
20IPS X 8IPS	Fabricated	18.031	27.559	COSBT GI1011	COSBT WI1011
22IPS X 2IPS	Fabricated	17.142	27.559	COSBT GI1012	COSBT WI1012
22IPS X 2 1/2IPS	Fabricated	18.362	27.559	COSBT GI1013	COSBT WI1013
22IPS X 3IPS	Fabricated	18.953	27.559	COSBT GI1014	COSBT WI1014
22IPS X 4IPS	Fabricated	20.134	27.559	COSBT GI1015	COSBT WI1015
22IPS X 6IPS	Fabricated	19.031	27.559	COSBT GI1016	COSBT WI1016
22IPS X 8IPS	Fabricated	19.031	27.559	COSBT GI1017	COSBT WI1017
24IPS X 2IPS	Fabricated	18.142	27.559	COSBT GI1018	COSBT WI1018
24IPS X 2 1/2IPS	Fabricated	19.362	27.559	COSBT GI1019	COSBT WI1019
24IPS X 3IPS	Fabricated	19.953	27.559	COSBT GI1020	COSBT WI1020
24IPS X 4IPS	Fabricated	21.134	27.559	COSBT GI1021	COSBT WI1021
24IPS X 6IPS	Fabricated	20.031	27.559	COSBT GI1022	COSBT WI1022
24IPS X 8IPS	Fabricated	20.031	27.559	COSBT GI1023	COSBT WI1023
28IPS X 2IPS	Fabricated	20.142	39.370	COSBT GI1024	COSBT WI1024
28IPS X 2 1/2IPS	Fabricated	21.362	39.370	COSBT GI1025	COSBT WI1025
28IPS X 3IPS	Fabricated	21.953	39.370	COSBT GI1026	COSBT WI1026

* The product dimensions may change for quality improvement by manufacturer

Unit: inch

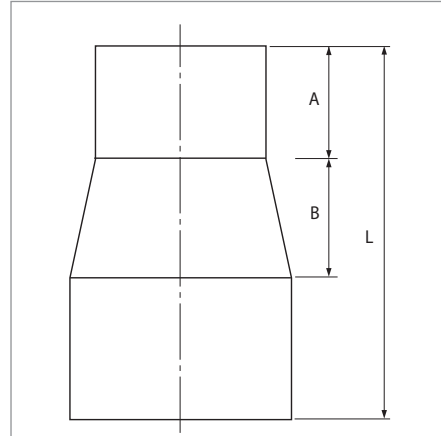
ASTM Spec[d]	Manufacturing Method	A	B	Item Code	
				Gas	Industrial
28IPS X 4IPS	Fabricated	23.134	39.370	COSBT GI1027	COSBT WI1027
28IPS X 6IPS	Fabricated	22.031	39.370	COSBT GI1028	COSBT WI1028
28IPS X 8IPS	Fabricated	22.031	39.370	COSBT GI1029	COSBT WI1029
32IPS X 2IPS	Fabricated	22.142	39.370	COSBT GI1030	COSBT WI1030
32IPS X 2 1/2IPS	Fabricated	23.362	39.370	COSBT GI1031	COSBT WI1031
32IPS X 3IPS	Fabricated	23.953	39.370	COSBT GI1032	COSBT WI1032
32IPS X 4IPS	Fabricated	25.134	39.370	COSBT GI1033	COSBT WI1033
32IPS X 6IPS	Fabricated	24.031	39.370	COSBT GI1034	COSBT WI1034
32IPS X 8IPS	Fabricated	24.031	39.370	COSBT GI1035	COSBT WI1035
36IPS X 2IPS	Fabricated	24.142	39.370	COSBT GI1036	COSBT WI1036
36IPS X 2 1/2IPS	Fabricated	25.362	39.370	COSBT GI1037	COSBT WI1037
36IPS X 3IPS	Fabricated	25.953	39.370	COSBT GI1038	COSBT WI1038
36IPS X 4IPS	Fabricated	27.134	39.370	COSBT GI1039	COSBT WI1039
36IPS X 6IPS	Fabricated	26.031	39.370	COSBT GI1040	COSBT WI1040
36IPS X 8IPS	Fabricated	26.031	39.370	COSBT GI1041	COSBT WI1041
42IPS X 2IPS	Fabricated	27.142	39.370	COSBT GI1042	COSBT WI1042
42IPS X 2 1/2IPS	Fabricated	28.362	39.370	COSBT GI1043	COSBT WI1043
42IPS X 3IPS	Fabricated	28.953	39.370	COSBT GI1044	COSBT WI1044
42IPS X 4IPS	Fabricated	30.134	39.370	COSBT GI1045	COSBT WI1045
42IPS X 6IPS	Fabricated	29.031	39.370	COSBT GI1046	COSBT WI1046
42IPS X 8IPS	Fabricated	29.031	39.370	COSBT GI1047	COSBT WI1047
48IPS X 2IPS	Fabricated	30.142	39.370	COSBT GI1048	COSBT WI1048
48IPS X 2 1/2IPS	Fabricated	31.362	39.370	COSBT GI1049	COSBT WI1049
48IPS X 3IPS	Fabricated	31.953	39.370	COSBT GI1050	COSBT WI1050
48IPS X 4IPS	Fabricated	33.134	39.370	COSBT GI1051	COSBT WI1051
48IPS X 6IPS	Fabricated	32.031	39.370	COSBT GI1052	COSBT WI1052
48IPS X 8IPS	Fabricated	32.031	39.370	COSBT GI1053	COSBT WI1053

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ BF REDUCER



Unit : inch

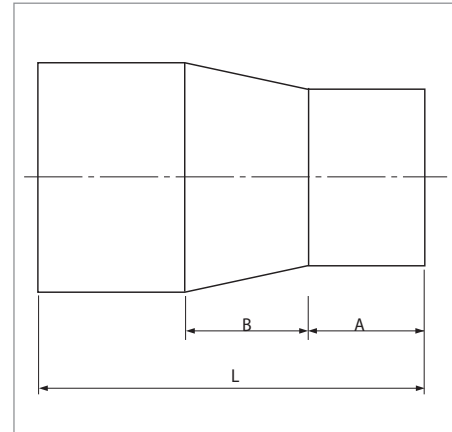
ASTM Spec[d]	Manufacturing Method	L	A	B	Item Code	
					Gas	Industrial
1/2" IPS x 1/2" CTS	Injection(Socket)	1.575	0.630	0.12	COSB GCI0500	COSB WCI0500
3/4" IPS x 1/2" CTS	Injection(Socket)	1.811	0.709	0.39	COSB GCI0501	COSB WCI0501
3/4" IPS x 1/2" IPS	Injection(Socket)	1.693	0.748	0.20	COSB GCI0502	COSB WCI0502
1" IPS x 1/2" CTS	Injection(Socket)	2.087	0.709	0.47	COSB GCI0503	COSB WCI0503
1" IPS x 1/2" IPS	Injection(Socket)	1.969	0.748	0.35	COSB GCI0504	COSB WCI0504
1" IPS x 3/4" IPS	Injection(Socket)	2.008	0.827	0.28	COSB GCI0505	COSB WCI0505
1 1/4" IPS x 1/2" IPS	Injection(Socket)	2.165	0.709	0.47	COSB GCI0506	COSB WCI0506
1 1/4" IPS x 3/4" IPS	Injection(Socket)	2.244	0.827	0.39	COSB GCI0507	COSB WCI0507
1 1/4" IPS x 1" IPS	Injection(Socket)	2.244	0.906	0.31	COSB GCI0508	COSB WCI0508
1 1/2" IPS x 1/2" IPS	Injection(Socket)	2.323	0.748	0.59	COSB GCI0509	COSB WCI0509
1 1/2" IPS x 3/4" IPS	Injection(Socket)	2.362	0.827	0.55	COSB GCI0510	COSB WCI0510
1 1/2" IPS x 1" IPS	Injection(Socket)	2.362	0.945	0.47	COSB GCI0511	COSB WCI0511
1 1/2" IPS x 1 1/4" IPS	Injection(Socket)	2.362	1.024	0.35	COSB GCI0512	COSB WCI0512
2" IPS x 3/4" IPS	Injection(Socket)	3.150	0.827	1.22	COSB GCI0513	COSB WCI0513
2" IPS x 1" IPS	Injection(Socket)	3.110	0.945	1.02	COSB GCI0514	COSB WCI0514
2" IPS x 1 1/4" IPS	Injection(Socket)	3.071	1.024	0.83	COSB GCI0515	COSB WCI0515
2" IPS x 1 1/2" IPS	Injection(Socket)	2.756	1.102	0.51	COSB GCI0516	COSB WCI0516
2 1/2" IPS x 1 1/4" IPS	Injection(Socket)	3.346	1.024	1.06	COSB GCI0517	COSB WCI0517
2 1/2" IPS x 1 1/2" IPS	Injection(Socket)	3.031	1.063	0.83	COSB GCI0518	COSB WCI0518
2 1/2" IPS x 2" IPS	Injection(Socket)	2.795	1.220	0.39	COSB GCI0519	COSB WCI0519
3IPS X 2IPS	Injection	7.638	2.677	1.69	COSB GI0506	COSB WI0506
4IPS X 2IPS	Injection	8.071	2.559	2.32	COSB GI0508	COSB WI0508
12IPS X 8IPS	Injection	15.866	5.000	4.72	COSB GI0519	COSB WI0519
12IPS X 10IPS	Injection	18.307	6.260	5.63	COSB GI0520	COSB WI0520
16IPS X 14IPS	Injection	17.717	6.693	3.54	COSB GI0523	COSB WI0523

※ The product dimensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ **BF REDUCER**



Unit : inch

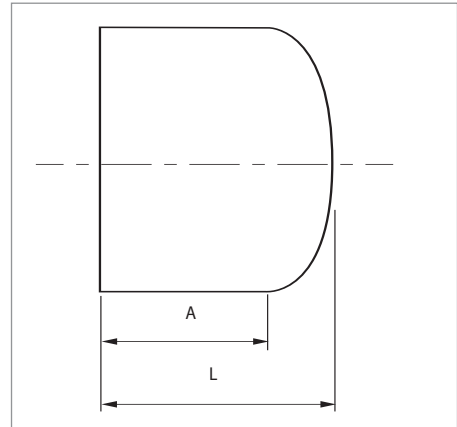
ASTM Spec[d]	Manufacturing Method	L	A	B	Item Code	
					Gas	Industrial
18IPS X 14IPS	Fabricated	20.669	6.890	5.91	COSB GI0538	COSB WI0538
18IPS X 16IPS	Fabricated	18.701	7.283	3.54	COSB GI0539	COSB WI0539
20IPS X 16IPS	Fabricated	21.850	7.283	5.91	COSB GI0540	COSB WI0540
20IPS X 18IPS	Fabricated	20.079	7.874	3.54	COSB GI0541	COSB WI0541
22IPS X 20IPS	Fabricated	21.654	8.661	3.54	COSB GI0543	COSB WI0543
24IPS X 20IPS	Fabricated	25.394	8.661	6.50	COSB GI0544	COSB WI0544
24IPS X 22IPS	Fabricated	23.819	9.449	4.13	COSB GI0545	COSB WI0545

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ BF END CAP



Unit : inch

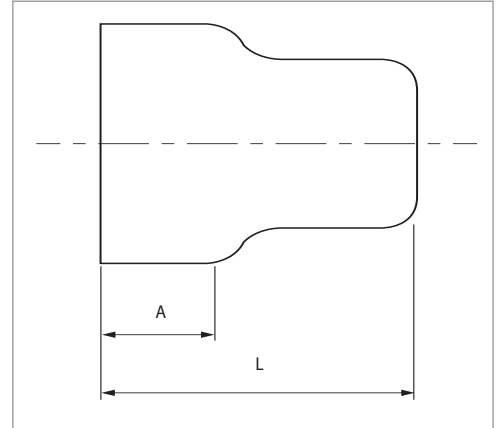
ASTM Spec[d]	Manufacturing Method	L	A	Item Code	
				Gas	Industrial
1 CTS	Injection(Socket)	2.087	1.772	COSB GI6009	COSB WI6009
1 1/2IPS	Injection(Socket)	1.654	1.024	COSB GI0600	COSB WI0600
2IPS	Injection(Socket)	2.047	1.339	COSB GI0601	COSB WI0601
2 1/2IP	Injection(Socket)	1.929	1.299	COSB GI0602	COSB WI0602
3IPS	Injection(Socket)	4.882	3.307	COSB GI0603	COSB WI0603
4IPS	Injection(Socket)	4.291	3.307	COSB GI0604	COSB WI0604
5IPS	Injection(Socket)	6.299	3.819	COSB GI0605	COSB WI0605
6IPS	Injection(Socket)	6.417	4.094	COSB GI0606	COSB WI0606
8IPS	Injection	8.583	4.803	COSB GI0607	COSB WI0607
10IPS	Injection	10.157	5.748	COSB GI0608	COSB WI0608
12IPS	Injection	10.709	5.709	COSB GI0609	COSB WI0609
14IPS	Injection	9.724	6.772	COSB GI0610	COSB WI0610
16IPS	Injection	11.063	7.205	COSB GI0611	COSB WI0611

※ The product dimensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ **BF END CAP**



Unit : inch

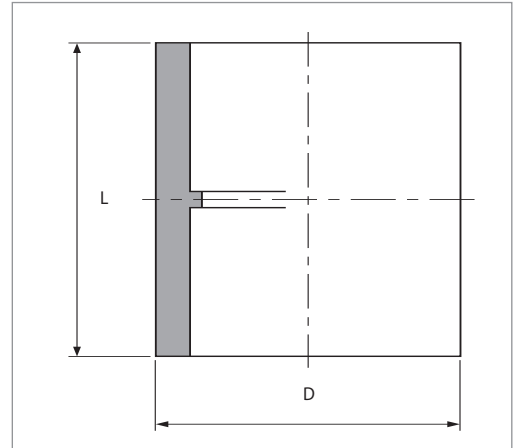
ASTM Spec[d]	Manufacturing Method	L	A	Item Code	
				Gas	Industrial
18IPS	Fabricated	17.323	7.874	COSB GI0615	COSB WI0615
20IPS	Fabricated	20.472	8.661	COSB GI0616	COSB WI0616
22IPS	Fabricated	23.622	9.449	COSB GI0617	COSB WI0617
24IPS	Fabricated	17.913	10.236	COSB GI0618	COSB WI0618

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ **BF SOCKET**



Unit : inch

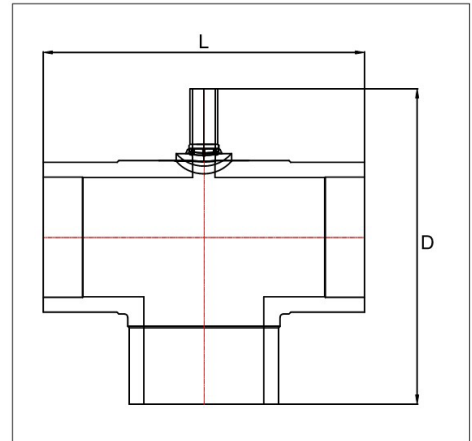
ASTM Spec[d]	Manufacturing Method	D	L	Item Code	
				Gas	Industrial
½" CTS	Injection(Socket)	0.945	1.417	COSB GCI0700	COSB WCI0700
½" IPS	Injection(Socket)	1.102	1.535	COSB GCI0701	COSB WCI0701
¾" IPS	Injection(Socket)	1.339	1.732	COSB GCI0702	COSB WCI0702
1" IPS	Injection(Socket)	1.614	1.929	COSB GCI0703	COSB WCI0703
1¼" IPS	Injection(Socket)	2.047	2.126	COSB GCI0704	COSB WCI0704
1½" IPS	Injection(Socket)	2.520	2.244	COSB GCI0705	COSB WCI0705
2" IPS	Injection(Socket)	3.110	2.559	COSB GCI0706	COSB WCI0706
2½" IPS	Injection(Socket)	3.661	2.677	COSB GCI0707	COSB WCI0707

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ **BF DRIP TEE**



Unit : inch

ASTM Spec[d]	Manufacturing Method	D	L	Item Code	
				Gas	Industrial
6IPS X 2IPS	Fabricated	17.540	16.299	COSB GI03563-1	COSB WI03563-1
8IPS X 2IPS	Fabricated	21.176	21.090	COSB GI03564-1	COSB WI03564-1
12IPS X 2IPS	Fabricated	26.842	27.397	COSB GI03565-1	COSB WI03565-1
16IPS X 2IPS	Fabricated	31.806	34.755	COSB GI03566-1	COSB WI03566-1

※ The product diemensions may change for quality improvement by manufacturer

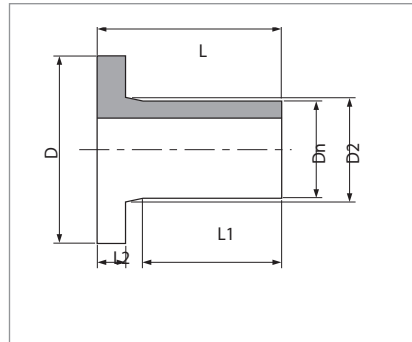
PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

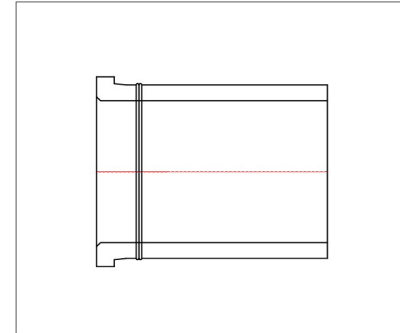
➤ BF FLANGE ADAPTER



(Injection type)



(Fabricated type)



Unit : inch

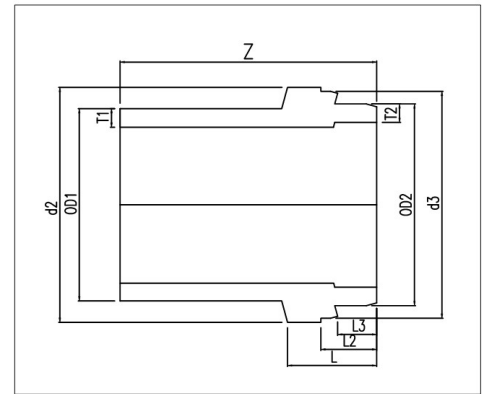
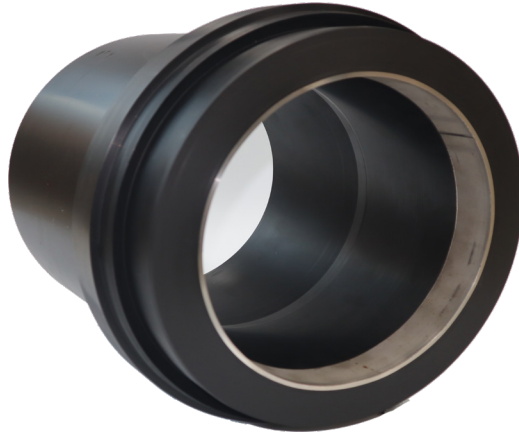
ASTM Spec[d]	SDR	Flange Adapter						Item Code	
		Dn	L	L1	L2	D	D2	Gas	Industrial
1/2IPS	11/17	1.024	2.441	1.969	0.472	2.008	1.024	COSB GCI0900	COSB WCI0900
3/4IPS	11/17	1.299	2.441	1.969	0.472	2.402	1.299	COSB GCI0901	COSB WCI0901
1IPS	11/17	1.575	2.362	1.890	0.433	2.756	1.575	COSB GCI0902	COSB WCI0902
1 1/4IPS	11/17	1.969	2.756	2.205	0.551	3.110	1.969	COSB GCI0903	COSB WCI0903
1 1/2IPS	11/17	2.402	2.913	2.244	0.630	3.543	2.480	COSB GCI0904	COSB WCI0904
2IPS	11/17	2.953	4.055	3.386	0.709	3.937	2.953	COSB GCI0905	COSB WCI0905
2IPS	11/17	2.480	3.976	3.465	0.472	3.937	2.677	COSB GI0900	COSB WI0900
2 1/2IPS	11/17	2.953	4.331	3.740	0.591	4.724	3.110	COSB GI0901	COSB WI0901
3IPS	11/17	3.543	5.394	4.724	0.669	5.157	3.701	COSB GI0902	COSB WI0902
4IPS	11/17	4.331	6.181	5.276	0.906	6.142	4.528	COSB GI0903	COSB WI0903
5IPS	11/17	5.512	5.787	4.843	0.945	7.362	5.709	COSB GI0904	COSB WI0904
6IPS	11/17	6.299	6.457	5.394	1.063	8.307	6.535	COSB GI0905	COSB WI0905
8IPS	11/17	8.858	7.165	6.063	1.260	10.472	5.197	COSB GI0906	COSB WI0906
10IPS	11/17	11.024	8.976	7.598	1.378	12.677	11.417	COSB GI0907	COSB WI0907
12IPS	11/17	12.402	7.717	6.220	1.496	14.567	12.598	COSB GI0908	COSB WI0908
14IPS	11/17	13.976	9.646	7.835	1.811	16.378	14.134	COSB GI0909	COSB WI0909
16IPS	11/17	15.748	10.354	8.583	1.772	18.898	16.024	COSB GI0910	COSB WI0910
18IPS	11/17	17.717	9.606	7.638	1.969	20.866	18.071	COSB GI0911	COSB WI0911
20IPS	11/17	19.685	9.094	6.929	2.165	22.441	20.079	COSB GI0912	COSB WI0912
22IPS	11/17	22.047	10.000	7.677	2.323	24.764	22.402	COSB GI0913	COSB WI0913
24IPS	11/17	24.803	12.244	9.803	2.441	27.126	25.197	COSB GI0914	COSB WI0914

※ The product dimensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ BF MJ ADAPTER



MJ ADAPTER (IPS) WITH STIFFENER

Unit : inch

ASTM Spec [d]	OD1	T1	OD2	T2	d2	d3	L	L2	L3	z	Item Code
											Industrial
2IPS X 2DIPS	2.375	0.229	2.500	0.240	3.760	3.420	3.500	2.500	1.750	8.500	COSB WID1400
3IPS X 3DIPS	3.500	0.337	3.960	0.379	5.290	4.820	3.620	2.500	1.750	9.000	COSB WID1401
4IPS X 4DIPS	4.500	0.434	4.800	0.462	6.450	5.860	3.750	2.500	1.750	10.500	COSB WID1402
6IPS X 6DIPS	6.625	0.638	6.900	0.665	8.390	7.960	3.880	2.500	1.750	11.500	COSB WID1403
8IPS X 8DIPS	8.625	0.831	9.050	0.872	10.500	10.120	4.000	2.500	1.750	12.000	COSB WID1404
10IPS X 10DIPS	10.750	1.036	11.100	1.070	12.790	12.160	4.000	2.500	1.750	14.000	COSB WID1405
12IPS X 12DIPS	12.750	1.229	13.200	1.272	14.810	14.240	4.000	2.500	1.750	14.000	COSB WID1406
14IPS X 14DIPS	14.000	1.349	15.300	1.474	17.480	16.320	5.000	3.500	2.500	14.000	COSB WID1407
16IPS X 16DIPS	16.000	1.542	17.400	1.677	19.680	18.400	5.000	3.500	2.500	14.000	COSB WID1408

MJ ADAPTER (DIPS) WITH STIFFENER

Unit : inch

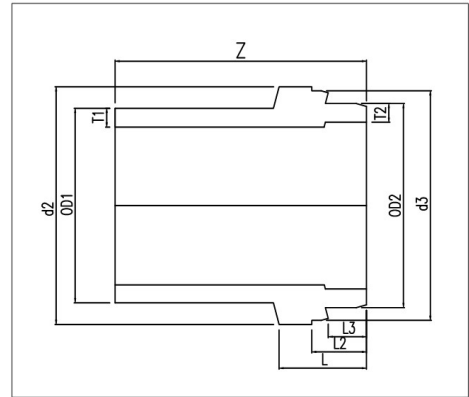
ASTM Spec [d]	OD1	T1	OD2	T2	d2	d3	L	L2	L3	z	Item Code
											Industrial
2DIPS X 2DIPS	2.500	0.240	2.500	0.240	3.760	3.420	3.500	2.500	1.750	8.500	COSB WDD1400
3DIPS X 3DIPS	3.960	0.379	3.960	0.379	5.290	4.820	3.620	2.500	1.750	9.000	COSB WDD1401
4DIPS X 4DIPS	4.800	0.462	4.800	0.462	6.450	5.860	3.750	2.500	1.750	10.500	COSB WDD1402
6DIPS X 6DIPS	6.900	0.665	6.900	0.665	8.390	7.960	3.880	2.500	1.750	11.500	COSB WDD1403
8DIPS X 8DIPS	9.050	0.872	9.050	0.872	10.500	10.120	4.000	2.500	1.750	12.000	COSB WDD1404
10DIPS X 10DIPS	11.100	1.070	11.100	1.070	12.790	12.160	4.000	2.500	1.750	14.000	COSB WDD1405
12DIPS X 12DIPS	13.200	1.272	13.200	1.272	14.810	14.240	4.000	2.500	1.750	14.000	COSB WDD1406
14DIPS X 14DIPS	15.300	1.474	15.300	1.474	17.480	16.320	5.000	3.500	2.500	14.000	COSB WDD1407
16DIPS X 16DIPS	17.400	1.677	17.400	1.677	19.680	18.400	5.000	3.500	2.500	14.000	COSB WDD1408

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE 2406 / 4710

➤ BF MJ ADAPTER



MJ ADAPTER (IPS) WITHOUT STIFFENER

Unit : inch

ASTM Spec [d]	OD1	T1	OD2	T2	d2	d3	L	L2	L3	z	Item Code
											Industrial
2IPS X 2DIPS	2.375	0.229	2.500	0.240	3.760	3.420	3.500	2.500	1.750	8.500	COSB WID1300
3IPS X 3DIPS	3.500	0.337	3.960	0.379	5.290	4.820	3.620	2.500	1.750	9.000	COSB WID1301
4IPS X 4DIPS	4.500	0.434	4.800	0.462	6.450	5.860	3.750	2.500	1.750	10.500	COSB WID1302
6IPS X 6DIPS	6.625	0.638	6.900	0.665	8.390	7.960	3.880	2.500	1.750	11.500	COSB WID1303
8IPS X 8DIPS	8.625	0.831	9.050	0.872	10.500	10.120	4.000	2.500	1.750	12.000	COSB WID1304
10IPS X 10DIPS	10.750	1.036	11.100	1.070	12.790	12.160	4.000	2.500	1.750	14.000	COSB WID1305
12IPS X 12DIPS	12.750	1.229	13.200	1.272	14.810	14.240	4.000	2.500	1.750	14.000	COSB WID1306
14IPS X 14DIPS	14.000	1.349	15.300	1.474	17.480	16.320	5.000	3.500	2.500	14.000	COSB WID1307
16IPS X 16DIPS	16.000	1.542	17.400	1.677	19.680	18.400	5.000	3.500	2.500	14.000	COSB WID1308

MJ ADAPTER (DIPS) WITHOUT STIFFENER

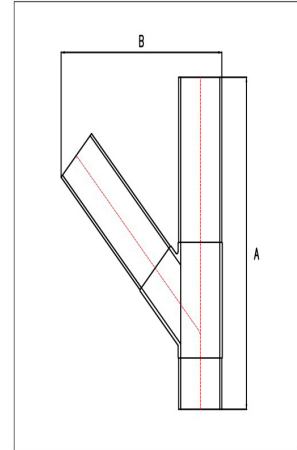
Unit : inch

ASTM Spec [d]	OD1	T1	OD2	T2	d2	d3	L	L2	L3	z	Item Code
											Industrial
2DIPS X 2DIPS	2.500	0.240	2.500	0.240	3.760	3.420	3.500	2.500	1.750	8.500	COSB WDD1300
3DIPS X 3DIPS	3.960	0.379	3.960	0.379	5.290	4.820	3.620	2.500	1.750	9.000	COSB WDD1301
4DIPS X 4DIPS	4.800	0.462	4.800	0.462	6.450	5.860	3.750	2.500	1.750	10.500	COSB WDD1302
6DIPS X 6DIPS	6.900	0.665	6.900	0.665	8.390	7.960	3.880	2.500	1.750	11.500	COSB WDD1303
8DIPS X 8DIPS	9.050	0.872	9.050	0.872	10.500	10.120	4.000	2.500	1.750	12.000	COSB WDD1304
10DIPS X 10DIPS	11.100	1.070	11.100	1.070	12.790	12.160	4.000	2.500	1.750	14.000	COSB WDD1305
12DIPS X 12DIPS	13.200	1.272	13.200	1.272	14.810	14.240	4.000	2.500	1.750	14.000	COSB WDD1306
14DIPS X 14DIPS	15.300	1.474	15.300	1.474	17.480	16.320	5.000	3.500	2.500	14.000	COSB WDD1307
16DIPS X 16DIPS	17.400	1.677	17.400	1.677	19.680	18.400	5.000	3.500	2.500	14.000	COSB WDD1308

※ The product dimensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11,, PE 2406 / 4710



Unit : inch

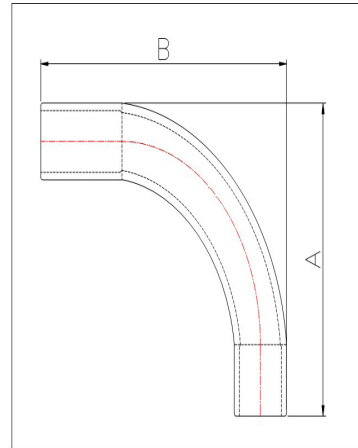
ASTM Spec[d]	Manufacturing Method	A	B	Item Code
				Industrial
2"	Injection	22.402	11.634	COSB WI11500
3"	Injection	23.386	13.858	COSB WI11501
4"	Injection	37.073	16.732	COSB WI11502
6"	Injection	35.709	24.685	COSB WI11503
8"	Injection	38.78	28.11	COSB WI11504
10"	Injection	43.307	32.283	COSB WI11505
12"	Injection	47.244	35.945	COSB WI11506

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11,, PE 2406 / 4710

▶ LONG ELBOW



Unit : inch

ASTM Spec[d]	Manufacturing Method	A	B	Item Code
				Industrial
3"	Injection	15.00	15.00	COSB W11600
4"	Injection	15.55	15.55	COSB W11601

※ The product diemensions may change for quality improvement by manufacturer

PE Butt fusion fitting(BF)

- SDR11, PE100

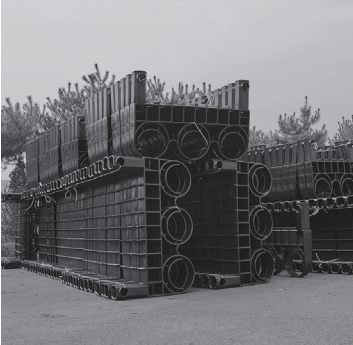
➤ TF(TRANSITION FITTING)



ASTM Spec[d]	Item Code	
	Gas	Industrial
2IPS	COSB GI0900	COSB WI1200
3IPS	COSB GI0901	COSB WI1201
4IPS	COSB GI0902	COSB WI1202
6IPS	COSB GI0903	COSB WI1203
8IPS	COSB GI0904	COSB WI1204
10IPS	COSB GI0905	COSB WI1205
12IPS	COSB GI0906	COSB WI1206

COSMOIND

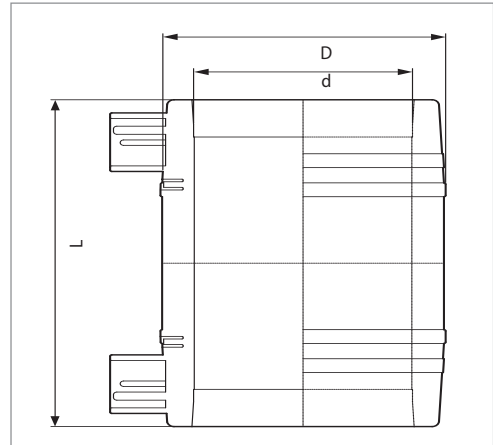
PE Electrofusion Fittings



PE Electrofusion fitting(EF)

- SDR11,, PE 2406 / 4710

➤ EF COUPLER



Unit : inch

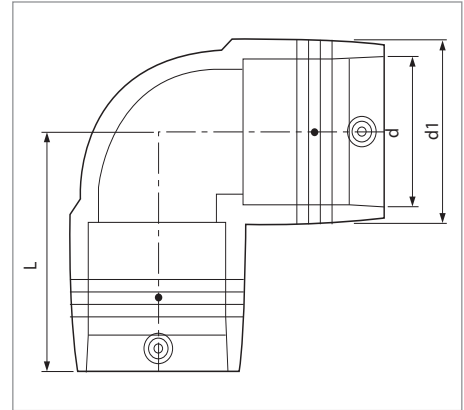
ASTM Spec[d]	D	L	Item code	
			Gas	Industrial
1/2" CTS	1.189	2.953	COS0005	COS W0005
3/4" IPS	1.693	3.622	COS0075	COS W0075
1" CTS	2.008	3.780	COS0080	COS W0080
1" IPS	2.008	3.780	COS0100	COS W0100
1-1/4" IPS	2.402	3.976	COS0105	COS W0105
2" IPS	3.268	4.646	COS0120	COS W0120
3" IPS	4.370	5.551	COS0130	COS W0130
4" IPS	5.276	6.299	COS0140	COS W0140
6" IPS	7.756	7.874	COS 0160	COS W0160
8" IPS	10.787	9.606	COS 0180	COS W0180
12" IPS	15.157	11.024	COS 0195	COS W0195
16" IPS(D/S)	19.370	10.827	COSDS0198	COS WDS0198

※ The product diemensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11, PE 2406 / 4710

➤ EF 90° ELBOW



Unit : inch

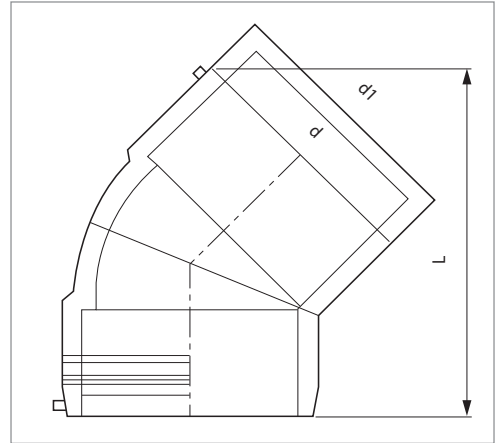
ASTM Spec[d]	d1	L	Item code	
			Gas	Industrial
1" CTS	1.772	2.638	COS0472	COS W0472
2" IPS	3.268	3.898	COS0475	COS W0475
3" IPS	4.449	5.118	COS0480	COS W0480
4" IPS	5.748	5.276	COS0485	COS W0485
6" IPS	7.756	7.756	COS0490	COS W0490
8" IPS	10.157	10.787	COS0495	COS W0495
12" IPS	12.953	15.709	COS0498	COS W0498
16" IPS(D/S)	19.764	24.606	COS0499F	COS W0499F

※ The product diemensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11, PE 2406 / 4710

➤ EF 45° ELBOW



Unit : inch

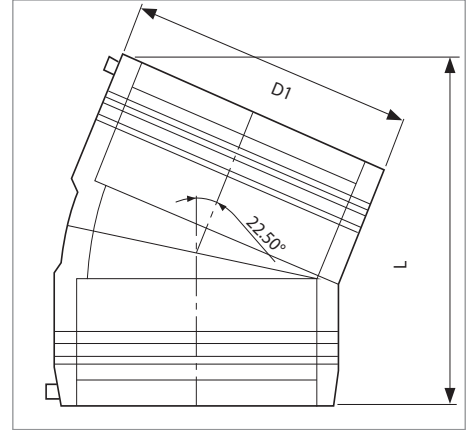
ASTM Spec[d]	d1	L	Item code	
			Gas	Industrial
2" IPS	3.228	7.283	COS0420	COS W0420
3" IPS	4.449	8.307	COS0430	COS W0430
4" IPS	5.630	10.512	COS0440	COS W0440
6" IPS	7.992	13.110	COS0445	COS W0445
8" IPS	10.787	15.236	COS0450	COS W0450
12" IPS	15.157	21.063	COS0460	COS W0460
16" IPS(D/S)	19.764	40.354	COS0464F	COS W0462

※ The product dimensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11, PE 2406 / 4710

➤ EF 22.5° ELBOW



Unit : inch

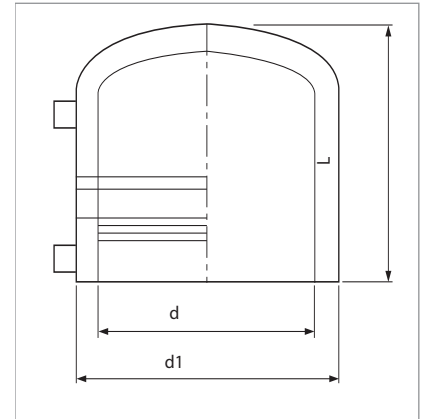
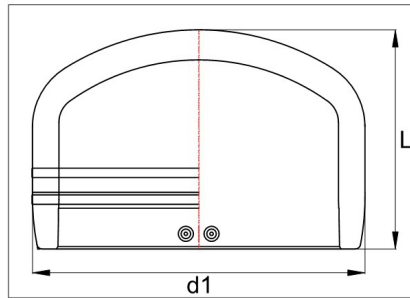
ASTM Spec[d]	d1	L	Item code	
			Gas	Industrial
8" IPS	10.803	15.130	COS0410	COSW0410
12" IPS	15.236	17.874	COS0415	COSW0415
16" IPS(D/S)	19.543	26.000	COS0416	COSW0416

※ The product diemensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11, PE 2406 / 4710

➤ EF END CAP



Unit : inch

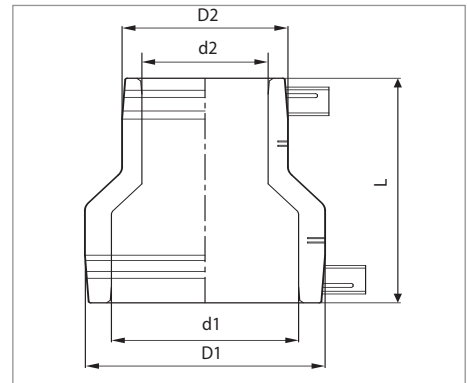
ASTM Spec[d]	d1	L	Item code	
			Gas	Industrial
1"CTS	1.125	2.598	COS04996	COS W04996
1"IPS	1.969	2.598	COS0400	COS W0400
2" IPS	3.228	4.055	COS0500	COS W0500
3" IPS	4.449	3.661	COS0505	COS W0505
4" IPS	5.276	4.921	COS0510	COS W0510
6" IPS	7.756	6.496	COS0515	COS W0515
8" IPS	10.787	8.661	COS0520	COS W0520
12" IPS(D/S)	15.236	10.236	COS0521	COS W0524
16" IPS(D/S)	19.173	12.520	COS0522	COS W0525

※ The product diemensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11, PE 2406 / 4710

➤ EF REDUCER



Unit : inch

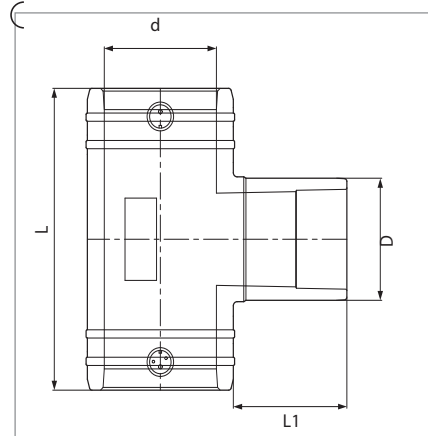
ASTM Spec[d]		D1	D2	L	Item code	
[d]	[d2]				Gas	Industrial
¾" IPS	½" CTS	1.732	0.625	3.661	COS0199	COS W0199
¾" IPS	1" CTS	1.732	1.125	3.661	COS0200	COS W0200
1" CTS	½" CTS	1.125	0.625	3.819	COS0201	COS W0201
1" IPS	½" CTS	2.047	0.625	3.819	COS0208	COS W0208
1" IPS	¾" IPS	2.047	2.047	3.819	COS0210	COS W0210
1" IPS	1" CTS	2.047	1.125	3.819	COS0211	COS W0211
2" IPS	1" IPS	3.268	2.047	5.118	COS0212	COS W0212
2" IPS	1¼" IPS	3.268	2.283	5.118	COS021401	COS W021401
4" IPS	2" IPS	5.551	3.346	7.087	COS0220	COS W0220
4" IPS	3" IPS	5.551	4.409	7.087	COS0225	COS W0225
6" IPS	4" IPS	7.638	5.236	7.874	COS0230	COS W0230
8" IPS	6" IPS	10.748	8.189	9.646	COS0236	COS W0236
12" IPS	6" IPS	15.748	8.110	13.780	COS0237	COS W0237
12" IPS	8" IPS	15.748	10.787	13.780	COS0238	COS W0238

※ The product diemensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11, PE 2406 / 4710

➤ EF EQUAL TEE



Unit : inch

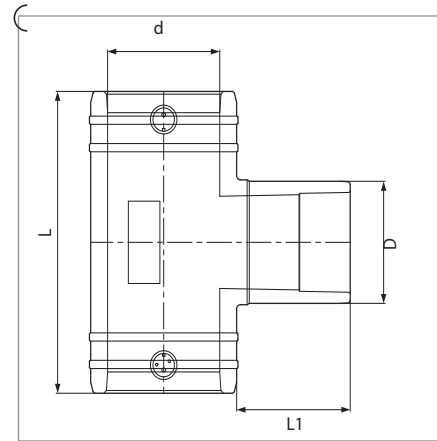
ASTM Spec[d]		L	L1	Item code	
[d]	[D]			Gas	Industrial
¾" IPS	¾" IPS	4.213	2.244	COS0255	COS W0255
1" IPS	1" IPS	4.961	2.362	COS0265	COS W0265
2" IPS	2" IPS	6.968	3.425	COS0320	COS W0320
3" IPS	3" IPS	8.346	4.134	COS0330	COS W0330
4" IPS	4" IPS	10.394	3.898	COS0340	COS W0340
6" IPS	6" IPS	15.157	5.039	COS0360	COS W0360
8" IPS	8" IPS	17.047	5.630	COS0380	COS W0380
12" IPS	12" IPS	22.047	18.346	COS0390	COS W0390

※ The product diemensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11, PE 2406 / 4710

► EF UNEQUAL TEE



Unit : inch

ASTM Spec[d]		L	L1	Item code	
[d]	[D]			Gas	Water
¾" IPS	½" IPS	4.213	2.362	COS0254	COS W0262
1" IPS	½" IPS	4.961	2.362	COS0263	COS W0263
1" IPS	¾" IPS	4.961	2.362	COS0264	COS W0264
2" IPS	½" IPS	6.968	2.244	COS0316	COS W0316
2" IPS	¾" IPS	6.968	2.244	COS0317	COS W0317
2" IPS	1" IPS	6.968	2.717	COS0318	COS W0318
2" IPS	1¼" IPS	6.968	2.835	COS0319	COS W0319
3" IPS	½" IPS	8.346	2.362	COS0325	COS W0325
3" IPS	¾" IPS	8.346	2.362	COS0326	COS W0326
3" IPS	1" IPS	8.346	2.598	COS0327	COS W0327
3" IPS	1¼" IPS	8.346	2.795	COS0328	COS W0328
3" IPS	2" IPS	8.346	3.386	COS0329	COS W0329
4" IPS	½" IPS	10.394	2.362	COS0337	COS W0337
4" IPS	¾" IPS	10.394	2.362	COS0338	COS W0338
4" IPS	1" IPS	10.394	2.362	COS0339	COS W0339

Unit : inch

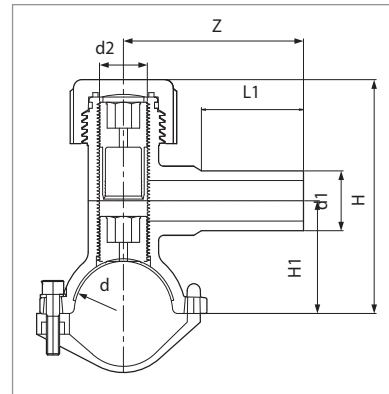
ASTM Spec[d]		L	L1	Item code	
[d]	[D]			Gas	Industrial
4" IPS	1¼" IPS	10.394	3.543	COS0341	COS W0341
4" IPS	2" IPS	10.394	3.583	COS0342	COS W0342
4" IPS	2 ½" IPS	10.394	3.740	COS0343	COS W0343
4" IPS	3" IPS	10.394	3.819	COS0344	COS W0344
6" IPS	¾" IPS	15.157	3.543	COS0355	COS W0355
6" IPS	1" IPS	15.157	3.543	COS0356	COS W0356
6" IPS	1¼" IPS	15.157	3.543	COS0357	COS W0357
6" IPS	2" IPS	15.157	3.543	COS0358	COS W0358
6" IPS	3" IPS	15.157	4.173	COS0359	COS W0359
6" IPS	4" IPS	15.157	4.331	COS0370	COS W0370
8" IPS	4" IPS	17.047	4.331	COS0385	COS W0385
8" IPS	6" IPS	17.047	5.394	COS0390	COS W0390
12" IPS	4" IPS	18.386	4.409	COS0391	COS W0391
12" IPS	6" IPS	18.386	5.118	COS0392	COS W0392
12" IPS	8" IPS	22.047	6.024	COS0393	COS W0393

※ The product dimensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11,, PE 2406 / 4710

➤ EF TAPPING TEE



Unit : inch

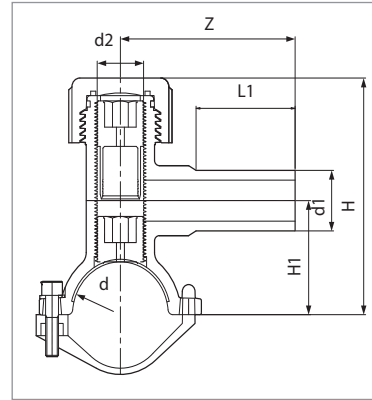
ASTM Spec[d]		L1	H	H1	Z	Item code	
MAIN SIZE [d]	BRANCH SIZE [d1]					Gas	Industrial
1¼" CTS	1" CTS	1.969	4.488	2.165	3.268	COS0702	COS W0702
1¼" CTS	1" IPS	1.969	4.488	2.165	3.268	COS0703	COS W0703
1¼" CTS	1¼" IPS	2.953	5.000	2.165	4.291	COS0704	COS W0704
1¼" IPS	¾" IPS	1.969	5.000	2.165	3.268	COS0705	COS W0705
1¼" IPS	1" CTS	1.969	5.000	2.165	3.268	COS0710	COS W0710
1¼" IPS	1" IPS	1.969	5.000	2.165	3.268	COS0715	COS W0715
2" IPS	½" CTS	2.165	5.197	2.402	4.331	COS0725	COS W0725
2" IPS	¾" IPS	2.165	5.197	2.402	4.331	COS 0740	COS W0740
2" IPS	1" CTS	2.165	5.197	2.402	4.331	COS 0745	COS W0745
2" IPS	1" IPS	2.165	5.197	2.402	4.331	COS 0750	COS W0750
3" IPS	½" CTS	2.283	5.591	2.835	4.449	COS0760	COS W0760
3" IPS	¾" IPS	2.283	5.591	2.835	4.449	COS0765	COS W0765
3" IPS	1" CTS	2.283	5.591	2.835	4.449	COS0775	COS W0775
3" IPS	1" IPS	2.283	5.591	2.835	4.449	COS0780	COS W0780
4" IPS	½" CTS	2.165	6.378	3.583	4.331	COS0785	COS W0785
4" IPS	¾" IPS	2.165	6.378	3.583	4.331	COS 0800	COS W0800
4" IPS	1" CTS	2.165	6.378	3.583	4.331	COS 0805	COS W0805
4" IPS	1" IPS	2.165	6.378	3.583	4.331	COS 0810	COS W0810
6" IPS	¾" IPS	2.165	7.205	4.685	4.331	COS0830	COS W0830
6" IPS	1" IPS	2.165	7.205	4.685	4.331	COS 0835	COS W0835
6" IPS	½" CTS	2.165	7.205	4.685	4.331	COS0815	COS W0815
6" IPS	1" IPS	2.165	7.205	4.685	4.331	COS 0840	COS W0840
8" IPS	¾" IPS	3.465	9.173	5.157	5.787	COS0860	COS W0860
8" IPS	1" CTS	3.465	9.173	5.157	5.787	COS0865	COS W0865
8" IPS	1" IPS	3.465	9.173	5.157	5.787	COS0870	COS W0870
12" IPS	1" CTS	3.465	9.449	5.394	5.866	COS0925	COS W0925
12" IPS	1" IPS	3.465	9.449	5.394	5.866	COS0930	COS W0930

※ The product diemensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11, PE 2406 / 4710

EF HIGH VOLUM TAPPING TEE



Unit : inch

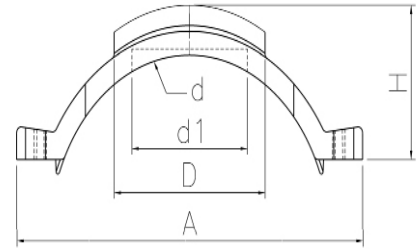
ASTM Spec[d]		L1	H	H1	Z	Item code	
MAIN SIZE [d]	BRANCH SIZE [d1]					Gas	Industrial
2" IPS	1¼" IPS	3.228	7.047	3.228	5.433	COS0950-1	COS W0950-1
2" IPS	2" IPS	3.228	7.047	3.228	5.433	COS0955-1	COS W0955-1
3" IPS	1¼" IPS	3.228	8.071	4.055	5.433	COS0960-1	COS W0960-1
3" IPS	2" IPS	3.228	8.071	4.055	5.433	COS0965-1	COS W0965-1
4" IPS	1¼" IPS	3.228	8.228	4.213	5.433	COS0970-1	COS W0970-1
4" IPS	2" IPS	3.228	8.228	4.213	5.433	COS0975-1	COS W0975-1
6" IPS	1¼" IPS	3.15	9.37	5.394	5.669	COS0980-1	COS W0980-1
6" IPS	2" IPS	3.15	9.37	5.394	5.669	COS0985-1	COS W0985-1
8" IPS	1¼" IPS	3.465	9.173	5.157	5.787	COS0990-1	COS W0990-1
8" IPS	2" IPS	3.465	9.173	5.157	5.787	COS0995-1	COS W0995-1
12" IPS	1¼" IPS	3.465	9.449	5.394	5.866	COS1010-1	COS W1010-1
12" IPS	2" IPS	3.465	9.449	5.394	5.866	COS1015-1	COS W1015-1

※ The product diemensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11, PE 2406 / 4710

➤ EF REPAIR SADDLE



Unit : inch

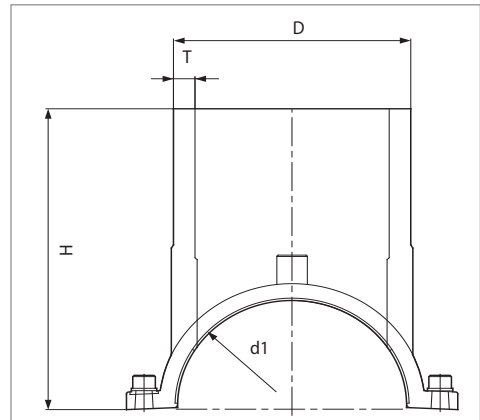
ASTM Spec[d]	D	EF PATCH			Item code	
		d1	A	H	Gas	Industrial
4" IPS	4.33	2.32	7.68	2.76	COS1404	COSW1404
6" IPS	4.33	2.32	9.09	2.76	COS1406	COSW1406
8" IPS	4.33	2.32	10.35	2.76	COS1408	COSW1408
10" IPS	4.33	2.32	11.61	2.76	COS1410	COSW1410
12" IPS	4.33	2.32	12.01	2.76	COS1412	COSW1412

※ The product diemensions may change for quality improvement by manufacturer

PE Electrofusion fitting(EF)

- SDR11, PE 2406 / 4710

➤ EF BRANCH SADDLES



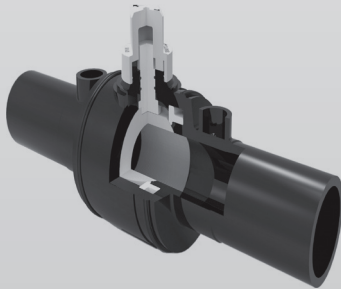
Unit : inch

ASTM Spec[d]		t	H	Item code	
Main [d1]	Branch [D]			Gas	Industrial
2" IPS	2" IPS	0.217	5.748	COS1150	COS W1150
3" IPS	2" IPS	0.217	6.299	COS1155	COS W1155
4" IPS	2" IPS	0.217	6.693	COS1160	COS W1160
4" IPS	4" IPS	0.406	7.559	COS1165	COS W1165
6" IPS	2" IPS	0.217	7.717	COS1170	COS W1170
6" IPS	4" IPS	0.409	8.346	COS1175	COS W1175
6" IPS	6" IPS	0.598	9.606	COS1176	COS W1176
8" IPS	4" IPS	0.409	8.425	COS1180	COS W1180
8" IPS	6" IPS	0.602	10.276	COS1185	COS W1185
8" IPS	8" IPS	0.787	11.535	COS1188	COS W1188
10" IPS	4" IPS	0.406	8.465	COS 1190	COS W1190
10" IPS	6" IPS	0.598	10.827	COS 1195	COS W1195
12" IPS	2" IPS	0.217	7.874	COS 1198	COS W1198
12" IPS	4" IPS	0.406	8.701	COS 1200	COS W1200
12" IPS	6" IPS	0.598	10.748	COS 1205	COS W1205
12" IPS	8" IPS	0.787	11.535	COS 1210	COS W1210

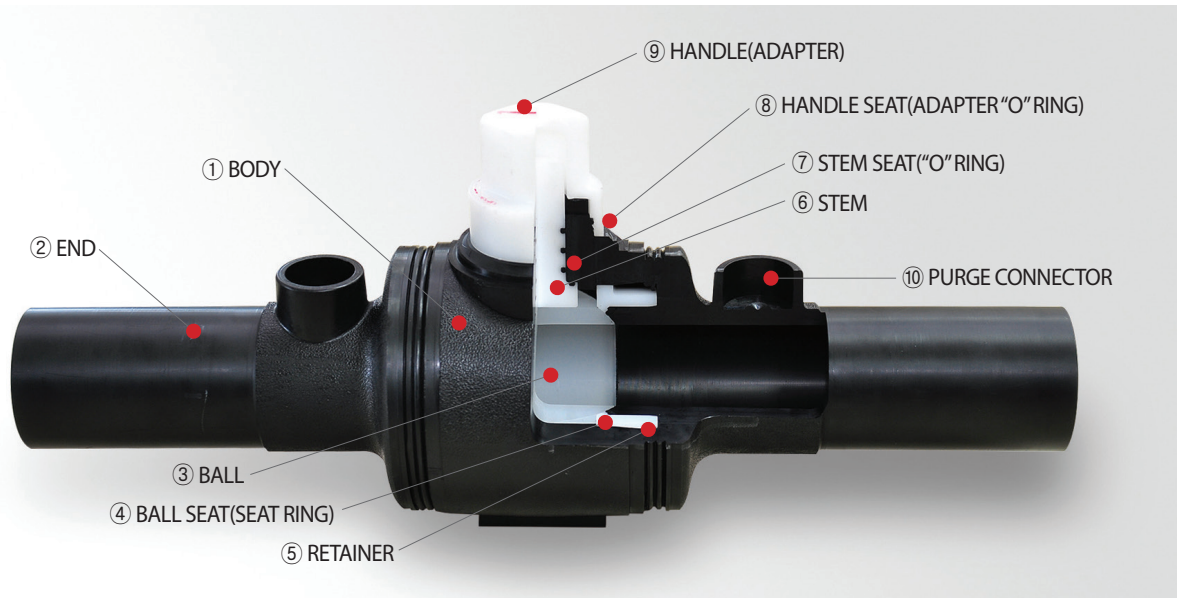
※ The product diemensions may change for quality improvement by manufacturer

COSMOIND

PE Ball Valves



PE Ball valve structure and specification



PE VALVE MAIN PART MATERIALS

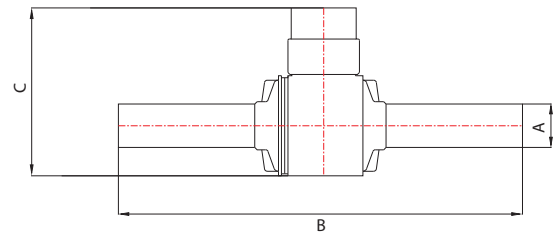
NO	ITEM	MATERIAL	CHARACTERISTIC
1	BODY	HDPE / MDPE	SAME WITH PE PIPE
2	END	HDPE / MDPE	SAME WITH PE PIPE
3	BALL	Polypropylene(PP)	HIGH STRENGTH AND GOOD AT HEAT RESISTANCE
4	BALL SEAT(SEAT RING)	NBR(Rubber)/EPDM	GOOD AT TIGHTNESS
5	RETAINER	Polypropylene(PP)	BALL SEAT SUPPORT WITH HIGH STRENGTH AND GOOD HEAT RESISTANCE
6	STEM	ACETAL	GOOD DURABILITY AND RUGGEDNESS
7	STEM SEAT('O' RING)	NBR(Rubber)	GOOD TIGHTNESS BY MULTIPLE SEAT TYPE
8	HANDLE SEAT(ADAPTER 'O' RING)	NBR(Rubber)	PREVENTION OF WATER AND FOREIGN MATTERS FROM OUTSIDE
9	HANDLE(ADAPTER)	Polypropylene(PP)	SQUARE TYPE FOR CONVENIENT OPERATION
10	PURGE CONNECTOR	HDPE / MDPE	FOR PURGE LINE INSTALLATION

Note) This valve can be used for water application. And it can be also changed parts

PE Ball valve

- SDR11, PE 2406 / 4710

► STANDARD TYPE (SMALL SIZE TYPE)



Unit : inch

SIZE(dn) ASTM	Bore	A	B	C	Item code	
					Gas	Industrial
½"	Full Port	0.84	12.24	5.079	COSV GI0100	COSV WI0100
¾"	Full Port	1.05	12.24	5.079	COSV GI0101	COSV WI0101
1"	Full Port	1.315	12.24	5.079	COSV GI0102	COSV WI0102
1¼"	Full Port	1.66	12.76	5.906	COSV GI0103	COSV WI0103
1½"	Full Port	1.9	12.76	5.906	COSV GI0104	COSV WI0104
2"	Full Port	2.375	13.35	6.732	COSV GI0105	COSV WI0105

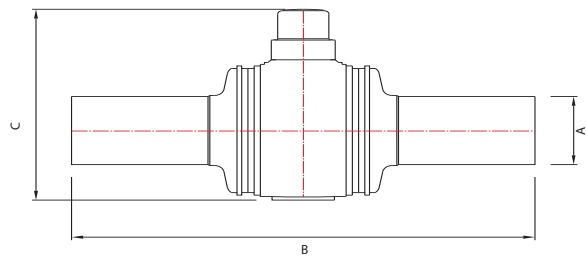
1)This picture and drawing can be changed by manufacturer's need or customer's demand

2)Where applicable, other SDR's are available upon request.

PE Ball valve

- SDR11, PE 2406 / 4710

➤ STANDARD TYPE



Unit : inch

SIZE(dn) ASTM	Bore	A	B	C	Item code	
					Gas	Industrial
3"(B Type)	Full Port	3.5	21.26	10.827	COSV GI0201	COSV WI0201
4"(B Type)	Full Port	4.5	22.44	12.126	COSV GI0202	COSV WI0202
6"(B Type)	Full Port	6.625	24.17	15.236	COSV GI0203	COSV WI0203
8"(B Type)	Full Port	8.625	27.56	20.669	COSV GI0204	COSV WI0204

1) This picture and drawing can be changed by manufacturer's need or customer's demand

2) Where applicable, other SDR's are available upon request.

PE Ball valve

- SDR11, PE 2406 / 4710

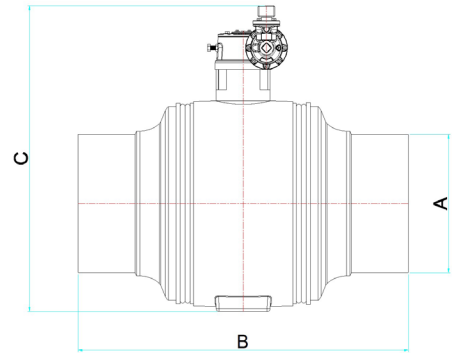
➤ GEAR BALL VALVE (GEAR TYPE)



GEAR BOX TYPE I



GEAR BOX TYPE II



Unit : inch

SIZE(dn) ASTM	Port	A	B	C	Type	Item code	
						Gas	Industrial
8"	Full Port	8.625	33.031	26.772	I	COSV GI0600	COSV WI0600
10"	Full Port	10.75	34.094	29.921	I	COSV GI0601	COSV WI0601
12"	Full Port	12.75	37.717	32.795	I	COSV GI0602	COSV WI0602
14"	Full Bore	14	37.717	35.236	II	COSV GI0603	COSV WI0603
	Full Port						
16"	Full Bore	16	38.976	35.236	II	COSV GI0604	COSV WI0604
	Full Port						

1) This picture and drawing can be changed by manufacturer's need or customer's demand

2) Where applicable, other SDR's are available upon request.

3) Gear type I can be replaced with Gear type II by the customer's request

PE Ball valve

- SDR11, PE 2406 / 4710

➤ CUSTOMIZED BALL VALVE

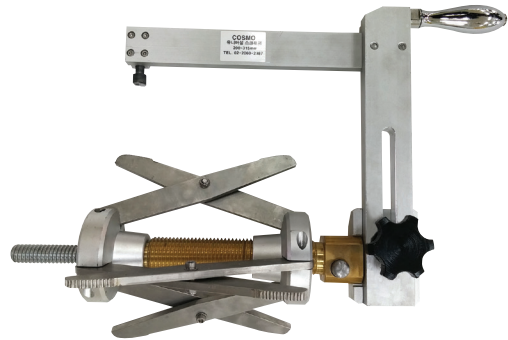


ASTM	SIZE(dn)
Lever type	2", 3", 4", 6", 8"
Gear type	6", 8", 10", 12", 14", 16"

Operation instrument and accessory

Universal scraper (D400, D500)

- Applicable dn : 8"~16", 16"~20"
- Easy scraping with simple rotational works
- Easy working at narrow trench
- Excellent scraping compared with manual scraping



Universal scraper (D160)

- Applicable dn : 2"~6"
- Easy scraping with simple rotational works
- Easy working at narrow trench
- excellent scraping compared with manual scraping



SCRAPING HANDLE

- Applicable dn : all size
- The blade can be replaced 4 times and use it for a long time



Portable one-touch leaktightness cap

- Applicable dn : 2"
- Easy check of good welding after tapping tee fusion
- Easy leaktightness test using one-touch



Leaking test cap

- Applicable dn for standard tapping tee : 2"~6"
- Applicable dn for HV tapping tee : 2"~12"
- leaktightness test



FOR HV TAPPING TEE

FOR STANDARD TAPPING TEE

● Econoclamp (socket, elbow type)

- Applicable dn : 63/90/110mm
- Type : Coupler, Tee, Elbow, Reducer
- Minimizing electrofusion error fixing pipe



● Roundness tool clamper

- Applicable dn : for 225 ~ 315mm, 355 ~ 400mm
- During E/F fusion, the pipe ellipse is made into exact circle to increase the fusion capability and prevents fusion nonconformities by correcting wrong angle and blocking the pipe movement



● E/F PROTECTION COVER

- Applicable dn : 6"~16"
- It prevents the influence of wind or low temperature during E/F fusion, and prevents inflow of foreign substances through E/F gap



● Tapping tool (ratchet handle, I type)

- Hole cutting tool after fixing tapping tee
- For re-cutting after first cutting failed
- Compatible with other product
- Easy working at narrow trench
- Convenience using ratchet



● TAPPING TEE CAP HANDLE

- Applicable dn : 2"~16"
- E/F tapping tee cap can be easily closed or opened



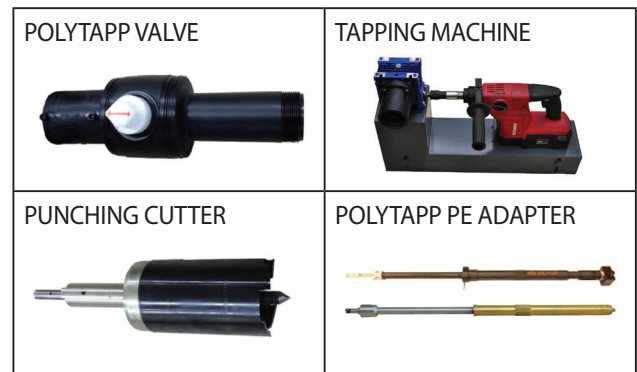
● BORING TOOL SET

- Component: boring tool, removable one-touch airtight cap, capped airtight cap, speed handle
- Consisting of basic equipment for drilling of E/F tapping tee



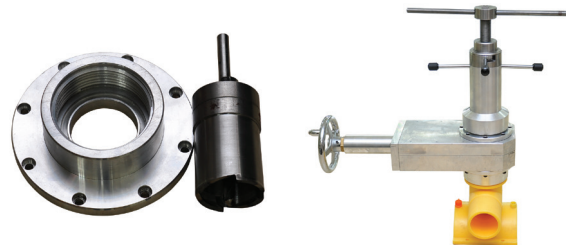
● HOT TAPPING MACHINE SET

- Application for the drilling operation in the live pipe by using valve.
- Possible for leakage test of pipe line



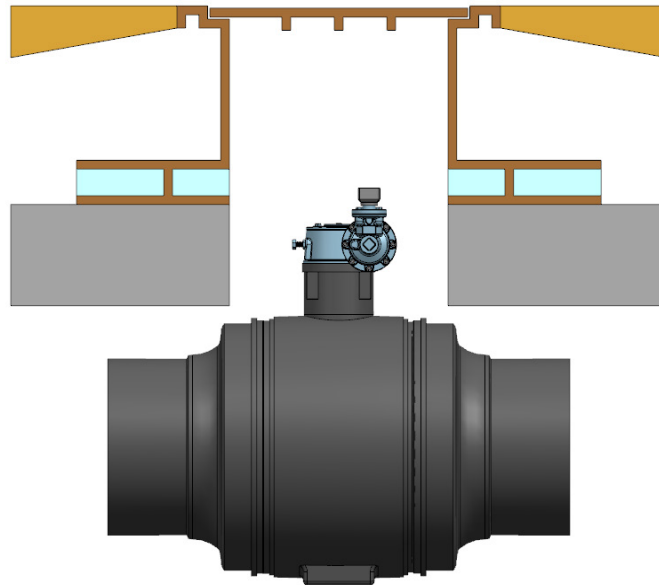
● BIG SIZE TAPPING TEE PUNCHING TOOL

- Punching is possible to branch to 90mm, 110mm
- Punching is possible to branch to 160mm
- Easy to use, light weight
- Able to make a hole without leaking gases



PE Valve Handling and matters that require attention in operation

- Be careful at impact during unload and transportation
- Fusion of valves or pipes should follow construction method
- Protect the products by covering plastic bag or protect cap before the fusion
- Valve construction method should follow working drawing or specification on the site



PE Valve Operation Method

- Handle : 1½" Square type and usable for all size
- Connection : after putting liner stick to handle, then put the handle to Top adapter
- In order to close, turn operating square handle clockwise from 'Open' location until the arrow is on 'Close' location. (For Gear type, handle turns clockwise 90°)
- In order to open, turn operating square counterclockwise from 'Close' location until the arrow is on 'Open' location. (For Gear type operators, handle turns counterclockwise 90°)



Lever type operator



Gear box type operator
(Gear box type I)



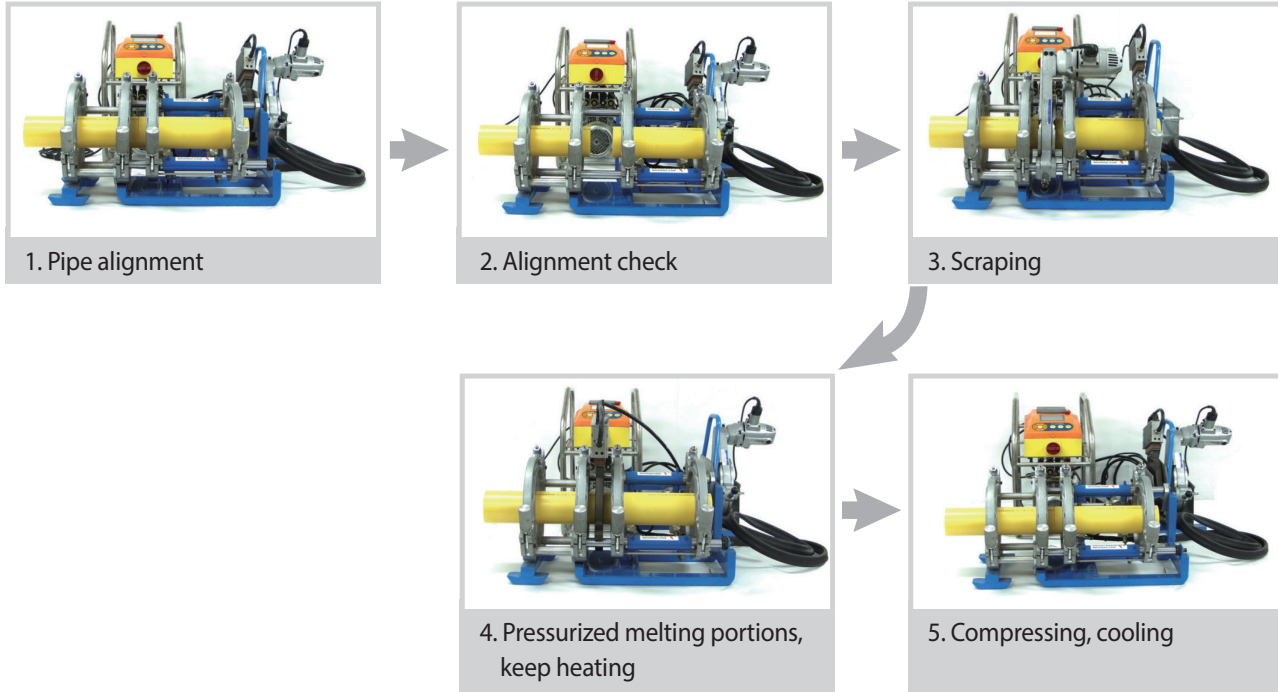
Gear box type operator
(Gear box type II)

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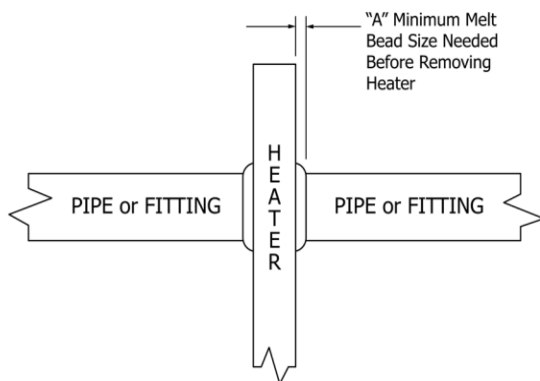
PE piping/fitting connection method

Butt fusion

Refers to a fusion by inserting heater plates between pipes or cross sections of fitting to melt the end faces of pipes or fittings, then removing the inserted heater plates and applying pressure to the melted portions. At this time, temperature, pressure, and time must be strictly observed.



Requirements of Butt fusion (ASTM F2620)



Butt Fusion Machine Set up	Required Condition
Heating Tool Temperature	The surface temperature of heating tool faces must be 400 to 450 °F.
Joining Pressure	Determine fusion joining pressure for the pipe OD and DR using 60 to 90 psi interface pressure.

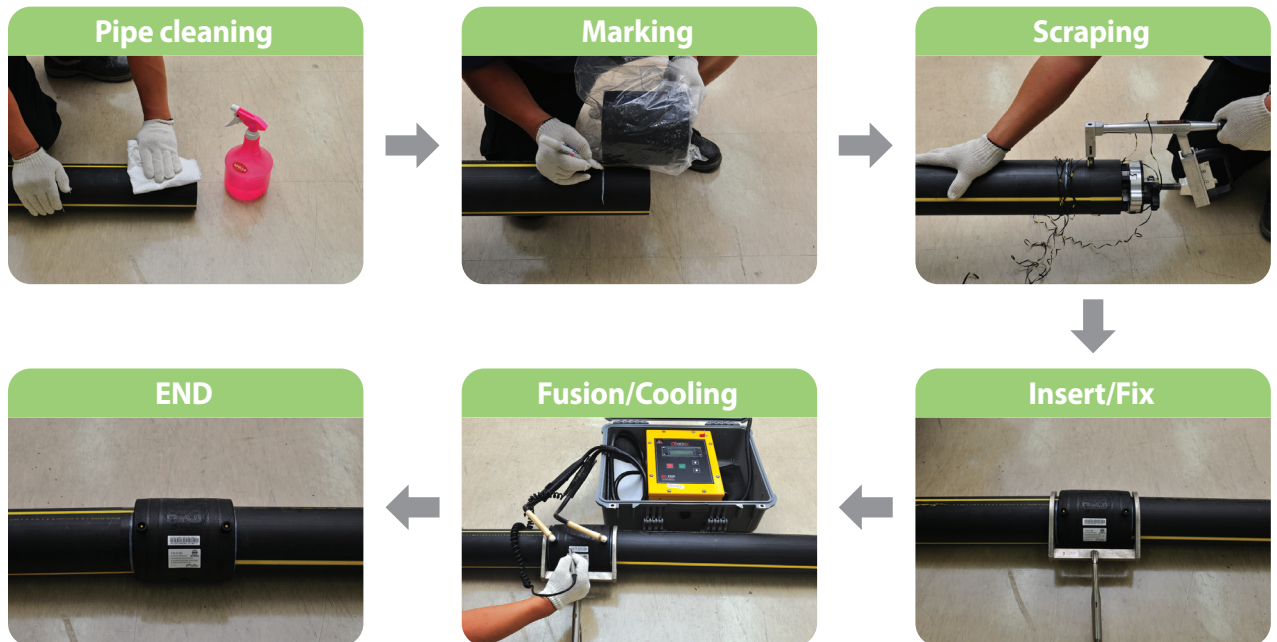
Pipe OD (in)	"A" Minimum Bead Size (in)
up to 2.37	1/32
2.37 ... 3.5	1/16
3.5 ... 8.62	3/16
8.62 ... 12.75	1/4
12.75 ... 24	3/8
24 ... 36	7/16
36 ... 65	9/16

Wall thickness (in)	Maximum Heater Plate Removal Time Seconds
0.17 ... 0.36	0.5
0.36 ... 0.55	1.0
0.55 ... 1.18	1.5
1.18 ... 2.50	2.0
2.50 ... 4.50	2.5

Benefit of Electrofusion

■ Advantages of E/F (Electro Fusion Fitting)

- E/F for the use in gas is connected to the automatic fusion fitting machine so that the fitting time is automatically set up and it is easy to operate the machine.
- As the fittings, specified per KS M ISO 8085-2, 3 and KS M 3408-3, are identical in dimension to the main pipes and the coupling pipes, it is convenient to install.
- It is efficient to install as the fittings are lighter in weight than other products.
- The product lifetime is semi-permanent due to excellent resistance to corrosion, chemicals and cold temperature characteristic of the product raw material, PE.
- Because the automatic fusion machine is small and light, it is convenient to operate in the limited space or in the site of difficult construction.
- Fusion processes are simpler and easier than for the butt welding.



Comparison of E/F's for Gas and Indursti

E/F Use	Material	Color	Terminal Type	Fusion Machine	Standard
for Gas	Mid Density (MDPE)	Yellow	1PIN/1PIN	Automatic	KS, ISO, ASTM, GB
for Gas	High Density (HDPE)	Black	1PIN/1PIN	Automatic	KS, ISO, ASTM, GB
for Water Supply	High Density (HDPE)	Black	1PIN/1PIN	Automatic	KS, ISO, ASTM, GB
for Sewer	High Density (HDPE)	Black	1PIN/1PIN	Automatic	KWWA M 203

Installation Pictures & Fish cage products



Spigot fitting for Gas and water supply



Electrofusion fitting for Gas and water supply



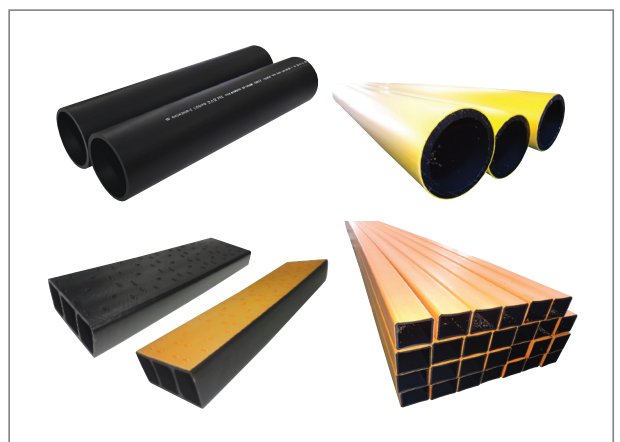
Tourist Leisure Facilities



Marine Facilities



Pipe fixtures for fishing

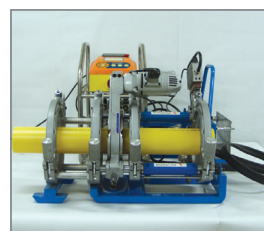
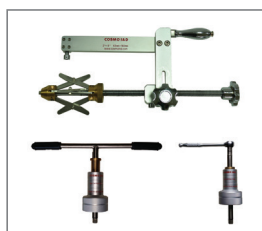
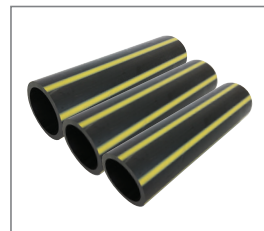
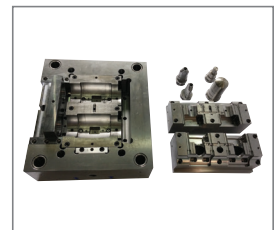
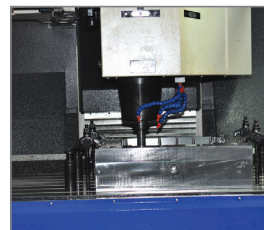
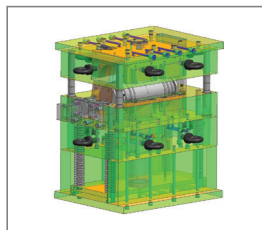


Pipe for handrail, scaffold

PE PIPE Total Solution Provider

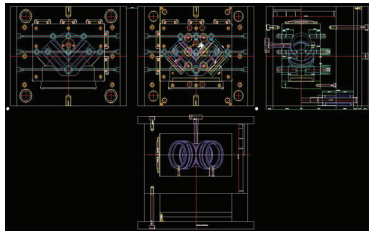
Polyethylene pipe line Total solution provider

We supply total solution service from mold design to pipe, fitting, welding machine.
We are prepared to give our best products and service solution.

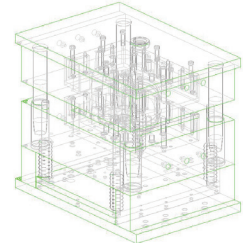
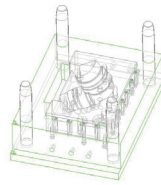
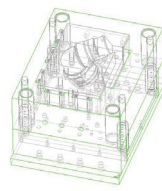


Mold design and manufacturing

Mold Design

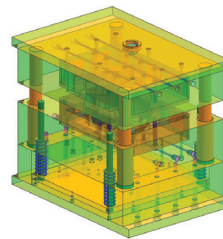


Mold Design(3D)

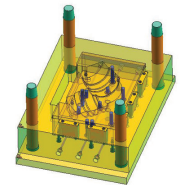
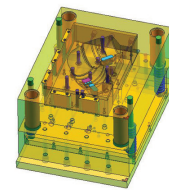


Medeling(3D)

Mold assembly

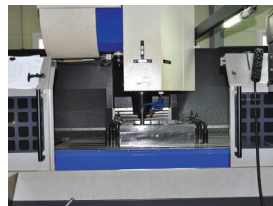
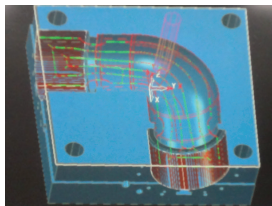


Sumulation(assembly)

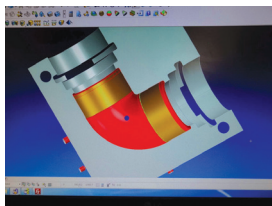


Sumulation

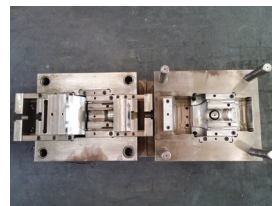
Mold manufacturing



Completion



Tooling
(CNC transformation)



Mold assembly

Quality Certification

All products of COSMOIND has been maintaining KS(Korea Industrial Standards) Certification and ISO 9001 Quality management system through inspection and examination every year by Korea Standard Association which is authorized from government. Through this, We try to produce and supply high quality products to meet our customer's requirements on product design, development, material purchase, production, shipment, and after service.

Also, We keep trying research and develop to provide valuable new products for our customers.



PE Valve CE Products Certificate



PE Valve CE System Certificate



NSF Certification Company



NSF Certification Facility



PE Valve China TSG type test report



TUV Certificate PE E/F ASTM F 1055



TUV Certificate PE E/F Gas EN 1555-3



TUV Certificate PE Valve Gas EN 1555-4



TUV Certificate PE E/F Water EN 12201-3



TUV Certificate PE Valve Water EN 12201-4