



PE100 Fitting for Gas & Water Transport Piping Systems



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Machining Workshop



CNC Machine Workshop for Electrofusion Fitting Heating Elements Embedded and Laying



Ball Valve Assembly Workshop



Quality Inspection Workshop



Raw Material Warehouse



Resin Unify Transport & Supply for Injection



Semi-finished Products Warehouse



Finished Products Warehouse





Material Testing Equipments



Ball Valve Testing Equipment



Hydrostatic Testing Equipment



Tensile Testing Equipment



Humidity Simulation Equipment



Tapping Saddle Impact Resistance Testing Equipment



MATERIAL PROPERTY

Characteristics	Requirements ^a	Test parameters		Test method
		Parameter	Value	
Compound density	≥930kg/m ³	Test temperature	20°C	ISO 1183-1 or ISO 1183-2
		Number of samples ^b	Shall conform to ISO 1183-1 or ISO 1183-2	
Oxidation induction time(Thermal stability)	>20min	Test temperature	20°C	ISO 11357-6
		Number of test pieces ^b	3	
		Test atmosphere	Oxygen	
		Sample weight	15±2mg	
Melt mass-flow rate (MFR)	(0,20≤MFR≤1,40) g/10min ^d Maximum deviation of ±20% of the nominated value	Loading mass	5kg	ISO 1133-1
		Test temperature	190°C	
		Time	10min	
		Number of test pieces ^b	Shall conform to ISO 1133-1	
Volatile content	≤350mg/kg	Number of test pieces ^b	1	EN 12099
Water content ^e	≤300mg/kg (Equivalent to <0,03% by mass)	Number of test pieces ^b	1	ISO 15512
Carbon black content ^f	(2,0 to 2,5%)(by mass)	Shall conform to ISO 6964		ISO 6964
Carbon black dispersion ^f	Grade≤3	Preparation of test pieces	Freeg	ISO 18553
	Rating of dispersion A1,A2,A3 or B	Number of test pieces ^b	Shall conform to ISO 18553	
Pigment dispersion ^h	Grade≤3	Preparation of test pieces	Freeg	ISO 18553
	Rating of dispersion A1,A2,A3 or B	Number of test pieces ^b	Shall conform to ISO 18553	

a Conformity to these requirements shall be proved by the compound producer.

b The number of test pieces given indicates the number required to establish a value for the characteristic described in [Table 1](#). The number of test pieces required for factory production control and process control should be listed in the manufacturer's quality plan.

c Test can be carried out at 210°C or 220°C provided that a clear correlation has been established. In case of dispute, the reference temperature shall be 200°C.

d Nominated value given by the compound manufacturer.

e Only applicable if the measured volatile content is not in conformity to its specified requirement. In case of dispute, the requirement for water content shall be used. As an alternative method, ISO 760[6] can apply. The requirement applies to the compound producer at the stage of manufacturing and to the compound user at the stage of processing(if the water content exceeds the limit, drying is required prior to use).

f Only for black compound.

g In case of dispute, the test pieces shall be prepared by compression method.

h Only for non-black compounds.

i Materials 0,15<MFR<0,20 can be introduced, in such case attention is drawn to the fusion compatibility(see [6.3](#)). The lowest MFR value resulting from the maximum lower deviation of the nominated value should be not less than 0,15.

FITTING PROPERTY

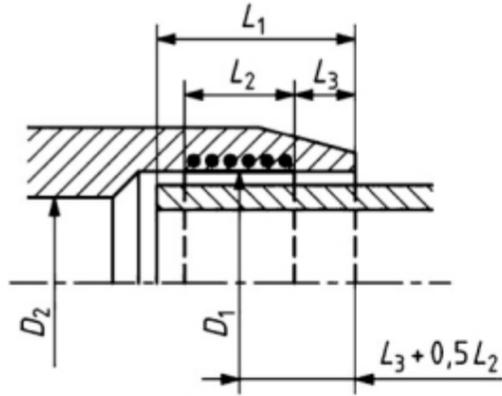
Characteristics	Requirements	Test parameters		Test method			
		Parameter	Value				
Hydrostatic strength at 20°C	No failure during test period of any test pieces	End caps	Type A ^a ISO 1167-1	ISO 1167-1 and ISO 1167-4			
		Conditioning Period	Shall conform to ISO 1167-1				
		Number of test pieces	3				
		Type of test	Water-in-water				
Hydrostatic strength at 80°C	No failure during test period of any test pieces	Test temperature	20°C	ISO 1167-1 and ISO 1167-4			
		Test period	100h				
		Circumferential(hoop) stress ° for:PE 80	10,0 MPa				
		PE 100	12,0 MPa				
Hydrostatic strength at 80°C	No failure during test period of any test pieces	End caps	Type A ^a	ISO 1167-1 and ISO 1167-4			
		Conditioning Period	Shall conform to ISO 1167-1				
		Number of test pieces	3				
		Type of test	Water-in-water				
Hydrostatic strength at 80°C	No failure during test period of any test pieces	Test temperature	80°C	ISO 1167-1 and ISO 1167-4			
		Test period	165h ^d				
		Circumferential(hoop) stress ° for:PE 80	4,5 MPa				
		PE 100	5,4 MPa				
Decohesive resistance for electrofusion socket fittings	Length of initiation rupture≤L ₂ /3in brittle failure	Test temperature	23°C	ISO 13954 ISO 13955			
		Number of test pieces ^b	Shall conform to ISO 13954 or ISO 13955				
		Cohesive strength of electrofusion saddle fittings	Ld ≤50% and Ad ≤25%,brittle failure		Test temperature	23°C	ISO 13956
					Number of test pieces ^b	Shall conform to ISO 13956	
Tensile strength for built fusion fittings-spigoted fittings	Test to failure: - ductile: pass -brittle: fail	Test temperature	23°C	ISO 13953			
		Number of test pieces ^b	Shall conform to ISO 13953				
Impact resistance of tapping tees	No failure, no leaks	Test temperature	(0±2)°C	ISO 13957			
		Mass of striker	(2 500±20)g				
		Height	(2 000±10)mm				
		Conditioning period: in air	4h				
		in liquid	2h				

a Type B end caps may be used for batch release tests for diameters ≥500mm.

b The number of test pieces given indicate the quantity required to establish a value for the characteristic described in the table. The number of test pieces required for factory production control and process control should be listed in the manufacturer's quality plan.

c The test pressure shall be calculated using the design SDR of the fitting.

d Premature ductile failures are not taken into account. For retest procedure see 7.4.



Dimensions of electrofusion sockets

Key

- D₁ is the "mean inside diameter in the fusion zone" measured in a plane parallel to the plane of the mouth at a distance of $L_3 + 0,5L_2$.
- D₂ is the bore which is the minimum diameter of the flow channel through the body of the fitting where $D_2 \geq (d_n - 2e_{min})$.
- L₁ is the "design penetration depth" of the pipe or male end of a spigot fitting; in the case of a coupling without a stop, it is not greater than half the total length of the fitting.
- L₂ is the heated length within a socket as declared by the manufacturer to be the nominal length of the fusion zone.
- L₃ is the distance between the mouth of the fitting and the start of the fusion zone as declared by the manufacturer to be the nominal unheated entrance length of the fitting L₃ shall be ≥ 5 mm.

Electrofusion socket dimensions

Dimensions in millimetres

Nominal diameter of the fitting d_n	Design depth		Fusion zone L ₂ , min
	L ₁ , min Intensity regulation	L ₁ , max Voltage regulation	
20	20	25	10
25	20	25	10
32	20	25	10
40	20	25	10
50	20	28	10
63	23	31	11
75	25	35	12
90	28	40	13
110	32	53	15
125	35	58	16
140	38	62	18
160	42	68	20
180	46	74	21
200	50	80	23
225	55	88	26
250	73	95	33
280	81	104	35
315	89	115	39
355	99	127	42
400	110	140	47
450	122	155	51
500	135	170	56
560	147	188	61
630	161	209	67
710	177	220	74
800	193	230	82

The mean inside diameter of the fitting in the middle of the fusion zone, D₁, shall not be less than d_n .

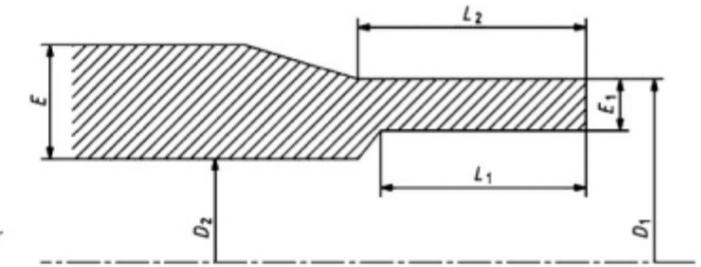
The manufacturer shall declare maximum and minimum values of D₁ to allow end user to determine their suitability for clamping and joint assembly and fitness for purpose testing in accordance with EN 12201-5.

In the case of a fitting having sockets of differing sizes, each one shall conform to the requirements for the corresponding nominal diameter.

The wall thickness of the fusion end, E₁, shall be at least equal to the minimum wall thickness of the pipe, except between the plane of the entrance face and a plane parallel to it, located at a distance not greater than $(0,01d_n + 1)$ mm, where a thickness reduction for e.g. a chamfered edge is permitted.

Key

- D₁ mean outside diameter of fusion end piece^a
- D₂ minimum bore which comprises the minimum diameter of the flow channel through the body of the fitting^b
- E body wall thickness of fitting^c
- E₁ fusion face wall thickness^d
- L₁ cut-back length of fusion end piece^e
- L₂ tubular length of fusion end piece^f



Dimensions of spigot end fittings

- a D₁ is measured in any plane parallel to the plane of the entrance face at a distance not greater than L₂ (tubular length) from the plane of the entrance face.
- b This diameter does not include the fusion bead, if any.
- c It comprises the thickness measured at any point of the wall of the fitting.
- d It is measured at any point at a maximum distance of L₁ (cut back length) from the entrance face and shall be equal to the pipe wall thickness and tolerance to which it is intended to be butt fused, as specified in EN 12201-2:2011, Table 2. E₁ for small dimensions is at least 3mm.
- e It comprises the initial depth of the spigot end necessary for butt fusion or re-weld and may be obtained by joining a length of pipe to the spigot end of the fitting provided the wall thickness of the pipe is equal to E₁ for its entire length.
- f It comprises the initial length of the fusion end piece and shall allow the following (in any combination): the use of clamps required in the case of butt fusion; assembly with an electrofusion fitting; assembly with a socket fusion fitting; the use of a mechanical scraper.

Spigot dimensions

Dimensions in millimetres

Nominal outside diameter of spigot d_n	Mean outside diameter of the fusion end ^d			For electrofusion and butt fusion				Socket fusion Tubular length L _{2,min}	For butt fusion only			
	D _{1,min}	D _{1,max}	D _{1,max}	Out-of-roundness max.	Min.bore D ₂	Cut back length L _{1,min}	Tubular length L _{2,min}		Out-of-roundness max.	Cut back length L _{1,min}	Tubular length Normal ^e L _{2,min}	Tubular length Special ^e L _{2,min}
20	20,0	-	20,3	0,3	13	25	41	11	-	-	-	-
25	25,0	-	25,3	0,4	18	25	41	12,5	-	-	-	-
32	32,0	-	32,3	0,5	25	25	44	14,6	-	-	-	-
40	40,0	-	40,4	0,6	31	25	49	17	-	-	-	-
50	50,0	-	50,4	0,8	39	25	55	20	-	-	-	-
63	63,0	-	63,4	0,9	49	25	63	24	1,5	5	16	5
75	75,0	-	75,5	1,2	59	25	70	25	1,6	6	19	6
90	90,0	-	90,6	1,4	71	28	79	28	1,8	6	22	6
110	110,0	-	110,7	1,7	87	32	82	32	2,2	8	28	8
125	125,0	-	125,8	1,9	99	35	87	35	2,5	8	32	8
140	140,0	-	140,9	2,1	111	38	92	-	2,8	8	35	8
160	160,0	-	161,0	2,4	127	42	98	-	3,2	8	40	8
180	180,0	-	181,1	2,7	143	46	105	-	3,6	8	45	8
200	200,0	-	201,2	3,0	159	50	112	-	4,0	8	50	8
225	225,0	-	226,4	3,4	179	55	120	-	4,5	10	55	10
250	250,0	-	251,5	3,8	199	60	129	-	5,0	10	60	10
280	280,0	282,6	281,7	4,2	223	75	139	-	9,8	10	70	10
315	315,0	317,9	316,9	4,8	251	75	150	-	11,1	10	80	10
355	355,0	358,2	357,2	5,4	283	75	164	-	12,5	10	90	12
400	400,0	403,6	402,4	6,0	319	75	179	-	14,0	10	95	12
450	450,0	454,1	452,7	6,8	359	100	195	-	15,6	15	60	15
500	500,0	504,5	503,0	7,5	399	100	212	-	17,5	20	60	15
560	560,0	565,0	563,4	8,4	447	100	235	-	19,6	20	60	15
630	630,0	635,7	633,8	9,5	503	100	255	-	22,1	20	60	20
710	710,0	716,4	714,9	10,6	567	125	280	-	24,8	20	60	20
800	800,0	807,2	805,0	12,0	639	125	280	-	28,0	20	60	20

- a Tolerance grades A and B are in accordance with ISO 11922-1:1997[8].
- b The values of L₂(electrofusion) are based on the following equations:
for $d_n \leq 90$, $L_2 = 0,6d_n + 25$ mm; for $d_n \geq 110$, $L_2 = d_n/3 + 45$ mm.

- c Used by preference.
- d Used for fittings fabricated in the factory.

Electrofusion Coupler

Injection molding

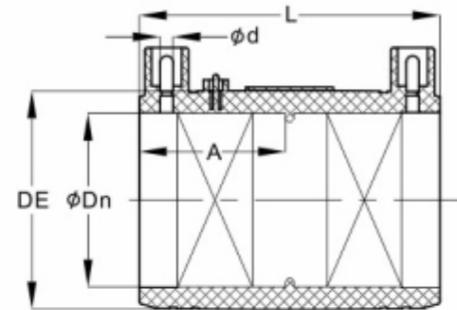
Embedded resistance wire by CNC machine

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

Φd:4.7mm terminal pin,4.0mm is also available

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM			Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	L	DE	L	W	H	
20	0.043	/	35	73	31	49	41	24	250
25	0.052	/	37.5	78	36	49	41	24	200
32	0.066	/	38.5	80	44	45	39	20	150
40	0.086	/	43.5	90	52	45	39	20	100
50	0.134	/	49.5	102	64	50.5	42.5	24.5	100
63	0.213	/	53.5	110	81	50.5	42.5	24.5	60
75	0.337	/	61.5	126	92	48.5	39	27.5	40
90	0.478	/	64.5	132	111	57.5	35.5	28.5	30
110	0.757	/	71	146	138	43	43	31.5	18
125	1.045	/	78	160	153	64	33	34	16
140	1.400	/	80	164	174	54.5	37	35	12
160	1.850	/	94	193	201	42	42	41	8
180	2.350	/	97	198	224	45	23.5	42	4
200	2.800	/	97.5	200	247	50	26	42	4
225	3.800	/	105.5	216	278	56	29	45	4
250	5.270	/	110.5	226	310	47	32	32	2
280	7.050	/	125	255	344	53	36.5	36.5	2
315	9.250	/	137.5	280	390	58	41	41	2
355	13.950	/	144.5	294	436	45.5	45.5	31.5	1
400	15.450	10.800	145	295	490/460	50/48	50/48	31.5	1
450	/	14.550	172	350	514	53.5	53.5	37	1
500	/	18.250	187	380	570	59	59	40	1
560	/	26.450	192	390	644	66.5	66.5	41	1
630	/	37.450	206	418	718	74	74	44	1

Electrofusion 90° Elbow

Injection molding

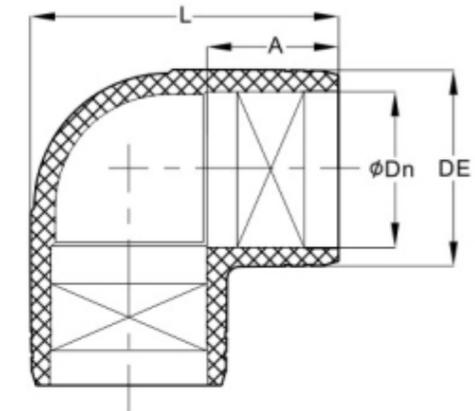
Embedded resistance wire by CNC machine

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

Φd:4.7mm terminal pin,4.0mm is also available

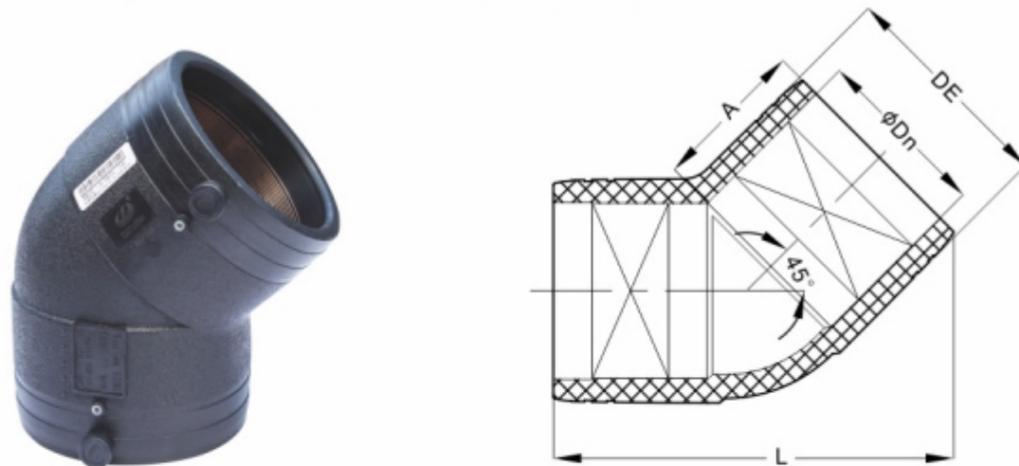
ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM			Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	L	DE	L	W	H	
20	0.078	/	36	62	32	49	41	24	150
25	0.067	/	41	72	37	49	41	24	150
32	0.084	/	38	77	44	49	41	24	125
40	0.112	/	44	91	52	49	41	24	80
50	0.189	/	50	107	64	66	42	29	80
63	0.320	/	56	125	81	66	42	29	50
75	0.510	/	63	145	92	58	39	36	30
90	0.759	/	65	166	111	62	42	33	20
110	1.230	/	75	196	138	60.5	43	21.5	9
125	1.770	/	80	211	153	48	44	23	6
140	2.310	/	81	231	174	55	48	25	6
160	3.540	/	91	271	201	56	41	29	4
180	4.550	/	97	294	224	45	31.5	31.5	2
200	4.440	/	106	327	247	50	34.5	34.5	2
225	7.650	/	110	360	278	56	38	38	2
250	10.050	/	115	390	310	61	41	41	2
280	14.200	/	125	440	345	46	46	36.5	1
315	19.500	/	135	480	390	50	50	41	1
355	/	21.850	200	590	408	61	61	42.5	1
400	/	34.650	200	641	470	65	48	65	1
450	/	43.300	200	730	520	74	53	74	1
500	/	63.670	200	758	580	77	59	77	1
560	/	72.600	205	820	650	83	66	83	1

Electrofusion 45° Elbow

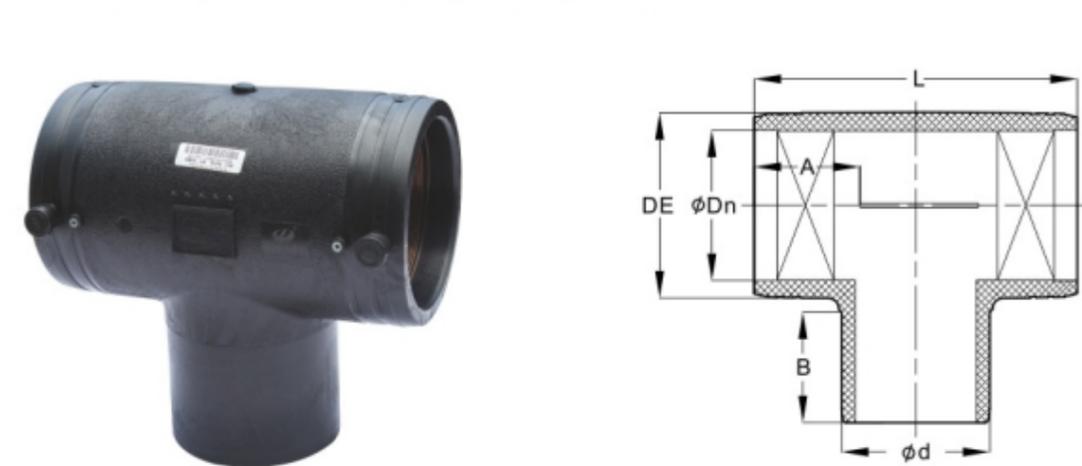
Injection molding
 Embedded resistance wire by CNC machine
 PE100,SDR11,20°C: PN10 Gas, PN16 Water
 PE100,SDR17,20°C: PN6 Gas, PN10 Water
 Φd:4.7mm terminal pin,4.0mm is also available
 ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM			Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	L	DE	L	W	H	
20	0.052	/	31	79	31	42	36	30	200
25	0.060	/	33	87	36	42	36	30	180
32	0.075	/	38	95	43	42	36	30	150
40	0.099	/	46	116	52	58	39	36	150
50	0.162	/	48	135	64	58	39	36	100
63	0.272	/	49	151.5	81	58	39	36	50
75	0.424	/	64	167	94	65	33	33	30
90	0.605	/	65	191	111	65	33	33	20
110	1.090	/	75	216	138	58	43	24	9
125	1.430	/	80	236	155	49	43	26	6
140	1.820	/	82	251	173	47	37	27	4
160	2.880	/	104	296	201	54	41	32	4
180	3.520	/	97	314	224	68	30.5	34	3
200	4.330	/	101	331	247	51	33	35	2
225	5.710	/	110	367	278	57	36.5	39	2
250	7.930	/	115	396	310	64	40	42	2
280	10.750	/	130	445	344	46.5	44.5	37	1
315	14.630	/	140	490	389	51	49.5	41.5	1
355	/	16.150	185	580	415	61	55	44	1
400	/	22.700	175	610	470	62	58.5	48	1
450	/	30.000	180	650	520	66	65	53	1
500	/	37.700	180	695	580	70.5	67.5	59	1
560	/	58.000	185	758	650	77	77.5	66	1

Electrofusion 90° Equal Tee

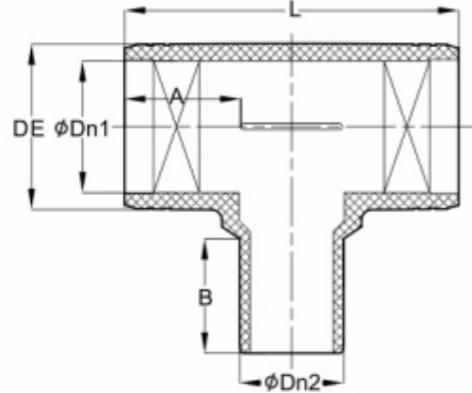
Injection molding
 Embedded resistance wire by CNC machine
 PE100,SDR11,20°C: PN10 Gas, PN16 Water
 PE100,SDR17,20°C: PN6 Gas, PN10 Water
 Φd:4.7mm terminal pin,4.0mm is also available
 ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM				Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	B	L	DE	L	W	H	
20	0.054	/	31	41	87	31	65	32.5	33	200
25	0.073	/	31	42	97	36	65	32.5	33	150
32	0.099	/	39	44	105	44	49	41	23.5	100
40	0.135	/	44	49	121	52	58	39	35.5	60
50	0.226	/	50	55	140	64	68	30	30	50
63	0.383	/	56	63	168	81	58	39	35.5	40
75	0.618	/	63	70	189	92	68	28	28.5	25
90	0.950	/	65	80	204	111	68	28	28.5	20
110	1.600	/	73	82	240	138	58	39	35.5	10
125	2.120	/	78	87	260	153	54	48	27	6
140	2.800	/	82	92	277	174	57.5	37	29.5	4
160	4.050	/	96	101	320	201	61	34	33	3
180	5.200	/	97	105	345	247	45	36.5	36.5	2
200	6.550	/	98	112	364	278	50	38	40	2
225	9.250	/	107	123	401	310	56	42	44	2
250	11.600	/	112	129	431	306	45	32.5	48	1
280	16.600	/	127	140	485	344	51	37	52	1
315	22.800	/	137	150	530	390	55	41	58	1
355	/	30.300	200	150	720	436	73	43	59	1
400	/	43.300	200	175	800	470	81	48	69	1
450	/	58.700	200	190	857	520	87	53	76	1
500	/	81.300	200	195	912	580	92	59	82.5	1
560	/	108.900	205	209	990	650	100	66	91	1

Electrofusion 90° Reducer Tee

Injection molding
 Embedded resistance wire by CNC machine
 PE100,SDR11,20°C: PN10 Gas, PN16 Water
 PE100,SDR17,20°C: PN6 Gas, PN10 Water
 Φd:4.7mm terminal pin,4.0mm is also available
 ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn1xDn2xDn1 /MM	N.W. KG/PC SDR11	SIZE/MM				Packing Box Size/CM			PCS /CTN
		A	B	L	DE	L	W	H	
25x20x25	0.068	39	41	97	37	65	32.5	33	150
32x20x32	0.095	39	41	106	44	49	41	23.5	100
32x25x32	0.100	39	41	106	44	49	41	23.5	100
40x25x40	0.130	45	41	120	52	58	39	35.5	60
40x32x40	0.140	45	44	120	52	58	39	35.5	60
50x32x50	0.215	50	44	140	64	68	30	30	50
50x40x50	0.231	50	49	140	64	68	30	30	50
63x20x63	0.231	51	41	130	81	58	39	35.5	40
63x25x63	0.241	51	41	130	81	58	39	35.5	40
63x32x63	0.272	51	44	130	81	58	39	35.5	40
63x40x63	0.362	54	49	161	81	58	39	35.5	40
63x50x63	0.371	54	55	161	81	58	39	35.5	40
75x63x75	0.590	64	64	189	92	68	28	28.5	25
90x32x90	0.690	65	44	182	111	68	28	28.5	20
90x40x90	0.697	65	49	182	111	68	28	28.5	20
90x50x90	0.686	65	54	182	111	68	28	28.5	20
90x63x90	0.712	65	63	182	111	68	28	28.5	20
90x75x90	0.895	65	70	204	111	68	28	28.5	20
110x25x110	0.941	72	41	175	138	58	39	35.5	10
110x32x110	0.947	72	44	175	138	58	39	35.5	10
110x40x110	1.110	72	49	201	138	58	39	35.5	10
110x50x110	1.120	72	55	201	138	58	39	35.5	10

Dn1xDn2xDn1 /MM	N.W. KG/PC SDR11	SIZE/MM				Packing Box Size/CM			PCS /CTN
		A	B	L	DE	L	W	H	
110x63x110	1.100	72	63	211	138	58	39	35.5	10
110x75x110	1.260	72	70	211	138	58	39	35.5	10
110x90x110	1.410	72	79	240	138	58	39	35.5	10
125x110x125	1.920	78	82	260	153	54	48	27	6
140x110x140	2.500	80	82	277	174	57.5	37	29.5	4
140x125x140	2.640	80	87	277	174	57.5	37	29.5	4
160x32x160	2.610	96	44	247	201	51.5	41	29.5	4
160x40x160	2.670	96	49	247	201	51.5	41	29.5	4
160x50x160	2.690	96	55	247	201	51.5	41	29.5	4
160x63x160	2.630	96	63	247	201	51.5	41	29.5	4
160x75x160	3.110	96	70	286	201	59.5	41	31.5	4
160x90x160	3.250	96	82	286	201	59.5	41	31.5	4
160x110x160	3.300	96	82	286	201	59.5	41	31.5	4
160x125x160	4.070	96	87	320	201	61	34	33	3
160x140x160	4.540	96	92	320	201	61	34	33	3
180x160x180	5.030	97	98	345	224	45	36.5	36.5	2
200x50x200	3.810	98	55	253	247	50	27	35	2
200x63x200	3.850	98	63	253	247	50	27	35	2
200x75x200	3.900	98	70	292	247	50	31	36.5	2
200x90x200	4.650	98	79	292	247	50	31	36.5	2
200x110x200	4.680	98	82	292	247	50	31	36.5	2
200x125x200	5.440	98	87	332	247	50	35	38	2
200x140x200	5.580	98	92	332	247	50	35	38	2
200x160x200	5.800	98	98	332	247	50	35	38	2
200x180x200	6.660	98	105	364	247	50	38	40	2
225x200x225	8.850	107	112	401	278	56	42	44	2
250x75x250	7.530	112	70	320	310	63	34	43.5	2
250x90x250	7.480	112	79	320	310	63	34	43.5	2
250x110x250	7.690	112	82	320	310	63	34	43.5	2
250x125x250	8.830	112	87	360	310	38	32.5	45	1
250x140x250	8.960	112	92	360	310	38	32.5	45	1
250x160x250	9.100	112	98	360	310	38	32.5	45	1
250x180x250	9.980	112	105	392	310	41	32.5	46	1
250x200x250	10.280	112	112	392	310	41	32.5	46	1
250x225x250	11.950	112	120	431	310	45	32.5	48	1
280x250x280	16.830	127	129	485	344	50.5	36.5	52.5	1
315x90x315	13.500	137	79	370	390	39	41	51	1
315x110x315	13.600	137	82	370	390	39	41	51	1
315x160x315	16.610	137	98	442	390	46	41	54	1
315x200x315	17.400	137	112	442	390	46	41	54	1
315x250x315	24.000	137	129	530	390	55	41	58	1

Electrofusion Reducer

Injection molding

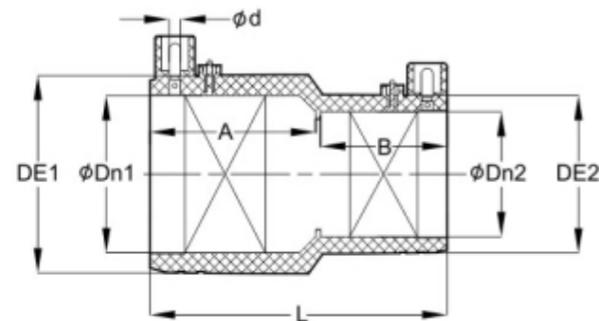
Embedded resistance wire by CNC machine

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

Φd:4.7mm terminal pin,4.0mm is also available

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC	SIZE/MM					Packing Box Size/CM			PCS /CTN
		SDR11	A	B	L	DE1	DE2	L	W	
25×20	0.050	41	35	84	36	31	49	41	23.5	200
32×20	0.064	46	36	87	42	31	65	32.5	33	250
32×25	0.068	46	39	88	44	36	44.5	39	20	150
40×20	0.079	48	36	96	51	31	58	39	35.5	150
40×25	0.082	48	40	99	51	36	58	39	35.5	150
40×32	0.087	48	40	96	51	43	58	39	35.5	150
50×32	0.120	54	40	104	64	43	58	39	35.5	150
50×40	0.121	54	45	106	64	51	49	41	23.5	100
63×32	0.190	57	40	115	80	43	49	41	23.5	70
63×40	0.187	57	45	115	80	51	49	41	23.5	60
63×50	0.199	57	52	115	80	63	49	41	23.5	60
75×50	0.300	70	50	128	92	63	49	41	23.5	40
75×63	0.337	69	60	138	92	80	49	41	23.5	40
90×50	0.430	74	52	147	111	63	58	39	35.5	50
90×63	0.466	74	52	146	111	80	51	41	26.5	40
90×75	0.463	66	62	140	111	94	56	34	26.5	30
110×63	0.716	75	59	163	138	80	62	42	33	40
110×75	0.735	75	64	160	138	96	68	28	28.5	20
110×90	0.757	75	67	156	138	111	68	28	28.5	20
125×63	0.850	90	53	153	155	80	48.5	48.5	17.5	9
125×75	0.890	90	60	160	155	95	48.5	48.5	18	9
125×90	0.950	90	58	158	155	112	48.5	48.5	18	9
125×110	1.050	90	73	173	155	138	48.5	48.5	20	9

Dn /MM	N.W. KG/PC	SIZE/MM					Packing Box Size/CM			PCS /CTN
		SDR11	A	B	L	DE1	DE2	L	W	
140×110	1.340	92	74	184	174	138	54.5	37	31	8
160×90	1.770	110	67	215	201	111	41	41	23.5	4
160×110	1.870	110	75	213	201	138	41	41	23.5	4
160×125	1.950	110	102	240	201	155	41	41	26	4
180×160	2.650	104	95	211	216	201	45	45	23	4
200×90	2.800	102	70	239	247	111	50	50	26	4
200×110	2.750	113	75	230	247	138	50	50	25	4
200×160	3.000	102	98	232	247	201	50	50	25	4
225×200	4.210	122	101	237	275	247	57	29.5	25.5	2
250×110	5.100	126	86	260	310	138	63	32.5	28	2
250×160	5.430	126	98	271	310	201	63	32.5	29	2
250×200	5.340	127	101	254	310	247	63	32.5	27.5	2
280×250	7.250	138	115	270	345	310	71	36.5	29	2
315×160	9.010	149	98	327	390	201	80	41	35	2
315×200	9.510	149	101	310	390	247	80	41	33	2
315×250	9.200	149	115	283	390	310	80	41	30	2

Electrofusion End Cap

Injection molding

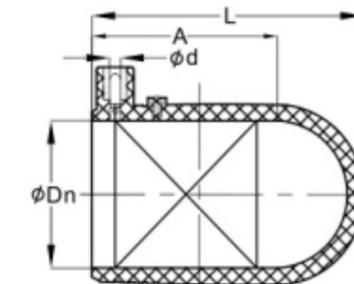
Embedded resistance wire by CNC machine

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

Φd:4.7mm terminal pin,4.0mm is also available

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC	SIZE/MM		Packing Box Size/CM			PCS /CTN
		A	L	L	W	H	
Dn32	0.054	41	84	45	39	20	150
Dn40	0.072	46	87	45	39	20	100
Dn50	0.1	46	88	50.5	42.5	24.5	100
Dn63	0.159	48	96	50.5	42.5	24.5	60
Dn90	0.377	48	99	57.5	35.5	28.5	30
Dn110	0.655	48	96	43	43	31.5	18

Other size can assemble from EF Coupler and BF End Cap

Electrofusion Adjustable Elbow

Injection molding

α from 1° to 21.5°

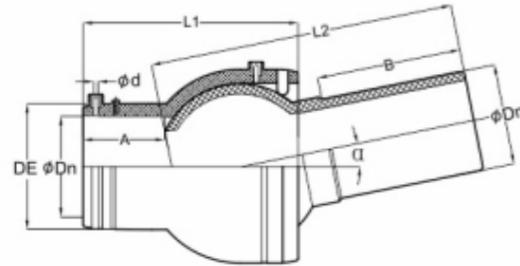
Embedded resistance wire by CNC machine

PE100, SDR11, 20°C: PN10 Gas, PN16 Water

PE100, SDR17, 20°C: PN6 Gas, PN10 Water

Φd : 4.7mm terminal pin, 4.0mm is also available

ISO4437-3/EN1555-3, ISO4427-3/EN12201-3, ISO15494, AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM				Packing Box Size/CM			PCS /CTN	
	SDR11		A	B	L1	L2	DE	L	W		H
110	3.5		98	159	236	335	134	42	42	35.5	4
160	9		110	160	305	360	195	52	31	38	1
200	13		117	148	305	385	245	64	36.5	40.5	1
250	17.5		130	128	358	385	306	73	41	40.5	1
315	35.3		135	150	435	510	390	97	54	53	1

PEEL TESTING



Cross-Section After Fusion



Peel Testing Specimen



Peel Testing Result

APPLICATION



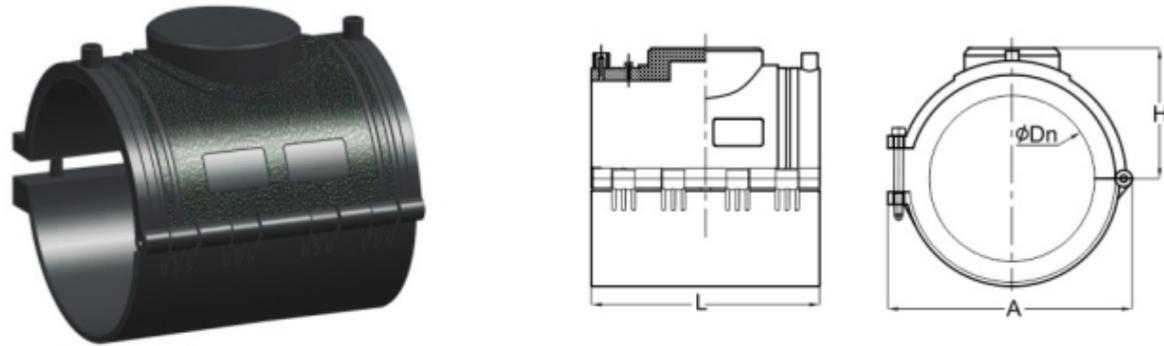
To Get Big Range by Assembled



Range from 1° to 21.5°

Electrofusion Repair Saddle

Injection molding
 Concealed latticed frame resistance wire
 PE100,SDR11,20°C: PN10 Gas, PN16 Water
 Φd:4.7mm terminal pin,4.0mm is also available
 ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC	SIZE/MM			Packing Box Size/CM			PCS /CTN	
		SDR11	A	L	H	L	W		H
63	0.200		100	100	38	50.5	42.5	24.5	60
90	0.970		145	155	55	43	43	31.5	15
110	1.110		160	180	65	42	42	41	8
160	1.950		230	230	132	50	26	42	4
200	2.500		270	230	132	48	48	29	4
250	2.890		300	260	152	56	54	32	4
315	3.620		370	260	190	54	39	37	2



Normal Type With Two Sides Screw Down

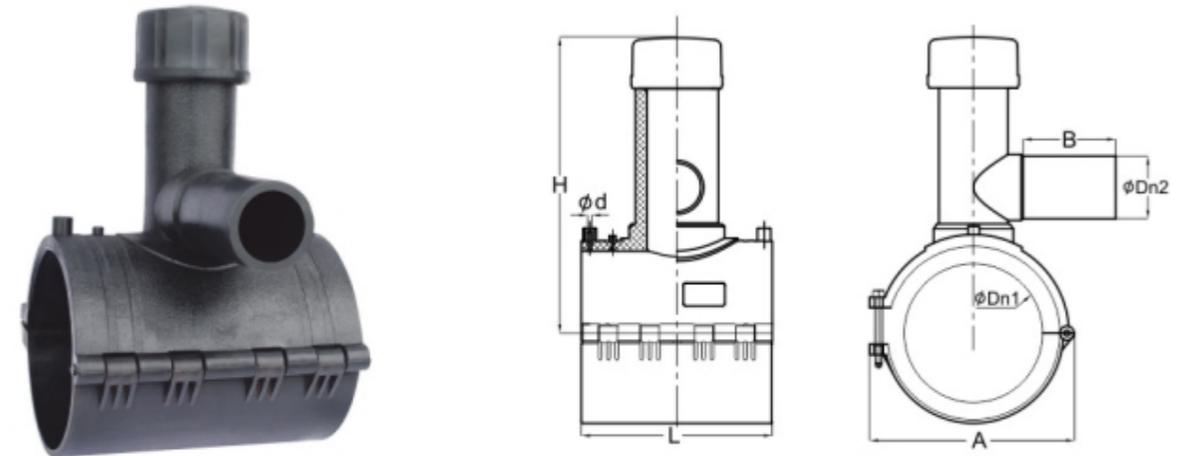
Our Hinge Type With One Side Screw Down, Easily to Operate

Latticed Frame Resistance Wire

Tapping Cutter With Threading, Easily to Operate And Hold Cutting Material

Electrofusion Tapping Saddle

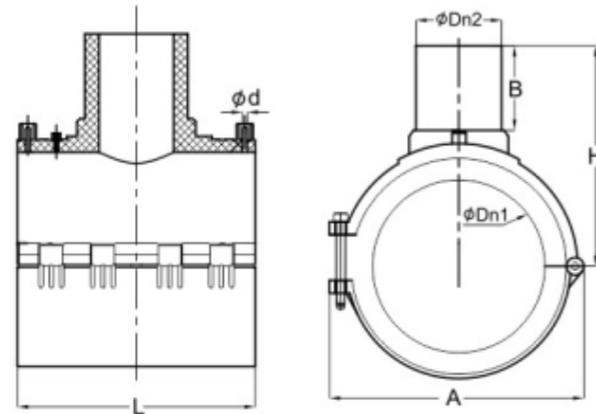
Injection molding
 Concealed latticed frame resistance wire
 PE100,SDR11,20°C: PN10 Gas, PN16 Water
 Φd:4.7mm terminal pin,4.0mm is also available
 ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn1xDn2 /MM	N.W. KG/PC	SIZE/MM				Packing Box Size/CM			PCS /CTN	
		SDR11	A	B	L	H	L	W		H
63×32	0.460		100	86	100	140	64	40	33	20
90×63	2.300		145	110	155	250	64	40	33	6
110×63	2.470		160	110	180	250	64	40	33	4
160×63	3.230		230	110	230	300	42	46	34	2
160×90	4.490		230	130	230	300	42	46	34	2
200×63	3.390		270	110	230	300	42	46	34	2
200×90	4.810		270	130	230	420	54	46	36	2
200×110	5.940		270	130	230	420	54	46	36	2
250×90	5.860		300	130	260	470	62	52	39	2
250×110	6.600		300	130	260	470	62	52	39	2
315×90	6.600		370	130	260	500	67	52	46	2
315×110	7.410		370	130	260	500	67	52	46	2

Electrofusion Straight Saddle

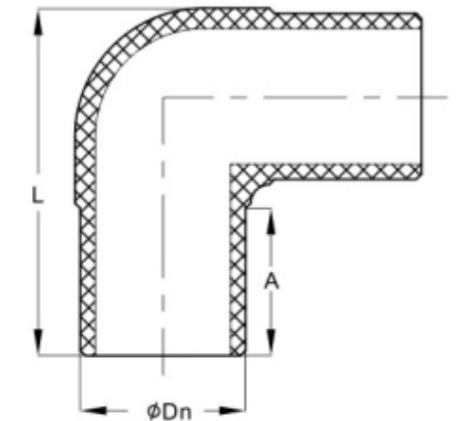
Injection molding
 Concealed latticed frame resistance wire
 PE100,SDR11,20°C: PN10 Gas, PN16 Water
 Φd:4.7mm terminal pin,4.0mm is also available
 ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn1xDn2 /MM	N.W. KG/PC SDR11	SIZE/MM				Packing Box Size/CM			PCS /CTN
		A	B	L	H	L	W	H	
90×63	0.890	145	63	155	250	64	40	33	20
110×63	1.040	160	63	180	250	64	40	33	8
160×63	1.830	230	63	230	300	64	40	33	6
160×90	2.000	230	79	230	300	42	46	34	3
200×63	2.900	270	63	230	300	42	46	34	3
200×90	3.000	270	79	260	300	42	46	34	3
250×63	3.200	300	63	260	470	54	46	36	3
250×90	3.300	300	79	260	470	54	46	36	3
250×110	3.450	300	82	260	470	62	52	39	3
315×63	4.200	370	63	370	500	62	52	39	3
315×90	4.300	370	79	370	500	67	52	46	3
315×110	4.500	370	82	370	500	67	52	46	3

Butt Fusion 90° Elbow

Injection molding
 PE100,SDR11,20°C: PN10 Gas, PN16 Water
 PE100,SDR17,20°C: PN6 Gas, PN10 Water
 ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM		Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	L	L	W	H	
40	0.069	/	49	99	56	34	26.5	100
50	0.120	/	55	116	44.5	39	20	50
63	0.221	/	56	132	56	34	26.5	50
75	0.372	/	65	155	54	39.5	40.5	50
90	0.630	/	80	182	51	41	26.5	20
110	1.050	0.700	86	210	44	44	37	12
125	1.350	0.950	82	225	47	47	29	8
140	1.750	1.250	85	244	51	51	32	8
160	2.700	1.900	100	280	58	34	30.5	4
180	3.510	2.450	103	307	64	40	33	4
200	4.850	3.500	114	345	64	36.5	36.5	3
225	6.520	4.900	112	367	49.5	38.5	38.5	2
250	9.150	6.350	132	410	54.5	43	43	2
280	10.410	8.850	133	450	47	47	31	1
315	18.300	12.000	150	510	53	53	35	1
355	22.450	16.850	168	570	59	59	39	1
400	31.100	22.750	142	592	61	61	43.5	1
450	/	34.650	140	641	65	48	65	1
500	/	43.300	140	730	74	53	74	1
560	/	63.670	140	758	77	59	77	1
630	/	72.600	140	820	83	66	83	1

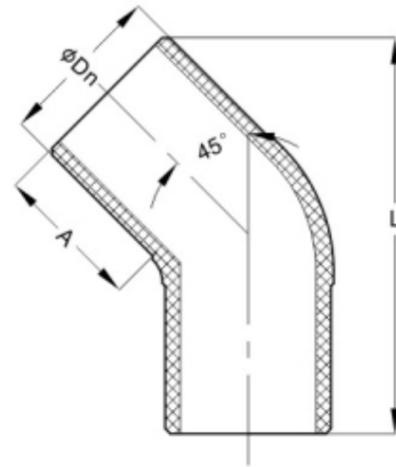
Butt Fusion 45° Elbow

Injection molding

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM		Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	L	L	W	H	
40	0.054	/	49	119	56	34	26.5	100
50	0.090	/	55	138	56	34	26.5	80
63	0.168	/	56	150	56	34	26.5	50
75	0.266	/	65	175	68	28	30	50
90	0.440	/	79	216	56	34	26.5	22
110	0.746	0.550	82	238	54	39.5	40.5	20
125	1.057	0.750	82	247	56	46	32	8
140	1.374	1.000	85	267	56	46	32	8
160	1.970	1.400	98	306	68	28	30	4
180	2.790	1.950	103	335	54	39.5	40.5	4
200	3.680	2.600	112	370	54	39.5	40.5	4
225	4.750	3.250	105	378	50	33.5	40	2
250	6.750	4.900	129	440	54	38	46	2
280	9.100	6.550	134	469	49	41.5	31.5	1
315	13.500	9.700	155	539	56	47	35.5	1
355	16.650	11.950	140	545	56.5	50	39.5	1
400	23.435	16.150	142	587	61	55	44	1
450	/	22.700	140	610	62	58.5	48	1
500	/	30.000	140	650	66	65	53	1
560	/	37.700	140	695	70.5	67.5	59	1
630	/	58.000	140	758	77	77.5	66	1

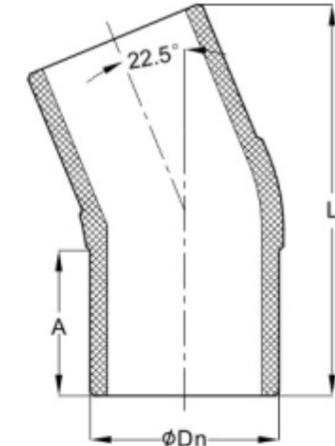
Butt Fusion 22.5° Elbow

Injection molding

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM		Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	L	L	W	H	
90	0.041	/	69	210	56	34	26.5	22
110	0.850	0.550	78	220	54	39.5	40.5	20
160	1.900	1.400	98	300	68	28	30	4
200	3.200	2.400	105	345	54	39.5	40.5	4
250	5.720	4.200	117	410	54	38	46	2
315	11.350	8.100	142	510	53	45	35.5	1

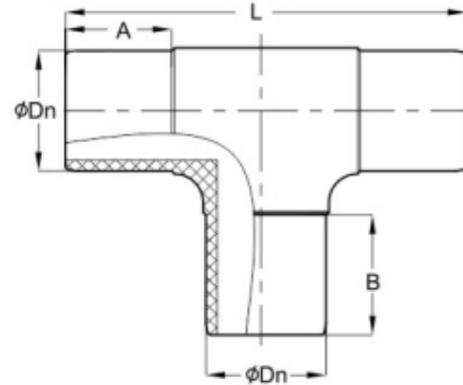
Butt Fusion 90° Equal Tee

Injection molding

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM			Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	B	L	L	W	H	
40×40×40	0.113	/	50	50	160	62	42	33	100
50×50×50	0.194	/	53	53	184	62	42	33	80
63×63×63	0.350	/	63	63	218	62	42	33	50
75×75×75	0.530	/	65	70	243	65	32.5	33	30
90×90×90	0.900	/	79	79	274	65	32.5	33	15
110×110×110	1.400	1.050	82	82	304	58	39	35.5	10
125×125×125	1.850	1.350	88	92	326	55	49	35	8
140×140×140	2.410	1.800	94	98	356	60	28	37.5	4
160×160×160	3.680	2.950	100	100	390	68	30	41	4
180×180×180	4.800	3.600	104	104	423	58	44	34.5	3
200×200×200	7.000	5.200	116	120	470	49	43	36	2
225×225×225	8.430	6.800	107	114	489	51	49	37	2
250×250×250	12.950	9.000	130	140	550	57	28	45	1
280×280×280	15.900	12.000	130	139	600	62	31	47.5	1
315×315×315	24.000	18.700	150	150	640	66	35	57	1
355×355×355	34.300	25.900	164	164	730	75	39	57	1
400×400×400	40.500	30.300	140	150	720	74	43	60	1
450×450×450	/	43.300	130	175	800	81	48	69	1
500×500×500	/	58.700	128	190	857	87	53	76	1
560×560×560	/	81.300	128	195	912	92	59	82.5	1
630×630×630	/	108.900	150	220	1000	91	66	101	1

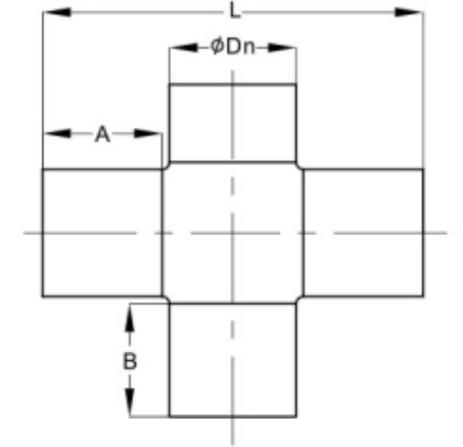
Butt Fusion 90° Equal Cross Tee

Injection molding

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM			Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	B	L	L	W	H	
63×63×63×63	0.470	/	63	63	218	46	41	46	24
75×75×75×75	0.660	/	65	70	243	51	41	51	20
90×90×90×90	1.120	/	79	79	274	57	50	29.5	10
110×110×110×110	1.820	1.340	82	82	304	48	33	33	4
125×125×125×125	2.200	1.510	88	92	326	54	35	35	4
140×140×140×140	2.900	2.020	94	98	356	46	37.5	37.5	3
160×160×160×160	4.910	3.900	100	100	390	41	36	41	2
180×180×180×180	5.500	4.200	104	104	423	44.5	40	44.5	2
200×200×200×200	9.300	6.900	116	116	470	49	49	22.5	1
225×225×225×225	10.200	7.200	107	114	489	51	51	25.5	1
250×250×250×250	17.270	12.000	130	130	550	57	57	28	1
280×280×280×280	18.400	13.200	130	139	600	62	62	31	1
315×315×315×315	32.000	24.900	150	150	640	66	66	35	1
355×355×355×355	45.700	34.500	164	164	730	75	75	39	1
400×400×400×400	48.200	33.900	140	140	720	74	74	44	1

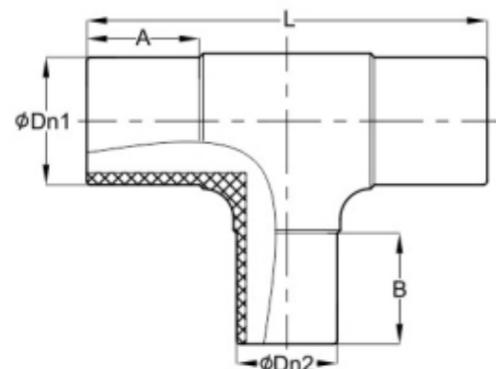
Butt Fusion 90° Reducer Tee

Injection molding

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM			Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	B	L	L	W	H	
40x32x40	0.100	/	46	45	160	66	42	28.5	100
50x32x50	0.161	/	50	45	176	66	42	28.5	70
50x40x50	0.200	/	50	49	176	66	42	28.5	70
63x32x63	0.250	/	56	45	181	66	42	28.5	50
63x40x63	0.250	/	56	49	189	66	42	28.5	50
63x50x63	0.250	/	56	55	199	66	42	28.5	50
75x40x75	0.350	/	64	49	207	66	42	28.5	35
75x50x75	0.400	/	64	55	217	66	42	28.5	35
75x63x75	0.400	/	64	63	230	66	42	28.5	35
90x32x90	0.600	/	80	45	261	66	42	28.5	25
90x40x90	0.625	/	80	49	261	66	42	28.5	25
90x50x90	0.650	/	80	55	223	66	42	28.5	25
90x63x90	0.700	/	80	63	261	66	42	28.5	25
90x75x90	0.750	/	80	76	263	66	42	28.5	25
110x32x110	0.900	0.630	82	47	254	54	39.5	40.5	15
110x40x110	0.900	0.650	82	50	254	54	39.5	40.5	15
110x50x110	0.950	0.750	82	55	199	54	39.5	40.5	15
110x63x110	1.050	0.800	82	63	264	58	39	35.5	15
110x75x110	1.000	0.750	82	70	278	54	39.5	40.5	15
110x90x110	1.250	0.850	82	84	290	54	39.5	40.5	15
125x75x125	1.500	1.050	81	70	276	54.5	33	50	8
125x90x125	1.610	1.100	81	79	291	54.5	33	50	8
125x110x125	1.850	1.300	81	82	312	54.5	33	50	8
140x90x140	2.050	1.300	83	79	295	68	46	35	6

Dn /MM	N.W. KG/PC		SIZE/MM			Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	B	L	L	W	H	
140x110x140	2.150	1.420	83	82	316	68	46	36	6
140x125x140	2.230	1.580	83	87	331	68	46	35	6
160x50x160	2.100	1.400	99	56	282	58	40	36	4
160x63x160	2.270	1.600	99	65	300	58	40	36	4
160x90x160	2.450	1.750	99	85	316	58	40	36	4
160x110x160	2.750	1.950	99	90	335	58	40	36	4
160x125x160	3.050	2.050	99	87	363	58	40	36	4
160x140x160	3.200	2.350	99	92	378	58	40	36	4
180x125x180	4.030	2.790	101	87	367	39	39.5	32	2
180x140x180	4.250	2.900	101	92	382	40	39.5	33	2
180x160x180	4.400	3.010	101	99	402	42.5	39.5	33	2
200x63x200	3.650	2.600	112	66	325	40	43	35	2
200x90x200	4.100	2.900	112	85	355	40	43	35	2
200x110x200	4.480	3.250	112	90	375	40	43	35	2
200x140x200	5.100	3.600	112	92	385	40	43	35	2
200x160x200	5.340	3.900	112	112	420	44	43	36	2
200x180x200	5.400	4.850	112	105	425	44	43	36	2
225x110x225	5.450	5.480	111	82	380	49	40	36.5	2
225x160x225	7.370	5.710	111	99	423	49	44	37.5	2
225x180x225	7.700	5.950	111	105	443	49	46	38	2
225x200x225	8.100	6.200	111	112	465	49	48.5	39	2
250x90x250	6.450	4.850	135	80	380	54	42	39	2
250x110x250	7.400	5.300	135	85	406	54	42	39	2
250x160x250	9.100	6.800	135	105	480	52	28	43	1
250x180x250	9.850	6.680	135	105	500	52	28	43	1
250x200x250	10.050	7.080	135	115	500	52	28	43	1
250x225x250	10.350	7.600	135	120	500	52	28	43	1
280x200x280	13.350	9.700	131	112	506	52.5	31	44	1
280x225x280	13.950	10.550	131	120	529	55	31	45	1
280x250x280	14.800	11.200	131	129	564	58.5	31	46	1
315x110x315	12.200	9.200	150	90	445	46.5	35	45	1
315x160x315	14.200	11.100	150	105	520	54	35	47	1
315x200x315	16.300	12.180	150	128	540	56	35	48	1
315x225x315	16.150	12.200	150	120	575	60	35	48.5	1
315x250x315	17.400	13.100	150	129	604	62.5	35	50	1
315x280x315	18.300	14.200	150	139	630	65	35	51	1
355x250x355	26.000	19.630	165	160	640	66	39	56.5	1
355x280x355	26.500	20.100	147	139	632	65.5	39	55	1
355x315x355	28.700	21.000	147	150	673	70	39	56.5	1
400x280x400	34.100	20.500	147	139	632	65.5	43	59	1
400x315x400	35.480	22.500	147	139	673	69.5	43	59	1
400x355x400	37.900	25.300	147	139	719	74	43	59	1

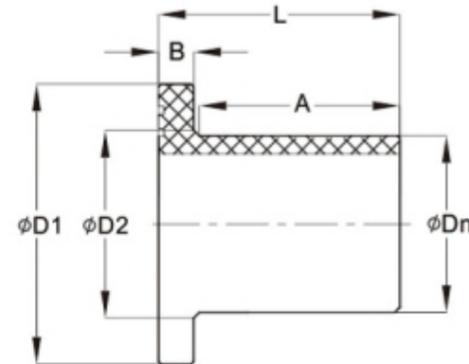
Butt Fusion Flange Adapter

Injection molding

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



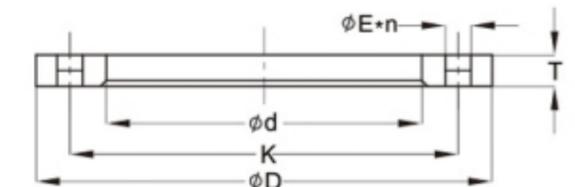
Dn /MM	N.W. KG/PC		SIZE/MM					Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	B	L	D1	D2	L	W	H	
40	0.071	/	66	13	83	78	50	58	39	36	200
50	0.096	/	58	13	85	88	61	58	39	36	150
63	0.159	/	74	13	89	102	75	58	39	36	100
75	0.263	/	86	16	106	122	89	54	39.5	40	50
90	0.408	0.301	86	19	110	138	105	68	28	30	25
110	0.550	0.425	94	19	117	158	125	66	42	29	30
125	0.720	0.550	98	24	127	158	132	58	39	36	24
140	0.950	0.750	102	20	127	188	150	58	39	36	16
160	1.400	1.030	120	24	149	212	175	62	42	33	12
180	1.600	1.200	123	26	155	218	190	54	39.5	41	12
200	2.280	1.700	122	27	155	268	232	55	35.5	50	8
225	2.700	2.580	129	26	162	268	235	78.5	34.5	29	6
250	3.470	2.800	133	29	170	320	270	58	39	36	4
280	4.300	3.250	150	30	187	326	300	35	35	40	2
315	6.190	4.600	161	32	202	370	335	39	39	42	2
355	8.400	5.900	166	31	207	430	375	45	45	44	2
400	11.000	8.450	168	38	215	482	420	50	50	23	1
450	/	11.700	168	46	224	530	470	54	54	23	1
500	/	15.500	176	50	236	585	520	59	59	24	1
560	/	20.600	181	50	238	660	580	67	67	25	1
630	/	22.500	182	50	242	685	650	69	69	25	1
710	/	27.500	182	50	240	780	730	79	79	25	1
800	/	36.000	186	55	249	900	824	91	91	26	1
900	/	47.000	190	55	253	990	926	100	100	26	1
1000	/	56.500	194	60	262	1090	1026	110	110	26.5	1
1200	/	79.300	194	60	262	1292	1228	130	130	26.5	1

Steel Backing Ring for BF Flange Adapter

Carbon Steel Material

Powder coating or cold galvanized for anticorrosion

ISO 9624



Dn /MM	SIZE/MM				Bolt hole Dia.E*n	Screw
	D	d	K	T		
40	140	51	100	18	18x4	M16
50	150	62	110	18	18x4	M16
63	165	78	125	20	18x4	M16
75	185	92	145	20	18x4	M16
90	200	108	160	20	18x8	M16
110	220	128	180	22	18x8	M16
125	220	135	180	22	18x8	M16
140	250	158	210	22	18x8	M16
160	285	178	240	24	22x8	M20
180	285	188	240	24	22x8	M20
200	340	235	295	24	22x8	M20
225	340	238	295	24	22x8	M20
250	395	288	350	26	22x12	M20
280	395	294	350	26	22x12	M20
315	445	338	400	28	22x12	M20
355	505	376	460	30	22x16	M20
400	565	430	515	32	26x16	M24
450	615	470	565	35	26x20	M24
500	670	533	620	38	26x20	M24
560	780	618	725	42	30x20	M27
630	780	645	725	42	30x24	M27
710	895	730	840	46	30x24	M27
800	1015	830	950	46	33x24	M30
900	1115	930	1050	48	33x28	M30
1000	1230	1030	1160	52	36x28	M33
1200	1455	1236	1380	52	39x32	M36

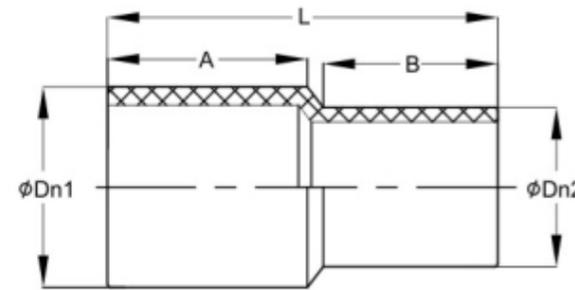
Butt Fusion Reducer

Injection molding

PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn1xDn2 /MM	N.W. KG/PC		SIZE/MM			Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	B	L	L	W	H	
40x32	0.034	/	49	44	98	49	41	23.5	100
50x32	0.052	/	55	44	109	49	41	23.5	100
50x40	0.060	/	55	49	109	49	41	23.5	100
63x32	0.091	/	63	44	123	49	41	23.5	100
63x40	0.097	/	63	49	123	44.5	39	20	90
63x50	0.122	/	63	55	123	49	41	23.5	100
75x32	0.153	/	70	44	138	65	32.5	33	100
75x40	0.154	/	70	49	138	49	41	23.5	60
75x50	0.162	/	70	55	138	54	39.5	40.5	100
75x63	0.182	/	70	63	138	49	41	23.5	50
90x32	0.246	/	79	44	156	44.5	39	20	25
90x40	0.255	/	79	49	156	44.5	39	20	25
90x50	0.260	/	79	55	156	44.5	39	20	25
90x63	0.270	0.220	79	63	156	44.5	39	20	25
90x75	0.270	0.220	79	70	156	65	32.5	33	50
110x32	0.295	0.280	82	44	169	44.5	39	20	20
110x40	0.299	0.300	82	50	170	44.5	39	20	20

Dn1xDn2 /MM	N.W. KG/PC		SIZE/MM			Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	B	L	L	W	H	
110x50	0.395	0.310	82	50	169	44.5	39	20	20
110x63	0.400	0.310	82	63	169	49	41	23.5	25
110x75	0.441	0.310	82	70	169	44.5	39	20	17
110x90	0.510	0.320	82	79	169	49	41	23.5	20
160x63	1.010	0.700	98	63	200	58	39	35.5	15
160x75	1.030	0.700	98	70	200	58	36	27.5	10
160x90	1.080	0.720	98	79	200	58	36	27.5	10
160x110	1.120	0.800	98	82	200	58	39	35.5	15
160x125	1.140	0.850	98	87	200	54	39.5	40.5	14
160x140	1.200	0.900	98	92	200	54	39.5	40.5	12
200x63	1.600	1.000	112	64	227	41	40	22	4
200x90	1.800	1.200	112	79	227	41	40	22	4
200x110	1.900	1.300	112	82	227	54	39.5	40.5	8
200x125	1.840	1.250	112	87	227	49	41	23.5	4
200x140	1.910	1.260	112	92	227	49	41	23.5	4
200x160	2.100	1.400	112	98	227	49	41	23.5	4
200x180	2.200	1.420	112	105	227	54	39.5	40.5	8
225x110	2.900	1.410	120	82	242	47	25	50	4
250x110	3.300	2.200	130	85	270	52	37	56	4
250x125	2.920	2.100	130	81	243	52	37	51	4
250x140	3.010	2.150	130	83	243	52	37	51	4
250x160	3.500	2.500	130	102	264	52	37	55	4
250x180	3.280	2.300	130	97	243	52	37	51	4
250x200	3.900	2.750	130	118	275	52	37	57	4
250x225	3.630	2.800	130	111	253	52	37	53	4
315x160	6.150	4.500	150	104	315	65	33.5	33	2
315x180	5.830	4.220	150	101	293	65	33.5	33	2
315x200	6.650	4.650	150	115	315	65	33.5	33	2
315x225	6.270	4.500	150	111	295	65	33.5	33	2
315x250	7.250	5.200	150	130	320	65	33.5	34	2
315x280	6.800	4.820	141	131	289	65	33.5	31	2
355x250	7.200	4.900	127	95	262	37.5	37.5	28	1
355x315	7.500	5.200	127	115	262	37.5	37.5	28	1
400x200	10.350	7.550	147	102	320	42	42	34	1
400x225	10.520	7.650	147	111	320	42	42	34	1
400x250	10.810	7.750	147	116	320	42	42	34	1
400x280	11.030	7.850	147	130	325	42	42	34	1
400x315	11.300	8.000	147	140	325	42	42	34	1
400x355	11.950	8.250	147	146	318	42	42	34	1

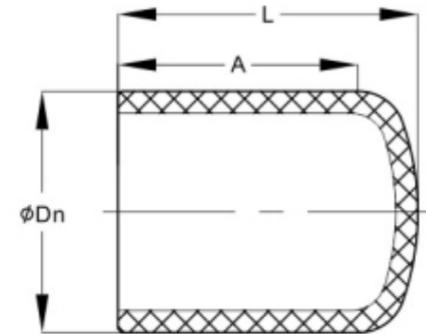
Butt Fusion End Cap

Injection molding

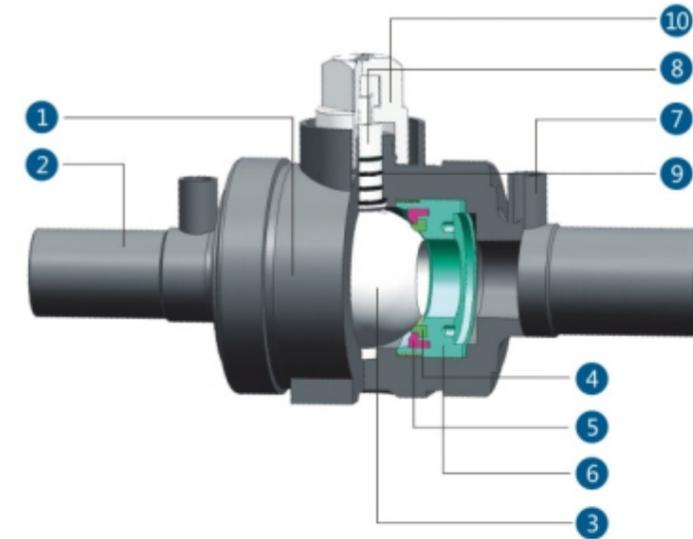
PE100,SDR11,20°C: PN10 Gas, PN16 Water

PE100,SDR17,20°C: PN6 Gas, PN10 Water

ISO4437-3/EN1555-3,ISO4427-3/EN12201-3,ISO15494,AS/NZS 4129



Dn /MM	N.W. KG/PC		SIZE/MM		Packing Box Size/CM			PCS /CTN
	SDR11	SDR17	A	L	L	W	H	
25	0.010	/	41	48	58	39	36	400
32	0.014	/	44	52	58	39	36	300
40	0.025	/	49	59	58	39	36	250
50	0.044	/	55	67	58	39	36	200
63	0.075	/	66	83	54	39.5	40.5	200
75	0.127	/	66	84	54	39.5	40.5	150
90	0.210	/	79	92	54	39.5	40.5	100
110	0.370	0.350	82	110	35	35	35	27
125	0.510	0.360	82	112	40	40	36	27
140	0.690	0.500	85	120	44	44	26	18
160	0.970	0.690	105	139	50	50	30	12
180	1.360	0.950	102	147	56	56	32	12
200	1.830	1.320	115	168	42	42	36	8
225	2.390	1.650	105	162	47	47	34.5	8
250	3.160	2.260	130	188	52	40	27	4
280	4.530	3.200	134	205	63.5	30	30	3
315	6.240	4.350	140	220	46	33.5	33.5	2
355	8.100	6.200	140	230	48	37.5	37.5	2
400	11.800	7.900	142	240	42	42	26	1



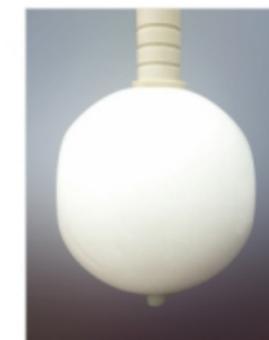
Standard Type

Extended Stem for Top Operation

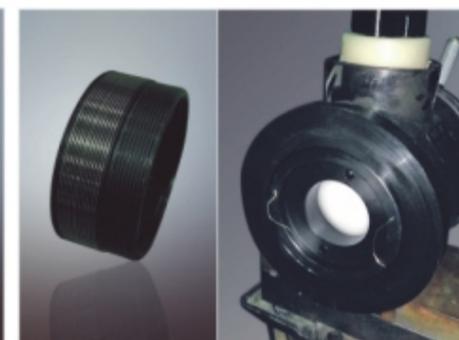


Top Operation with Gear Assist

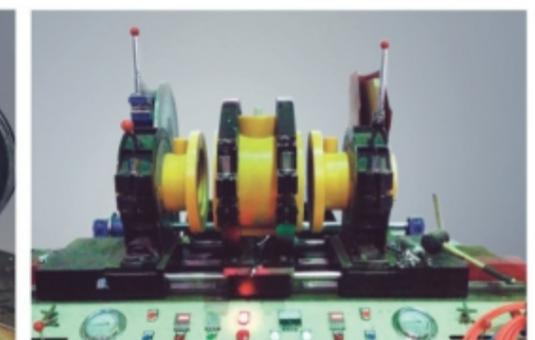
No.	Component	Material	Operating Feature
1	BODY	Polyethylene	PE80,PE100
2	SPIGOT END	Polyethylene	PE80,PE100
3	BALL	Polypropylene	Excellent Strength,Thermal Resistance
4	BALL SEAL	EPDM	Excellent ageing,ozone and corrosion resistance
5	SEAL SEAT	Graphite Nylon	Excellent carrying capacity to keep sealing
6	BALL SEAT	Polyethylene	PE80,PE100,connect to body by both threading and electrofusion for excellent sealing
7	PURGE CONNECTOR	Polyethylene	Integral Easy Purge Connection
8	STEM	Reinforced Nylon	Excellent Durability & Strength
9	STEM SEAL	Nitrile	Reliable Sealing from -29 °C to 60 °C ,Redundant Sealing with multiple O - rings
10	OPERATOR	Reinforced Polypropylene	50mm or 75mm Square



Use coaxial pin to fix the ball to prevent shifting when working under pressure



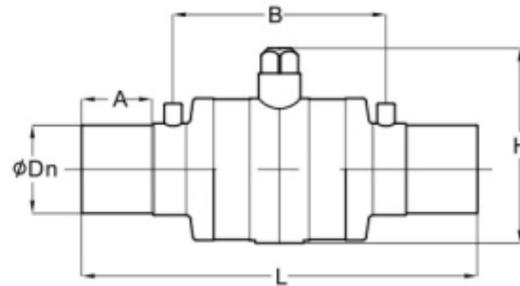
Ball seat connect to body by both threading and electrofusion



Welding the both spigot ends at same time to keep all the parts coaxially

No Purge Ball Valve

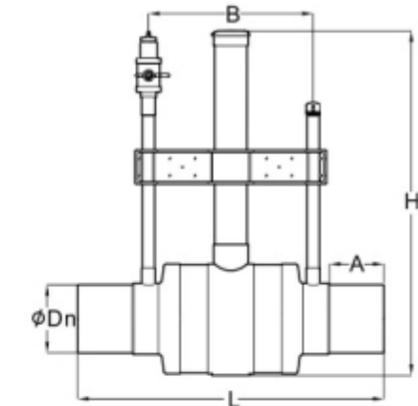
Full port
 GAS(20°C,PE100): PN10/SDR11, PN6/SDR17
 Extended stem for top-opening device is alternative
 Extended stem for top-opening with gear assist is alternative from dn160
 ISO4437-4/EN1555-4



Dn /MM	KG/PC SDR11	SIZE/MM				Packing Box Size/CM			PCS /CTN
		A	B	L	H	L	W	H	
63	3.000	120	200	500	180	52	46	35	2
90	10.000	130	320	645	350	74	31	40	1
110	11.500	140	320	700	350	74	37	40	1
160	20.000	140	360	770	450	81	36.5	50	1
200	33.000	165	400	840	500	90	41	55	1
250	49.000	185	420	930	500	100	46	55	1
315	80.000	165	530	980	650	106	58	70	1
355	84.000	165	530	980	650	100	46	122	1
400	88.000	180	530	1010	650	106	58	130	1

Single Purge Ball Valve

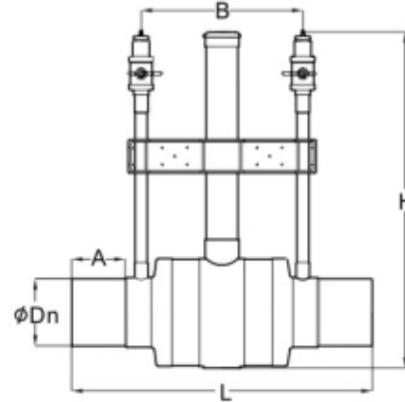
Full port
 GAS(20°C,PE100): PN10/SDR11, PN6/SDR17
 Extended stem for top-opening device is alternative
 Extended stem for top-opening with gear assist is alternative from dn160
 H:Accessory height can be customized
 ISO4437-4/EN1555-4



Dn /MM	KG/PC SDR11	SIZE/MM				Packing Box Size/CM			PCS /CTN
		A	B	L	H	L	W	H	
63	4.78	120	200	500	800	52	46	90	2
90	13.780	130	320	645	950	74	31	102	1
110	14.850	140	320	700	950	74	31	102	1
160	22.000	140	360	770	1080	81	36.5	113	1
200	38.500	165	400	840	1150	90	41	121	1
250	55.500	185	420	930	1150	100	46	122	1
315	85.000	165	530	980	1250	106	58	130	1
355	89.000	165	530	980	1250	106	58	130	1
400	93.000	180	530	1010	1250	106	58	130	1

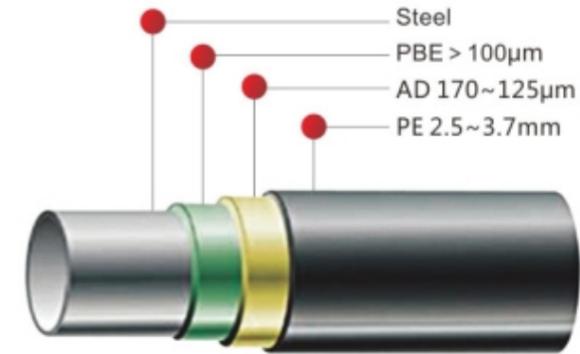
Double Purge Ball Valve

Full port
 GAS(20°C,PE100): PN10/SDR11, PN6/SDR17
 Extended stem for top-opening device is alternative
 Extended stem for top-opening with gear assist is alternative from dn160
 H: Accessory height can be customized
 ISO4437-4/EN1555-4



Dn /MM	KG/PC	SIZE/MM				Packing Box Size/CM			PCS /CTN
		SDR11	A	B	L	H	L	W	
63	5.260	120	200	500	800	52	46	90	2
90	14.310	130	320	645	950	74	31	102	1
110	15.000	140	320	700	950	74	31	102	1
160	23.000	140	360	770	1080	81	36.5	113	1
200	39.500	165	400	840	1150	90	41	121	1
250	56.500	185	420	930	1150	100	46	122	1
315	86.000	165	530	980	1250	106	58	130	1
355	90.000	165	530	980	1250	106	58	130	1
400	94.000	180	530	1010	1250	106	58	130	1

3PE(MAPEEC) Coating for Anticorrosion

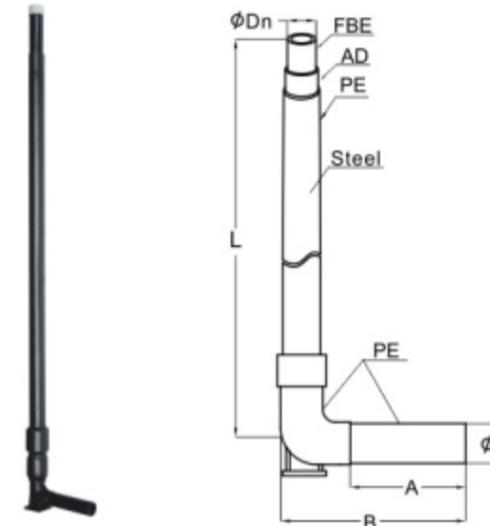


3PE Coating Process



Injection Molding PE-Steel 90° Adapter

Injection molding, Steel part as insert
 Steel part with 3PE(MAPEEC) coating for anticorrosion
 PE100, SDR11, 20°C: PN10 Gas, PN16 Water
 ISO4437-3/EN1555-3, ISO4427-3/EN12201-3, ISO15494, AS/NZS 4129



DnxD /MM	SDR	SIZE/MM		
		A	B	L
32×G34	11	161	120	800
40×G34	11	237	158	800
40×G42	11	237	158	800
50×G42	11	257	178	800
50×G48	11	257	178	800
63×G48	11	315	200	800
63×G57	11	315	200	800

Mechanical PE-Steel Straight Adapter

PE part by injection molding

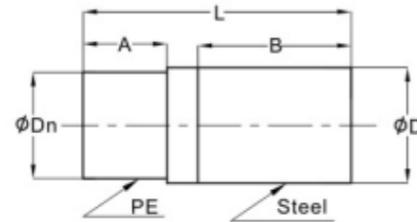
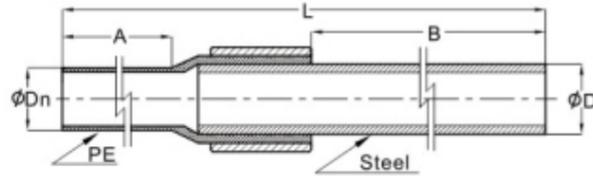
Steel part with cold galvanized, powder or 3PE(MAPEC) coating for anticorrosion

PE100, SDR11, 20°C: PN10 Gas, PN16 Water

ISO 17885



Type for Bigger(Include) Dn200



DnxD /MM	SDR	SIZE/MM		
		A	B	L
25xG22	11	82	250	340
25xG27	11	82	250	345
32xG22	11	88	250	345
32xG27	11	88	250	347
32xG32	11	88	250	357
32xG34	11	88	250	358
40xG27	11	96	250	352
40xG32	11	96	250	352
40xG34	11	96	250	355
40xG42	11	96	250	368
40xG45	11	96	250	369
40xG48	11	96	250	372
50xG42	11	110	250	371
50xG45	11	110	250	371
50xG48	11	110	250	385
50xG50	11	110	250	383
50xG60	11	110	250	390
63xG48	11	126	250	385
63xG50	11	126	250	385
63xG57	11	126	250	402
63xG60	11	126	240	392
63xG63	11	126	250	407
75xG76	11	80	320	431

DnxD /MM	SDR	SIZE/MM		
		A	B	L
90xG76	11	79	300	388
90xG83	11	79	300	394
90xG89	11	79	300	421
110xG89	11	82	350	445
110xG102	11	82	300	418
110xG108	11	97	350	470
110xG114	11	82	350	478
125xG108	11	87	350	457
125xG114	11	87	350	475
140xG114	11	92	350	454
140xG140	11	92	350	493
160xG159	11	119	400	560
160xG168	11	98	350	514
200xG203	11	112	350	545
200xG219	11	112	350	548
250xG219	11	129	395	586
250xG232	11	129	395	586
250xG273	11	129	395	586
315xG299	11	178	355	627
315xG325	11	150	350	616
355xG325	11	164	350	530
400xG426	11	179	400	735
500xG529	11	212	450	848

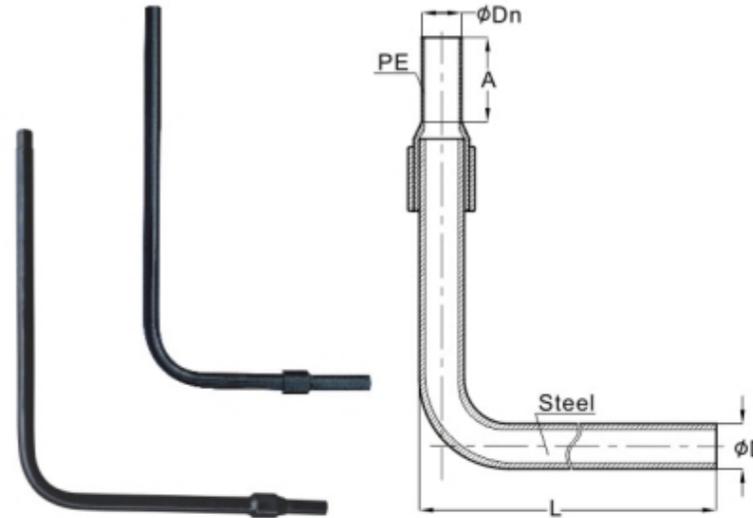
Mechanical PE-Steel 90° Adapter

PE part by injection molding

Steel part with cold galvanized, powder or 3PE(MAPEC) coating for anticorrosion

PE100, SDR11, 20°C: PN10 Gas, PN16 Water

ISO 17885



DnxD /MM	SDR	SIZE/MM	
		A	L
25xG27	11	82	800
32xG34	11	88	800
40xG34	11	96	800
40xG42	11	96	800
50xG48	11	110	800
63xG48	11	126	800
63xG57	11	126	800
63xG60	11	126	800

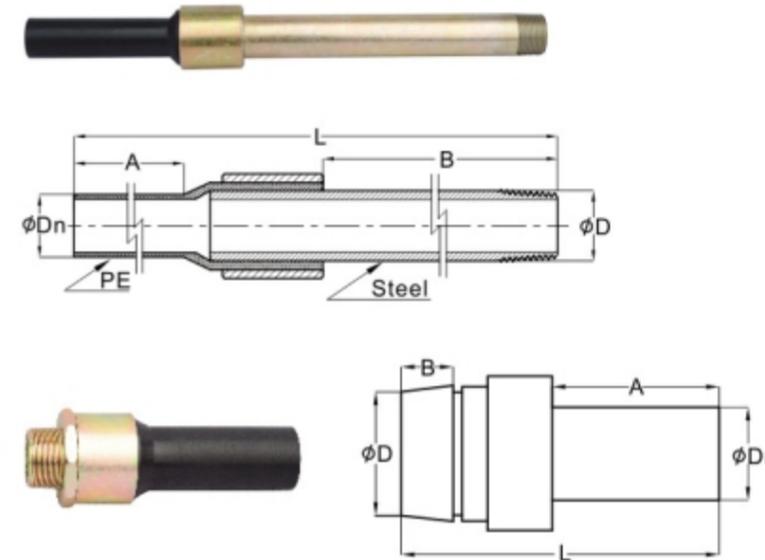
Mechanical PE-Steel Threading Adapter

BSPT male threading

Steel part with cold galvanized surface for anticorrosion

PE100, SDR11, 20°C: PN10 Gas, PN16 Water

ISO 17885

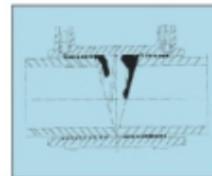


DnxD /MM	SDR	SIZE/MM		
		A	B	L
32x1"	11	80	25	170
40x1 1/4"	11	80	25	170
50x1 1/2"	11	80	25	170
63x2"	11	80	25	170
25x3/4"	11	82	250	340
32x3/4"	11	88	250	345
32x1"	11	88	250	345
40x1"	11	88	250	347
40x1/4"	11	96	250	352
50x1/2"	11	110	250	371
63x1/2"	11	126	250	385
63x2"	11	126	250	407

Electrofusion Operation Specification

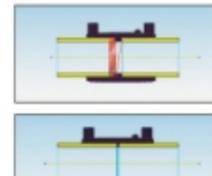
-Connect to HDPE Solid Wall pipe/fitting

CAUTION: You should obey the following terms before & during the welding procedure, otherwise may be occur accident or welding aborted!



Step.1

1. Attention that the end faces of the pipe/fitting should be cut perpendicular to the level line. It will lead partial welding zone exposed if the end faces of pipe were not cut perpendicular to the level line, which will make the welding failed, such as the melt materials flow into the pipeline, etc.



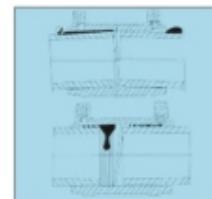
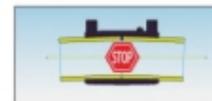
Step.6

6. Insert the welding end of the pipe into the pipe fitting up to the limitation of pipe fittings or the depth marked on the main pipes, when installation, place the power socket of the pipe fitting at the position that convenient for operation. If the external diameter of pipe is large, the surface of the welding end of pipe should be re-scraped till fitted and adapted.



Step.2

2. Measure the inserted depth or the welding zone of the electrofusion fitting, and mark it on the pipe.



Step.7

7. The pipe fitting should be mounted with the pipe under the stress free condition, that can be rotated manually, otherwise there will be such kind of accidents like the melt spilling out the end face of the pipe fitting or spilling into the pipeline during welding.



Step.3

3. The surface of the polyethylene pipe may form an oxide layer after a period of storage time. Before welding, the oxide layer of the welding zone should be cleaned off completely (need to scrape 0.1mm~0.2mm thick oxidation layer), otherwise it will influence the welding quality, lead to failed welding or cause the hidden danger. This step is very very important.



Step.8

8. Connect the welding machine plugs to the fitting electrode pins at first, then.

8.1. scan the barcode on the fitting surface with scanner and enter Start Button to start welding.

8.2. Or enter the Fusion voltage, Fusion and Cool time (can be found on the fitting surface) manually, then enter Start Button to start welding.

Do not move or stress the pipe & fitting during the welding and cooling time.

Do not touch or looking directly the fitting's inspection hole during welding.

Record the welding parameters, welding date and operator on the pipelines after cooling.



Step.4

4. chamfer the pipe end for about 45° degree, for easily insert to the fitting.



Step.5

5. The welding surface of the pipes and pipe fittings should be clean absolutely, dry and non-grease, after scrape off the oxide layer, it should be cleaned off by adopting the polyethylene cleanser or 96% or above alcohol and non-chipping colorless paper before installation.

Working Site Corners

