



Your Satisfaction, Our Aspiration



POLYFUSE PRODUCT RANGE



PE Single Injection Moulded Spigot Fittings [PE80]



PE Single Injection Moulded Spigot Fittings [PE100]



Loose Backing Flanges For Butt Fusion Systems



Electrofusion Fittings [PE100]



PE Fabricated Fittings



Tools & Accessories

03 Product Specification & Standard Reference

PE Single Injection Moulded Spigot Fittings (PE80)

- 04 . End Cap . Flat Cap .
- 05 . Stub End (Short Collar) . Stub End (Short Collar-Clamp Fit) .
- 06 . Stub End (Short Collar-Reduction Type) . Stub End (Long Collar) .
- 07 . Reducer .
- 08 . Spigot Tee . Spigot Elbow 90° . Spigot Elbow 45° .

PE Single Injection Moulded Spigot Fittings (PE100)

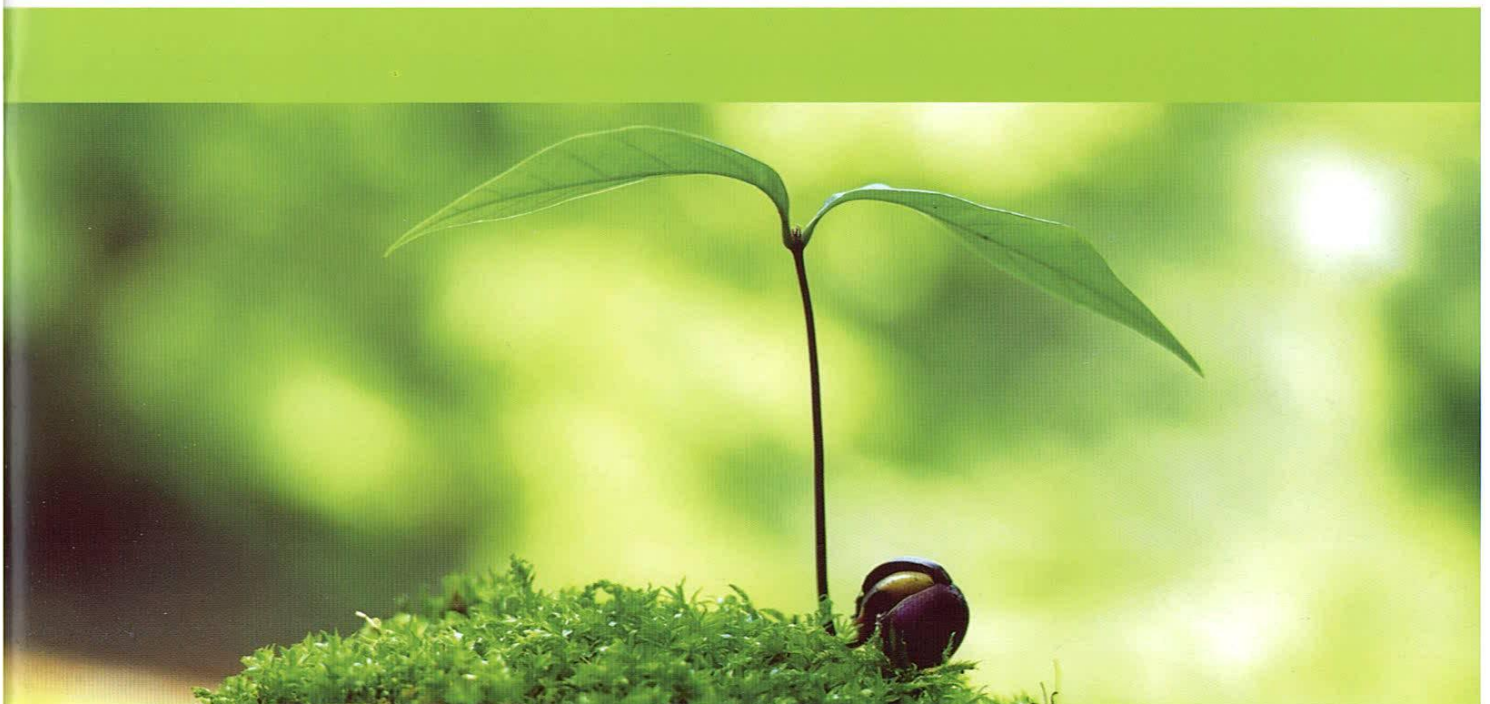
- 09 . Stub End (Short Collar) . Stub End (Short Collar-Clamp Fit) .
- 10 . Stub End (Short Collar-Reduction Type) . Stub End (Long Collar) .
- 11 . Reducer . End Cap .
- 12 . Flat Cap . Spigot Tee . Spigot Elbow 90° . Spigot Elbow 45° .

PE Fabricated Fittings (PE80 & PE100)

- 13 . 90° Bend . 60° & 45° Bend . 30° & 22.5° Bend
- 14 . 90° Tee . 60° & Branch Tee . Cross Tee

PE Fabricated Fittings

- 15 . Product Range On Request .



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Loose Backing Flanges For Butt Fusion Systems

- 16 . Mild Steel Flange - Nominal Pressure PN10 .
- 17 . Mild Steel Flange - Nominal Pressure PN16 .
 . PE Single Injection Moulded Flange .
- 18 . Rubber Gasket .

Electrofusion Fittings (PE100)

- 19 . Electrofusion Straight Coupler . Electrofusion Reducing Coupler .
 . Electrofusion Elbow 90°Coupler .
- 20 . Electrofusion Equal Tee . Electrofusion Reducing Tee .
- 21 . Electrofusion End Cap .
 . Electrofusion Transition PE/BRass Adaptor/ Female / Internal Thread .
 . Electrofusion Transition PE/BRass Adaptor/ Male / External Thread .
- 22 . LPG PE / Brass Adaptor (BSP Male Threaded) .
 . LPG PE / Brass Adaptor (BSP Female Threaded) .

Tools And Accessories

- 23 . Electrofusion Pin Adaptor (L Type)
 . Electrofusion Pin Adaptor (Straight Type) . PE Pipe Cover

24 - 27 Installation Guidline - Butt Fusion Joint

28 Installation Guidline - Electrofusion Joint



PRODUCT DESCRIPTION	SIZE (mm)	MAXIMUM OPERATING PRESSURE (PN) AT TEMPERATURE 20°C	REFERENCE STANDARD
PE Single Injection Moulded Spigot Fittings And Fabricated Fittings	20 - 500	6 ~ 16	DIN 16963 / EN 12201
MS Flanges	20 - 1200 250 - 1200	10 16	ISO 9624 , BS 4504
PE Single Injection Moulded Flanges	63 - 280	10 16	ISO 9624 , BS 4504
Rubber Gasket	2" - 12"	10 or 16	ISO 9624 , BS 4504, BS 10 (Table E)
Electrofusion Fittings	20 - 225	16 (Water) 10 (Gas)	EN 12201 (Water) EN 1555 (Gas)

[APPROVALS]

Polyfuse PE Single Injection Moulded Fittings in accordance to DIN 16963 certification no. PP015501 is approval and recognized by:

- * SIRIM QAS International Sdn. Bhd. in Malaysia.
- * State Water Authorities in Malaysia.
- * Suruhanjaya Perkhidmatan Air Negara (SPAN) in Malaysia.

HEAT FUSION FITTINGS

[MATERIAL COMPOSITION]

PE Single Injection Moulded Spigot Fittings And Fabricated Fittings

Material (PE80 / PE100) Polyethylene

Flanges

MS Mild steel

PE Single injection moulded (PE) Polyethylene c/w steel insert

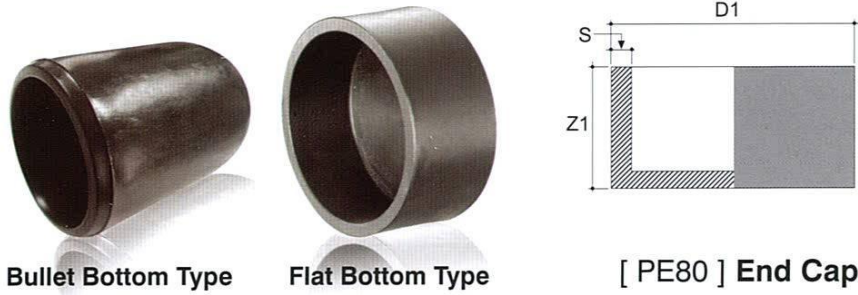
Rubber Gasket

Material (NR) Natural Rubber / Normal Rubber (Recycle Nitrile Butadiene Rubber) / GSG Rubber (Natural Rubber and Recycle Nitrile Butadiene Rubber) / Ethylene Propylene Rubber (EPDM)

Electrofusion Fittings

Material (PE100) Polyethylene

PE SINGLE INJECTION MOULDED SPIGOT FITTINGS (PE80)



Bullet Bottom Type

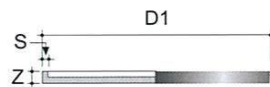
Flat Bottom Type

[PE80] End Cap

D1(mm)	Z1(mm)	WALL THICKNESS, S			
		PN8 SDR17	PN10 SDR13.6	PN12.5 SDR11	PN16 SDR9
63	99	3.8	4.7	5.8	7.1
90	110	6.7	6.7	8.2	10.1
110	50	8.1	8.1	10.0	12.3
125	50	9.2	9.2	11.4	14.0
160	63	11.8	11.8	14.6	17.9
180	63	13.3	13.3	16.4	20.1
225	95	16.6	16.6	20.5	25.2

* Flat bottom type for 110mm - 225mm

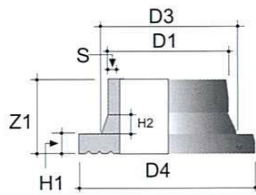
* Bullet bottom type for 63 & 90mm



[PE80] Flat Cap

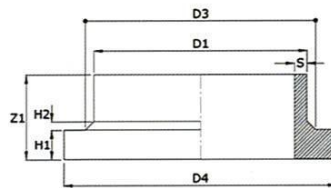
D1(mm)	Z(mm)	WALL THICKNESS, S		
		PN8 SDR17	PN10 SDR13.6	PN12.5 SDR11
200	35	11.9	14.7	18.2
225	35	13.4	16.6	20.5
250	35	14.8	18.4	22.8
280	35	16.6	20.6	25.5
315	35	18.7	23.2	28.7
345	35	20.4	25.5	31.5
355	44	21.1	26.1	32.3
400	44	23.7	29.4	36.4
450	44	26.7	33.1	41.0

1. SDR (Standard Dimension Ratio)
2. PN (Pressure Rating)
3. Other dimension on request.



[PE80] Stub End (Short Collar)

D1 (mm) OD	D3 (mm)	D4 (mm)	Z1 (mm)	H1 (mm)	H2 (mm)	WALL THICKNESS, S				
						PN6 SDR21	PN8 SDR17	PN10 SDR13.6	PN12.5 SDR11	PN16 SDR9
50	61	88	50	12	15	2.3	3.0	3.7	4.6	5.6
63	75	102	50	16	20	3.0	3.8	4.7	5.8	7.1
75	89	122	50	16	20	3.5	4.5	5.6	6.8	8.4
90	105	138	80	17	20	4.3	5.4	6.7	8.2	10.1
110	125	158	80	18	25	5.3	6.6	8.1	10.0	12.3
125	132	158	80	25	25	6.0	7.4	9.2	11.4	-
160	175	212	80	25	28	7.7	9.5	11.8	14.6	17.9
180	180	212	80	30	30	8.6	10.7	13.3	16.4	-
200	232	268	100	32	30	9.6	11.9	14.7	18.2	-
225	235	268	100	32	30	10.8	13.4	16.6	20.5	25.2
250	285	320	100	35	40	11.9	14.8	18.4	22.7	-
280	291	320	100	35	40	13.4	16.6	20.6	25.4	31.3
315	335	370	100	35	40	15.0	18.7	23.2	28.6	-
345	353	386	120	40	40	16.5	20.4	25.5	31.5	-
355	373	430	120	40	40	16.9	21.1	26.1	32.2	-
400	427	482	120	46	45	19.1	23.7	29.4	36.3	-
450	475	541	130	55	40	21.3	26.7	33.1	40.9	-



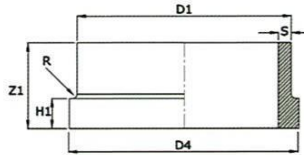
[PE80] Stub End
(Short Collar - Clamp Fit)

* Compliant to manufacturer's specification

D1 (mm) OD	D3 (mm)	D4 (mm)	Z1 (mm)	H1 (mm)	H2 (mm)	WALL THICKNESS, S				
						PN6 SDR21	PN8 SDR17	PN10 SDR13.6	PN12.5 SDR11	PN16 SDR9
250	285	320	100	35	20	11.9	14.8	18.4	22.7	-
280	291	320	100	35	20	13.4	16.6	20.6	25.4	31.3
315	335	370	100	35	20	15.0	18.7	23.2	28.6	-
355	373	430	120	40	20	16.9	21.1	26.1	32.2	-
400	427	482	120	46	15	19.1	23.7	29.4	36.3	-
450	475	541	130	55	15	21.3	26.7	33.1	40.9	-

1. SDR (Standard Dimension Ratio)
2. PN (Pressure Rating)
3. Other dimension on request.

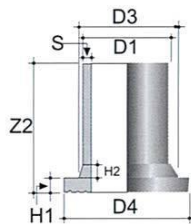
PE SINGLE INJECTION MOULDED SPIGOT FITTINGS (PE80)



[PE80] Stub End (Short Collar - Reduction Type)

* Compliant to manufacturer's specification

D1(mm) OD	D4(mm)	R(mm)	Z1(mm)	H1(mm)	WALL THICKNESS, S				
					PN6 SDR21	PN8 SDR17	PN10 SDR13.6	PN12.5 SDR11	PN16 SDR9
250	320	5	100	35	11.9	14.8	18.4	22.7	-
315	370	5	100	35	15.0	18.7	23.2	28.6	-
355	430	5	120	40	16.9	21.1	26.1	32.2	-
400	482	5	120	46	19.1	23.7	29.4	36.3	-
450	541	5	130	55	21.3	26.7	33.1	40.9	-

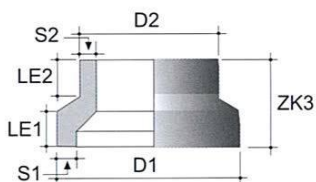


[PE80] Stub End (Long Collar)

D1(mm) OD	D3(mm)	D4(mm)	Z2(mm)		H1(mm)	H2(mm)	WALL THICKNESS, S				
			DIN (mm)	EN (mm)			PN6 SDR21	PN8 SDR17	PN10 SDR13.6	PN12.5 SDR11	PN16 SDR9
20	27	45	85	-	7	13	-	-	-	-	2.3
25	33	58	85	-	9	13	-	-	-	2.3	-
32	40	68	85	-	10	13	-	-	2.4	3.0	-
40	50	78	85	-	11	15	-	2.4	3.0	3.7	-
50	61	88	120	89	12	15	2.3	3.0	3.7	4.6	5.6
63	75	102	125	93	16	20	3.0	3.8	4.7	5.8	7.1
75	89	122	125	-	16	20	3.5	4.5	5.6	6.8	8.4
90	105	138	140	133	17	20	4.3	5.4	6.7	8.2	10.1
110	125	158	160	143	18	25	5.3	6.6	8.1	10.0	12.3
125	132	158	170	-	25	25	6.0	7.4	9.2	11.4	-
160	175	212	-	164	25	28	7.7	9.5	11.8	14.6	17.9
180	180	212	-	195	30	30	8.6	10.7	13.3	16.4	-
200	232	268	200	-	32	30	9.6	11.9	14.7	18.2	22.4
225	235	268	200	200	32	30	10.8	13.4	16.6	20.5	25.2
250	285	320	210	-	35	40	11.9	14.8	18.4	22.7	-
280	291	320	210	-	35	40	13.4	16.6	20.6	25.4	-
315	335	370	-	245	35	40	15.0	18.7	23.2	28.7	-
355	373	431	-	245	40	40	16.9	21.1	26.1	32.3	-

* EN=EN12201 DIN=DIN16963

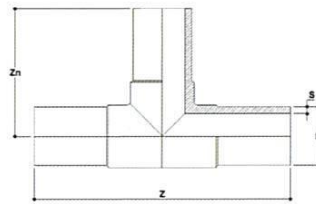
1. SDR (Standard Dimension Ratio) 2. PN (Pressure Rating) 3. Other dimension on request.



[PE80] Reducer

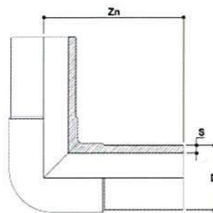
D1/D2 (mm)/(mm)	LE1 (mm)	LE2 (mm)	ZK3 (mm)	S1 / S2			
				PN8 SDR17	PN10 SDR13.6	PN12.5 SDR11	PN16 SDR9
50 x 25	60	46	138	3.0 / 2.3	3.7 / 2.3	4.6 / 2.3	-
50 x 32	60	49	139	3.0 / 2.4	3.7 / 2.4	4.6 / 3.0	-
50 x 40	60	54	142	3.0 / 2.4	3.7 / 3.0	4.6 / 3.7	-
63 x 32	68	49	153	3.8 / 2.4	4.7 / 2.4	5.8 / 3.0	-
63 x 40	68	54	156	3.8 / 2.4	4.7 / 3.0	5.8 / 3.7	-
63 x 50	68	60	160	3.8 / 3.0	4.7 / 3.7	5.8 / 4.6	-
75 x 50	35	35	92	4.5 / 3.0	5.6 / 3.7	6.8 / 4.6	-
90 x 50	35	35	92	5.4 / 3.0	6.7 / 3.7	8.2 / 4.6	10.1 / 5.6
90 x 63	35	35	92	5.4 / 3.8	6.7 / 5.6	8.2 / 5.8	-
90 x 75	35	35	92	5.4 / 4.5	6.7 / 3.7	8.2 / 6.8	-
110 x 63	35	35	92	6.6 / 3.8	8.1 / 4.7	10.0 / 5.8	-
110 x 75	35	35	92	6.6 / 4.5	8.1 / 5.6	10.0 / 6.8	-
110 x 90	35	35	92	6.6 / 5.4	8.1 / 6.7	10.0 / 8.2	-
125 x 63	43	60	118	7.4 / 3.8	9.2 / 4.7	11.4 / 5.8	-
125 x 90	35	60	115	7.4 / 5.4	9.2 / 6.7	11.4 / 8.2	-
125 x 110	35	25	85	7.4 / 6.6	9.2 / 8.1	11.4 / 10.0	-
160 x 90	43	30	122	9.5 / 5.4	11.8 / 6.7	14.6 / 8.2	17.9 / 10.1
160 x 110	43	30	122	9.5 / 6.6	11.8 / 8.1	14.6 / 10.0	17.9 / 12.3
160 x 125	46	33	130	9.5 / 7.4	11.8 / 9.2	14.6 / 11.4	-
180 x 90	46	33	130	10.7 / 5.4	13.3 / 6.7	16.4 / 8.2	-
180 x 110	46	33	130	10.7 / 6.6	13.3 / 8.1	16.4 / 10.0	-
180 x 125	46	33	130	10.7 / 7.4	13.3 / 9.2	16.4 / 11.4	-
180 x 160	46	33	130	10.7 / 9.5	13.3 / 11.8	16.4 / 14.6	20.1 / 17.9
200 x 110	73	55	158	11.9 / 6.6	14.7 / 8.1	18.2 / 10.0	-
200 x 125	73	55	158	11.9 / 7.4	14.7 / 9.2	18.2 / 11.4	-
200 x 160	73	57	159	11.9 / 9.5	14.7 / 11.8	18.2 / 14.6	22.4 / 17.9
200 x 180	73	57	159	11.9 / 10.7	14.7 / 13.3	18.2 / 16.4	-
225 x 110	65	43	160	13.4 / 6.6	16.6 / 8.1	20.5 / 10.0	-
225 x 125	65	50	160	13.4 / 7.4	16.6 / 9.2	20.5 / 11.4	-
225 x 160	65	60	160	13.4 / 9.5	16.6 / 11.8	20.5 / 14.6	25.2 / 17.9
225 x 180	65	65	160	13.4 / 10.7	16.6 / 13.3	20.5 / 16.4	-
225 x 200	65	65	160	13.4 / 11.9	16.6 / 14.7	20.5 / 18.2	25.2 / 22.4
250 x 160	66	45	185	14.8 / 9.5	18.4 / 11.8	22.7 / 14.6	-
250 x 180	66	40	180	14.8 / 10.7	18.4 / 11.8	22.7 / 16.4	-
250 x 200	68	60	180	14.8 / 11.9	18.4 / 14.7	22.7 / 18.2	-
250 x 225	68	50	180	11.8 / 13.4	18.4 / 16.6	22.7 / 20.5	-
280 x 200	76	61	210	16.6 / 11.9	20.6 / 16.6	25.4 / 18.2	-
280 x 225	75	55	205	16.6 / 13.4	20.6 / 14.7	25.4 / 20.5	-
280 x 250	76	61	210	16.6 / 14.8	20.6 / 18.4	25.4 / 22.7	-
315 x 225	78	52	213	18.7 / 13.4	23.2 / 16.6	28.6 / 20.5	-
315 x 250	80	52	213	18.7 / 14.8	23.2 / 18.4	28.6 / 22.7	-
315 x 280	77	54	215	18.7 / 16.6	23.2 / 20.6	28.6 / 25.4	-

1. SDR (Standard Dimension Ratio) 2. PN (Pressure Rating) 3. Other dimension on request.



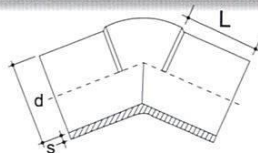
[PE80] Spigot Tee

D(mm)	z(mm)	Zn(mm)	L(mm)	WALL THICKNESS, S			
				PN8 SDR17	PN10 SDR13.6	PN12.5 SDR11	PN16 SDR9
63	250	125	71	3.8	4.7	5.8	7.1
90	296	148	81	5.4	6.7	8.2	-
110	344	172	94	6.6	8.1	10.0	12.3
125	380	190	105	7.4	9.2	11.4	14.0
160	444	222	107	9.5	11.8	14.6	17.9
180	456	228	103	10.7	13.3	16.4	-



[PE80] Spigot Elbow 90°

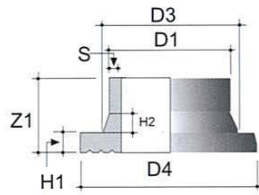
D(mm)	Zn(mm)	L(mm)	WALL THICKNESS, S			
			PN8 SDR17	PN10 SDR13.6	PN12.5 SDR11	PN16 SDR9
63	125	71	3.8	4.7	5.8	7.1
90	148	81	5.4	6.7	8.2	-
110	172	94	6.6	8.1	10.0	12.3
125	190	105	7.4	9.2	11.4	14.0
160	222	107	9.5	11.8	14.6	17.9
180	228	103	10.7	13.3	16.4	20.1



[PE80] Spigot Elbow 45°

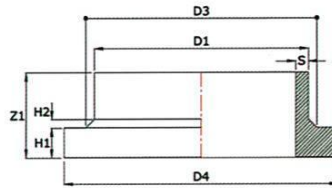
d(mm)	L(mm)	WALL THICKNESS, S			
		PN8 SDR17	PN10 SDR13.6	PN12.5 SDR11	PN16 SDR9
63	71	3.8	4.7	5.8	7.1
90	81	5.4	6.7	8.2	-
110	94	6.6	8.1	10.0	12.3
125	105	7.4	9.2	11.4	14.0
160	107	9.5	11.8	14.6	17.9
180	103	10.7	13.3	16.4	20.1

1. SDR (Standard Dimension Ratio) 2. PN (Pressure Rating) 3. Other dimension on request.



[PE100] Stub End (Short Collar)

D1(mm) OD	D3(mm)	D4(mm)	Z1(mm)	H1(mm)	H2(mm)	WALL THICKNESS, S				
						PN6 SDR26	PN10 SDR17	PN12.5 SDR13.6	PN16 SDR11	PN20 SDR9
20	27	45	50	7	13	-	-	-	-	2.3
25	33	58	50	9	13	-	-	-	2.3	-
32	40	68	50	10	13	-	-	-	3.0	-
40	50	78	80	11	15	-	-	-	3.7	-
50	61	88	80	12	15	-	-	-	4.6	-
63	75	102	80	16	20	3.0	3.8	-	5.8	-
75	89	122	80	16	20	3.3	4.5	-	6.8	-
90	105	138	80	17	20	4.0	5.4	-	8.2	-
110	125	158	80	18	25	-	-	-	10.0	-
125	132	158	80	25	25	5.4	7.4	-	11.4	-
160	175	212	80	25	28	-	-	-	14.6	-
180	180	212	80	30	30	-	-	-	16.4	-
200	232	268	100	32	30	-	11.9	-	18.2	-
225	235	268	100	32	30	9.6	13.3	16.6	20.5	-
250	285	320	100	35	40	-	-	-	22.7	-
280	291	320	100	35	40	-	16.6	-	25.4	-
315	335	370	100	35	40	-	18.7	-	28.6	-
355	373	430	120	40	40	-	21.1	-	32.2	-
400	427	482	120	46	45	-	23.7	-	36.3	-



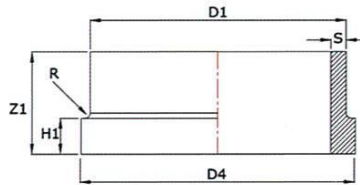
[PE100] Stub End (Short Collar - Clamp Fit)

* Compliant to manufacturer's specification

D1(mm) OD	D3(mm)	D4(mm)	Z1(mm)	H1(mm)	H2(mm)	WALL THICKNESS, S	
						PN10 SDR17	PN16 SDR11
250	285	320	100	35	20	14.8	22.7
280	291	320	100	35	20	18.4	25.4
315	335	370	100	35	20	18.7	28.6
355	373	430	120	40	20	21.1	32.2
400	427	482	120	46	15	23.7	36.3

1. SDR (Standard Dimension Ratio) 2. PN (Pressure Rating) 3. Other dimension on request.

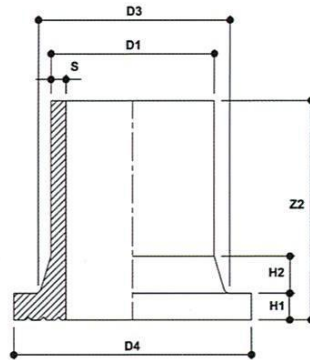
PE SINGLE INJECTION MOULDED SPIGOT FITTINGS (PE100)



[PE100] **Stub End (Short Collar -Reduction Type)**

* Compliant to manufacturer's specification

D1(mm) OD	D4(mm)	R(mm)	Z1(mm)	H1(mm)	WALL THICKNESS, S	
					PN10 SDR17	PN16 SDR11
250	320	5	100	35	14.8	22.7
315	370	5	100	35	18.7	28.6
355	430	5	120	40	21.1	32.2
400	482	5	120	46	23.7	36.3

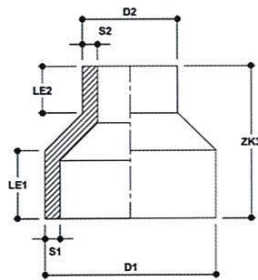


[PE100] **Stub End (Long Collar)**

D1(mm) OD	D3(mm)	D4(mm)	Z2(mm)		H1(mm)	H2(mm)	WALL THICKNESS, S		
			DIN (mm)	EN (mm)			PN10 SDR17	PN16 SDR11	PN20 SDR9
20	27	45	85	-	7	13	-	-	2.3
25	33	58	85	-	9	13	-	2.3	-
32	40	68	85	-	10	13	-	3.0	-
40	50	78	85	-	11	15	-	3.7	-
50	61	88	120	89	12	15	-	4.6	-
63	75	102	125	93	16	20	3.8	5.8	-
75	89	122	125	-	16	20	4.5	6.8	-
90	105	138	140	133	17	20	-	8.2	-
110	125	158	160	143	18	25	-	10.0	-
125	132	158	170	-	25	25	-	11.4	-
160	175	212	-	164	25	28	-	14.6	-
180	180	212	-	195	30	28	-	16.4	-
225	235	268	-	200	32	30	-	20.5	-
315	335	370	-	245	35	40	-	28.7	-
355	373	431	-	245	40	40	-	32.2	-

* EN=EN12201 DIN=DIN16963

1. SDR (Standard Dimension Ratio) 2. PN (Pressure Rating) 3. Other dimension on request.



[PE100] Reducer

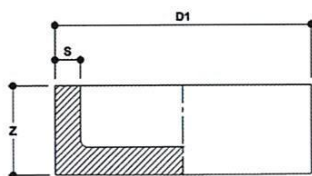
D1/D2 (mm)/(mm)	LE1 (mm)	LE2 (mm)	ZK3 (mm)	S1 / S2	
				PN10 SDR17	PN16 SDR11
75 x 50	35	35	92	-	6.8 / 4.6
90 x 50	35	35	92	-	8.2 / 4.6
90 x 63	35	35	92	-	8.2 / 5.8
90 x 75	35	35	92	-	8.2 / 6.8
110 x 63	35	35	92	-	10.0 / 5.8
160 x 90	43	30	122	-	14.6 / 8.2
160 x 110	43	30	122	9.5 / 6.6	14.6 / 10.0
160 x 125	46	33	130	-	14.6 / 11.4
180 x 90	46	33	130	-	16.4 / 8.2
180 x 110	46	33	130	10.7 / 6.6	16.4 / 10.0
180 x 125	46	33	130	-	16.4 / 11.4
200 x 110	73	55	158	-	18.2 / 10.0
200 x 125	73	55	158	-	18.2 / 11.4
200 x 160	73	57	159	-	18.2 / 14.6
200 x 180	73	57	159	-	18.2 / 16.4
225 x 110	65	43	160	-	20.5 / 10.0
225 x 125	65	50	160	-	20.5 / 11.4
225 x 160	65	60	160	-	20.5 / 14.6
250 x 160	66	45	185	14.8 / 9.5	22.7 / 14.6
250 x 180	66	40	180	-	22.7 / 16.4
250 x 200	68	60	180	-	22.7 / 18.2
250 x 225	68	50	180	-	22.7 / 20.5
280 x 200	76	61	210	-	25.4 / 18.2
280 x 225	75	55	205	-	25.4 / 20.5
315 x 250	80	52	213	-	28.6 / 22.7
315 x 280	77	54	215	-	28.6 / 25.4



Bullet Bottom Type



Flat Bottom Type



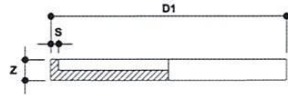
[PE100] End Cap

D1 (mm)	Z (mm)	S1 / S2			
		PN6 SDR26	PN10 SDR17	PN12.5 SDR13.6	PN16 SDR11
63	99	2.5	3.8	4.7	5.8
90	110	3.5	5.4	6.7	8.2
110	50	4.2	6.6	8.1	10.0
125	50	4.8	7.4	9.2	11.4
160	63	6.2	9.5	11.8	14.6
180	63	6.9	10.7	13.3	16.4
225	95	8.6	13.4	16.6	20.5

* Flat bottom type for 110mm - 225mm
 * Bullet bottom type for 63 & 90mm

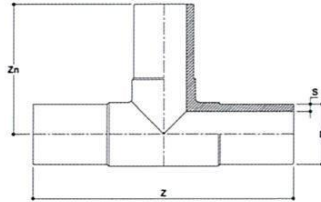
1. SDR (Standard Dimension Ratio)
2. PN (Pressure Rating)
3. Other dimension on request.

[PE100] Flat Cap



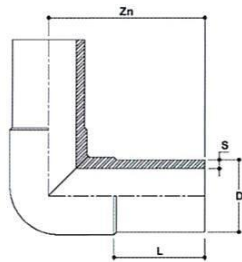
D1 (mm)	Z (mm)	WALL THICKNESS, S			
		PN6 SDR26	PN10 SDR17	PN12.5 SDR13.6	PN16 SDR11
200	35	7.7	11.9	14.7	18.2
225	35	8.6	13.4	16.6	20.5
250	35	9.6	14.8	18.4	22.7
280	35	10.7	16.6	20.6	25.5
315	35	12.1	18.7	23.2	28.7

[PE100] Spigot Tee



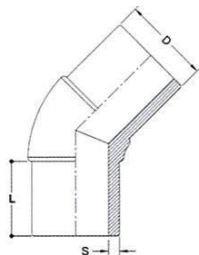
D (mm)	Z (mm)	Zn (mm)	L (mm)	WALL THICKNESS, S	
				PN10 SDR17	PN16 SDR11
63	250	125	71	-	5.8
90	296	148	81	-	8.2
110	344	172	94	6.6	10.0
125	380	190	105	7.4	11.4
160	444	222	107	9.5	14.6
180	456	228	103	10.7	-

[PE100] Spigot Elbow 90°



D (mm)	Zn (mm)	L (mm)	WALL THICKNESS, S	
			PN10 SDR17	PN16 SDR11
63	125	71	-	5.8
90	148	81	-	8.2
110	172	94	6.6	10.0
125	190	104	7.4	11.4
160	222	107	9.5	14.6
180	228	103	10.7	16.4

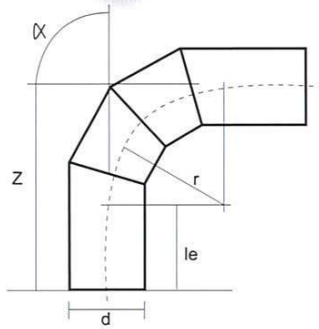
[PE100] Spigot Elbow 45°



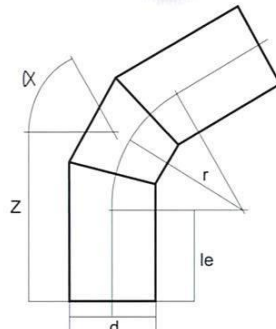
D (mm)	L (mm)	WALL THICKNESS, S
		PN16 SDR11
63	71	5.8
110	94	10.0
125	105	11.4
160	107	14.6
180	103	16.4

1. SDR (Standard Dimension Ratio) 2. PN (Pressure Rating) 3. Other dimension on request.

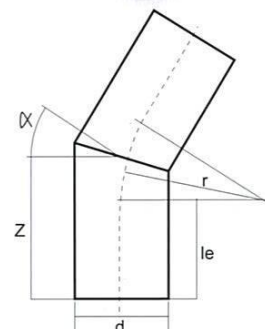
[PE80 & PE100]



[90° BEND]



[60° & 45° BEND]



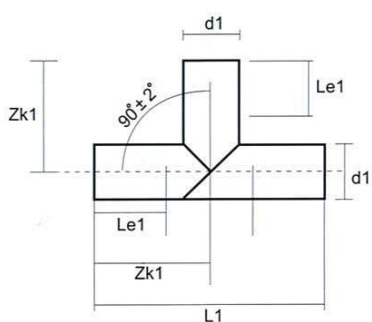
[30° & 22.5° BEND]

d (mm)	le ₁ min. (mm)	r ¹⁾ (mm)	$\alpha \pm 2^\circ$				
			90°	60°	45°	30°	22.5°
			Z min. (mm)	Z min. (mm)	Z min. (mm)	Z min. (mm)	Z min. (mm)
110	150	165	315	245	218	194	194
125		188	338	258	228	200	200
160		240	390	288	249	214	214
180		270	420	305	262	222	222
200		300	450	323	274	230	230
225		338	488	345	290	241	241
250		375	625	466	412	350	350
280	250	420	670	492	424	362	362
315		473	773	576	498	428	428
355		533	833	608	520	443	443
400	300	600	900	646	548	461	461
450		675	975	689	580	481	481
500		750	1100	783	665	551	551

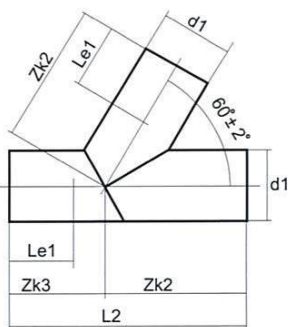
1) $r = 1.5 d$

1. Other dimension on request.

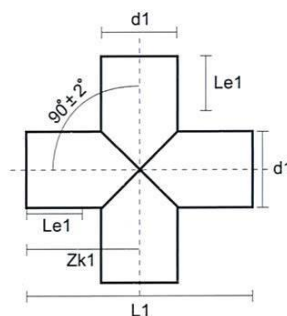
[PE80 & PE100]



[90° TEE]



[60° & BRANCH TEE]

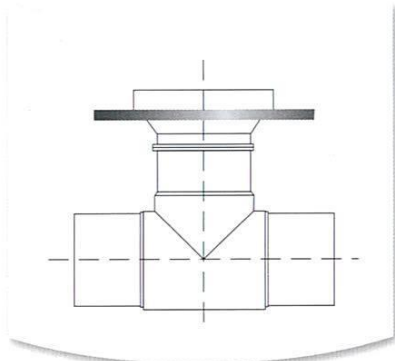


[CROSS TEE]

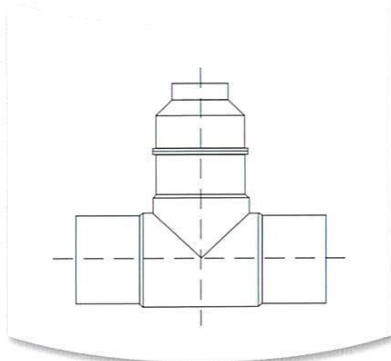
d1 (mm)	le1 min. (mm)	90° TEE & CROSS TEE		60° BRANCH TEE		
		L1 min. (mm)	Zk1 min. (mm)	L2 min. (mm)	Zk2 min. (mm)	Zk2 min. (mm)
110	150	410	205	500	325	175
125		430	215	545	355	190
160		460	230	642	412	230
180		480	240	700	450	250
200		500	250	759	487	272
225		530	265	830	530	300
250	250	750	375	905	580	325
280		780	390	995	630	365
315	300	920	460	1090	690	400
355		960	480	1155	730	425
400		1000	500	1250	800	450
450		1050	525	1325	850	475
500	350	1200	600	1400	900	500

1. Other dimension on request.

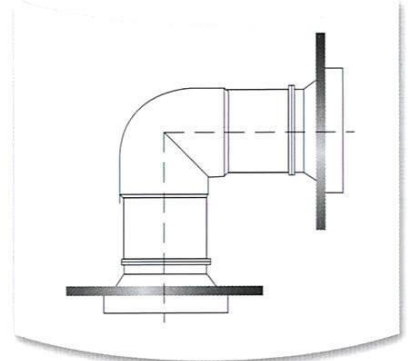
PRODUCT RANGE ON REQUEST



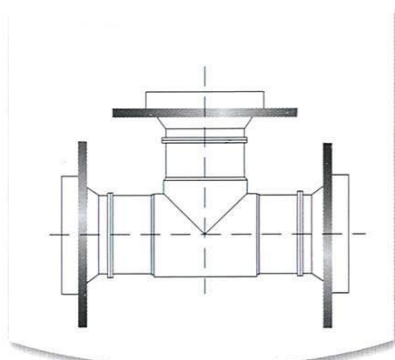
Flanged Branch Tee
[FBT]



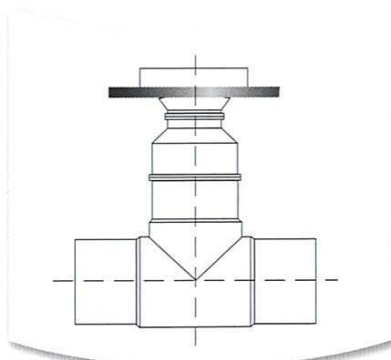
Reducing Tee
[PERT]



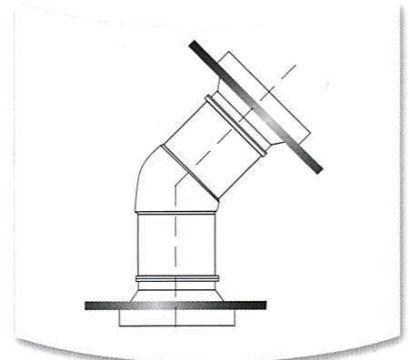
All Flanged Elbow 90°
[AFE 90°]



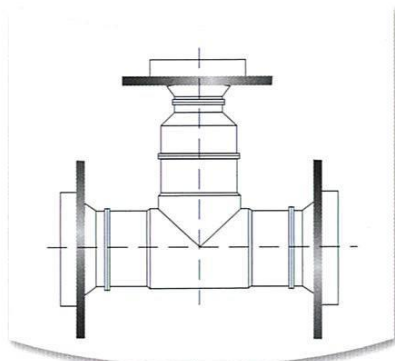
All Flanged Tees
[AFT]



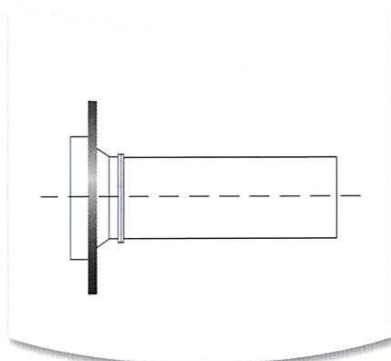
Flanged Branch Reducing Tee
[FBRT]



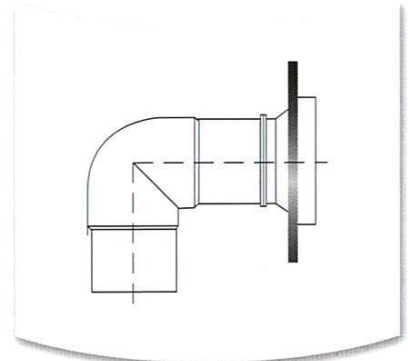
All Flanged Elbow 45°
[AFE 45°]



All Flanged Reducing Tees
[AFRT]

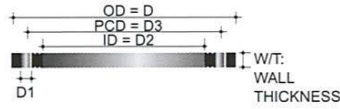


Pipped Stub Flanged Assembly
With Backing Ring
[PSF]



Single Flanged Elbow 90°
[SFE 90°]

- Nominal Pressure PN10



Mild Steel Flange

DN (mm)	NOMINAL OUTSIDE DIAMETER OF PIPE dn (mm)	LOOSE BACKING FLANGES					
		OUTSIDE DIAMETER D (mm)	INSIDE DIAMETER D2 (mm)	PITCH CIRCLE DIAMETER D3 (mm)	BOLTS		
					BOLT HOLE DIAMETER D1 (mm)	NUMBER N	SCREW THREAD
15	20	95	28	65	14	4	M 12
20	25	105	34	75	14	4	M 12
25	32	115	42	85	14	4	M 12
32	40	140	51	100	18	4	M 16
40	50	150	62	110	18	4	M 16
50	63	165	78	125	18	4	M 16
65	75	185	92	145	18	4	M 16
80	90	200	108	160	18	8	M 16
100	110	220	128	180	18	8	M 16
100	125	220	135	180	18	8	M 16
125	140	250	158	210	18	8	M 16
150	160	285	178	240	22	8	M 20
150	180	285	188	240	22	8	M 20
200	200	340	235	295	22	8	M 20
200	225	340	238	295	22	8	M 20
250	250	395	288	350	22	12	M 20
250	280	395	294	350	22	12	M 20
300	315	445	338	400	22	12	M 20
350	355	505	376	460	22	16	M 20
400	400	565	430	515	26	16	M 24
450	450	615	470	565	26	20	M 24
500	450	670	517	620	26	20	M 24
500	500	670	533	620	26	20	M 24
600	560	780	618	725	30	20	M 27
600	630	780	645	725	30	24	M 27
700	710	895	740	840	30	24	M 27
800	800	1015	843	950	33	24	M 30
900	900	1115	947	1050	33	28	M 30
1000	1000	1230	1050	1160	36	28	M 33
1200	1200	1455	1260	1380	39	32	M 36

* BS 4504 PN 16 (12 holes) upon request.

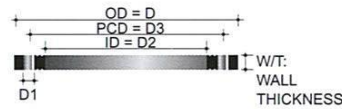
- W/T = Wall thickness on request.

Metric screw thread sizes in millimetres conforming to ISO 261.

Table E Flanges upon request.

LOOSE BACKING FLANGES FOR BUTT FUSION SYSTEMS

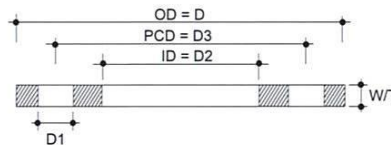
- Nominal Pressure PN16



Mild Steel Flange

DN (mm)	NOMINAL OUTSIDE DIAMETER OF PIPE dn (mm)	LOOSE BACKING FLANGES					
		OUTSIDE DIAMETER D (mm)	INSIDE DIAMETER D2 (mm)	PITCH CIRCLE DIAMETER D3 (mm)	BOLTS		
					BOLT HOLE DIAMETER D1 (mm)	NUMBER N	SCREW THREAD
250	250	405	288	355	26	12	M 24
250	280	405	294	355	26	12	M 24
300	315	460	338	410	26	12	M 24
350	355	520	376	470	26	16	M 24
400	400	580	430	525	30	16	M 27
450	450	670	480	585	30	20	M 27
500	500	715	533	650	33	20	M 30
600	560	840	618	770	36	20	M 33
600	630	840	645	770	36	20	M 33
700	710	910	740	840	36	24	M 33
800	800	1025	843	950	39	24	M 36
900	900	1125	947	1050	39	28	M 36
1000	1000	1230	1050	1170	42	28	M 39
1200	1200	1455	1260	1390	48	32	M 45

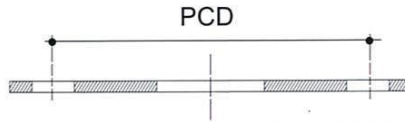
- W/T = Wall thickness on request.



PE Single Injection Moulded Flanges

DN (mm)	NOMINAL OUTSIDE DIAMETER OF PIPE dn (mm)	OUTSIDE DIAMETER D (mm)	INSIDE DIAMETER D2 (mm)	PITCH CIRCLE DIAMETER D3 (mm)	BOLT HOLE DIAMETER D1 (mm)	NUMBER N	SCREW THREAD	APPROX. WALL THICKNESS W/T
50	63	165	78	125	18	4	16	25
65	75	185	92	145	18	4	16	25
80	90	200	108	160	18	8	16	25
100	110	220	128	180	18	8	16	28
100	125	220	135	180	18	8	16	28
150	160	285	178	240	22	8	20	29
150	180	285	188	240	22	8	20	29
200	200	340	235	295	22	8	20	31
200	225	340	238	295	22	12	20	31
250	280	395	288	350	26	12	20	34

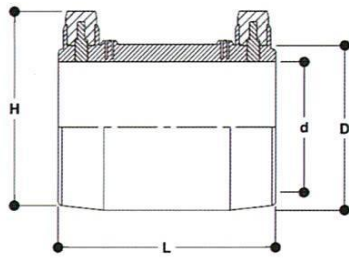
Metric screw thread sizes in millimetres conforming to ISO 261.



Rubber Gasket

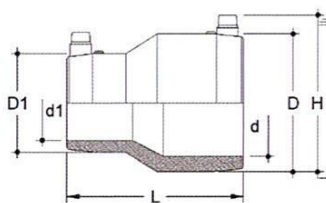
DN (Outside diameter of pipe) (inch)	PCD(mm)	NO. OF HOLES	PCS / Bundle
2	125	4	20
2 T/E	114	4	20
2 1/2 T/E	127	4	20
3 T/E	146	4	20
3	160	8	20
4 T/E	178	8	20
4	110	8	20
6 T/E	235	8	20
6	238	8	20
8 T/E	292	8	20
8	295	12	20
10 T/E	356	12	20
10	355	12	20
12 T/E	406	12	20
12	315	12	20

* Material : Normal Rubber / Natural Rubber / GSG / EPDM



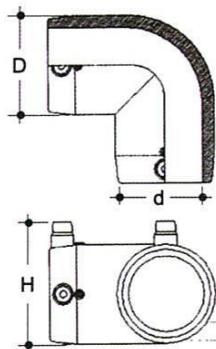
[PE100] Electrofusion Straight Coupler

d (mm)	L (mm)	H (mm)	D (mm)	Nos / Carton
20	70	50	32	100
32	84	63	44	100
63	105	97	79	30
90	128	125	109	10
110	147	146	131	8
125	159	156	150	6
160	174	199	188	4
180	195	224	212	3
225	222	269	265	1



[PE100] Electrofusion Reducing Coupler

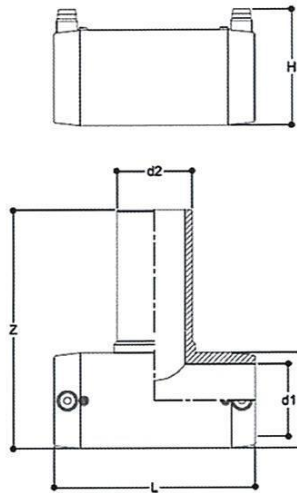
d (mm)	d1 (mm)	D (mm)	D1 (mm)	L (mm)	H (mm)	Nos / Carton
63	40	79	54	124	97	30
63	50	79	65	118	97	30
90	63	109	79	145	125	10
110	63	131	79	176	146	8
110	90	131	109	167	146	8
160	110	181	131	209	199	4



[PE100] Electrofusion Elbow 90° Coupler

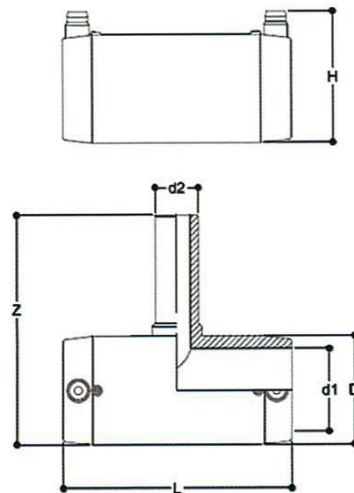
d (mm)	D (mm)	H (mm)	Nos / Carton
63	79	97	10
90	109	125	10

ELECTROFUSION FITTINGS (PE100)



[PE100] Electrofusion Equal Tee

d1(mm)	d2(mm)	D(mm)	Z(mm)	L(mm)	H(mm)	Nos / Carton
63	63	79	199	169	97	10



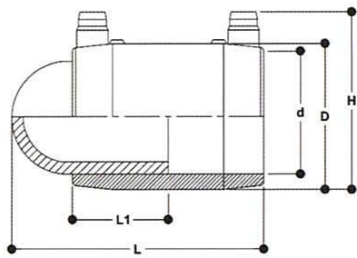
[PE100] Electrofusion Reducing Tee

d1(mm)	d2(mm)	D(mm)	Z(mm)	L(mm)	H(mm)	Nos / Carton
63	32	79	166	169	97	10

ELECTROFUSION FITTINGS (PE100)



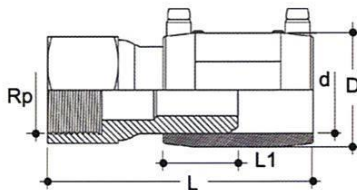
[PE100] **Electrofusion End Cap**



d (mm)	D (mm)	H (mm)	L (mm)	L1 (mm)	Nos / Carton
63	79	97	152	53	10
90	109	125	188	64	10



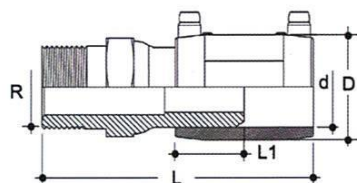
Electrofusion Transition PE/Brass Adaptor / Female / Internal Thread [PE100]



d (mm)	Rp (inch)	D (mm)	L (mm)	L1 (mm)	Nos / Carton
20	1/2	32	97	35	10
32	1	44	117	42	10
63	2	79	161	53	8

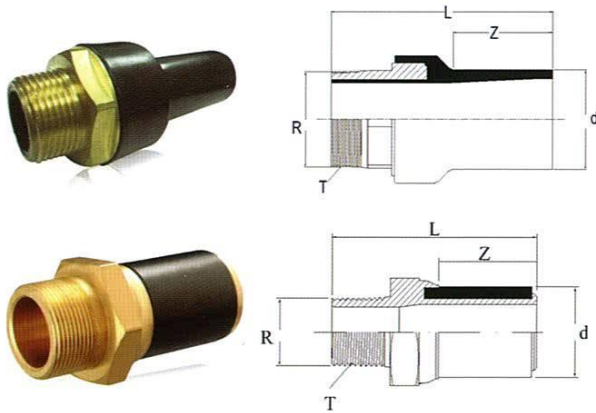


Electrofusion Transition PE/Brass Adaptor Male / External Thread [PE100]



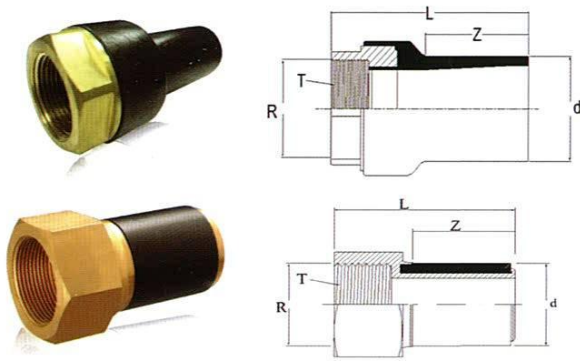
d (mm)	R (inch)	D (mm)	L (mm)	L1 (mm)	Nos / Carton
20	1/2	32	103	35	10
32	1	44	122	42	10
63	2	79	171	53	8

ELECTROFUSION FITTINGS (PE100)



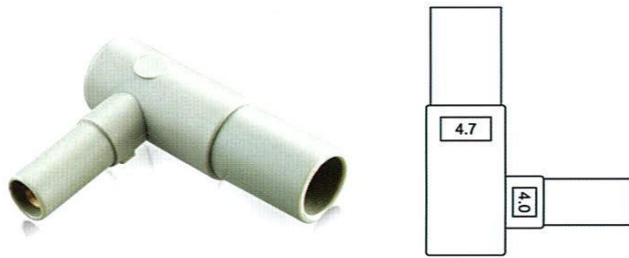
LPG PE / Brass Adaptor
 [BSP Male Threaded]
 *NPT Threaded upon request

d x R (mm x inch)	L (mm)	Z (mm)	R (inch)	d (mm)	BSP	NPT	STANDARD PACK NOS/CARTON
20 x 1/2	92.5	46	1/2	20	•		50
25 x 3/4	94.5	46	3/4	25	•		50
32 x 3/4	109.5	50	3/4	32	•		50
32 x 1	109.5	50	1	32	•		50
40 x 1	89	45	1	40	•		20
40 x 1 1/4	89	45	1 1/4	40	•		20
50 x 1 1/2	117	61	1 1/2	50	•	•	20
63 x 1 1/2	TBA	TBA	1 1/2	63	•		14
63 x 2	TBA	TBA	2	63	•		14



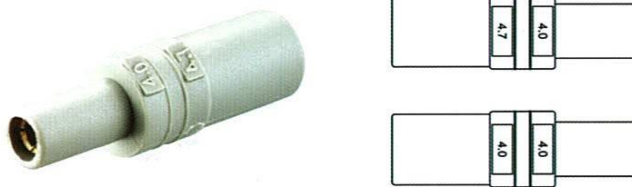
LPG PE / Brass Adaptor
 [BSP Female Threaded]
 *NPT Threaded upon request

d x R (mm x inch)	L (mm)	Z (mm)	R (inch)	d (mm)	BSP	NPT	STANDARD PACK NOS/CARTON
20 x 1/2	83	36	1/2	20	•		50
25 x 3/4	85	36	3/4	25	•		50
32 x 3/4	97	37	3/4	32	•		50
32 x 1	97	39	1	32	•		50
40 x 1	75	45	1	40	•		20
40 x 1 1/4	80	45	1 1/4	40	•		20
50 x 1 1/2	107	61	1 1/2	50	•	•	20
63 x 1 1/2	TBA	TBA	1 1/2	63	•		14
63 x 2	TBA	TBA	2	63	•		14



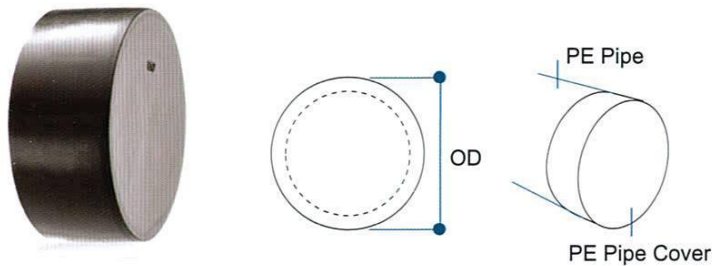
Electrofusion Pin Adaptor [L Type]

SIZE	SMALL PACK	PACKING
4.7 mm to 4.0 mm	Grey	1 pair



Electrofusion Pin Adaptor [Straight Type]

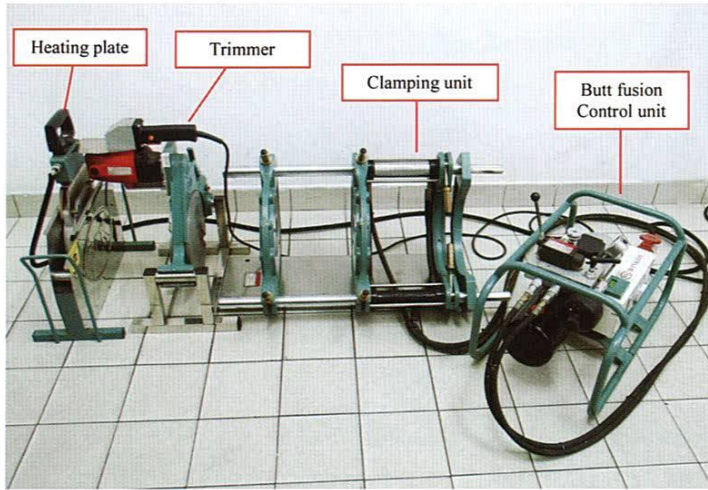
SIZE	SMALL PACK	PACKING
4.7 mm to 4.0 mm	Grey	1 pair
4.0 mm to 4.0 mm	Black	1 pair



PE Pipe Cover

DIAMETER OD (mm)	STANDARD PACK (NOS/BAG)
63	250
90	150
110	100
125	80
160	40
180	40

[1]



Prepare butt fusion machine.

[2]



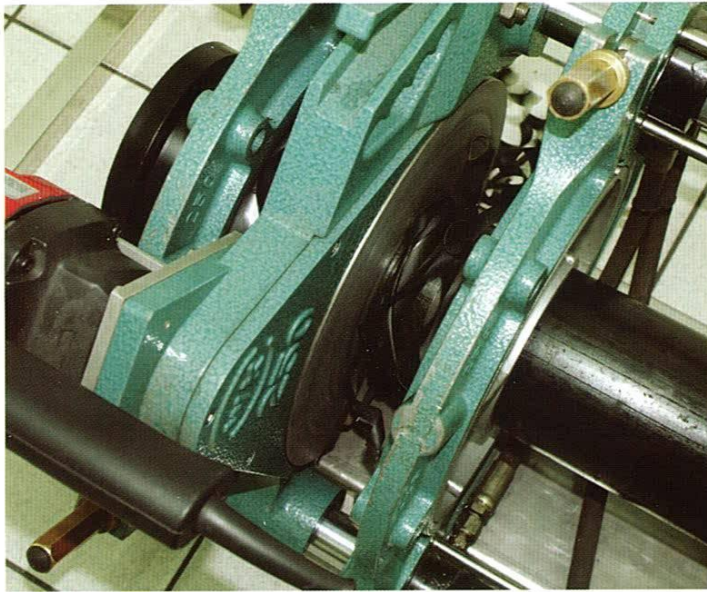
Affix the pipe/fitting onto the clamping unit as shown.

[3]



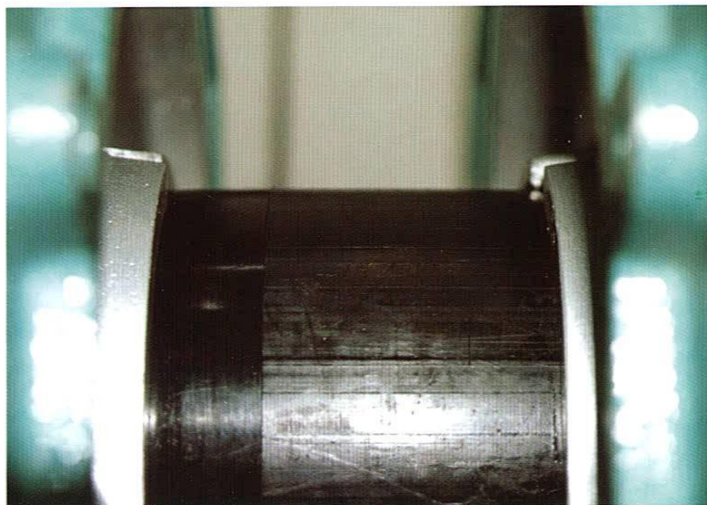
Positioning the trimmer.

[4]



The pipe/fitting ends are to be grinded to establish clean, parallel mating surfaces, perpendicular to the centerline of each pipe / fitting. Remove any burrs and shavings from the ends of the pipe / fitting.

[5]



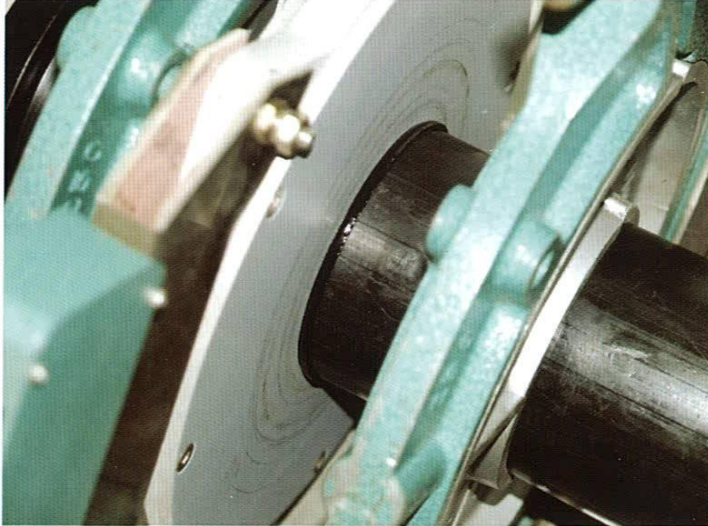
Check to ensure alignment is perpendicular between both pipe/fitting ends with a tolerance of $\pm 10\%$ of wall thickness.

[6]



Position the heating plate as shown.

[7]



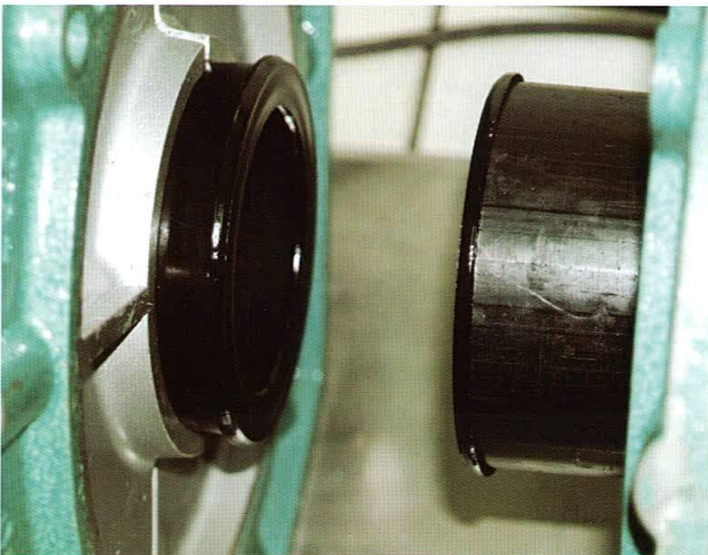
The pipe/fitting shall be pressed against the heater plate using the initial bead up pressure.

After the initial bead up, the pressure in the system shall be released so that the pressure gauge registers between zero and the drag pressure to control bead growth during heat soak time. Check that the clamps do not move. The pipe/fitting ends shall be maintained in contact with the heater plate.

During removal of the heater plate, no molten polymer should stick to the heater plate. If it does, then the joint shall be aborted. The plate cleaned and the surface quality of the plate examined. If the surface of the plate is damaged, the manufacturer's advice should be sought on cleaning and /or replacement.

The maximum plate removal time, including the time to bring the hot ends of the pipe together, shall not exceed 10 seconds.

[8]



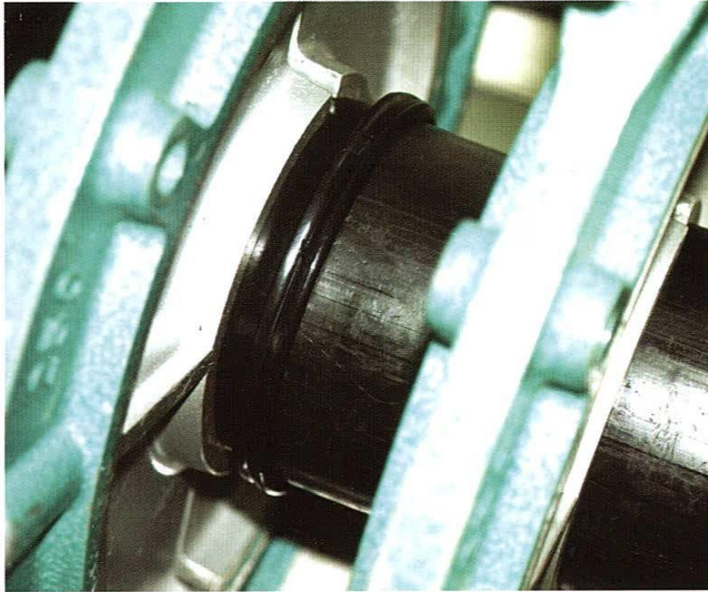
A melt pattern called bead that penetrates into the pipe/fitting, must be formed around both pipe/fitting ends. Immediately after plate removal the hot pipe/fitting ends shall be brought together in a smooth manner and the pressure raised to the bead roll over pressure for a period of 10 seconds.

The fused material should roll back in a uniform manner and there should be no sign of bubbles or contamination present.

The principle is that sufficient bead should be formed during the fusion part of the cycle to demonstrate that bonding has been effected, but that this should not be excessive to avoid squeezing out the melt which can impair joint quality.

The uniformity of the fusion joint bead around the full circumference of the pipe/fitting and between the two halves of the bead at any single point around the circumferences, is however important, as this indicates whether the butt fusion equipment is set up and operating correctly.

[9]



The joint should be allowed to cool in the clamps, whilst maintaining the joint at the cooling pressure for at least the time given in Butt fusion Reference Table for the appropriate thickness pipe / fitting.

Pipe/fitting shall not be pulled when a newly made joint until the full cooling time has elapsed. Any cover used may be removed from the pipe/fitting end to promote a draught through the pipe/fitting to assist cooling.

At the end of the cooling time, the clamps may be released and the jointed pipes/ fittings removed. Installation of the pipe shall not take place until the surface temperature of the bead is below 40°C as measured by a digital surface probe thermometer.

If the ambient temperature is greater than 22°C, additional cooling time of 60 sec/°C of excess temperature is required. If the ambient temperature is less than 5°C, a similar reduction in cooling time of 60sec/°C is permitted.

[10]



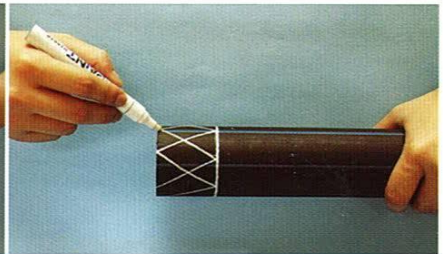
The joint is completed, once the fusion is fully cooled.



[1]
Prepare the electrofusion welding unit and other ancillary equipment.



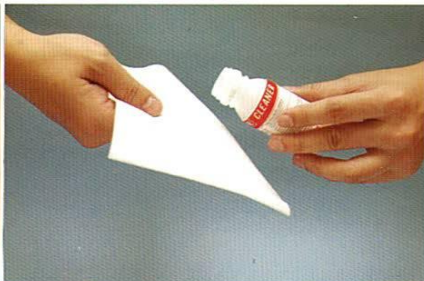
[2]
Measure the total length of the fitting.



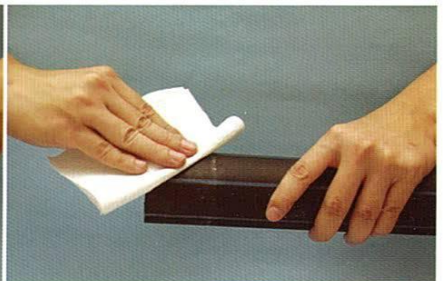
[3]
Mark the penetration length on the pipe by dividing half from the total length of fitting as above.



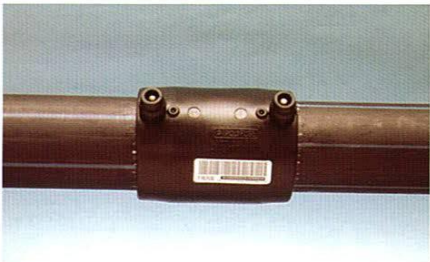
[4]
Scrape the whole pipe circumference to remove all oxidation and contaminations with scrapping tool using the markings as a guide.



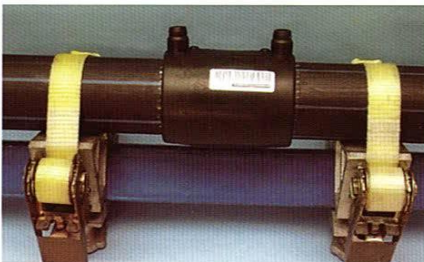
[5]
Pour a sufficient amount of acetone cleaner onto clean cloth.



[6]
Wipe the whole circumference of the marked area scraped and allow to fully dry before proceeding.



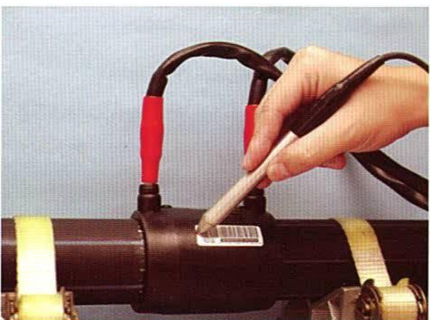
[7]
Push the pipes into the fitting until the pre-marked area.



[8]
Fasten the pipe and fitting firmly onto the clamping device.



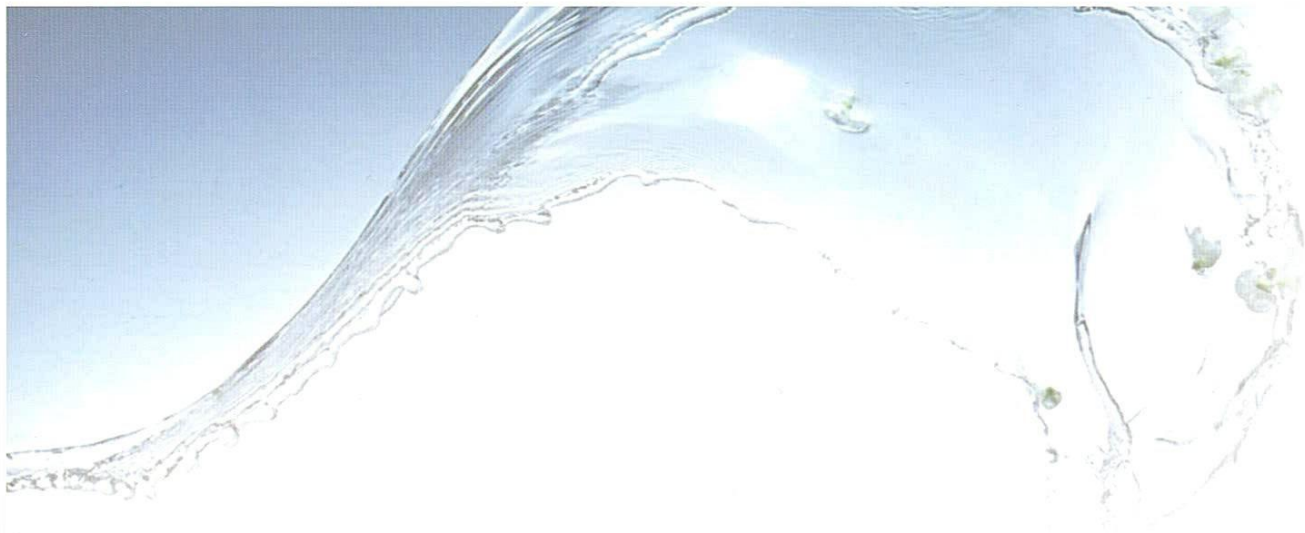
[9]
Connect the welding cables to the fitting terminals.



[10]
Enter fusion data by scanning barcode on the fitting.



[11]
Ensure fusion indicators are raised. This indicates successful completion of fusion process.



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