

# polyethylene

## section guide

Polyethylene is now in widespread use for industrial pipework systems, as well as for buried gas and water pipelines, where it is the dominant material.

One of the major benefits is that Polyethylene is virtually unbreakable due to impact at temperatures above 5°C, and remains very tough at temperatures as low as -40°C. It is also exceptionally resistant to abrasion, and will outlast steel or other hard materials in most slurry handling applications.

Polyethylene is relatively low in weight, and its flexibility makes it suitable for temporary pipelines which are laid on rough ground or where buried in unstable ground conditions.

It has very good chemical resistance, and will withstand most acids and caustic substances. It is insoluble in all organic and inorganic solvents at 20°C, but it will not resist strong oxidising acids.

Polyethylene is joined by heat, and both socket fusion and butt fusion welding equipment is available for sale or hire.

## application guide

- Wide range of sizes from 10mm to 1400mm
- High impact resistance
- Temperature range from -40°C to +60°C
- Exceptionally resistant to abrasion
- Non-toxic
- Resistant to many acids, alkalis, organic and inorganic solvents
- Flexible and therefore suitable for buried or surface pipelines
- UV resistant
- Not resistant to strong oxidising acids
- Special welding equipment required
- Above ground pipes require a lot of support

## standards and approvals

Pipe : DIN 8074 - dimensions  
: DIN 8075 - testing  
Fittings : DIN 16963

NEW 150 GATE VALVE

NEW 100 GATE VALVE

100 SL ST GR 316 SCH 10

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# about: polyethylene

Polyethylene (PE) is a thermoplastic from the polyolefin group of materials, characterised by its low density when compared to other thermoplastics. A unique combination of properties including mechanical strength, chemical resistance and thermal stability all combine to make polyethylene a popular piping system material.

Polyethylene has excellent resistance against a variety of chemicals, however strong oxidising acids attack the material. Good chemical resistance is achieved against contact with solvents, such as alcohols, esters and ketones. Consequently, solvent cement welding of PE pipes and fittings is not possible. PE has excellent diffusion resistance, and because of this property, polyethylene has been successfully applied for the safe transportation of gases for many years.

Black coloured PE is stabilised against the effects of UV radiation, and it may therefore safely be used outdoors. The stabilisation also counteracts heat fatigue, increasing the operating life.

There are a number of welding techniques suitable for pressure piping applications. High quality, reliable joints can be achieved using socket fusion jointing, butt fusion welding and electrofusion welding. In addition, PE systems can be joined using flanges, threaded connections and mechanical couplings.

Polyethylene is no longer described by its density (LDPE, MDPE or HDPE), but by its resistance class according to ISO 9080 (PE 63, PE 80 or PE 100). Polyethylene piping systems are available from IPS in metric dimensions according to DIN 8077/8078 and DIN 16962.



## General properties of polyethylene

Polyethylene exhibits thermal stability up to 60°C (short-term 70° for drainage systems). Polyethylene shows excellent impact strength, with impact strength rising with increasing temperature.

Some important advantages of polyethylene are:

- Low specific weight of 0.95g/cm<sup>3</sup>
- Favourable transportation methods (can be coiled)
- High long term creep resistance
- Very good chemical resistance
- Weathering resistance
- Radiation resistance
- Outstanding weldability
- Excellent abrasion resistance
- Smooth internal surfaces- low friction loss
- Resistant to freezing

Properties of Polyethylene (Average values)		
Property	PE80	PE100
Density	0.94 g/cm <sup>3</sup>	0.95 g/cm <sup>3</sup>
Tensile Strength	20 MPa	25 MPa
Elongation at Break	>600%	>600%
Notched Impact Strength at 23°C	12 kJ/ m <sup>2</sup>	16 kJ/ m <sup>2</sup>
Notched Impact Strength at -30°C	4.5 kJ/ m <sup>2</sup>	6 kJ/ m <sup>2</sup>
Modulus of Elasticity	950 MPa	1100 MPa
Coefficient of Linear Expansion	0.18 mm/m°C	0.18 mm/m°C
Maximum Operating Temperature	60°C	60°C
Minimum Operating Temperature	-40°C	-40°C
Crystalline Melting Temperature	128-131°C	127-130°C
Melt Flow Index	0.40-0.50g/10min	0.30-0.55g/10min
Surface Resistance	>10 <sup>13</sup> Ω	>10 <sup>13</sup> Ω
Thermal Conductivity	0.43 W/m · K	0.40 W/m · K
Flammability	HB UL94	HB UL94
Colour	Black	Black

## Characteristics

### Chemical resistance

The chemical resistance of polyethylene is considered excellent, due to its non-polar nature. It is resistant to dilute (aqueous) solutions of salts, acids and alkalis and to a large number of organic solvents. Against concentrated hydrochloric acid and hydrofluoric acid polyethylene is resistant, however above certain concentration levels diffusion can occur which does not damage the material but causes secondary damage to surrounding steel constructions. In this type of application, double containment piping systems have been found ideally suited.

### Weathering resistance

Piping systems in black polyethylene are UV stabilised, and therefore they do not need to be protected against degradation. To help control the heating effects of UV radiation, the pipe surface may be protected by the application of a UV absorbent coating such as AGRU Coat, or by adding a layer of insulation.

### Electrical characteristics

Polyethylene is non-conductive, therefore systems will remain free from electrolytic corrosion. Precautions should be taken to avoid static discharge should any part of a PE piping system pass through an area where explosive gases may be present.

### Radioactivity resistance

Polyethylene pipes and fittings are well established for drainage systems applications handling radioactive waste water from laboratories as well as for cooling water piping systems for the nuclear power industry. PE remains unaffected by regular exposure to a radiation dose of up to 10<sup>4</sup> Gray.

### Physiological characteristics

Polyethylene piping systems from IPS are physiologically non-toxic (in accordance with ONORM B5014, Part 1, FDA, BGA, and KTW guidelines) making them ideally suited as a piping material in contact with potable water.

# about: polyethylene

## Pressure ratings for polyethylene systems

### Maximum continuous pressure ratings

Pipes, fittings and valves are designed to operate continuously for 50 years at their maximum rated pressure at 20°C as follows, unless otherwise stated.

The pressure ratings for Polyethylene pipes according to DIN 8074 and Polyethylene fittings according to DIN 16963 are defined by the 'nominal pressure' method, **whereby** pipes, fittings and valves are grouped together according to a single nominal pressure rating. The PN rating is the maximum permitted operational pressure in bars calculated at 20°C, for example PN6 indicates a maximum working pressure of 6 bars. According to this method the pressure ratings of Polyethylene pipes and fittings according to the nominal pressure system is as follows:-

PE80		Size Range	Max. Operating Pressure
Pipe	PN16	10mm to 400mm	16 Bar
	PN10	16mm to 630mm	10 Bar
	PN6	20mm to 800mm	6 Bar
	PN4	40mm to 1200mm	4 Bar
	PN3.2	50mm to 1400mm	3.2 Bar
	PN2.5	63mm to 1400mm	2.5 Bar

PE100		Size Range	Max. Operating Pressure
Pipe	PN16	10mm to 630mm	16 Bar
	PN10	40mm to 800mm	10 Bar
Fittings			
Socket Fusion	PN16	20mm to 110mm	16 Bar*
	* Unions and threaded fittings PN10		
Spigot Fusion	PN16	20mm to 500mm	16 Bar
	PN10	50mm to 500mm	10 Bar
	PN6	110mm to 500mm	6 Bar
Threaded	PN10	1/2" to 2"	10 Bar
Electrofusion	PN16	20mm to 500mm	16 Bar
	PN10	450mm to 710mm	10 Bar

### Standard Dimensional Ratio (SDR)

Standard Dimensional Ratio (SDR) is used to define thermoplastic pipes in a variety of materials including polypropylene, polyethylene, and PVC-U. Taken from ISO 4065, SDR is described as being 'the ratio of the nominal outside diameter of a pipe to its nominal wall thickness'. To calculate the SDR according to ISO 4065 the following equation can be used:

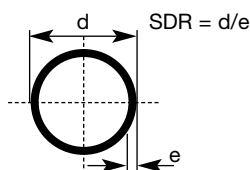
$$SDR = \frac{d}{e}$$

where:

SDR = Value to be calculated

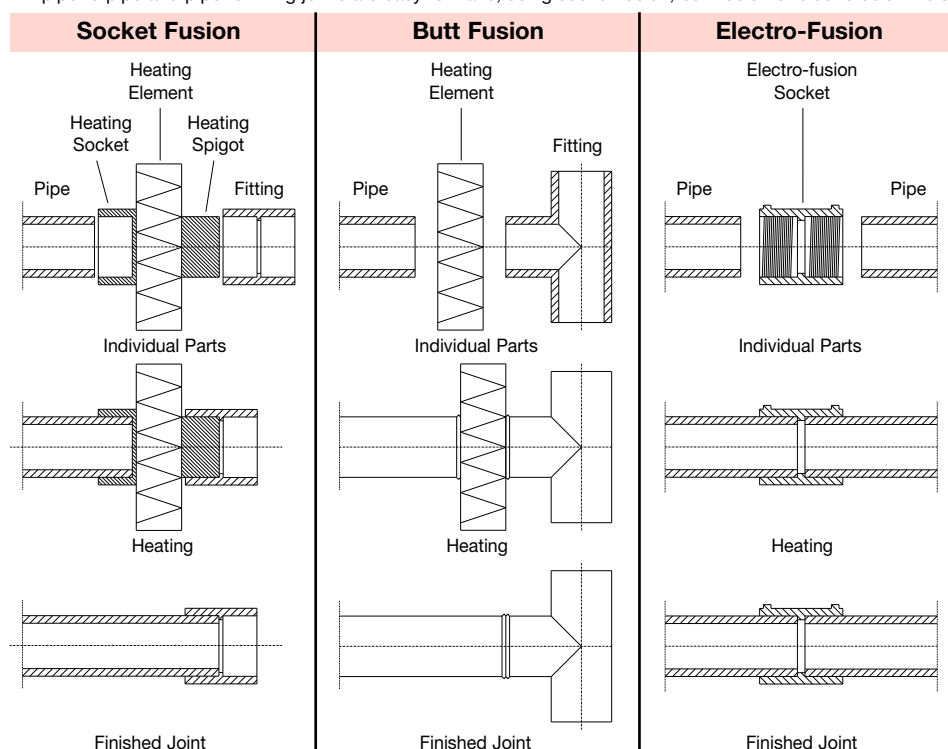
e = Thickness of the pipe wall (mm)

d = Pipe outside diameter (mm)



## Joining Polyethylene Systems

PE pipe to pipe and pipe to fitting joints are easy to make, using socket fusion, butt fusion or electrofusion welds.



Welding equipment is available for sale or hire - see Tools and Installation Equipment.  
Detailed installation instructions, as well as free training, is available on request.

# PE100 Polyethylene pipe availability

Metric Sizes DIN 8074		PE100						PE100 FM	PE-HD-el: Electro Conductive			
Size	Series SDR Working Pressure	Ventilation -	S-20 SDR41 PN4	S-16 SDR33 PN5	S-12.5 SDR26 PN6.3	S-8.3 SDR17 PN10	S-5 SDR11 PN16	S-5 SDR11 PN12	S-16 SDR33 PN3.2	S-8.3 SDR17.6 PN6	S-5 SDR11 PN10	
10	O.D. (mm) Wall (mm) Weight/m (kg)											
12	O.D. (mm) Wall (mm) Weight/m (kg)											
16	O.D. (mm) Wall (mm) Weight/m (kg)											
20	O.D. (mm) Wall (mm) Weight/m (kg)						20 2.0 0.12					
25	O.D. (mm) Wall (mm) Weight/m (kg)						25 2.3 0.17					
32	O.D. (mm) Wall (mm) Weight/m (kg)					32 2 0.20	32 2.9 0.28				32 2.9 0.28	
40	O.D. (mm) Wall (mm) Weight/m (kg)					40 2.4 0.30	40 3.7 0.43				40 3.7 0.45	
50	O.D. (mm) Wall (mm) Weight/m (kg)					50 3.0 0.46	50 4.6 0.67				50 4.6 0.69	
63	O.D. (mm) Wall (mm) Weight/m (kg)					63 3.8 0.73	63 5.8 1.06	63 5.8 1.05			63 5.8 1.10	
75	O.D. (mm) Wall (mm) Weight/m (kg)		75 1.9 0.46	75 2.3 0.54		75 4.5 1.03	75 6.8 1.48	75 6.8 1.47			75 6.8 1.53	
90	O.D. (mm) Wall (mm) Weight/m (kg)		90 2.2 0.63	90 2.8 0.79	90 3.5 0.98	90 5.4 1.47	90 8.2 2.14	90 8.2 2.11		90 5.1 1.44	90 8.2 2.20	
110	O.D. (mm) Wall (mm) Weight/m (kg)		110 2.7 0.94	110 3.4 1.16	110 4.2 1.42	110 6.6 2.19	110 10.0 3.18	110 10.0 3.14	110 3.4 1.21	110 6.3 2.15	110 10.0 3.28	
125	O.D. (mm) Wall (mm) Weight/m (kg)		125 3.1 1.22	125 3.9 1.51	125 4.8 1.84	125 7.4 2.79	125 11.4 4.12	125 11.4 4.06	125 3.9 1.58	125 7.1 2.77	125 11.4 4.23	
140	O.D. (mm) Wall (mm) Weight/m (kg)		140 3.5 1.54	140 4.3 1.86	140 5.4 2.30	140 8.3 3.50	140 12.7 5.13	140 12.7 5.08				
160	O.D. (mm) Wall (mm) Weight/m (kg)		160 4.0 2.00	160 4.9 2.42	160 6.2 3.02	160 9.5 4.57	160 14.6 6.74	160 14.6 6.67	160 4.9 2.53	160 9.1 4.51	160 14.6 6.95	
180	O.D. (mm) Wall (mm) Weight/m (kg)		180 4.4 2.46	180 5.5 3.07	180 6.9 3.79	180 10.7 5.77	180 16.4 8.51	180 16.4 8.40	180 5.5 3.19	180 10.2 5.68	180 16.4 8.75	
200	O.D. (mm) Wall (mm) Weight/m (kg)		200 4.9 3.05	200 6.2 3.81	200 7.7 4.69	200 11.9 7.12	200 18.2 10.50	200 18.2 10.40	200 6.2 3.97	200 11.4 7.04	200 18.2 10.80	
225	O.D. (mm) Wall (mm) Weight/m (kg)		225 5.5 3.86	225 6.9 4.77	225 8.6 5.89	225 13.4 9.03	225 20.5 13.30	225 20.5 13.10	225 6.9 4.99	225 12.8 8.91	225 20.5 13.70	
250	O.D. (mm) Wall (mm) Weight/m (kg)		250 6.2 4.79	250 7.7 5.92	250 9.6 7.30	250 14.8 11.10	250 22.7 16.30	250 22.7 16.20	250 7.7 6.17	250 14.2 11.00	250 22.7 16.80	
280	O.D. (mm) Wall (mm) Weight/m (kg)		280 6.9 5.98	280 8.6 7.40	280 10.7 9.10	280 16.6 13.90	280 25.4 20.50	280 25.4 20.20				
315	O.D. (mm) Wall (mm) Weight/m (kg)		315 7.7 7.51	315 9.7 9.37	315 12.1 11.50	315 18.7 17.60	315 28.6 25.90	315 28.6 25.60	315 9.7 9.76	315 17.9 17.40	315 28.6 26.70	
355	O.D. (mm) Wall (mm) Weight/m (kg)		355 8.7 9.55	355 10.9 11.80	355 13.6 14.60	355 21.1 22.40	355 32.2 32.90	355 32.2 32.50				
400	O.D. (mm) Wall (mm) Weight/m (kg)	400 8.0 9.93	400 9.8 12.10	400 12.3 15.00	400 15.3 18.50	400 23.7 28.30	400 36.3 41.70	400 36.3 41.20	400 12.3 15.60			
450	O.D. (mm) Wall (mm) Weight/m (kg)	450 8.0 11.20	450 11.0 15.20	450 13.8 19.00	450 17.2 23.40	450 26.7 35.80	450 40.9 52.80					
500	O.D. (mm) Wall (mm) Weight/m (kg)	500 8.0 12.50	500 12.3 18.90	500 15.3 23.30	500 19.1 28.90	500 29.7 44.20	500 45.4 65.20					
560	O.D. (mm) Wall (mm) Weight/m (kg)	560 10.0 17.40	560 13.7 23.60	560 17.2 29.40	560 21.4 36.20	560 33.2 55.40	560 50.8 81.70					
630	O.D. (mm) Wall (mm) Weight/m (kg)	630 10.0 19.60	630 15.4 29.80	630 19.3 37.00	630 24.1 44.80	630 37.4 70.20	630 57.2 103.00					
710	O.D. (mm) Wall (mm) Weight/m (kg)	710 12.0 26.40	710 17.4 37.90	710 21.8 47.20	710 27.2 58.30	710 42.1 89.00	710 64.5 131.00					
800	O.D. (mm) Wall (mm) Weight/m (kg)	800 12.0 29.80	800 19.6 48.10	800 24.5 59.70	800 30.6 73.90	800 47.4 113.00	800 72.6 167.00					
900	O.D. (mm) Wall (mm) Weight/m (kg)	900 15.0 41.80	900 22.0 60.70	900 27.6 75.60	900 34.4 93.30	900 53.3 143.00						
1000	O.D. (mm) Wall (mm) Weight/m (kg)	1000 15.0 46.60	1000 24.5 75.20	1000 30.6 93.10	1000 38.2 115.00	1000 59.3 176.00						
1200	O.D. (mm) Wall (mm) Weight/m (kg)	1200 18.0 67.00	1200 29.4 108.00	1200 36.7 134.00								
1400	O.D. (mm) Wall (mm) Weight/m (kg)	1400 20.0 86.80	1400 34.3 147.00	1400 42.9 183.00								



## Agru PE 100

Can be supplied with FM Approval for applications within the fire protection industry. Please refer to the separate pages at the end of the Polyethylene section



PE100 Pipe

PN10/S-8.3/SDR17.6    PN16/S-5/SDR11

Size	Code	Price/m	Code	Price/m
20	25 705 0020 17	0.79	25 705 0020 11	1.02
25	25 705 0025 17	1.00	25 705 0025 11	1.40
32	25 705 0032 17	1.28	25 705 0032 11	1.96
40	25 705 0040 17	1.81	25 705 0040 11	2.71
50	25 705 0050 17	2.87	25 705 0050 11	4.13
63	25 705 0063 17	4.44	25 705 0063 11	6.48
75	25 705 0075 17	6.24	25 705 0075 11	9.02
90	25 705 0090 17	9.02	25 705 0090 11	12.99
110	25 705 0110 17	13.24	25 705 0110 11	19.40
125	25 705 0125 17	17.00	25 705 0125 11	24.96
140	25 705 0140 17	21.21	25 705 0140 11	31.28
160	25 705 0160 17	27.82	25 705 0160 11	40.88
180	25 705 0180 17	35.05	25 705 0180 11	51.57
200	25 705 0200 17	43.29	25 705 0200 11	63.90
225	25 705 0225 17	54.87	25 705 0225 11	80.43
250	25 705 0250 17	66.91	25 705 0250 11	99.37
280	25 705 0280 17	84.04	25 705 0280 11	123.87
315	25 705 0315 17	106.73	25 705 0315 11	157.11
355	25 705 0355 17	135.61	25 705 0355 11	199.94
400	25 705 0400 17	172.13	25 705 0400 11	253.32
450	25 705 0450 17	236.02	25 705 0450 11	348.79
500	25 705 0500 17	292.40	25 705 0500 11	429.97
560	25 705 0560 17	365.32	25 705 0560 11	538.97
630	25 705 0630 17	463.04	25 705 0630 11	680.26
710	25 705 0710 17	586.31	25 705 0710 11	873.55
800	25 705 0800 17	745.67	25 705 0800 11	1118.15

Please note that a transportation surcharge may be applied on pipe diameters 250mm or larger - please enquire for details.



Non Standard Lengths

Depending on the quantity and lead time requirements, PE pipes can be produced in lengths up to 12 metres. Please enquire for details.



Electrically Conductive PE

A range of PE80 pipes and fittings is designed for the safe discharge of static electricity in critical environments. Please refer to the separate pages at the end of the Polyethylene section.

Pipework Support

Polyethylene pipework requires more support than for metallic systems. As working temperature increases, the distance between supports is reduced.

PN10 Pipe Size	Support Centres/m		
	20°C	40°C	60°C
16	0.5	0.5	0.4
20	0.6	0.5	0.4
25	0.7	0.6	0.5
32	0.8	0.7	0.6
40	0.9	0.8	0.7
50	1.0	0.9	0.8
63	1.2	1.1	0.9
75	1.4	1.2	1.0
90	1.5	1.4	1.2
110	1.7	1.5	1.3
125	1.8	1.6	1.4
140	1.9	1.8	1.5
160	2.1	1.9	1.6
180	2.2	2.0	1.8
200	2.3	2.1	1.9
225	2.5	2.3	2.1
250	2.6	2.4	2.1
280	2.8	2.6	2.2
315	2.9	2.7	2.4
355	3.1	2.9	2.6
400	3.3	3.1	2.7

Temperature De-Rating Factors

Pressure ratings for Polyethylene pipework systems are always quoted at 20°C. As the working temperature increases, the maximum working pressure decreases by the factor indicated.

Working Temperature (°C)	Pressure De-Rating Factor
20	1.00
30	0.77
40	0.53
50	0.36

Machine Hire

Don't have the tools? We have a dedicated fleet of welding equipment available to hire on a weekly basis.



## Tee 90°



Size	Code	Price
20	25 056 0020 07	5.45
25	25 056 0025 07	6.16
32	25 056 0032 07	7.45
40	25 056 0040 07	9.23
50	25 056 0050 07	15.60
63	25 056 0063 07	22.42
75	25 056 0075 07	46.51
90	25 056 0090 07	74.18
110	25 056 0110 07	99.15

## Reducing Tee 90°



25/20	25 055 2520 07	7.23
32/20	25 055 3220 07	8.86
32/25	25 055 3225 07	8.86
40/20	25 055 4020 07	10.14
40/25	25 055 4025 07	10.14
40/32	25 055 4032 07	10.14
50/20	25 055 5020 07	16.33
50/25	25 055 5025 07	16.33
50/32	25 055 5032 07	16.33
50/40	25 055 5040 07	16.33
63/25	25 055 6325 07	23.82
63/32	25 055 6332 07	23.82
63/40	25 055 6340 07	23.82
63/50	25 055 6350 07	23.82

## Elbow 90°



20	25 051 0020 07	4.69
25	25 051 0025 07	5.67
32	25 051 0032 07	6.89
40	25 051 0040 07	8.72
50	25 051 0050 07	16.17
63	25 051 0063 07	20.99
75	25 051 0075 07	44.24
90	25 051 0090 07	55.59
110	25 051 0110 07	83.81

## Elbow 45°



20	25 050 0020 07	5.67
25	25 050 0025 07	6.74
32	25 050 0032 07	7.59
40	25 050 0040 07	9.80
50	25 050 0050 07	13.54
63	25 050 0063 07	17.30
75	25 050 0075 07	38.16
90	25 050 0090 07	53.47
110	25 050 0110 07	79.29

## Socket



20	25 053 0020 07	3.49
25	25 053 0025 07	3.62
32	25 053 0032 07	4.76
40	25 053 0040 07	6.16
50	25 053 0050 07	9.44
63	25 053 0063 07	12.84
75	25 053 0075 07	18.15
90	25 053 0090 07	25.67
110	25 053 0110 07	45.82

## Union

FPM O-Rings



Size	Code	Price
20	25 024 1120 07	15.47
25	25 024 1125 07	16.88
32	25 024 1132 07	20.28
40	25 024 1140 07	28.53
50	25 024 1150 07	40.44
63	25 024 1163 07	54.89

## Reducer

Spigot x Socket



25/20	25 057 2520 07	4.32
32/20	25 057 3220 07	5.39
32/25	25 057 3225 07	5.39
40/20	25 057 4020 07	6.38
40/25	25 057 4025 07	6.38
40/32	25 057 4032 07	6.38
50/20	25 057 5020 07	7.45
50/25	25 057 5025 07	7.45
50/32	25 057 5032 07	7.45
50/40	25 057 5040 07	7.45
63/25	25 057 6325 07	10.21
63/32	25 057 6332 07	10.21
63/40	25 057 6340 07	10.21
63/50	25 057 6350 07	10.21
75/63	25 057 7563 07	17.88
90/63	25 057 9063 07	24.96
90/75	25 057 9075 07	24.96
110/63	25 057 1163 07	33.91
110/90	25 057 1190 07	33.91

## Female Adaptor

BSP or NPT female threaded



20 x 1/2	25 034 2020 07	6.38
25 x 3/4	25 034 2525 07	7.23
32 x 1	25 034 3232 07	9.44
40 x 1 1/4	25 034 4040 07	10.85
50 x 1 1/2	25 034 5050 07	17.02
63 x 2	25 034 6363 07	21.06

Code shown is for BSP  
Code for NPT on request

## Male Adaptor

BSP or NPT threaded



20 x 3/4	25 035 2025 07	6.53
25 x 1	25 035 2532 07	7.59
32 x 1 1/4	25 035 3240 07	9.07
40 x 1 1/2	25 035 4050 07	14.89
50 x 2	25 035 5063 07	18.87

Code shown is for BSP  
Code for NPT on request

## Cap



20	25 054 0020 07	2.27
25	25 054 0025 07	2.43
32	25 054 0032 07	2.55
40	25 054 0040 07	2.85
50	25 054 0050 07	3.62
63	25 054 0063 07	4.69
75	25 054 0075 07	6.46
90	25 054 0090 07	10.43
110	25 054 0110 07	14.47

## Stub Flange



Size	Code	Price
20	25 052 0020 07	2.76
25	25 052 0025 07	2.97
32	25 052 0032 07	3.28
40	25 052 0040 07	4.03
50	25 052 0050 07	4.76
63	25 052 0063 07	6.24
75	25 052 0075 07	11.97
90	25 052 0090 07	18.59
110	25 052 0110 07	27.53

## Gasket

EPDM



20	861-_-005	0.50
25	861-_-007	0.58
32	861-_-010	0.64
40	861-_-012	0.80
50	861-_-015	0.96
63	861-_-020	1.65
75	861-_-025	2.02
90	861-_-030	2.17
110	861-_-040	3.16

Complete code when ordering  
Insert 'I' for NP10/16; 'A' for ANSI 150;  
'E' for Table D/E

## Gasket

FPM



20	862-_-005	2.34
25	862-_-007	3.48
32	862-_-010	4.59
40	862-_-012	7.36
50	862-_-015	8.05
63	862-_-020	10.60
75	862-_-025	14.73
90	862-_-030	20.01
110	862-_-040	34.14

Complete code when ordering  
Insert 'I' for NP10/16; 'A' for ANSI 150;  
'E' for Table D/E



### Pressure Ratings

Maximum working pressures (socket fusion):-  
20-110mm PN16

Except for:  
Union - PN10  
Female adaptor - PN10  
Male adaptor - PN10

## Backing Ring Table D/E

Galvanised mild steel



20	860-005-11E	5.71
25	860-007-11E	6.47
32	860-010-11E	6.79
40	860-012-11E	7.00
50	860-015-11E	8.59
63	860-020-11E	12.18
75	860-025-11E	18.20
90	860-030-11E	18.50
110D	860-040-11D	23.91
110E	860-040-11E	23.91

## Backing Ring NP10/16

Galvanised mild steel



20	860-005-11NP	6.47
25	860-007-11NP	6.85
32	860-010-11NP	8.13
40	860-012-11NP	8.64
50	860-015-11NP	9.48
63	860-020-11NP	13.39
75	860-025-11NP	18.33
90	860-030-11NP	21.20
110	860-040-11NP	27.11

## Backing Ring ANSI 150

Galvanised mild steel



20	860-005-11A	6.47
25	860-007-11A	6.85
32	860-010-11A	8.13
40	860-012-11A	8.64
50	860-015-11A	9.48
63	860-020-11A	13.39
75	860-025-11A	18.33
90	860-030-11A	21.20
110	860-040-11A	27.11

## Backing Ring NP10

Polypropylene with steel core



20	11 014 0020 11	6.79
25	11 014 0025 11	7.46
32	11 014 0032 11	9.55
40	11 014 0040 11	12.11
50	11 014 0050 11	14.14
63	11 014 0063 11	16.40
75	11 014 0075 11	18.20
90	11 014 0090 11	21.50
110	11 014 0110 11	25.57

## Backing Ring ANSI 150

Polypropylene with steel core



20	11 013 0020 11	6.79
25	11 013 0025 11	7.46
32	11 013 0032 11	9.55
40	11 013 0040 11	12.11
50	11 013 0050 11	14.14
63	11 013 0063 11	16.40
75	11 013 0075 11	18.20
90	11 013 0090 11	21.50
110	11 013 0110 11	25.57

# electrofusion fittings

## Electrofusion Coupling

PN16 - SDR11



20	25 173 0020 11	4.55
25	25 173 0025 11	5.22
32	25 173 0032 11	5.49
40	25 173 0040 11	5.77
50	25 173 0050 11	8.99
63	25 173 0063 11	9.39
75	25 173 0075 11	13.39
90	25 173 0090 11	17.80
110	25 173 0110 11	21.43
125	25 173 0125 11	30.14
140	25 173 0140 11	35.34
160	25 173 0160 11	41.54
180	25 173 0180 11	59.61
200	25 173 0200 11	70.41
225	25 173 0225 11	90.70
250	25 173 0250 11	133.64
280	25 173 0280 11	181.09
315	25 173 0315 11	217.82
355	25 173 0355 11	398.26
400	25 173 0400 11	499.40
450	25 173 0450 11	993.53
500	25 373 0500 11	1070.89

PN10 - SDR17

450	25 173 0450 17	850.84
500	25 373 0500 17	915.97
560	25 373 0560 17	1218.75
630	25 373 0630 17	1550.39
710	25 373 0710 17	1817.06

## Electrofusion Tee 90°

Fusion Spigot Branch



20	25 176 0020 11	12.43
25	25 176 0025 11	12.43
32	25 176 0032 11	13.65
40	25 176 0040 11	15.79
50	25 176 0050 11	19.91
63	25 176 0063 11	22.29
75	25 176 0075 11	31.43
90	25 176 0090 11	39.73
110	25 176 0110 11	63.65
125	25 176 0125 11	80.14
160	25 176 0160 11	148.46
225	25 176 0225 11	404.86

## Electrofusion Elbow 90°



20	25 171 0020 11	12.27
25	25 171 0025 11	12.27
32	25 171 0032 11	12.97
40	25 171 0040 11	15.48
50	25 171 0050 11	19.69
63	25 171 0063 11	22.25
75	25 171 0075 11	31.89
90	25 171 0090 11	42.05
110	25 171 0110 11	61.69
125	25 171 0125 11	85.40
160	25 171 0160 11	167.43
180	25 171 0180 11	228.39
225	25 171 0225 11	363.65

## Electrofusion Elbow 45°



20	25 170 0020 11	12.27
25	25 170 0025 11	12.27
32	25 170 0032 11	12.97
40	25 170 0040 11	15.48
50	25 170 0050 11	19.69
63	25 170 0063 11	22.25
75	25 170 0075 11	31.89
90	25 170 0090 11	42.05
110	25 170 0110 11	61.69
125	25 170 0125 11	85.40
160	25 170 0160 11	167.43
180	25 170 0180 11	228.39
225	25 170 0225 11	363.65

## Electrofusion Reducer



25x20	25 177 2520 11	8.46
32x20	25 177 3220 11	8.82
32x25	25 177 3225 11	9.18
40x20	25 177 4020 11	10.57
40x25	25 177 4025 11	10.57
40x32	25 177 4032 11	11.73
50x25	25 177 5025 11	14.67
50x32	25 177 5032 11	14.67
50x40	25 177 5040 11	16.03
63x32	25 177 6332 11	19.13
63x40	25 177 6340 11	19.13
63x50	25 177 6350 11	19.13
75x50	25 177 7550 11	25.20
75x63	25 177 7563 11	25.93
90x63	25 177 9063 11	29.93
110x63	25 177 1163 11	48.79
110x90	25 177 1190 11	48.79
160x90	25 177 1690 11	85.12
160x110	25 177 1611 11	87.26
225x160	25 177 2216 11	198.05

## Electrofusion Cap



20	25 174 0020 11	8.76
25	25 174 0025 11	9.21
32	25 174 0032 11	10.49
40	25 174 0040 11	11.53
50	25 174 0050 11	17.49
63	25 174 0063 11	19.32
75	25 174 0075 11	30.37
90	25 174 0090 11	43.20
110	25 174 0110 11	55.42
125	25 174 0125 11	68.11
140	25 174 0140 11	93.53
160	25 174 0160 11	95.68
180	25 174 0180 11	125.63
200	25 174 0200 11	148.47
225	25 174 0225 11	183.28
250	25 174 0250 11	281.65
280	25 174 0280 11	389.58
315	25 174 0315 11	539.08



### Pressure Ratings

Polyethylene electrofusion fittings are suitable for use handling fluids at pressures up to 16 bar at 20°C.

## Electrofusion Adaptor

Electrofusion x Brass BSP Female



20 x 1/2	25 184 2020 11	36.67
25 x 3/4	25 184 2525 11	40.18
32 x 1	25 184 3232 11	44.09
40 x 1 1/4	25 184 4040 11	58.17
50 x 1 1/2	25 184 5050 11	88.02
63 x 2	25 184 6363 11	119.39

## Electrofusion Adaptor

Electrofusion x Steel BSP Female



20 x 1/2	25 184 2021 11	36.57
25 x 3/4	25 184 2526 11	37.31
32 x 1	25 184 3233 11	39.83
40 x 1 1/4	25 184 4041 11	60.96
50 x 1 1/2	25 184 5051 11	82.48
63 x 2	25 184 6364 11	93.65

## Electrofusion Adaptor

Electrofusion x Brass BSP Male



20 x 1/2	25 185 2020 11	37.16
25 x 3/4	25 185 2525 11	40.95
32 x 1	25 185 3232 11	51.66
40 x 1 1/4	25 185 4040 11	63.27
50 x 1 1/2	25 185 5050 11	93.80
63 x 2	25 185 6363 11	101.54

## Electrofusion Adaptor

Electrofusion x Steel BSP Male



20 x 1/2	25 185 2021 11	36.57
25 x 3/4	25 185 2526 11	37.31
32 x 1	25 185 3233 11	39.83
40 x 1 1/4	25 185 4041 11	60.96
50 x 1 1/2	25 185 5051 11	82.48
63 x 2	25 185 6364 11	93.65

## Electrofusion Adaptor

Spigot x Brass BSP Female



20 x 1/2	25 180 0020 11	28.54
25 x 3/4	25 180 0025 11	30.84
32 x 1	25 180 0032 11	34.21
40 x 1 1/4	25 180 0040 11	47.85
50 x 1 1/2	25 180 0050 11	71.97
63 x 2	25 180 0063 11	102.62

## Automatic Electrofusion Welding Machine

- Barcode or manual entry
  - Welding is fully monitored throughout
  - Illuminated display
  - Fault messages displayed plus warning signal
  - Memory records weld information
  - Data output to PC or printer
  - 110v or 230v supply
- Available for sale or hire



## Electrofusion Elbow 90°

Electrofusion x Brass BSP Female



20 x 1/2	25 187 2020 11	47.72
25 x 3/4	25 187 2525 11	50.04
32 x 1	25 187 3232 11	54.51
40 x 1 1/4	25 187 4040 11	72.10
50 x 1 1/2	25 187 5050 11	102.82
63 x 2	25 187 6363 11	137.44

## Electrofusion Elbow 90°

Electrofusion x Steel BSP Female



20 x 1/2	25 187 2021 11	47.64
25 x 3/4	25 187 2526 11	48.11
32 x 1	25 187 3233 11	50.27
40 x 1 1/4	25 187 4041 11	74.87
50 x 1 1/2	25 187 5051 11	97.22
63 x 2	25 187 6364 11	111.70

## Electrofusion Elbow 90°

Electrofusion x Brass BSP Male



20 x 1/2	25 186 2020 11	48.22
25 x 3/4	25 186 2525 11	50.81
32 x 1	25 186 3232 11	62.09
40 x 1 1/4	25 186 4040 11	77.19
50 x 1 1/2	25 186 5050 11	108.54
63 x 2	25 186 6363 11	119.56

## Electrofusion Elbow 90°

Electrofusion x Steel BSP Male



20 x 1/2	25 186 2021 11	47.64
25 x 3/4	25 186 2526 11	48.11
32 x 1	25 186 3233 11	50.27
40 x 1 1/4	25 186 4041 11	71.21
50 x 1 1/2	25 186 5051 11	97.22
63 x 2	25 186 6364 11	111.70

## Electrofusion Elbow 45°

Electrofusion x Brass BSP Female



20 x 1/2	25 189 2020 11	47.72
25 x 3/4	25 189 2525 11	50.04
32 x 1	25 189 3232 11	54.51
40 x 1 1/4	25 189 4040 11	72.10
50 x 1 1/2	25 189 5050 11	102.82
63 x 2	25 189 6363 11	137.44

## Electrofusion Elbow 45°

Electrofusion x Steel BSP Female



20 x 1/2	25 189 2021 11	47.64
25 x 3/4	25 189 2526 11	48.11
32 x 1	25 189 3233 11	50.27
40 x 1 1/4	25 189 4041 11	74.87
50 x 1 1/2	25 189 5051 11	97.22
63 x 2	25 189 6364 11	111.70

## Electrofusion Elbow 45°

Electrofusion x Brass BSP Male



20 x 1/2	25 188 2020 11	48.22
25 x 3/4	25 188 2525 11	50.81
32 x 1	25 188 3232 11	62.09
40 x 1 1/4	25 188 4040 11	77.19
50 x 1 1/2	25 188 5050 11	108.54
63 x 2	25 188 6363 11	119.56

## Electrofusion Elbow 45°

Electrofusion x Steel Male BSP



20 x 1/2	25 188 2021 11	47.64
25 x 3/4	25 188 2526 11	48.11
32 x 1	25 188 3233 11	50.27
40 x 1 1/4	25 188 4041 11	71.21
50 x 1 1/2	25 188 5051 11	97.22
63 x 2	25 188 6364 11	111.70

## Reducing Coupling



20x16	7110162	5.97
25x16	7110165	6.55
25x20	7110202	6.55
32x20	7110203	11.09
32x25	7110253	11.09
40x25	97110254	18.79
40x32	97110324	18.79
50x25	97110255	22.00
50x32	97110325	25.15
50x40	97110405	25.15
63x25	97110256	26.86
63x32	97110326	31.83
63x40	97110406	31.83
63x50	97110506	31.83
75x50	87110507	41.80
75x63	87110637	41.80
90x63	87110639	55.55
90x75	87110759	55.55
110x90	87110901	88.69

## 90° Reducing Tee



20x16x20	7340201	7.46
25x20x25	7340252	10.86
32x25x32	7340325	15.88
40x32x40	97340403	26.11
50x25x50	97340505	37.90
50x32x50	97340503	37.90
50x40x50	97340504	37.90
63x32x63	97340633	45.69
63x40x63	97340634	45.69
63x50x63	97340635	45.69
75x63x75	87340756	78.27

## Male Adaptor



16x <sup>3</sup> / <sub>8</sub>	7026163	2.16
16x <sup>1</sup> / <sub>2</sub>	7026165	2.16
16x <sup>3</sup> / <sub>4</sub>	7026167	2.16
20x <sup>1</sup> / <sub>2</sub>	7020205	3.05
20x <sup>3</sup> / <sub>4</sub>	7020207	3.26
20x1	7020201	4.55
25x <sup>1</sup> / <sub>2</sub>	7020255	3.66
25x <sup>3</sup> / <sub>4</sub>	7020257	3.66
25x1	7020251	5.66
32x <sup>3</sup> / <sub>4</sub>	7020327	5.66
32x1	7020321	5.66
32x1*	7021322	5.66
32x1 <sup>1</sup> / <sub>4</sub>	7020328	5.66
32x1 <sup>1</sup> / <sub>2</sub>	7020325	5.66
40x1	97020401	10.83
40x1 <sup>1</sup> / <sub>4</sub>	97020408	10.83
40x1 <sup>1</sup> / <sub>2</sub>	97020405	10.83
40x2	97020402	10.83
50x1	97020501	13.84
50x1 <sup>1</sup> / <sub>4</sub>	97020508	13.84
50x1 <sup>1</sup> / <sub>2</sub>	97020505	13.84
50x2	97020502	13.84
63x1 <sup>1</sup> / <sub>4</sub>	97020638	18.54
63x1 <sup>1</sup> / <sub>2</sub>	97020635	18.54
63x2	97020632	18.54
63x2 <sup>1</sup> / <sub>2</sub>	7020625	18.54
75x2	87020752	28.12
75x2 <sup>1</sup> / <sub>2</sub>	87020755	28.12
75x3	87020753	28.12
90x2	87020902	38.11
90x2 <sup>1</sup> / <sub>2</sub>	87020905	38.11
90x3	87020903	38.11
90x4	87020904	38.11
110x2	87020112	64.56
110x3	87020113	64.56
110x4	87020114	64.56

\* NPT

## Female Adaptor



16x <sup>1</sup> / <sub>2</sub>	7036165	2.57
16x <sup>3</sup> / <sub>4</sub>	7036167	2.57
20x <sup>1</sup> / <sub>2</sub>	7030205	3.66
20x <sup>3</sup> / <sub>4</sub>	7030207	3.66
20x1	7030201	3.66
25x <sup>3</sup> / <sub>4</sub>	7030257	4.00
25x1	7030251	4.00
32x <sup>3</sup> / <sub>4</sub>	7030327	5.38
32x1*	7031322	5.38
32x1	7030321	5.38
32x1 <sup>1</sup> / <sub>4</sub>	7030328	5.38
40x1	97030401	12.49
40x1 <sup>1</sup> / <sub>4</sub>	97030408	12.49
40x1 <sup>1</sup> / <sub>2</sub>	97030405	12.49
50x1 <sup>1</sup> / <sub>4</sub>	97030508	17.02
50x1 <sup>1</sup> / <sub>2</sub>	97030505	17.02
50x2	97030502	17.02
63x2	97030632	21.40
75x2	87030752	28.74
75x2 <sup>1</sup> / <sub>2</sub>	87030755	28.74
90x2	87030902	39.33
90x3	87030903	39.33
90x4	87030904	39.33
110x3	87030113	82.59
110x4	87030114	82.59

\* NPT

## End Plug



20	7120020	4.02
25	7120025	5.16
32	7120032	7.50
40	97120040	11.67
50	97120050	15.58
63	97120063	26.11
75	7120075	33.85
90	7120090	45.99
110	7120110	54.76

## Coupling



16x16	7016016	2.57
20x20	7010020	3.26
25x25	7010025	3.50
32x32	7010032	8.20
40x40	97010040	17.39
50x50	97010050	18.10
63x63	97010063	26.46
75x75	87010075	51.84
90x90	87010090	52.39
110x110	87010110	91.34
125x125	7010125	194.58

## 90° Tee



16x16x16	7040016	4.56
20x20x20	7040020	5.72
25x25x25	7040025	8.93
32x32x32	7040032	12.04
40x40x40	97040040	23.33
50x50x50	97040050	25.92
63x63x63	97040063	38.78
75x75x75	87040075	69.67
90x90x90	87040090	98.35
110x110x110	87040110	199.82

## 90° Tee

Threaded Male Offtake



20x1/2x20	7840205	4.94
20x3/4x20	7840207	4.94
25x1/2x25	7840255	8.03
25x3/4x25	7840257	8.03
32x1x32	7840321	11.38
40x1 1/4x40	97840408	16.83
40x1 1/2x40	97840405	16.83
50x1 1/4x50	97840508	23.78
50x1 1/2x50	97840505	23.78
63x1 1/4x63	97840638	32.20
63x1 1/2x63	97840635	32.20
63x2x63	97840632	32.20

## 90° Tee

Threaded Female Offtake



16x1/2x16	7146165	4.24
20x1/2x20	7140205	5.24
20x3/4x20	7140207	5.24
25x1/2x25	7140255	8.67
25x3/4x25	7140257	8.67
25x1x25	7140251	8.67
25x1 1/4x25	7140258	8.67
32x3/4x32	7140327	11.38
32x1x32	7140321	11.38
32x1 1/4x32	7140328	11.38
32x1 1/2x32	7140325	11.38
40x1x40	97140401	18.46
40x1 1/4x40	97140408	19.96
40x1 1/2x40	97140405	19.96
40x2x40	97140402	19.96
50x1 1/2x50	97140505	24.08
50x2x50	97140502	24.08
63x1 1/4x63	97140638	33.79
63x1 1/2x63	97140635	33.79
63x2x63	97140632	33.79
75x2x75	87140752	63.52
75x2 1/2x75	87140755	63.52
75x3x75	87140753	63.52
90x3x90	87140903	75.81
110x4x110	87140114	138.04

## 90° Elbow



16x16	7056016	2.94
20x20	7050020	4.04
25x25	7050025	5.95
32x32	7050032	9.77
40x40	97050040	19.37
50x50	97050050	20.70
63x63	97050063	27.48
75x75	87050075	78.27
90x90	87050090	100.00
110x110	87050110	163.93

## 45° Elbow



32x32	7460032	11.44
40x40	97460040	13.01
50x50	97460050	16.20
63x63	97460063	25.20
90x90	87460090	119.28
110x110	87460110	183.41

## Compression Flange Adaptor

Metal Flange



50x40	7220505	34.75
50x50	7220502	34.75
63x50	7220632	53.70
75x65	87220755	62.67
90x80	87220903	73.77
90x100	87220904	73.77
110x100	87220114	92.22
125x125	7220125	141.41
125x150	7220126	141.41



## Reducing Tee 90°



### PE100 PN6

Size	Code	Price
90 x 32		
90 x 50		
110 x 32		
110 x 50		
125 x 63		
125 x 90		
140 x 63		
140 x 75		
140 x 90		
140 x 110		
160 x 125		
180 x 63		
180 x 75		
180 x 110		
180 x 125		
200 x 63		
200 x 90		
200 x 110		
200 x 125		
200 x 160		
225 x 125		
250 x 110		
250 x 160		

### PN10

Code	Price
25 016 1132 17	31.71
25 016 1463 17	51.80
25 016 1475 17	52.02
25 016 1490 17	52.87
25 016 1411 17	53.97
25 016 1612 17	100.63
25 016 1863 17	119.48
25 016 1875 17	123.12
25 016 1811 17	119.48
25 016 1812 17	123.12
25 016 2212 17	163.04
25 016 2511 17	164.87
25 016 2516 17	166.68

### PN16

Code	Price
25 016 9032 11	25.24
25 016 9050 11	25.92
25 016 1132 11	37.25
25 016 1150 11	38.00
25 016 1263 11	53.19
25 016 1463 11	66.73
25 016 1475 11	66.73
25 016 1490 11	67.80
25 016 1411 11	67.80
25 016 1612 11	112.51
25 016 1863 11	139.69
25 016 1875 11	139.69
25 016 1812 11	144.17
25 016 2212 11	243.20
25 016 2511 11	321.01
25 016 2516 11	327.62

## Reducing Tee 90°

Elongated



63 x 50		
75 x 32		
75 x 50		
75 x 63		
90 x 63		
90 x 75		
110 x 63		
110 x 75		
110 x 90		
125 x 90		
125 x 110		
160 x 63		
160 x 75		
160 x 90		
160 x 110		
180 x 90		
180 x 110		
180 x 160		
200 x 63		
200 x 90		
200 x 110		
200 x 125		
200 x 160		
225 x 75		
225 x 90		
225 x 110		
225 x 160		
225 x 180		
315 x 90		
315 x 110		
315 x 160		
315 x 200		
315 x 225		
315 x 250		

25 065 6350 17	11.76
25 065 7550 17	17.84
25 065 7563 17	18.13
25 065 9063 17	25.39
25 065 9075 17	25.61
25 065 1163 17	37.65
25 065 1175 17	37.65
25 065 1190 17	38.55
25 065 1211 17	52.29
25 065 1663 17	103.61
25 065 1675 17	106.80
25 065 1690 17	106.80
25 065 1611 17	107.80
25 065 1890 17	144.09
25 065 1816 17	144.09
25 065 2063 17	193.62
25 065 2090 17	193.62
25 065 2011 17	193.62
25 065 2012 17	193.62
25 065 2016 17	193.62
25 065 2275 17	243.16
25 065 2290 17	243.16
25 065 2211 17	243.97
25 065 2216 17	244.66
25 065 2218 17	245.07
25 065 3190 17	631.98
25 065 3111 17	676.21
25 065 3116 17	676.21
25 065 3120 17	631.98
25 065 3122 17	706.95
25 065 3125 17	706.95

25 065 6350 11	12.74
25 065 7532 11	19.93
25 065 7550 11	19.93
25 065 7563 11	20.32
25 065 9063 11	28.40
25 065 9075 11	28.61
25 065 1163 11	42.10
25 065 1175 11	42.10
25 065 1190 11	42.70
25 065 1290 11	58.58
25 065 1211 11	58.58
25 065 1663 11	115.17
25 065 1675 11	116.14
25 065 1690 11	116.14
25 065 1611 11	119.06
25 065 1890 11	159.65
25 065 1811 11	159.65
25 065 1816 11	159.65
25 065 2063 11	214.78
25 065 2090 11	214.78
25 065 2011 11	214.78
25 065 2012 11	214.78
25 065 2016 11	214.78
25 065 2275 11	269.90
25 065 2290 11	269.90
25 065 2211 11	270.98
25 065 2216 11	271.94
25 065 2218 11	272.90
25 065 3190 11	686.93
25 065 3111 11	735.02
25 065 3116 11	735.02
25 065 3120 11	686.93
25 065 3122 11	768.41
25 065 3125 11	768.41



## Elbow 45°

Elongated



### PE100 PN6

Size	Code	Price
20		
25		
32		
40		
50		
63		
75		
90		
110		
125		
140		
160		
180		
200		
225		
250		
280		
315		

### PN10

Code	Price
25 060 0063 17	11.93
25 060 0075 17	14.73
25 060 0090 17	18.60
25 060 0110 17	35.60
25 060 0125 17	43.88
25 060 0140 17	57.52
25 060 0160 17	66.55
25 060 0180 17	72.67
25 060 0200 17	99.41
25 060 0225 17	118.61
25 060 0250 17	228.73
25 060 0280 17	346.57
25 060 0315 17	431.30

### PN16

Code	Price
25 060 0020 11	3.95
25 060 0025 11	4.23
25 060 0032 11	5.10
25 060 0040 11	6.38
25 060 0050 11	7.27
25 060 0063 11	13.26
25 060 0075 11	16.46
25 060 0090 11	20.63
25 060 0110 11	39.53
25 060 0125 11	48.83
25 060 0140 11	63.89
25 060 0160 11	73.85
25 060 0180 11	80.83
25 060 0200 11	110.47
25 060 0225 11	131.67
25 060 0250 11	255.02
25 060 0280 11	385.07
25 060 0315 11	481.80

## Elbow 30°

Elongated

90		
110		
160		

25 019 0090 17	37.49
25 019 0110 17	46.52
25 019 0160 17	100.58

25 019 0090 11	42.14
25 019 0110 11	52.87
25 019 0160 11	112.21

## Bend 45°

Elongated



### PN6

Size	Code	Price
90		
110		
125		
140		
160		
180		
200		
225		
250		

### PN8

Code	Price
25 397 0090 17	53.22
25 397 0110 17	99.02
25 397 0125 17	97.74
25 397 0140 17	116.47
25 397 0160 17	149.25
25 397 0180 17	160.06
25 397 0200 17	172.66
25 397 0225 17	218.82
25 397 0250 17	326.89

### PN12.5

Code	Price
25 397 0090 11	53.22
25 397 0110 11	101.17
25 397 0125 11	105.76
25 397 0140 11	118.03
25 397 0160 11	150.61
25 397 0180 11	181.69
25 397 0200 11	193.50
25 397 0225 11	232.32
25 397 0250 11	363.35

## Bend 30°

Elongated



Size	Code	Price
90		
110		
125		
140		
160		
180		
200		
225		
250		

Code	Price
25 396 0090 17	57.94
25 396 0110 17	99.02
25 396 0125 17	97.74
25 396 0140 17	116.47
25 396 0160 17	149.25
25 396 0180 17	160.06
25 396 0200 17	172.66
25 396 0225 17	218.82
25 396 0250 17	303.92

Code	Price
25 396 0090 11	65.10
25 396 0110 11	101.17
25 396 0125 11	105.76
25 396 0140 11	118.03
25 396 0160 11	160.74
25 396 0180 11	181.69
25 396 0200 11	193.50
25 396 0225 11	232.32
25 396 0250 11	353.23

## Bend 22°

Elongated



Size	Code	Price
90		
110		
125		
140		
160		
180		
200		
225		
250		

Code	Price
25 395 0090 17	53.22
25 395 0110 17	99.02
25 395 0125 17	97.74
25 395 0140 17	116.47
25 395 0160 17	149.25
25 395 0180 17	160.06
25 395 0200 17	172.66
25 395 0225 17	218.82
25 395 0250 17	303.92

Code	Price
25 395 0090 11	65.10
25 395 0110 11	101.17
25 395 0125 11	105.76
25 395 0140 11	118.03
25 395 0160 11	160.74
25 395 0180 11	181.69
25 395 0200 11	193.50
25 395 0225 11	232.32
25 395 0250 11	353.23

## Bend 11°

Elongated



Size	Code	Price
90		
110		
125		
140		
160		
180		
200		
225		
250		

Code	Price
25 394 0090 17	53.22
25 394 0110 17	99.02
25 394 0125 17	97.74
25 394 0140 17	116.47
25 394 0160 17	149.25
25 394 0180 17	160.06
25 394 0200 17	172.66
25 394 0225 17	218.82
25 394 0250 17	303.92

Code	Price
25 394 0090 11	65.10
25 394 0110 11	101.17
25 394 0125 11	105.76
25 394 0140 11	118.03
25 394 0160 11	160.74
25 394 0180 11	181.69
25 394 0200 11	193.50
25 394 0225 11	232.32
25 394 0250 11	353.23

# fusion spigot fittings

## Reducer

Concentric



		PE100 PN6		PN10		PN16	
Size	Code	Price	Code	Price	Code	Price	
25 x 20							
32 x 20							
32 x 25							
40 x 20							
40 x 25							
40 x 32							
50 x 25							
50 x 32							
50 x 40							
63 x 32							
63 x 40							
63 x 50							
75 x 32							
75 x 40							
75 x 50							
75 x 63				25 009 7563 17	13.30		
90 x 50							
90 x 63				25 009 9063 17	14.86		
90 x 75				25 009 9075 17	14.86		
110 x 50							
110 x 63				25 009 1163 17	18.91		
110 x 75				25 009 1175 17	18.91		
110 x 90				25 009 1190 17	18.91		
125 x 63				25 009 1263 17	24.32		
125 x 75				25 009 1275 17	24.32		
125 x 90				25 009 1290 17	24.32		
125 x 110				25 009 1211 17	24.32		
140 x 75				25 009 1475 17	29.31		
140 x 90				25 009 1490 17	29.31		
140 x 110				25 009 1411 17	29.31		
140 x 125				25 009 1412 17	34.31		
160 x 90				25 009 1690 17	34.31		
160 x 110				25 009 1611 17	34.31		
160 x 125				25 009 1612 17	34.31		
160 x 140				25 009 1614 17	34.31		
180 x 90				25 009 1890 17	53.90		
180 x 110				25 009 1811 17	50.65		
180 x 125				25 009 1812 17	46.73		
180 x 140				25 009 1814 17	44.44		
180 x 160				25 009 1816 17	42.43		
200 x 140				25 009 2014 17	121.31		
200 x 160				25 009 2016 17	107.12		
200 x 180				25 009 2018 17	95.90		
225 x 140				25 009 2214 17	145.21		
225 x 160				25 009 2216 17	124.27		
225 x 180				25 009 2218 17	118.32		
225 x 200				25 009 2220 17	104.27		
250 x 160				25 009 2516 17	166.14		
250 x 180				25 009 2518 17	153.98		
250 x 200				25 009 2521 17	141.15		
250 x 225				25 009 2522 17	133.86		
280 x 200				25 009 2820 17	185.06		
280 x 225				25 009 2822 17	172.24		
280 x 250				25 009 2825 17	168.16		
315 x 200				25 009 3120 17	235.71		
315 x 225				25 009 3122 17	208.69		
315 x 250				25 009 3125 17	191.13		
315 x 280				25 009 3128 17	178.28		
63 x 16				25 007 6316 17	4.62	25 007 6316 11	5.14
75 x 32				25 007 7532 17	7.88	25 007 7532 11	8.22
110 x 63	25 007 1163 33	9.80		25 007 1163 17	10.34	25 007 1163 11	10.90
125 x 75	25 007 1275 33	11.22		25 007 1275 17	11.76	25 007 1275 11	12.32
160 x 110	25 007 1611 33	35.58		25 007 1611 17	38.32	25 007 1611 11	41.07
225 x 160	25 007 2216 33	89.98		25 007 2216 17	101.08	25 007 2216 11	111.38
315 x 225	25 007 3122 33	103.83		25 007 3122 17	114.65	25 007 3122 11	122.84
450 x 315	25 007 4531 33	355.06		25 007 4531 17	393.45	25 007 4531 11	437.07
630 x 450	25 007 6345 33	440.16		25 007 6345 17	593.05		

## Reducer

Concentric



63 x 16				25 007 6316 17	4.62	25 007 6316 11	5.14
75 x 32				25 007 7532 17	7.88	25 007 7532 11	8.22
110 x 63	25 007 1163 33	9.80		25 007 1163 17	10.34	25 007 1163 11	10.90
125 x 75	25 007 1275 33	11.22		25 007 1275 17	11.76	25 007 1275 11	12.32
160 x 110	25 007 1611 33	35.58		25 007 1611 17	38.32	25 007 1611 11	41.07
225 x 160	25 007 2216 33	89.98		25 007 2216 17	101.08	25 007 2216 11	111.38
315 x 225	25 007 3122 33	103.83		25 007 3122 17	114.65	25 007 3122 11	122.84
450 x 315	25 007 4531 33	355.06		25 007 4531 17	393.45	25 007 4531 11	437.07
630 x 450	25 007 6345 33	440.16		25 007 6345 17	593.05		

## Reducer

Eccentric



250/160	25 005 2516 33	103.83		25 005 2516 17	114.65	25 005 2516 11	122.84
355/250	25 005 3525 33	144.74		25 005 3525 17	152.89	25 005 3525 11	163.59



# fusion spigot fittings

## Union

FPM Seal



## PE100

### PN6

Size	Code	Price
20		
25		
32		
40		
50		
63		

### PN10

Code	Price

### PN16

Code	Price
25 024 0120 11	14.89
25 024 0125 11	16.22
25 024 0132 11	19.51
25 024 0140 11	27.56
25 024 0150 11	38.99
25 024 0163 11	53.05

## Cap

Elongated



20		
25		
32		
40		
50		
63		
75		
90		
110		
125		
140		
160		
180		
200		
225		
250		
280		
315		

25 064 0063 17	9.02
25 064 0075 17	13.96
25 064 0090 17	21.62
25 064 0110 17	28.78
25 064 0125 17	31.10
25 064 0140 17	38.92
25 064 0160 17	43.60
25 064 0180 17	56.69
25 064 0200 17	70.62
25 064 0225 17	86.85
25 064 0250 17	113.64
25 064 0280 17	161.41
25 064 0315 17	215.87

25 064 0020 11	3.06
25 064 0025 11	3.35
25 064 0032 11	4.23
25 064 0040 11	5.23
25 064 0050 11	6.86
25 064 0063 11	9.02
25 064 0075 11	13.96
25 064 0090 11	21.62
25 064 0110 11	28.78
25 064 0125 11	31.10
25 064 0140 11	38.92
25 064 0160 11	43.60
25 064 0180 11	56.69
25 064 0200 11	70.62
25 064 0225 11	86.85
25 064 0250 11	126.32
25 064 0280 11	179.44
25 064 0315 11	241.24

## Cap

Short Spigot

355		
400		
450		
500		

25 004 0355 11	267.07
25 004 0400 11	366.13
25 004 0450 11	508.28
25 004 0500 11	637.51

## Adaptor

Spigot x Female BSP Thread



20 x 1/2		
25 x 3/4		
32 x 1		
40 x 1 1/4		
50 x 1 1/2		
63 x 2		

25 032 2020 11	5.13
25 032 2525 11	5.80
25 032 3232 11	7.59
25 032 4040 11	8.70
25 032 5050 11	13.67
25 032 6363 11	17.12

## Adaptor

Spigot x Male BSP Thread



20 x 1/2		
25 x 3/4		
32 x 1		
40 x 1 1/4		
50 x 1 1/2		
63 x 2		

25 033 2020 11	4.01
25 033 2525 11	4.80
25 033 3232 11	6.09
25 033 4040 11	7.32
25 033 5050 11	11.98
25 033 6363 11	15.17

## Stub Flange



### PE100

#### PN6

Size	Code	Price
20		
25		
32		
40		
50		
63		
75		
90		
110	25 012 0110 33	10.46
125	25 012 0125 33	12.85
140	25 012 0140 33	14.91
160	25 012 0160 33	18.46
180	25 012 0180 33	26.96
200	25 012 0200 33	34.84
225	25 012 0225 33	36.32
250	25 012 0250 33	51.24
280	25 012 0280 33	55.25
315	25 012 0315 33	66.19
355	25 012 0355 33	113.22
400	25 012 0400 33	235.20
450	25 012 0450 33	275.43
500	25 012 0500 33	334.51
560	25 012 0560 33	395.83
630	25 012 0630 33	455.91

#### PN10

Code	Price
25 012 0063 17	4.76
25 012 0075 17	5.62
25 012 0090 17	8.22
25 012 0110 17	10.46
25 012 0125 17	12.85
25 012 0140 17	14.91
25 012 0160 17	18.46
25 012 0180 17	33.69
25 012 0200 17	36.23
25 012 0225 17	37.75
25 012 0250 17	53.97
25 012 0280 17	59.29
25 012 0315 17	72.39
25 012 0355 17	124.05
25 012 0400 17	250.67
25 012 0450 17	295.41
25 012 0500 17	364.19
25 012 0560 17	435.93
25 012 0630 17	504.86

#### PN16

Code	Price
25 012 0025 11	2.45
25 012 0032 11	2.91
25 012 0040 11	3.45
25 012 0050 11	4.24
25 012 0063 11	5.30
25 012 0075 11	6.27
25 012 0090 11	8.97
25 012 0110 11	11.55
25 012 0125 11	13.92
25 012 0140 11	16.25
25 012 0160 11	20.49
25 012 0180 11	35.06
25 012 0200 11	37.71
25 012 0225 11	39.06
25 012 0250 11	59.29
25 012 0280 11	64.77
25 012 0315 11	76.30
25 012 0355 11	135.47
25 012 0400 11	266.85
25 012 0450 11	312.58
25 012 0500 11	395.83
25 012 0560 11	780.37
25 012 0630 11	902.23

## Stub Flange

Elongated



Size	Code	Price
20		
25		
32		
40		
50		
63		
75		
90		
110		
125		
140		
160		
180		
200		
225		
250		
280		
315		
355		
400		

Code	Price
25 062 0063 17	7.15
25 062 0075 17	9.70
25 062 0090 17	12.07
25 062 0110 17	15.41
25 062 0125 17	18.74
25 062 0140 17	24.16
25 062 0160 17	27.62
25 062 0180 17	42.59
25 062 0200 17	48.56
25 062 0225 17	52.32
25 062 0250 17	72.41
25 062 0280 17	109.62
25 062 0315 17	143.82
25 062 0355 17	261.38
25 062 0400 17	461.12

Code	Price
25 062 0020 11	3.20
25 062 0025 11	3.35
25 062 0032 11	3.94
25 062 0040 11	4.65
25 062 0050 11	5.67
25 062 0063 11	7.15
25 062 0075 11	9.26
25 062 0090 11	12.07
25 062 0110 11	15.41
25 062 0125 11	18.74
25 062 0140 11	24.16
25 062 0160 11	27.62
25 062 0180 11	42.59
25 062 0200 11	48.56
25 062 0225 11	52.32
25 062 0250 11	80.43
25 062 0280 11	121.79
25 062 0315 11	154.60
25 062 0355 11	280.90
25 062 0400 11	495.54

## Full Face Flange

Elongated Steel Core



Size	Code	Price
90		
110		
125		
160		
180		

Code	Price
25 162 0090 11	84.36
25 162 0110 11	112.04
25 162 0125 11	115.31
25 162 0160 11	158.17
25 162 0180 11	221.88

Code	Price

### Technical Resources

Register online for our technical catalogue

[www.ipsflowsystems.com](http://www.ipsflowsystems.com)

Or call our technical team on:

**0800 975 79 71**





## AGRU Ball Valve

**Description:** In-line one-piece ball valve  
**Mounting:** In any position  
**Maximum Fluid Pressure at 20°C:** 16 bar  
**Fluid Temperature Range:** -20°C - +50°C  
**Construction:**  
**Body:** PE100  
**Seats:** PE100  
**Seals:** EPDM  
**End Connections:** Fusion spigots



### MM Fusion Spigots

32	25.333.2032.11	136.10
50	25.333.2050.11	175.80
63	25.333.2063.11	300.56
90	25.333.2090.11	396.97
110	25.333.2110.11	425.33
125	25.333.2125.11	475.17

### MM Fusion Spigots - Gear Operated

63	25.333.3063.11	382.23
90	25.333.3090.11	478.63
110	25.333.3110.11	506.99
125	25.333.3125.11	555.76
160	25.333.3160.11	1469.39
180	25.333.3180.11	1476.73
225	25.333.3225.11	2154.98

## Pipe Availability

We typically hold over  
**120 miles of pipe**  
 in stock for immediate despatch



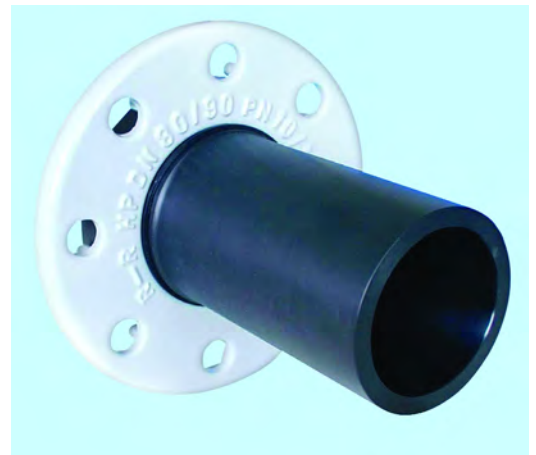
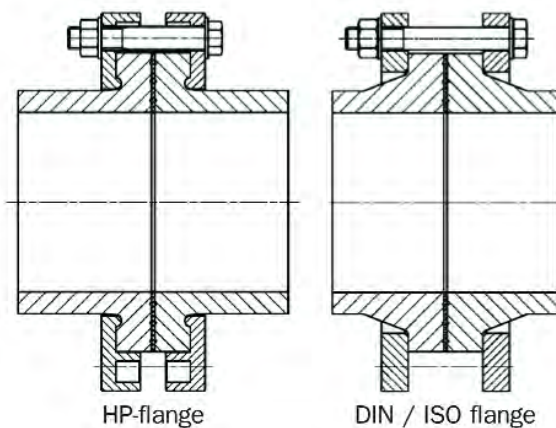
### Large diameter fabricated fittings

Working closely with our manufacturing partners, we can supply a comprehensive range of large diameter, fully pressure rated fittings, together with special fabrications, long radius bends and spool pieces.

A selection of the range is featured here and we will be delighted to discuss any specific requirements you may have.



### HP - Flange



The HP - flange has been designed for use in high pressure applications, and is particularly effective in larger diameters.

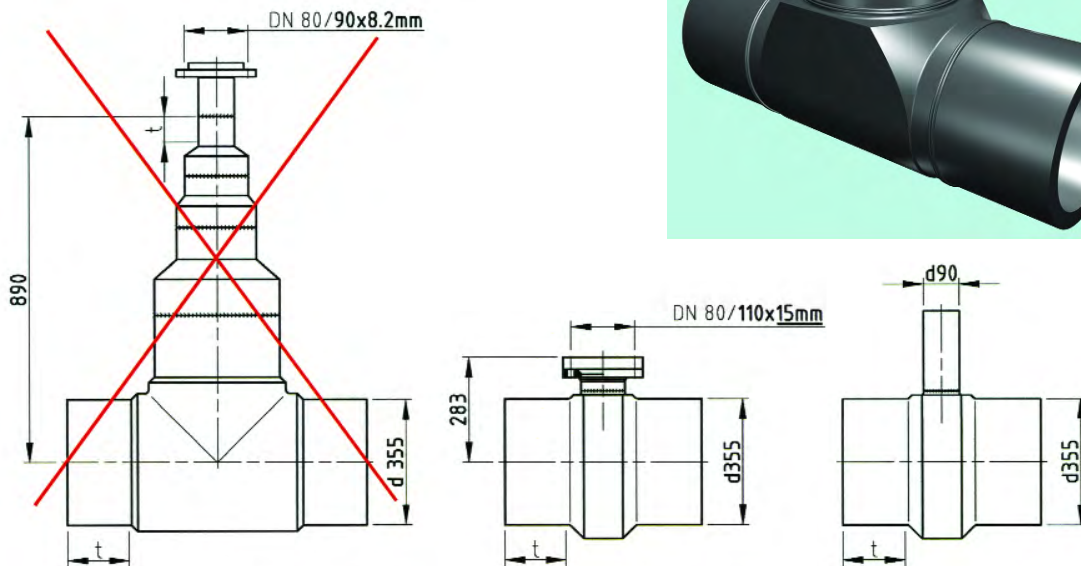
The uniquely designed collar and backing ring ensure that distortion of the flange face is eliminated, ensuring leak free joints.



Please contact either Tony Charlton or Tom Tate for further information on:

**0800 975 79 71**

## Large diameter fabricated fittings

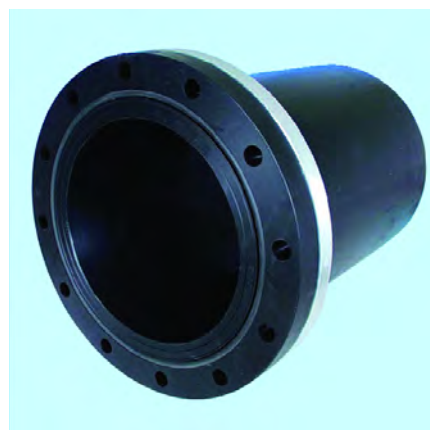
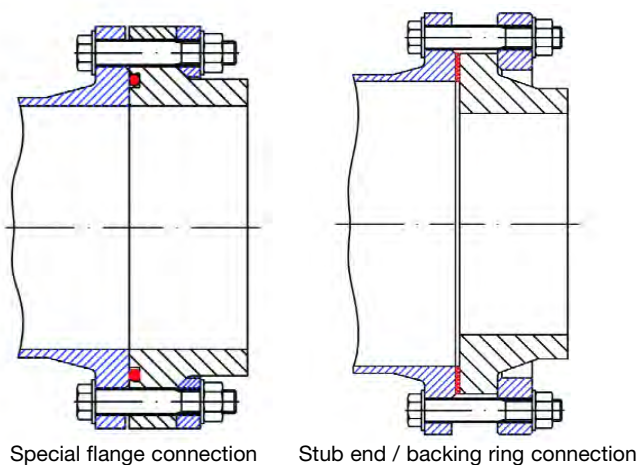


Large diameter tees are manufactured up to 1600mm in all pressure ratings.

Manufactured from hollow bar they can be produced with equal or reduced branches. Branches can be either long spigot or flanged as required.

Eliminating the need for a series of reducers, large branch reductions can be achieved with an extremely small footprint.

## Special Flange



Special flanges are full face flanges with nominal bores equivalent to cast iron or steel pipes. This design eliminates misalignment of the bore due to differing wall thickness.

The integrated o-ring ensures a tight, leak free joint while the long spigot design allows connection by either butt or electrofusion welding.

The flanges are supplied with either steel or cast iron backing rings.

Electrically  
conductive  
grade

## Pipe PE 80-EL



PN3.2/S-16/SDR33			PN6/S-8.3/SDR17		PN10/S-5/SDR11	
Size	Code	Price/m	Code	Price/m	Code	Price/m
32	-	-	-	-	28 705 0032 11	8.99
40	-	-	-	-	28 705 0040 11	14.32
50	-	-	-	-	28 705 0050 11	21.87
63	-	-	-	-	28 705 0063 11	34.72
75	-	-	-	-	28 705 0075 11	48.36
90	-	-	28 705 0090 17	45.39	28 705 0090 11	69.43
110	28 705 0110 33	38.23	28 705 0110 17	67.81	28 705 0110 11	103.46
125	28 705 0125 33	49.84	28 705 0125 17	87.13	28 705 0125 11	133.45
160	28 705 0160 33	79.82	28 705 0160 17	142.50	28 705 0160 11	219.50
180	28 705 0180 33	100.63	28 705 0180 17	179.65	28 705 0180 11	276.23
200	28 705 0200 33	125.21	28 705 0200 17	222.20	28 705 0200 11	341.06
225	28 705 0225 33	157.36	28 705 0225 17	280.94	28 705 0225 11	432.24
250	28 705 0250 33	194.50	28 705 0250 17	347.14	28 705 0250 11	530.16
315	28 705 0315 33	307.98	28 705 0315 17	549.08	28 705 0315 11	842.85
400	28 705 0400 33	492.35	-	-	-	-

Standard length 5m

Please note that a transportation surcharge may be applied on pipe diameters 250mm or larger - please enquire for details.

## Tee 90°



PN3.2			PN6		PN10	
Size	Code	Price	Code	Price	Code	Price
32	-	-	-	-	28 006 0032 11	6.14
40	-	-	-	-	28 006 0040 11	9.26
50	-	-	-	-	28 006 0050 11	12.56
63	-	-	-	-	28 006 0063 11	19.59
75	-	-	-	-	28 006 0075 11	39.31
90	-	-	-	-	28 006 0090 11	58.63
110	-	-	28 006 0110 17	73.21	28 006 0110 11	86.05
125	-	-	28 006 0125 17	101.70	28 006 0125 11	118.46
160	-	-	28 006 0160 17	225.57	28 006 0160 11	252.59
180	-	-	28 006 0180 17	276.89	28 006 0180 11	324.86
200	-	-	28 006 0200 17	362.00	28 006 0200 11	441.02
225	-	-	28 006 0225 17	443.04	28 006 0225 11	553.14
250	-	-	28 006 0250 17	587.57	28 006 0250 11	702.38
315	-	-	28 006 0315 17	884.72	28 006 0315 11	1348.03



### Free Training

We can provide free installer training either on site or at our bespoke training facility.

Contact Tony Charlton or Tom Tate on:

**0800 975 79 71**



## Bend 90°



PN3.2			PN6		PN10	
Size	Code	Price	Code	Price	Code	Price
32	-	-	-	-	28 001 0032 11	6.29
40	-	-	-	-	28 001 0040 11	8.16
50	-	-	-	-	28 001 0050 11	10.27
63	-	-	-	-	28 001 0063 11	14.72
75	-	-	-	-	28 001 0075 11	20.26
90	-	-	-	-	28 001 0090 11	29.31
110	-	-	28 001 0110 17	54.30	28 001 0110 11	45.80
125	-	-	28 001 0125 17	69.28	28 001 0125 11	78.47
160	-	-	28 001 0160 17	110.62	28 001 0160 11	127.91
180	-	-	28 001 0180 17	137.11	28 001 0180 11	151.96
200	-	-	28 001 0200 17	170.18	28 001 0200 11	226.25
225	-	-	28 001 0225 17	208.69	28 001 0225 11	270.14
250	-	-	28 001 0250 17	352.54	28 001 0250 11	518.01
315	-	-	28 001 0315 17	634.17	28 001 0315 11	836.10

## Reducer

Concentric



Size	Code	Price	Code	Price	Code	Price
63x16	-	-	-	-	28 007 6316 11	11.18
110x63	-	-	-	-	28 007 1163 11	23.51
160x110	-	-	28 007 1611 17	82.53	28 007 1611 11	88.34
225x160	-	-	28 007 2216 17	217.48	28 007 2216 11	239.77
315x225	-	-	28 007 3122 17	246.52	28 007 3122 11	265.42

## Stub Flange



Size	Code	Price	Code	Price	Code	Price
32	-	-	-	-	28 012 0032 11	6.22
40	-	-	-	-	28 012 0040 11	7.21
50	-	-	-	-	28 012 0050 11	9.12
63	-	-	-	-	28 012 0063 11	11.41
75	-	-	-	-	28 012 0075 11	13.50
90	-	-	-	-	28 012 0090 11	19.31
110	28 012 0110 33	22.56	28 012 0110 17	22.56	28 012 0110 11	25.25
125	28 012 0125 33	27.70	28 012 0125 17	27.70	28 012 0125 11	29.98
160	28 012 0160 33	39.85	28 012 0160 17	39.85	28 012 0160 11	44.18
180	28 012 0180 33	58.09	28 012 0180 17	58.09	28 012 0180 11	68.75
200	28 012 0200 33	69.69	28 012 0200 17	72.66	28 012 0200 11	75.65
225	28 012 0225 33	78.47	28 012 0225 17	81.31	28 012 0225 11	84.01
250	28 012 0250 33	110.62	28 012 0250 17	116.02	28 012 0250 11	127.50
315	28 012 0315 33	143.18	28 012 0315 17	156.68	28 012 0315 11	164.78
355	28 012 0355 33	244.48	-	-	-	-
400	28 012 0400 33	507.20	-	-	-	-

Please refer to previous pages for backing rings and gaskets

AGRU – Frank has become the first European manufacturer to achieve Factory Mutual (FM) Approval for High Density Polyethylene (PE100) pipes and fittings for underground fire protection service. The FM approval means that the pipes and fittings correspond to the highest requirements - ensuring consistent quality of the product range - achieved by means of a third party audit undertaken by FM.

PE100 piping is ideal for buried applications. It has exceptional ductility and will withstand very unfavourable ground conditions. It is also very easy to install using a simple butt fusion or electro-fusion welding technique.

Many industrial and automotive groups require FM approval for infrastructure piping systems within their factories. This need can now be satisfied with a comprehensive range of approved pipes and fittings. The FM approval has been issued for the dimension range 63mm to 400mm, and it includes a wide and diverse range of fittings. The system is approved for use at a service pressure of up to 12 bar.

IPS can supply the complete range of FM approved AGRU piping systems together with documentation, as well as welding equipment for butt or electro fusion jointing. Comprehensive welder training is readily available on request.

### PE100

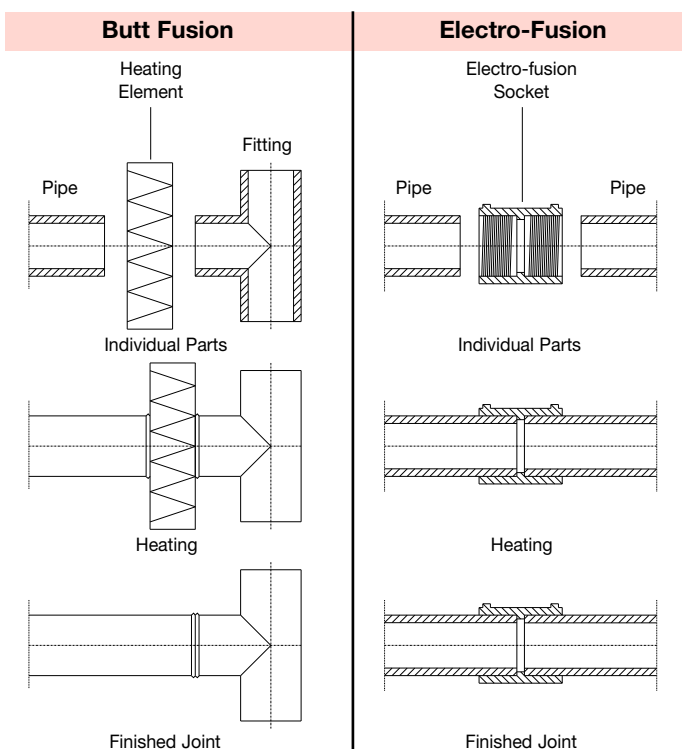
#### PN12

Size	Code	Price/m
63	25 705 0063 11FM	7.56
75	25 705 0075 11FM	10.54
90	25 705 0090 11FM	15.12
110	25 705 0110 11FM	22.56
125	25 705 0125 11FM	29.04
140	25 705 0140 11FM	36.34
160	25 705 0160 11FM	47.82
180	25 705 0180 11FM	60.12
200	25 705 0200 11FM	88.45
225	25 705 0225 11FM	93.74
250	25 705 0250 11FM	115.90
280	25 705 0280 11FM	144.67
315	25 705 0315 11FM	183.71
355	25 705 0355 11FM	233.00
400	25 705 0400 11FM	295.15

Please note that a transportation surcharge may be applied on pipe diameters 250mm or larger - please enquire for details.

## Jointing FM Approved Polyethylene Systems

PE pipe to pipe and pipe to fitting joints are easy to make, using butt fusion or electrofusion welds.



Welding equipment is available for sale or hire - see Tools and Installation Equipment. Detailed installation instructions, as well as free training, is available on request.



# FM approved electrofusion fittings

## Electrofusion Coupling



63	25 173 0063 11FM	10.83
75	25 173 0075 11FM	15.45
90	25 173 0090 11FM	20.59
110	25 173 0110 11FM	24.76
125	25 173 0125 11FM	34.80
140	25 173 0140 11FM	39.20
160	25 173 0160 11FM	47.99
180	25 173 0180 11FM	68.85
200	25 173 0200 11FM	81.32
225	25 173 0225 11FM	104.75
250	25 173 0250 11FM	154.37
280	25 173 0280 11FM	208.58
315	25 173 0315 11FM	251.62
355	25 173 0355 11FM	459.99
400	25 173 0400 11FM	576.78

## Electrofusion Elbow 45°



63	25 170 0063 11FM	25.73
75	25 170 0075 11FM	36.84
90	25 170 0090 11FM	45.88
110	25 170 0110 11FM	73.57
125	25 170 0125 11FM	92.57
160	25 170 0160 11FM	171.47
180	25 170 0180 11FM	on application
225	25 170 0225 11FM	467.61

## Electrofusion Tee 90°

Fusion Spigot Branch



63	25 176 0063 11FM	25.73
75	25 176 0075 11FM	36.22
90	25 176 0090 11FM	45.88
110	25 176 0110 11FM	73.51
125	25 176 0125 11FM	92.57
160	25 176 0160 11FM	171.47
180	25 176 0180 11FM	on application
225	25 176 0225 11FM	467.61



## Electrofusion Reducer

90x63	25 177 9063 11FM	34.57
110x63	25 177 1163 11FM	56.36
110x90	25 177 1190 11FM	56.36
125x90	25 177 1290 11FM	on application
160x90	25 177 1690 11FM	98.29
160x110	25 177 1611 11FM	100.79
180x125	25 177 1812 11FM	on application
225x160	25 177 2216 11FM	228.77

## Electrofusion Elbow 90°



63	25 171 0063 11FM	25.73
75	25 171 0075 11FM	36.84
90	25 171 0090 11FM	45.88
110	25 171 0110 11FM	73.51
125	25 171 0125 11FM	92.57
160	25 171 0160 11FM	171.47
180	25 171 0180 11FM	on application
225	25 171 0225 11FM	467.61



## Electrofusion Cap

63	25 174 0063 11FM	22.33
75	25 174 0075 11FM	35.31
90	25 174 0090 11FM	49.89
110	25 174 0110 11FM	64.02
125	25 174 0125 11FM	78.67
140	25 174 0140 11FM	103.26
160	25 174 0160 11FM	110.51
180	25 174 0180 11FM	145.10
200	25 174 0200 11FM	171.56
225	25 174 0225 11FM	202.24
250	25 174 0250 11FM	325.30
280	25 174 0280 11FM	446.95
315	25 174 0315 11FM	555.93

## Automatic Electrofusion Welding Machine

- Barcode or manual entry
- Welding is fully monitored throughout
- Illuminated display
- Fault messages displayed plus warning signal
- Memory records weld information
- Data output to PC or printer
- 110v or 230v supply
- Available for sale or hire



# FM approved fusion spigot fittings

## Tee 90°



### PN12

Size	Code	Price
63	25 006 0063 11FM	10.46
75	25 006 0075 11FM	21.05
90	25 006 0090 11FM	31.44
110	25 006 0110 11FM	46.18
125	25 006 0125 11FM	63.57
140	25 006 0140 11FM	80.56
160	25 006 0160 11FM	135.52
180	25 006 0180 11FM	173.67
200	25 006 0200 11FM	248.97
225	25 006 0225 11FM	296.02
250	25 006 0250 11FM	376.61
280	25 006 0280 11FM	507.30
315	25 006 0315 11FM	723.32
355	25 006 0355 11FM	845.34
400	25 006 0400 11FM	1262.21

## Reducing Tee 90°



### PN12

Size	Code	Price
125x63	25 016 1263 11FM	61.42
125x90	25 016 1290 11FM	61.42
140x63	25 016 1463 11FM	77.05
140x90	25 016 1490 11FM	78.31
140x110	25 016 1411 11FM	78.31
160x125	25 016 1612 11FM	129.94
180x63	25 016 1863 11FM	161.33
180x110	25 016 1811 11FM	161.33
180x125	25 016 1812 11FM	166.51
225x125	25 016 2212 11FM	280.91
250x110	25 016 2511 11FM	370.76
250x160	25 016 2516 11FM	378.42

## Tee 90°

Elongated



63	25 066 0063 11FM	14.08
75	25 066 0075 11FM	23.39
90	25 066 0090 11FM	33.26
110	25 066 0110 11FM	48.67
125	25 066 0125 11FM	66.81
140	25 066 0140 11FM	107.36
160	25 066 0160 11FM	139.32
180	25 066 0180 11FM	182.82
200	25 066 0200 11FM	262.03
225	25 066 0225 11FM	311.25
250	25 066 0250 11FM	401.89
280	25 066 0280 11FM	600.97
315	25 066 0315 11FM	771.77

## Reducing Tee 90°

Elongated



63x50	25 065 6350 11FM	14.70
90x63	25 065 9063 11FM	32.80
110x63	25 065 1163 11FM	48.65
110x90	25 065 1190 11FM	49.34
125x90	25 065 1290 11FM	67.67
125x110	25 065 1211 11FM	67.67
160x63	25 065 1663 11FM	133.02
160x90	25 065 1690 11FM	134.15
160x110	25 065 1611 11FM	137.53
180x90	25 065 1890 11FM	184.40
180x110	25 065 1811 11FM	184.40
180x160	25 065 1816 11FM	184.40
225x90	25 065 2290 11FM	311.74
225x110	25 065 2211 11FM	313.00
225x160	25 065 2216 11FM	314.11
225x180	25 065 2218 11FM	315.19
315x110	25 065 3111 11FM	848.94
315x160	25 065 3116 11FM	848.94
315x225	25 065 3122 11FM	887.51
315x250	25 065 3125 11FM	887.51



### Pressure Ratings

FM approved polyethylene fittings are suitable for use handling fluids at pressures up to 12 bar at 20°C.

# FM approved fusion spigot fittings

## Reducer

Concentric



### PN12

Size	Code	Price
90x63	25 009 9063 11FM	17.11
110x63	25 009 1163 11FM	21.74
110x90	25 009 1190 11FM	21.74
125x63	25 009 1263 11FM	27.94
125x90	25 009 1290 11FM	27.94
125x110	25 009 1211 11FM	27.94
140x90	25 009 1490 11FM	33.82
140x110	25 009 1411 11FM	33.82
140x125	25 009 1412 11FM	39.53
160x90	25 009 1690 11FM	39.53
160x110	25 009 1611 11FM	39.53
160x125	25 009 1612 11FM	39.53
160x140	25 009 1614 11FM	39.53
180x90	25 009 1890 11FM	62.09
180x110	25 009 1811 11FM	58.46
180x125	25 009 1812 11FM	53.90
180x140	25 009 1814 11FM	51.18
180x160	25 009 1816 11FM	48.83
225x140	25 009 2214 11FM	167.08
225x160	25 009 2216 11FM	143.41
225x180	25 009 2218 11FM	136.55
250x160	25 009 2516 11FM	191.47
250x180	25 009 2518 11FM	177.16
250x225	25 009 2522 11FM	154.57
280x200	25 009 2820 11FM	223.06
280x225	25 009 2822 11FM	207.97
280x250	25 009 2825 11FM	200.25
315x225	25 009 3122 11FM	240.74
315x250	25 009 3125 11FM	220.06

## Cap

Elongated



### PN12

Size	Code	Price
63	25 064 0063 11FM	10.43
75	25 064 0075 11FM	16.08
90	25 064 0090 11FM	24.52
110	25 064 0110 11FM	33.26
125	25 064 0125 11FM	35.93
140	25 064 0140 11FM	44.94
160	25 064 0160 11FM	50.36
180	25 064 0180 11FM	65.46
200	25 064 0200 11FM	81.94
225	25 064 0225 11FM	97.38
250	25 064 0250 11FM	145.89
280	25 064 0280 11FM	206.67
315	25 064 0315 11FM	278.64

## Cap

Short Spigot

355	25 004 0355 11FM	207.24
400	25 004 0400 11FM	278.64

## Reducer

Concentric - Elongated



Size	Code	Price
90x63	25 067 9063 11FM	17.47
110x63	25 067 1163 11FM	23.50
110x90	25 067 1190 11FM	23.50
125x63	25 067 1263 11FM	28.22
125x90	25 067 1290 11FM	28.22
125x110	25 067 1211 11FM	28.27
140x125	25 067 1412 11FM	40.62
160x90	25 067 1690 11FM	54.22
160x110	25 067 1611 11FM	54.38
160x125	25 067 1612 11FM	54.38
160x140	25 067 1614 11FM	52.59
180x125	25 067 1812 11FM	70.48
180x160	25 067 1816 11FM	70.48
225x160	25 067 2216 11FM	124.25
250x160	25 067 2516 11FM	168.01
250x225	25 067 2522 11FM	175.73
280x250	25 067 2825 11FM	234.19
315x225	25 067 3122 11FM	301.32
315x250	25 067 3125 11FM	301.32

## Machine Hire

Don't have the tools?  
We have a dedicated fleet of  
welding equipment available to  
hire on a weekly basis.



# FM approved fusion spigot fittings

## Bend 90°



### PN12

Size	Code	Price
250	25 001 0250 11FM	278.16
280	25 001 0280 11FM	360.33
315	25 001 0315 11FM	499.27
355	25 001 0355 11FM	730.31
400	25 001 0400 11FM	1002.93

## Bend 60°

Elongated



### PN12

Size	Code	Price
90	25 398 0090 11FM	
110	25 398 0110 11FM	
125	25 398 0125 11FM	
140	25 398 0140 11FM	
160	25 398 0160 11FM	
180	25 398 0180 11FM	on application
200	25 398 0200 11FM	on application
225	25 398 0225 11FM	
250	25 398 0250 11FM	
280	25 398 0280 11FM	
315	25 398 0315 11FM	

## Multi-Bend 90°

Elongated



63	25 068 0063 11FM	9.24
75	25 068 0075 11FM	12.72
90	25 068 0090 11FM	18.48
110	25 068 0110 11FM	35.15
125	25 068 0125 11FM	49.53
140	25 068 0140 11FM	66.25
160	25 068 0160 11FM	80.70
180	25 068 0180 11FM	95.57
200	25 068 0200 11FM	142.40
225	25 068 0225 11FM	169.84

## Bend 45°

Elongated



Size	Code	Price
90	25 397 0090 11FM	66.47
110	25 397 0110 11FM	126.50
125	25 397 0125 11FM	on application
140	25 397 0140 11FM	on application
160	25 397 0160 11FM	187.62
180	25 397 0180 11FM	226.78
200	25 397 0200 11FM	on application
225	25 397 0225 11FM	290.54
250	25 397 0250 11FM	454.44
280	25 397 0280 11FM	on application
315	25 397 0315 11FM	on application

## Elbow 90°

Elongated



250	25 061 0250 11FM	294.54
280	25 061 0280 11FM	443.50
315	25 061 0315 11FM	556.49

## Bend 30°

Elongated



Size	Code	Price
90	25 396 0090 11FM	66.47
110	25 396 0110 11FM	126.50
125	25 396 0125 11FM	on application
140	25 396 0140 11FM	on application
160	25 396 0160 11FM	200.68
180	25 396 0180 11FM	226.78
200	25 396 0200 11FM	on application
225	25 396 0225 11FM	290.54
250	25 396 0250 11FM	441.69
280	25 396 0280 11FM	on application
315	25 396 0315 11FM	on application

## Elbow 45°

Elongated



Size	Code	Price
63	25 060 0063 11FM	15.30
75	25 060 0075 11FM	19.73
90	25 060 0090 11FM	23.82
110	25 060 0110 11FM	45.66
125	25 060 0125 11FM	56.40
140	25 060 0140 11FM	73.79
160	25 060 0160 11FM	85.30
180	25 060 0180 11FM	93.37
200	25 060 0200 11FM	127.62
225	25 060 0225 11FM	152.09
250	25 060 0250 11FM	294.54
280	25 060 0280 11FM	443.49
315	25 060 0315 11FM	556.49

## Bend 22°

Elongated



Size	Code	Price
90	25 395 0090 11FM	66.47
110	25 395 0110 11FM	126.50
125	25 395 0125 11FM	on application
140	25 395 0140 11FM	on application
160	25 395 0160 11FM	187.62
180	25 395 0180 11FM	226.78
200	25 395 0200 11FM	on application
225	25 395 0225 11FM	290.54
250	25 395 0250 11FM	454.44
280	25 395 0280 11FM	on application
315	25 395 0315 11FM	on application

## Bend 11°

Elongated



Size	Code	Price
90	25 394 0090 11FM	66.47
110	25 394 0110 11FM	126.50
125	25 394 0125 11FM	on application
140	25 394 0140 11FM	on application
160	25 394 0160 11FM	187.62
180	25 394 0180 11FM	226.78
200	25 394 0200 11FM	on application
225	25 394 0225 11FM	290.54
250	25 394 0250 11FM	454.44
280	25 394 0280 11FM	on application
315	25 394 0315 11FM	on application

## Stub Flange



### PN12

Size	Code	Price
63	25 012 0063 11FM	6.12
75	25 012 0075 11FM	7.22
90	25 012 0090 11FM	10.36
110	25 012 0110 11FM	13.32
125	25 012 0125 11FM	16.08
140	25 012 0140 11FM	18.78
160	25 012 0160 11FM	23.68
180	25 012 0180 11FM	36.79
200	25 012 0200 11FM	40.49
225	25 012 0225 11FM	45.10
250	25 012 0250 11FM	68.47
280	25 012 0280 11FM	74.61
315	25 012 0315 11FM	88.13
355	25 012 0355 11FM	156.46
400	25 012 0400 11FM	308.21

## Backing Ring

Polypropylene with Steel Core



### NP10

63	14 014 0063 11*	16.40
75	14 014 0075 11*	18.20
90	14 014 0090 11*	21.50
110	14 014 0110 11*	25.57
125	14 014 0125 11*	25.57
140	14 014 0140 11*	39.38
160	14 014 0160 11*	45.09
180	14 014 0180 11*	45.09
200	14 014 0200 11*	64.20
225	14 014 0225 11*	64.20
250	14 014 0250 11*	102.52
280	14 014 0280 11*	102.52
315	14 014 0315 11*	128.83
355	14 014 0355 11*	271.34
400	14 014 0400 11*	307.41

\*Black

## Stub Flange

Elongated



63	25 062 0063 11FM	8.26
75	25 062 0075 11FM	10.72
90	25 062 0090 11FM	13.93
110	25 062 0110 11FM	17.79
125	25 062 0125 11FM	21.65
140	25 062 0140 11FM	27.92
160	25 062 0160 11FM	31.91
180	25 062 0180 11FM	49.18
200	25 062 0200 11FM	56.10
225	25 062 0225 11FM	60.42
250	25 062 0250 11FM	92.90
280	25 062 0280 11FM	140.27
315	25 062 0315 11FM	178.57

## Blind Flange

Polypropylene with steel insert



### NP10

63	14 045 0063 11	65.53
75	14 045 0075 11	76.69
90	14 045 0090 11	84.44
110	14 045 0110 11	115.26
125	14 045 0125 11	115.26
140	14 045 0140 11	141.63
160	14 045 0160 11	178.69
180	14 045 0180 11	178.69
200	14 045 0200 11	198.82
225	14 045 0225 11	198.82
250	14 045 0250 11	259.87
280	14 045 0280 11	259.87
315	14 045 0315 11	378.99
355	14 045 0355 11	740.13
400	14 045 0400 11	845.86

## Stub Flange

To adapt to cast iron flanges



63	25 912 0063 11FM	
90	25 912 0090 11FM	
110	25 912 0110 11FM	
125	25 912 0125 11FM	
140	25 912 0140 11FM	
160	25 912 0160 11FM	on application
180	25 912 0180 11FM	
225	25 912 0225 11FM	
250	25 912 0250 11FM	
280	25 912 0280 11FM	
315	25 912 0315 11FM	
355	25 912 0355 11FM	
400	25 912 0400 11FM	



### Connection to other materials

Connecting to metal pipe systems, particularly cast or ductile iron, requires care as the pipe diameters differ widely. We can advise on the selection of the correct flange components.