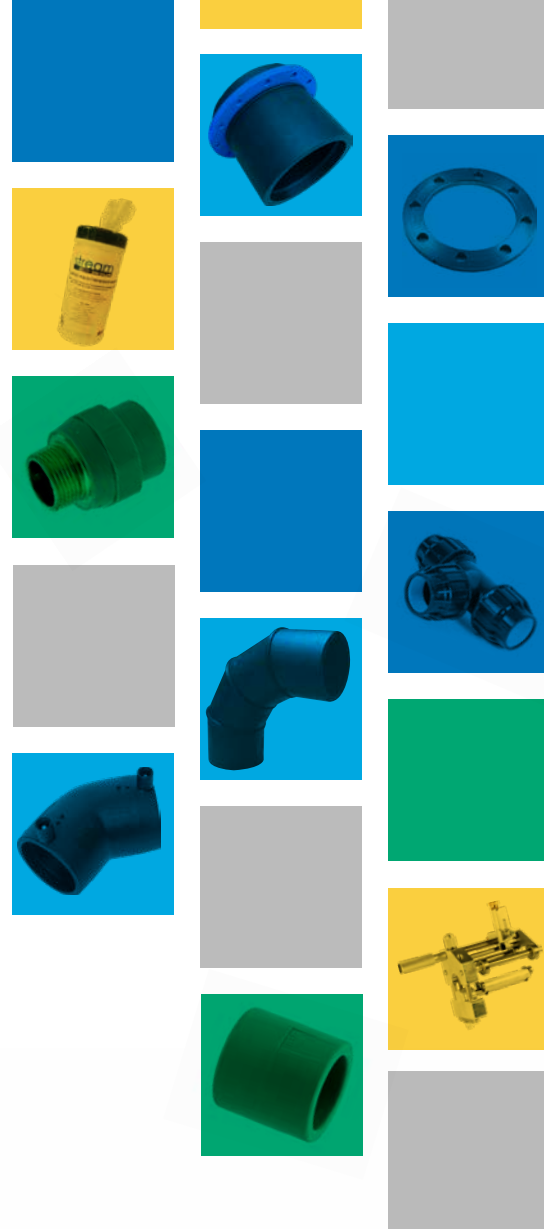




PRODUCT CATALOGUE



OUR COMPANY

UPG Pipe Systems is a division of the Satius Group* and has over 20 years of experience in supplying New Zealand with fluid and gas transfer pipeline systems.

Our market leading brands; Stream, Dynatherm, and Maxair, are used widely throughout Australia, New Zealand and the South Pacific.

At UPG, the key to our success lies in a commitment to provide you the highest quality service and support. We are a team of highly motivated and experienced individuals. We place the utmost importance in meeting your needs, constantly evolving our extensive product portfolio to meet the ever-changing demands of the markets we deal with. With these goals at our centre, we are proud to say to our partners, customers, and competitors that "we do it better".

We also place particular emphasis on comprehensive training in the use of our products, to ensure that every installation is trouble free.

*The Satius Group is located in Wellington, New Zealand and provides administration and marketing support to three Wellington-based companies including UPG Pipe Systems, Ultibend and ES3.



MARKET ORIENTATED

OUR VISION

To be first preference pipeline supplier to our customers.

OUR CULTURE

- Care
- Commitment
- Ownership
- Integrity
- Attitude
- Teamwork
- Respect
- Growth
- Balance



OUR PRODUCTS

Our products find a broad range of applications in the Industrial, Mining, HVAC, Plumbing and Utilities markets. The utilities of water and gas distribution are sectors that require high integrity products, the maintenance of water quality and the safe transport of gaseous fuels are of paramount importance. Industrial applications include compressed air, water and other fluid installations in the dairy, food, beverage and wine industries, and water reticulation systems. UPG products are widely used in pipeline installation, repair and maintenance. Lifetimes of our products are 50 years plus.

OUR BRANDS



PRODUCT RANGE



The advantages of polyethylene piping systems have been appreciated in the gas and water industries and by general industrial users for many years.

Polyethylene's durability, immunity from corrosion, excellent resistance to chemicals and light weight have contributed to its continued appeal for use in situations where cost-effective and reliable systems are required. Stream PE100 Pressure pipes and fittings from UPG offer the following advantages:

- High quality approved products designed and manufactured to exacting International and AS/NZ Standards.
- Four joining methods - Electrofusion, Butt-fusion, Socket-fusion and Mechanical Fittings.
- Up to 1600kPa rated at 20°C when carrying water and certain other liquids.
- Up to 1000kPa rated at 20°C when carrying natural gas.
- No anchor or thrust blocks needed (most systems are fully end load restrained).
- Ease of installation, maintenance and repair.



Stream HDPE Drainage products find a broad range of applications in the Plumbing and Industrial markets, such as greasy, sanitary, chemical and trade waste lines, laboratory situations and siphonic roof drainage.

HDPE pipes and fittings from UPG offer the following advantages:

- A complete product range from 50mm to 315mm. Larger sizes can be made to order.
- High quality approved products which are designed and manufactured to exacting International and Australasian standards.
- High resistance to chemicals, as well as organic and inorganic solvents.
- Temperature resistance: HDPE can resist temperatures from -40°C to +95°C.
- Resistant to mechanical stress due to high elasticity, flexibility and impact resistance. This makes HDPE particularly suitable for installation in unstable ground.
- Fully corrosion resistant. HDPE is also resistant to build up or scaling due to its smooth inner surface and chemical properties.
- Ease of installation, maintenance and repair.



Maxair utilises PE100, a product of advanced materials technology which outperforms other airline pipework for pressure, flow, corrosion resistance, compatibility with compressor oils & ease of installation and alteration.

Compressed gasses have inherent dangers, so an uncompromising standard of quality, conservative pressure ratings and the highest safety factors of any polymer piping system as set out in AS/NZS Standards all belong to Maxair.

The Maxair system by UPG offers the follow advantages:

- 50 year warranty
- Simple & fast to install
- Easy to alter or adapt
- Lightweight
- Strong, robust, safe
- Low friction, smooth bore
- Broad chemical resistance
- No corrosion
- No metallic contamination
- Food grade materials
- Suitable for breathing air
- Good thermal properties
- Suitable for use underground
- Option of a fully welded system

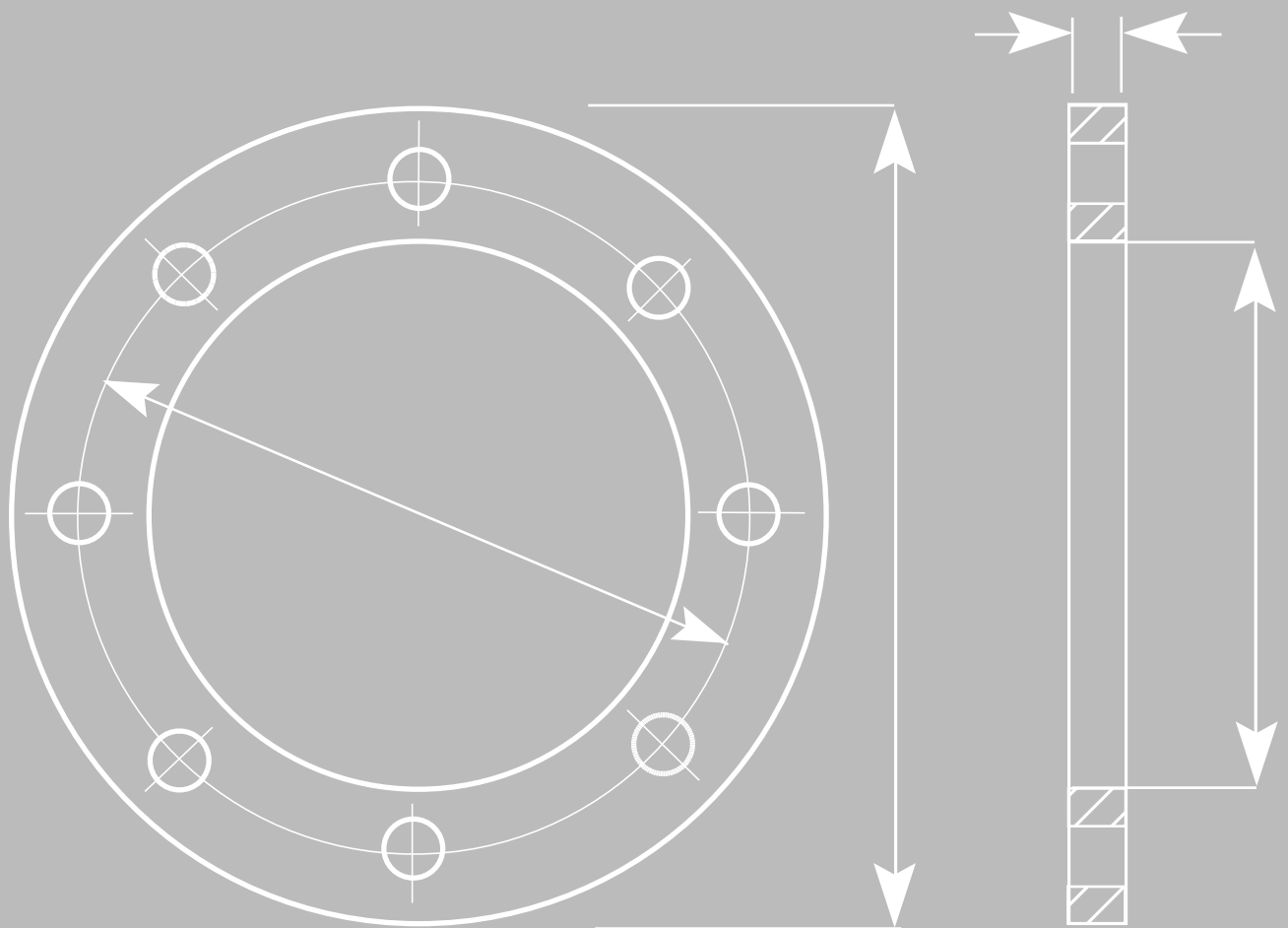


Our Dynatherm range (by Bänninger in Germany) offers a full range of PP-RCT, Faser and Stabi Polypropylene pipe systems. Dynatherm PP-RCT is suited to both cold and hot water applications and any installation where expansion/contraction is an issue. The Dynatherm PP-RCT (Polypropylene - Random Copolymer Temperature enhanced) raw material is a higher density polymer than the standard PP-R80 giving you higher efficiency at highest demands.

The Dynatherm PP-RCT pipe system is the ideal solution for potable water systems and heating & cooling systems in commercial buildings.

The advantages of PP-RCT over PP-R:

- Stability at higher temperatures
- Higher flow rates, and lower weight, due to reduced wall thickness of PP-RCT
- Higher temperature rating and longer life
- More rigid but less brittle
- Higher pressure load/rated
- Fully Guaranteed



**INDUSTRY
DATA**

NOMINAL PRESSURE RATINGS

SPECIFICATIONS ACCORDING TO AS/NZS 4130:2009

Standard Dimension Ratio (SDR)	PE80				PE100			
	PN Rating	MPa	PSI	Head Pressure (m)	PN Rating	MPa	PSI	Head Pressure (m)
SDR 41	PN 3.2	0.32	46	32	PN 4	0.40	58	40
SDR 33	PN 4	0.40	58	40	-	-	-	-
SDR 26	-	-	-	-	PN 6.3	0.63	91	63
SDR 21	PN 6.3	0.63	91	63	PN 8	0.80	116	80
SDR 17	PN 8	0.80	116	80	PN 10	1.00	145	100
SDR 13.6	PN 10	1.00	145	100	PN 12.5	1.25	181	125
SDR 11	PN 12.5	1.25	181	125	PN 16	1.60	232	160
SDR 9	PN 16	1.60	232	160	PN 20	2.00	290	200
SDR 7.4	PN 20	2.00	290	200	PN 25	2.50	363	250

Note:

Series 1 pipes are classified in terms of the nominal pressure rating (PN). The number used to describe PN is 10 times the value of the maximum allowable operating pressure (MAOP) at 20°C.

EFFECTS OF TEMPERATURE ON PRESSURE

PRESSURE DERATING DUE TO TEMPERATURE. MAXIMUM ALLOWABLE OPERATING PRESSURE (MAOP) - PE100

Temp °C	Metres of head pressure	PN 4	PN 6.3	PN 8	PN 10	PN 12.5	PN 16	PN 20	PN 25
20		40	63	80	100	125	160	200	250
25		40	63	80	100	125	160	200	250
30		38	59	75	94	118	150	188	235
35		36	56	71	89	116	143	179	224
40		34	53	68	84	106	135	169	221
45		32	50	64	80	100	127	159	199
50 (36y)		30	48	60	76	95	121	151	189
55 (24y)		29	45	57	72	89	115	143	179
60 (12y)		27	43	54	68	85	109	136	170
80 (1y)		21	34	43	53	67	86	107	134

Note:

This table conforms with AS/NZS 4131.

Where the temperature is constant during the life of the pipeline, it is expected to exceed 50 years service for temperatures up to 45°C. We recommend that PE100 is only used for applications up to 50°C continuous.

POLYETHYLENE PIPE - STANDARD DIMENSIONS

SPECIFICATIONS ACCORDING TO AS/NZS 4130:2009

Nominal outside diameter (DN)	Mean outside diameter		Maximum out of roundness	SDR 41				SDR 33				SDR 26			
				Wall thickness		Mean inside diameter		Wall thickness		Mean inside diameter		Wall thickness		Mean inside diameter	
	Min.	Max.		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
16	16.0	16.3	1.2	—	—	—	—	—	—	—	—	—	—	—	—
20	20.0	20.3	1.2	—	—	—	—	—	—	—	—	—	—	—	—
25	25.0	25.3	1.2	—	—	—	—	—	—	—	—	—	—	—	—
32	32.0	32.3	1.3	—	—	—	—	—	—	—	—	—	—	—	—
40	40.0	40.4	1.4	—	—	—	—	—	—	—	—	—	—	—	—
50	50.0	50.5	1.4	—	—	—	—	—	—	—	—	—	—	—	—
63	63.0	63.6	1.5	—	—	—	—	—	—	—	—	2.4	2.8	57.4	58.8
75	75.0	75.7	1.6	—	—	—	—	2.3	2.7	69.6	71.1	2.9	3.3	68.4	69.9
90	90.0	90.9	1.8	—	—	—	—	2.8	3.2	83.6	85.3	3.5	4.0	82.0	83.9
110	110.0	111.0	2.2	2.7	3.1	103.8	105.6	3.4	3.9	102.2	104.2	4.3	4.9	100.2	102.4
125	125.0	126.2	2.5	3.1	3.6	117.8	120.0	3.9	4.4	116.2	118.4	4.8	5.4	114.2	116.6
140	140.0	141.3	2.8	3.5	4.0	132.0	134.3	4.3	4.9	130.2	132.7	5.4	6.1	127.8	130.5
160	160.0	161.5	3.2	4.0	4.5	151.0	153.5	4.9	5.5	149.0	151.7	6.2	7.0	146.0	149.1
180	180.0	181.7	3.6	4.4	5.0	170.0	172.9	5.5	6.2	167.6	170.7	6.9	7.7	164.6	167.9
200	200.0	201.8	4.0	4.9	5.5	189.0	192.0	6.2	7.0	186.0	189.4	7.7	8.6	182.8	186.4
225	225.0	227.1	4.5	5.5	6.2	212.6	216.1	6.9	7.7	209.6	213.3	8.6	9.6	205.8	209.9
250	250.0	252.3	5.0	6.2	7.0	236.0	239.9	7.7	8.6	232.8	236.9	9.6	10.7	228.6	233.1
280	280.0	282.6	9.8	6.9	7.7	264.6	268.8	8.6	9.6	260.8	265.4	10.7	11.9	256.2	261.2
315	315.0	317.9	11.1	7.7	8.6	297.8	302.5	9.7	10.8	293.4	298.5	12.1	13.5	288.0	293.7
355	355.0	358.2	12.5	8.7	9.7	335.6	340.8	10.9	12.1	330.8	336.4	13.6	15.1	324.8	331.0
400	400.0	403.6	14.0	9.8	10.9	378.2	381.8	12.3	13.7	372.6	379.0	15.3	17.0	366.0	373.0
450	450.0	454.1	15.6	11.0	12.2	425.6	432.1	13.8	15.3	419.4	426.5	17.2	19.1	411.8	419.7
500	500.0	504.5	17.5	12.3	13.7	472.6	479.9	15.3	17.0	466.0	473.9	19.1	21.2	457.6	466.3
560	560.0	565.0	19.6	13.7	15.2	529.6	537.7	17.2	19.1	521.8	530.7	21.4	23.7	512.6	522.3
630	630.0	635.7	22.1	15.4	17.1	595.8	604.9	19.3	21.4	587.2	597.1	24.1	26.7	576.6	587.5
710	710.0	716.4	24.9	17.4	19.3	671.4	681.6	21.8	24.1	661.8	672.8	27.2	30.1	649.8	662.0
800	800.0	807.2	28.0	19.6	21.7	756.6	768.0	24.5	27.1	745.8	758.2	30.6	33.8	732.4	746.0
900	900.0	908.1	31.5	22.0	24.3	851.4	864.1	27.6	30.5	839.0	852.9	34.4	38.0	824.0	839.3
1000	1000.0	1009.0	35.0	24.5	27.1	945.8	960.0	30.6	33.8	932.4	947.8	38.2	42.2	915.6	932.6
1200	1200.0	1210.0	42.0	29.4	32.5	1135.0	1151.2	36.7	40.5	1119.0	1136.6	45.9	50.6	1098.8	1118.2
1400	1400.0	1410.0	49.0	34.4	38.0	1324.0	1341.2	42.9	47.3	1305.4	1324.2	53.2	58.7	1282.6	1303.6
1600	1600.0	1610.0	56.0	39.3	43.3	1513.2	1531.4	49.0	54.0	1492.0	1512.0	61.3	67.6	1464.8	1487.4
1800	1800.0	1816.2	—	43.8	48.3	1703.4	1728.6	54.5	60.1	1679.8	1707.2	69.1	76.2	1647.6	1677.4
2000	2000.0	2018.0	—	48.8	53.8	1892.4	1920.4	60.6	66.8	1866.4	1896.8	76.9	84.7	1830.6	1864.2

POLYETHYLENE PIPE - STANDARD DIMENSIONS

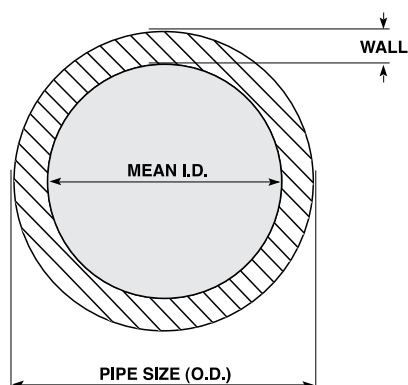
SPECIFICATIONS ACCORDING TO AS/NZS 4130:2009

Nominal outside diameter (DN)	Mean outside diameter		Maximum out of roundness	SDR 21				SDR 17				SDR 13.6			
				Wall thickness		Mean inside diameter		Wall thickness		Mean inside diameter		Wall thickness		Mean inside diameter	
	Min.	Max.		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
16	16.0	16.3	1.2	—	—	—	—	—	—	—	—	—	—	—	—
20	20.0	20.3	1.2	—	—	—	—	—	—	—	—	1.6	1.9	16.2	17.1
25	25.0	25.3	1.2	—	—	—	—	1.6	1.9	21.2	22.1	1.9	2.2	20.6	21.5
32	32.0	32.3	1.3	1.6	1.9	28.2	29.1	1.9	2.2	27.6	28.5	2.4	2.8	26.4	27.5
40	40.0	40.4	1.4	1.9	2.2	35.6	36.6	2.4	2.8	34.4	35.6	3.0	3.4	33.2	34.4
50	50.0	50.5	1.4	2.4	2.8	44.4	45.7	3.0	3.4	43.2	44.5	3.7	4.2	41.6	43.1
63	63.0	63.6	1.5	3.0	3.4	56.2	57.6	3.8	4.3	54.4	56.0	4.7	5.3	52.4	54.2
75	75.0	75.7	1.6	3.6	4.1	66.8	68.5	4.5	5.1	64.8	66.7	5.5	6.2	62.6	64.7
90	90.0	90.9	1.8	4.3	4.9	80.2	82.3	5.4	6.1	77.8	80.1	6.6	7.4	75.2	77.7
110	110.0	111.0	2.2	5.3	6.0	98.0	100.4	6.6	7.4	95.2	97.8	8.1	9.1	91.8	94.8
125	125.0	126.2	2.5	6.0	6.7	111.6	114.2	7.4	8.3	108.4	111.4	9.2	10.3	104.4	107.8
140	140.0	141.3	2.8	6.7	7.5	125.0	127.9	8.3	9.3	121.4	124.7	10.3	11.5	117.0	120.7
160	160.0	161.5	3.2	7.7	8.6	142.8	146.1	9.5	10.6	138.8	142.5	11.8	13.1	133.8	137.9
180	180.0	181.7	3.6	8.6	9.6	160.8	165.4	10.7	11.9	156.2	160.3	13.3	14.8	150.4	155.1
200	200.0	201.8	4.0	9.6	10.7	178.6	182.6	11.9	13.2	173.6	178.0	14.7	16.3	167.4	172.7
225	225.0	227.1	4.5	10.8	12.0	201.0	205.5	13.4	14.9	195.2	200.3	16.6	18.4	188.2	193.9
250	250.0	252.3	5.0	11.9	13.2	223.6	228.5	14.8	16.4	217.2	222.7	18.4	20.4	209.2	215.5
280	280.0	282.6	9.8	13.4	14.9	250.2	255.8	16.6	18.4	243.2	249.4	20.6	22.8	234.4	241.4
315	315.0	317.9	11.1	15.0	16.6	281.8	287.9	18.7	20.7	273.6	279.5	23.2	25.7	263.6	271.5
355	355.0	358.2	12.5	16.9	18.7	317.6	324.4	21.1	23.4	308.2	316.0	26.1	28.9	297.2	306.0
400	400.0	403.6	14.0	19.1	21.2	357.6	365.4	23.7	26.2	347.6	356.2	29.4	32.5	335.0	344.8
450	450.0	454.1	15.6	21.5	23.8	402.4	411.1	26.7	29.5	391.0	400.7	33.1	36.6	376.8	387.9
500	500.0	504.5	17.5	23.9	26.4	447.2	456.7	29.6	32.7	434.6	445.3	36.8	40.6	418.8	430.9
560	560.0	565.0	19.6	26.7	29.5	501.0	511.7	33.2	36.7	486.6	498.7	41.2	45.5	469.0	482.7
630	630.0	635.7	22.1	30.0	33.1	563.8	575.7	37.3	41.2	547.6	561.1	46.3	51.1	527.8	543.1
710	710.0	716.4	24.9	33.9	37.4	635.2	648.6	42.1	46.5	617.0	632.2	52.2	57.6	594.8	612.0
800	800.0	807.2	28.0	38.1	42.1	715.8	731.0	47.4	52.3	695.4	712.4	58.8	64.8	670.4	689.6
900	900.0	908.1	31.5	42.9	47.3	805.4	822.3	53.5	59.0	782.2	801.1	66.2	73.0	754.0	775.7
1000	1000.0	1009.0	35.0	47.7	52.6	894.8	913.6	59.3	65.4	869.2	890.4	72.5	79.9	840.2	864.0
1200	1200.0	1210.0	42.0	57.2	63.1	1073.8	1095.6	67.9	74.8	1050.4	1075.0	88.2	97.2	1005.6	1034.4
1400	1400.0	1410.0	49.0	66.7	73.5	1253.0	1279.2	82.4	90.8	1218.4	1247.8	102.9	113.3	1173.4	1206.8
1600	1600.0	1610.0	56.0	76.2	84.0	1432.0	1462.0	94.1	103.7	1392.6	1426.2	117.6	129.5	1341.0	1379.2
1800	1800.0	1816.2	—	85.7	94.4	1611.2	1644.8	105.9	116.6	1566.8	1604.4	—	—	—	—
2000	2000.0	2018.0	—	95.2	104.9	1790.2	1827.6	117.6	129.5	1741.0	1782.8	—	—	—	—

POLYETHYLENE PIPE - STANDARD DIMENSIONS

SPECIFICATIONS ACCORDING TO AS/NZS 4130:2009

Nominal outside diameter (DN)	Mean outside diameter		Maximum out of roundness	SDR 11				SDR 9				SDR 7.4			
				Wall thickness		Mean inside diameter		Wall thickness		Mean inside diameter		Wall thickness		Mean inside diameter	
	Min.	Max.		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
16	16.0	16.3	1.2	1.6	1.9	12.2	13.1	1.8	2.1	11.8	12.7	2.2	2.6	10.8	11.9
20	20.0	20.3	1.2	1.9	2.2	15.6	16.5	2.3	2.7	14.6	15.7	2.8	3.2	13.6	14.7
25	25.0	25.3	1.2	2.3	2.7	19.6	20.7	2.8	3.2	18.6	19.7	3.5	4.0	17.0	18.3
32	32.0	32.3	1.3	2.9	3.3	25.4	26.5	3.6	4.1	23.8	25.1	4.4	5.0	22.0	23.5
40	40.0	40.4	1.4	3.7	4.2	31.6	33.0	4.5	5.1	29.8	31.4	5.5	6.2	27.6	29.4
50	50.0	50.5	1.4	4.6	5.2	39.6	41.2	5.6	6.3	37.4	39.3	6.9	7.7	34.6	36.7
63	63.0	63.6	1.5	5.8	6.5	50.0	52.0	7.1	8.0	47.0	47.0	8.6	9.6	43.8	46.4
75	75.0	75.7	1.6	6.8	7.6	59.8	62.1	8.4	9.4	56.2	56.2	10.3	11.5	52.0	55.1
90	90.0	90.9	1.8	8.2	9.2	71.6	74.5	10.1	11.3	67.4	67.4	12.3	13.7	62.6	66.3
110	110.0	111.0	2.2	10.0	11.1	87.8	91.0	12.3	13.7	82.6	86.4	15.1	16.8	76.4	80.8
125	125.0	126.2	2.5	11.4	12.7	99.6	103.4	14.0	15.5	94.0	98.2	17.1	19.0	87.0	92.0
140	140.0	141.3	2.8	12.7	14.1	111.8	115.9	15.7	17.4	105.2	109.9	19.2	21.3	97.4	102.9
160	160.0	161.5	3.2	14.6	16.2	127.6	132.3	17.9	19.8	120.4	125.7	21.9	24.2	111.6	117.7
180	180.0	181.7	3.6	16.4	18.2	143.6	148.9	20.1	22.3	135.4	141.5	24.6	27.2	125.6	132.5
200	200.0	201.8	4.0	18.2	20.2	159.6	165.4	22.4	24.8	150.4	157.0	27.3	30.2	139.6	147.2
225	225.0	227.1	4.5	20.5	22.7	179.6	186.1	25.1	27.8	169.4	176.9	30.8	34.0	157.0	165.5
250	250.0	252.3	5.0	22.7	25.1	199.8	206.9	27.9	30.8	188.4	196.5	34.2	37.8	174.4	183.9
280	280.0	282.6	9.8	25.4	28.1	223.8	231.8	31.3	34.6	210.8	220.0	38.3	42.3	195.4	206.0
315	315.0	317.9	11.1	28.6	31.6	251.8	260.7	35.2	38.9	237.2	247.5	43.0	47.4	220.2	231.9
355	355.0	358.2	12.5	32.2	35.6	283.8	293.8	39.6	43.7	267.6	279.0	48.5	53.5	248.0	261.2
400	400.0	403.6	14.0	36.3	40.1	319.8	331.0	44.7	49.3	301.4	314.2	54.6	60.2	279.6	294.4
450	450.0	454.1	15.6	40.9	45.1	359.8	372.3	50.2	55.4	339.2	353.7	61.5	67.8	314.4	331.1
500	500.0	504.5	17.5	45.4	50.1	399.8	413.7	55.8	61.5	377.0	392.9	—	—	—	—
560	560.0	565.0	19.6	50.8	56.0	448.0	463.5	62.5	68.9	422.2	438.4	—	—	—	—
630	630.0	635.7	22.1	57.2	63.1	503.8	521.3	70.3	77.5	475.0	493.2	—	—	—	—
710	710.0	716.4	24.9	64.5	71.1	567.8	587.4	79.3	87.4	535.2	557.8	—	—	—	—
800	800.0	807.2	28.0	72.5	80.0	640.0	662.0	89.3	98.4	603.2	628.6	—	—	—	—
900	900.0	908.1	31.5	81.7	90.0	720.0	744.7	—	—	—	—	—	—	—	—
1000	1000.0	1009.0	35.0	90.2	99.4	801.2	828.6	—	—	—	—	—	—	—	—



$$\text{SDR} = \text{OD} \div \text{WALL THICKNESS}$$

POLYETHYLENE (PE100) PIPE WEIGHTS - KG/METRE

O.D.	SDR 41	SDR 33	SDR 26	SDR 21	SDR 17	SDR 13.6	SDR 11	SDR 9	SDR 7.4
PE100	PN 4		PN 6.3	PN 8	PN 10	PN 12.5	PN 16	PN 20	PN 25
16	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.08	...
20	0.096	0.096	0.096	0.096	0.096	0.096	0.11	0.13	0.15
25	0.12	0.12	0.12	0.12	0.12	0.138	0.16	0.20	0.23
32	0.16	0.16	0.16	0.16	0.18	0.23	0.27	0.32	0.40
40	0.20	0.20	0.20	0.23	0.28	0.35	0.42	0.50	0.58
50	0.25	0.25	0.30	0.36	0.44	0.54	0.66	0.78	0.92
63	0.32	0.38	0.47	0.57	0.72	0.86	1.05	1.25	1.45
75	0.45	0.54	0.67	0.81	1.00	1.20	1.45	1.75	...
90	0.63	0.78	0.97	1.17	1.45	1.73	2.11	2.55	3.03
110	0.92	1.15	1.46	1.75	2.14	2.59	3.13	3.75	4.50
125	1.20	1.49	1.84	2.24	2.75	3.34	4.06	4.48	...
140	1.58	1.85	2.33	2.81	3.43	4.19	5.04	6.08	...
160	1.97	2.44	3.05	3.68	4.50	5.47	6.62	7.92	...
180	2.45	3.06	3.80	4.63	5.67	6.94	8.37	10.02	...
200	3.01	3.77	4.71	5.73	7.02	8.51	10.32	12.39	...
225	3.81	4.79	5.92	7.24	8.90	10.80	13.06	15.63	...
250	4.78	5.90	7.33	8.87	10.87	13.31	16.08	19.27	...
280	5.92	7.41	9.15	11.19	13.65	16.68	20.16	24.23	...
315	7.44	9.34	11.66	14.07	17.28	21.14	25.48	30.70	...
355	9.46	11.85	14.73	17.86	22.04	26.80	32.34	38.80	...
400	12.00	15.02	18.68	22.77	27.85	33.98	41.05	49.40	...
450	15.13	19.04	23.61	28.80	35.21	43.05	51.98	62.50	...
500	18.80	23.52	29.13	35.53	43.44	53.12	64.20	77.00	...
560	23.60	29.41	36.30	44.85	55.10	67.33	81.48	...	...
630	29.80	37.12	46.00	56.70	69.64	85.13	103.20	...	...
710	38.00	47.26	58.05	72.20	88.57	108.16	...	...	...
800	48.20	59.85	65.48	91.44	112.37	137.28	...	...	...
900	60.90	75.85	93.80	115.82	142.65	...	...	...	...
1000	76.70	93.44	115.73	143.08	175.72	...	...	...	...

PE100 PIPE SUPPORT SPACINGS

ABOVE GROUND HORIZONTALLY PIPEWORK MAX SUPPORT SPACING (METERS)

Diameter (mm)	SDR 26	SDR 21	SDR 17	SDR 13.6	SDR 11	SDR 9	SDR 7.4
20	-	-	-	-	-	-	0.70
25	-	-	-	-	0.70	0.75	0.80
32	-	-	0.75	0.80	0.85	0.85	0.90
40	-	-	0.90	0.90	1.00	1.05	1.05
50	-	0.95	1.00	1.05	1.15	1.15	1.20
63	1.05	1.10	1.20	1.25	1.30	1.40	1.40
75	1.20	1.25	1.35	1.40	1.50	1.55	1.60
90	1.30	1.40	1.50	1.55	1.65	1.70	1.80
110	1.35	1.50	1.60	1.70	1.80	1.85	1.90
125	1.50	1.65	1.75	1.85	1.95	2.00	2.05
140	1.65	1.80	1.90	2.00	2.10	2.20	2.25
160	1.80	1.90	2.05	2.15	2.25	2.35	2.40
180	1.90	2.00	2.15	2.25	2.40	2.55	2.55
200	2.00	2.15	2.30	2.40	2.55	2.65	2.70
225	2.15	2.30	2.50	2.60	2.70	2.80	2.90
250	2.25	2.40	2.60	2.70	2.85	3.00	3.05
280	2.40	2.60	2.75	2.90	3.05	3.15	3.25
315	2.50	2.70	2.90	3.05	3.20	3.30	3.40
355	2.70	2.90	3.10	3.25	3.40	3.55	3.65
400	2.90	3.00	3.30	3.45	3.65	3.80	3.90
450	3.00	3.20	3.40	3.60	3.75	3.90	4.00
500	3.15	3.40	3.60	3.80	4.00	4.15	-
560	3.35	3.60	3.85	4.00	4.25	4.40	-
630	3.60	3.85	4.10	4.30	4.55	4.70	-
710	3.80	4.10	4.40	4.60	4.85	-	-
800	4.05	4.30	4.65	4.90	5.15	-	-
900	4.30	4.50	4.95	5.15	5.45	-	-
1000	4.55	4.70	5.20	5.45	5.75	-	-

The transportation of gases with a density of $<0.01 \text{ g/cm}^3$, the support distances can be increased as stated below.

SDR 17	+45%
SDR 11	+30%
SDR 7.4	+21%

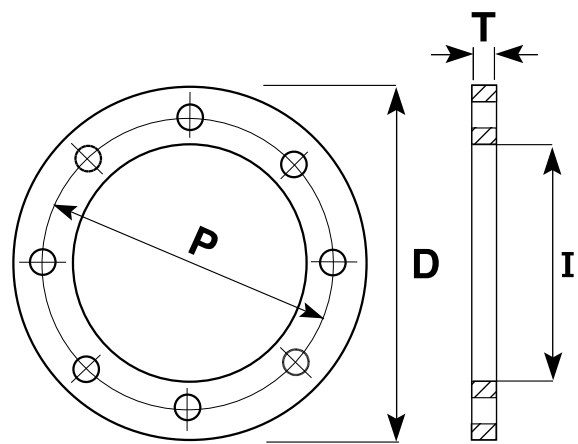
As polyethylene is a flexible pipe material, adequate pipe support must be provided to prevent sagging when polyethylene pipes have to be installed above ground. Pipe supports should be designed to support both the pipe weights and its contents and also accommodate the weight of any heavy fittings, valves etc. The pipe brackets, straps or plinths should have non-abrasive surfaces to prevent damage to the pipe. The support and bracketing design should allow for the stresses generated from thermal movement and if, for aesthetic reasons pipe deflection is unacceptable, continuous pipe support should be provided. The table above gives recommendations for maximum support spacing's for a pipe full of water at an ambient temperature of 20°C or below. At a temperature of 40°C and above continuous support is recommended for visual acceptance.

As the pipeline cools, any contraction will be resisted by the pipe clamps and when reheated to its normal operation temperature pipe sagging between supports will be minimized. Polyethylene is a good insulating material (thermal conductivity $0.38 \text{ W/m}^\circ\text{C}$) and will help prevent or delay the freezing of the pipe contents. Care needs to be taken with regards to expansion and contraction, as a result of temperature changes, when installing. Please ask our technical team for more information.

The pipe itself will not fail if the contents do freeze as polyethylene can safely expand to cater for increased volume. It is however good practice for operational reasons to insulate pipe work to prevent freezing and to ensure the insulation is water proof. Pipe work should be protected from possible impact damage and provision should be made for draining down horizontal pipe runs at low points in the system.

AS 4087 B7 PN16 TABLE D FLANGE PATTERN

SIZE (MM)	NOMINAL FLANGE SIZE	INCH SIZE	P (MM)	I (MM)	D (MM)	T (MM)	BOLT HOLES	
							NO X DIA	BOLT
20	15	1/2"	67	32	95	6	4x14	M12
25	20	3/4"	73	37	100	6	4x14	M12
32	25	1"	83	44	115	6	4x14	M12
40	32	1 1/4"	87	52	120	6	4x14	M12
50	40	1 1/2"	98	62	135	8	4x14	M12
63	50	2"	114	78	150	11	4x18	M16
75	65	2 1/2"	127	92	165	11	4x18	M16
90	80	3"	146	108	185	11	4x18	M16
110	100	4"	178	128	215	13	4x18	M16
125	100	4"	178	135	215	13	4x18	M16
160	150	6"	235	178	280	13	8x18	M16
180	150	6"	235	185	280	13	8x18	M16
200	200	8"	292	235	335	19	8x18	M16
225	200	8"	292	240	335	19	8x18	M16
250	250	10"	356	290	405	19	8x22	M20
280	250	10"	356	300	405	19	8x22	M20
315	300	12"	406	345	455	23	12x22	M20
355	350	14"	470	376	525	30	12x26	M24
n/a	375	15"	495	404	550	30	12x26	M24
400	400	16"	521	430	580	30	12x26	M24
450	450	18"	584	480	640	30	12x26	M24
500	500	20"	641	533	705	38	16x26	M24
630	600	24"	756	660	825	48	16x30	M27
710	700	28"	845	745	910	56	20x30	M27
800	800	32"	984	835	1060	56	20x36	M33



AS 2129 TABLE E FLANGE PATTERN

SIZE	NOMINAL	INCH	P	I	D	T	BOLT HOLES	
(MM)	FLANGE SIZE	SIZE	(MM)	(MM)	(MM)	(MM)	NO X DIA	BOLT
20	15	1/2"	67	32	95	6	4x14	M12
25	20	3/4"	73	37	100	6	4x14	M12
32	25	1"	83	44	115	7	4x14	M12
40	32	1 1/4"	87	52	120	8	4x14	M12
50	40	1 1/2"	98	62	135	9	4x14	M12
63	50	2"	114	74	150	10	4x18	M16
75	65	2 1/2"	127	93	165	10	4x18	M16
90	80	3"	146	108	185	12	4x18	M16
110	100	4"	178	125	215	13	8x18	M16
125	100	4"	178	140	215	14	8x18	M16
125	125	5"	210	140	255	14	8x18	M16
140	125	5"	210	158	255	14	8x18	M16
160	150	6"	235	175	280	17	8x22	M20
180	150	6"	235	185	280	17	8x22	M20
200	200	8"	292	230	335	19	8x22	M20
225	200	8"	292	240	335	19	8x22	M20
250	250	10"	356	290	405	22	12x22	M20
280	250	10"	356	300	405	22	12x22	M20
315	300	12"	406	345	455	25	12x26	M24
355	350	14"	470	373	525	29	12x26	M24
400	400	16"	521	425	580	32	12x26	M24
450	450	18"	584	480	640	32	16x26	M24
500	500	20"	641	533	705	38	16x26	M24
560	-	22"	699	590	760	44	16x30	M27
630	600	24"	756	660	825	48	16x33	M30
710	700	28"	845	745	910	51	20x33	M30
800	800	32"	984	835	1060	54	20x36	M33

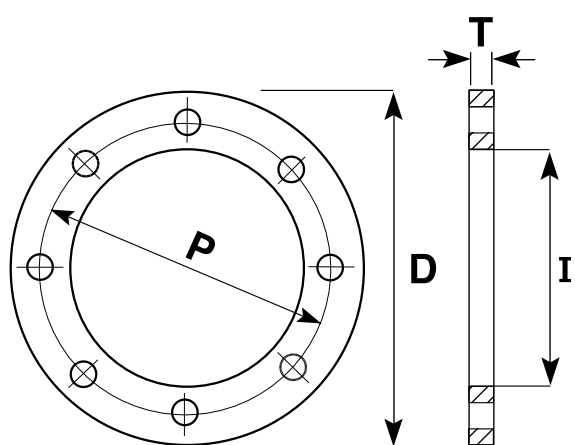
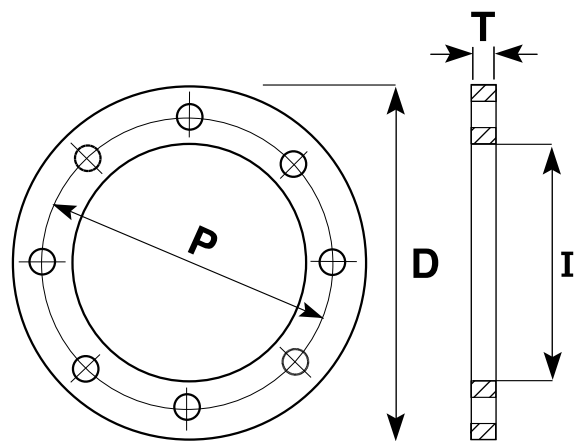


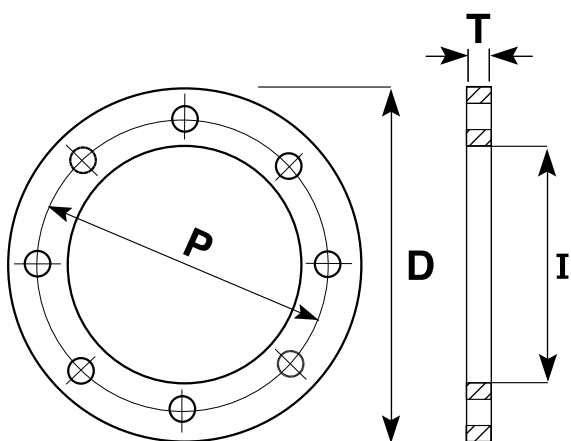
TABLE ANSI FLANGE PATTERN

SIZE (MM)	NOMINAL FLANGE SIZE	INCH SIZE	P (MM)	I (MM)	D (MM)	T (MM)	BOLT HOLES	
			(MM)	(MM)	(MM)	(MM)	NO X DIA	BOLT
20	15	1/2"	60.5	32	90	6	4x16	1/2"
25	20	3/4"	70	37	98	6	4x16	1/2"
32	25	1"	79.5	44	108	6	4x16	1/2"
40	32	1 1/4"	89	52	117	6	4x16	1/2"
50	40	1 1/2"	98.5	62	127	8	4x16	1/2"
63	50	2"	120.5	78	152	8	4x20	5/8"
75	65	2 1/2"	139.5	92	178	8	4x20	5/8"
90	80	3"	152	108	191	10	4x20	5/8"
110	100	4"	190.5	128	229	10	8x20	5/8"
125	100	4"	190.5	140	229	10	8x20	5/8"
125	125	5"	216	140	254	13	8x23	3/4"
140	125	5"	216	158	254	13	8x23	3/4"
160	150	6"	241	178	279	13	8x23	3/4"
180	150	6"	241	195	279	13	8x23	3/4"
200	200	8"	298.5	235	343	13	8x23	3/4"
225	200	8"	298.5	240	343	13	8x23	3/4"
250	250	10"	362	290	406	13	12x26	7/8"
280	250	10"	362	300	406	16	12x26	7/8"
315	300	12"	432	345	483	16	12x26	7/8"
355	350	14"	476	376	535	19	12x29	1"
400	400	16"	540	430	600	22	16x29	1"
450	450	18"	578	480	635	22	16x32	1 1/8"
500	500	20"	635	533	700	25	20x32	1 1/8"
630	600	24"	749	660	813	29	20x35	1 1/4"



PN16 BS EN 1092 FLANGE PATTERN

SIZE	NOMINAL	INCH	P	I	D	T	BOLT HOLES	
(MM)	FLANGE SIZE	SIZE	(MM)	(MM)	(MM)	(MM)	NO X DIA	BOLT
20	15	1/2"	65	32	95	16	4x14	M12
25	20	3/4"	75	37	105	18	4x14	M12
32	25	1"	85	44	115	18	4x14	M12
40	32	1 1/4"	100	52	140	18	4x18	M16
50	40	1 1/2"	110	62	150	18	4x18	M16
63	50	2"	125	74	165	18	4x18	M16
75	65	2 1/2"	145	87	185	18	4x18	M16
90	80	3"	160	103	200	20	8x18	M16
110	100	4"	180	125	220	20	8x18	M16
125	100	4"	180	140	220	20	8x18	M16
125	125	5"	210	140	250	22	8x18	M16
140	125	5"	210	158	250	22	8x18	M16
160	150	6"	240	175	285	22	8x22	M20
180	150	6"	240	185	285	22	8x22	M20
200	200	8"	295	230	340	24	12x22	M20
225	200	8"	295	240	340	24	12x22	M20
250	250	10"	355	290	405	26	12x26	M24
280	250	10"	355	300	405	26	12x26	M24
315	300	12"	410	345	460	28	12x26	M24
355	350	14"	470	373	520	30	16x26	M24
400	400	16"	525	425	580	32	16x30	M27
450	450	18"	585	480	640	40	20x30	M27
500	500	20"	650	533	715	44	20x33	M30
630	600	24"	770	660	840	54	20x36	M33



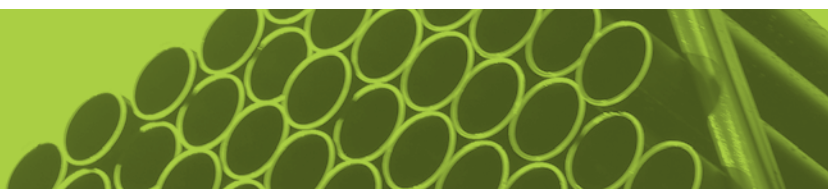
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**STREAM PE100
PRESSURE**



NOTES ON THE USE OF THIS SECTION

Explanation of Product codes:

The "Family" code shown before the point refers to the fitting TYPE.

Eg: 2014 is the code for an electrofusion coupler. The next four numbers refer to the SIZE; e.g. 0110 is the code for a 110mm fitting, 1163 for a 110mm x 63mm reducer therefore a 110mm electrofusion coupler is 2014.0110 and a 110mm x 63mm electrofusion reducer would be 2034.1163.

All pressure ratings given are subject to applicable regulations and standards. For further information

please contact our Technical team or check with your local regulatory authority.

All dimensions shown in this catalogue are intended as a guide only, and may change without notice. If exact measurements are required, please contact our sales team.

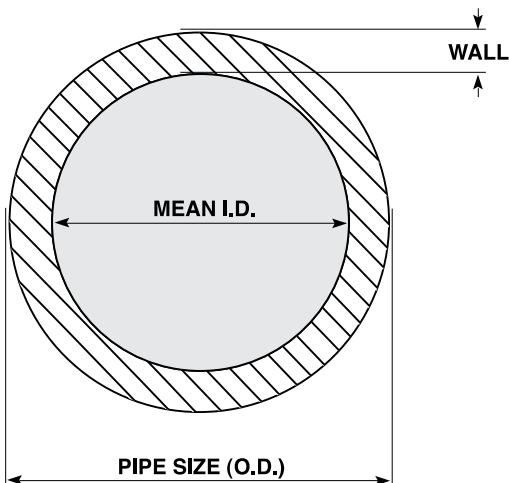
Please contact our sales team if there is any items required which are not shown in this catalogue. We are also able to manufacture, source & supply a wide range of associated products such as valves and non-standard flanges.



POLYETHYLENE PIPE - STANDARD DIMENSIONS

SPECIFICATIONS ACCORDING TO AS/NZS 4130: 2003

	SDR26		SDR21		SDR17		SDR13.6		SDR11		SDR9		SDR7.4	
PE80 (MDPE)			PN6.3		PN8		PN10		PN12.5		PN16			
PE100 (HDPE)	PN6.3		PN8		PN10		PN12.5		PN16		PN20		PN25	
SIZE	MIN WALL	MEAN I.D.	MIN WALL	MEAN I.D.	MIN WALL	MEAN I.D.	MIN WALL	MEAN I.D.	MIN WALL	MEAN I.D.	MIN WALL	MEAN I.D.	MEAN WALL	MEAN I.D.
20	1.6	16.7	1.6	16.7	1.6	16.7	1.6	16.7	1.9	16.1	2.3	15.2	2.8	14.2
25	1.6	21.7	1.6	21.7	1.6	21.1	1.9	21.1	2.3	20.2	2.8	19.2	3.5	17.7
32	1.6	28.7	1.6	28.7	1.9	28.1	2.4	27.0	2.9	26.0	3.6	24.5	4.4	22.8
40	1.6	36.7	1.9	36.1	2.4	35.0	3.0	33.8	3.7	32.3	4.5	30.6	5.5	28.5
50	2.0	45.9	2.4	45.0	3.0	43.8	3.7	42.3	4.6	40.4	5.6	38.3	6.9	35.6
63	2.4	58.0	3.0	56.8	3.8	55.1	4.7	53.2	5.8	50.9	7.1	48.1	8.6	45.1
75	2.9	69.1	3.6	67.6	4.5	65.7	5.5	63.6	6.8	60.9	8.4	57.5	10.3	53.6
90	3.5	82.8	4.3	81.1	5.4	78.8	6.6	76.3	8.2	72.9	10.1	68.6	12.3	64.5
110	4.3	101.2	5.3	99.1	6.6	96.4	8.1	93.2	10.0	89.3	12.3	84.4	15.1	78.6
125	4.8	115.3	6.0	112.8	7.4	109.8	9.2	106.0	11.4	101.4	14.0	96.0	17.1	89.5
140	5.4	129.1	6.7	126.4	8.3	123.0	10.3	118.8	12.7	113.8	15.7	107.5	19.2	100.2
160	6.2	147.5	7.7	144.4	9.5	140.6	11.8	135.8	14.6	129.9	17.9	123.0	21.9	114.7
180	6.9	166.2	8.6	162.6	10.7	158.2	13.3	152.7	16.4	146.2	20.1	138.4	24.6	129.1
200	7.7	184.5	9.6	180.5	11.9	175.7	14.7	169.8	18.2	162.4	22.4	153.6	27.3	143.4
225	8.6	207.7	10.8	203.1	13.4	197.6	16.6	190.9	20.5	182.7	25.1	173.0	30.8	161.3
250	9.6	230.7	11.9	225.9	14.8	219.8	18.4	212.2	22.7	203.2	27.9	192.3	34.2	179.2
280	10.7	258.6	13.4	252.9	16.6	246.2	20.6	237.8	25.4	227.7	31.3	215.3	38.3	200.7
315	12.1	290.7	15.0	284.7	18.7	276.9	23.2	267.4	28.6	256.1	35.2	242.2	43.0	226.1
355	13.6	327.8	16.9	320.9	21.1	312.0	26.1	301.5	32.2	288.7	39.6	273.2	48.5	254.6
400	15.3	369.3	19.1	361.3	23.7	351.7	29.4	339.7	36.3	325.2	44.7	307.6	54.6	287.0
450	17.2	415.5	21.5	406.5	26.7	395.6	33.1	382.1	40.9	365.8	50.3	346.0	61.5	332.8
500	19.1	461.7	23.9	451.7	29.6	439.7	36.8	424.6	45.4	406.5	55.8	384.7	...	...
560	21.4	517.2	26.7	506.1	33.2	492.4	41.2	475.6	50.8	455.5	...	...	...	...
630	24.1	581.8	30.0	569.5	37.2	554.1	46.3	535.2	57.2	512.3	...	...	...	...
710	27.2	655.6	33.9	641.6	42.1	624.3	52.2	603.1	...	...	...	...	...	...
800	30.6	738.8	38.1	723.0	47.4	703.2	58.8	680.0	...	...	...	...	...	...
900	34.4	829.5	42.9	813.8	53.5	791.6	...	...	...	...	...	...	...	...
1000	38.2	923.0	47.7	904.2	59.3	879.8	...	...	...	...	...	...	...	...



$$\text{SDR} = \text{OD} \div \text{WALL THICKNESS}$$

POLYETHYLENE PIPE - LENGTHS

STANDARD STOCK SIZES

PE100 • SDR11 • PN16 WATER • 1600KPA GAS • BLACK

SIZE OD (MM)	CODE 6 METRE LENGTHS	CODE 12 METRE LENGTHS	ID SIZE (MM)
25	1401-025-2	-	20.20
32	1401-032-2	-	26.00
40	1401-040-2	-	32.30
50	1401-050-2	-	40.40
63	1401-063-2	-	50.90
75	1401-075-2	-	60.90
90	1401-090-2	1401-090-3	72.90
110	1401-110-2	1401-110-3	89.30
125	1401-125-2	1401-125-3	101.00
140	1401-140-2	1401-140-3	114.00
160	1401-160-2	1401-160-3	129.90
180	1401-180-2	1401-180-3	146.20
200	1401-200-2	1401-200-3	162.00
225	1401-225-2	1401-225-3	183.00
250	1401-250-2	1401-250-3	203.00
280	1401-280-2	1401-280-3	228.00
315	1401-315-2	1401-315-3	256.00
355	1401-355-2	1401-355-3	288.70
400	1401-400-2	1401-400-3	325.20
450	1401-450-2	1401-450-3	365.80
500	1401-500-2	1401-500-3	406.50
560	1401-560-2	1401-560-3	455.50
630	1401-630-2	1401-630-3	512.30

STANDARD STOCK SIZES

PE100 • SDR17 • PN10 WATER • 1000KPA GAS • BLACK

SIZE OD (MM)	CODE 6 METRE LENGTHS	CODE 12 METRE LENGTHS	ID SIZE (MM)
90	1601-090-2	1601-090-3	78.80
110	1601-110-2	1601-110-3	96.40
125	1601-125-2	1601-125-3	109.80
140	1601-140-2	1601-140-3	123.00
160	1601-160-2	1601-160-3	140.60
180	1601-180-2	1601-180-3	158.20
200	1601-200-2	1601-200-3	175.70
225	1601-225-2	1601-225-3	197.60
250	1601-250-2	1601-250-3	219.80
280	1601-280-2	1601-280-3	246.20
315	1601-315-2	1601-315-3	276.90
355	1601-355-2	1601-355-3	312.00
400	1601-400-2	1601-400-3	351.70
450	1601-450-2	1601-450-3	395.60
500	1601-500-2	1601-500-3	439.70
560	1601-560-2	1601-560-3	492.40
630	1601-630-2	1601-630-3	554.10

Notes:

- Many other pressure ratings available - check page 21 for options
- Longer lengths available on request
- Variety of coloured stripes and jackets available



POLYETHYLENE PIPE - COILS

STANDARD STOCK LINES PE80 • PN12.5 • BLUE

SIZE OD (MM)	CODE 100 METRE COIL	ID SIZE (MM)
20	1441-020-7	16.1
25	1441-025-7	20.2
32	1441-032-7	26.0
40	1441-040-7	32.3
50	1441-050-7	40.4
63	1441-063-7	50.9
75	1441-075-7	60.9
90	1441-090-7	72.9
110	1441-110-7	89.3
125	1441-125-7	101.4

STANDARD STOCK LINES PE100 • PN16 • BLACK

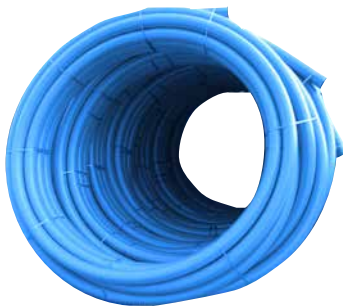
SIZE OD (MM)	CODE 100 METRE COIL	ID SIZE (MM)
20	1401-020-7	16.1
25	1401-025-7	20.2
32	1401-032-7	26.0
40	1401-040-7	32.3
50	1401-050-7	40.4
63	1401-063-7	50.9
75	1401-075-7	60.9
90	1401-090-7	72.9
110	1401-110-7	89.3
125	1401-125-7	101.4

STANDARD STOCK LINES PE100 • PN10 • BLACK

SIZE OD (MM)	CODE 100 METRE COIL	ID SIZE (MM)
20	1601-020-7	16.7
25	1601-025-7	21.1
32	1601-032-7	28.1
40	1601-040-7	35.0
50	1601-050-7	43.8
63	1601-063-7	55.1
75	1601-075-7	65.7
90	1601-090-7	78.8
110	1601-110-7	96.4
125	1601-125-7	109.8

Notes:

- 25, 50, 100 & 200 metre coils in stock (dependant on diameter)
- Other pressure ratings available
- Stripes available in a variety of colours



FLANGED LENGTHS

PE100 • SDR11 • PN16 • WATER • TABLE E

SIZE OD (MM)	CODE SDR11	STD LENGTH (M)	FLANGE SIZE (INCH)	ID SIZE (MM)
90	1401-090-2-FF-3	6	3	72.9
110	1401-110-2-FF-4	6	4	89.3
125	1401-125-2-FF-4	6	4	101.4
125	1401-125-2-FF-5	6	5	101.4
160	1401-160-2-FF-5	6	5	129.9
160	1401-160-2-FF-6	6	6	129.9
180	1401-180-2-FF-6	6	6	146.2
200	1401-200-2-FF-8	6	8	162.4
225	1401-225-2-FF-8	6	8	182.7
250	1401-250-2-FF-10	6	10	203.2
280	1401-280-2-FF-10	6	10	227.7
315	1401-315-2-FF-12	6	12	256.1
90	1401-090-3-FF-3	12	3	72.9
110	1401-110-3-FF-4	12	4	89.3
125	1401-125-3-FF-4	12	4	101.4
125	1401-125-3-FF-5	12	5	101.4
160	1401-160-3-FF-5	12	5	129.9
160	1401-160-3-FF-6	12	6	129.9
180	1401-180-3-FF-6	12	6	146.2
200	1401-200-3-FF-8	12	8	162.4
225	1401-225-3-FF-8	12	8	182.7
250	1401-250-3-FF-10	12	10	203.2
280	1401-280-3-FF-10	12	10	227.7
315	1401-315-3-FF-12	12	12	256.1

PE100 • SDR17 • PN10 • WATER • TABLE E

SIZE OD (MM)	CODE SDR17	STD LENGTH (M)	FLANGE SIZE (INCH)	ID SIZE (MM)
90	1601-090-2-FF-3	6	3	78.8
110	1601-110-2-FF-4	6	4	96.4
125	1601-125-2-FF-4	6	4	109.8
125	1601-125-2-FF-5	6	5	109.8
160	1601-160-2-FF-5	6	5	140.6
160	1601-160-2-FF-6	6	6	140.6
180	1601-180-2-FF-6	6	6	158.2
200	1601-200-2-FF-8	6	8	175.7
225	1601-225-2-FF-8	6	8	197.6
250	1601-250-2-FF-10	6	10	219.8
280	1601-280-2-FF-10	6	10	246.2
315	1601-315-2-FF-12	6	12	276.9
90	1601-090-3-FF-3	12	3	78.8
110	1601-110-3-FF-4	12	4	96.4
125	1601-125-3-FF-4	12	4	109.8
125	1601-125-3-FF-5	12	5	109.8
160	1601-160-3-FF-5	12	5	140.6
160	1601-160-3-FF-6	12	6	140.6
180	1601-180-3-FF-6	12	6	158.2
200	1601-200-3-FF-8	12	8	175.7
225	1601-225-3-FF-8	12	8	197.6
250	1601-250-3-FF-10	12	10	219.8
280	1601-280-3-FF-10	12	10	246.2
315	1601-315-3-FF-12	12	12	276.9

Note: other flange patterns and special lengths available - please specify when ordering

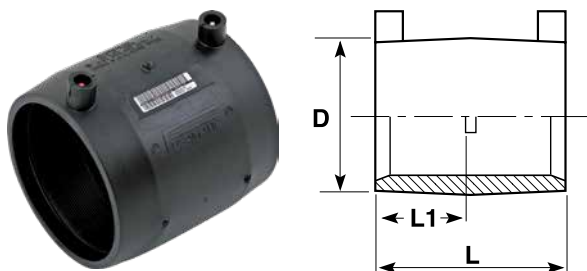


ELECTROFUSION COUPLER

PE100 • SDR11 - SDR26 • PN16 WATER • 1000KPA GAS

SIZE (MM)	CODE SDR11-21	CODE SDR17-26	L (MM)	L1 (MM)	D (MM)
20	2014-0020	-	77	38	29
25	2014-0025	-	77	38	34
32	2014-0032	-	77	38	43
40	2014-0040	-	90	44	52
50	2014-0050	-	91	44	62
63	2014-0063	-	102	49	77
75	2014-0075	-	120	59	92
90	2014-0090	-	122	60	110
110	2014-0110	-	144	70	133
125	2014-0125	-	154	80	151
140	2014-0140	-	165	79	172
160	2014-0160	-	175	86	195
180	2014-0180	-	185	91	220
200	2014-0200	-	186	92	243
225	2014-0225	-	222	109	270
250	2014-0250	-	220	108	300
280	2014-0280	-	260	127	345
315	2014-0315	-	261	128	386
355	2014-0355	-	260	126	437
400	2014-0400	2016-0400	295	147	499
450	2014-0450	2016-0450	320	160	522
500	2014-0500	2016-0500	360	180	621
560	2014-0560	2016-0560	390	195	694
630	2014-0630	2016-0630	430	215	780
710	2014-0710	2016-0710	500	245	812
800	2014-0800	2016-0800	500	245	915
900	2014-0900	2016-0900	550	270	1110
1000	2014-1000	2016-1000	600	395	1238

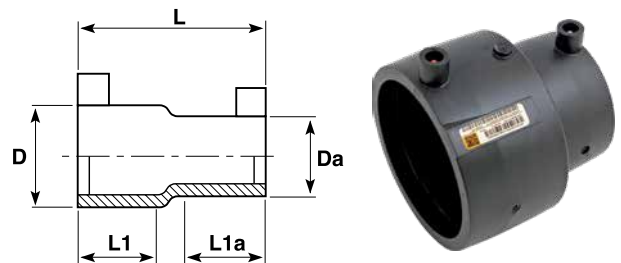
Note: SDR17 couplers are rated to Water PN10 – Gas PN6.



ELECTROFUSION REDUCER

PE100 • SDR11 - SDR21 • PN16 WATER • 1000KPA GAS

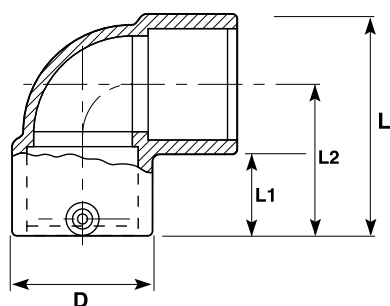
SIZE (MM)	CODE	L (MM)	L1 (MM)	D (MM)	L1A (MM)	DA (MM)
25 x 20	2034-2520	77	39	34	37	29
32 x 20	2034-3220	77	39	43	37	29
32 x 25	2034-3225	77	39	43	37	34
40 x 32	2034-4032	91	46	52	43	44
50 x 32	2034-5032	91	47	62	41	44
50 x 40	2034-5040	91	46	62	43	52
63 x 32	2034-6332	102	52	78	44	44
63 x 40	2034-6340	102	52	78	45	52
63 x 50	2034-6350	102	52	78	48	62
75 x 63	2034-7563	126	61	98	57	82
90 x 63	2034-9063	123	61	110	55	79
110 x 63	2034-1163	137	75	140	54	98
110 x 90	2034-1190	137	68	134	62	112
125 x 90	2034-1290	145	75	152	63	112
160 x 110	2034-1611	184	89	200	73	140
180 x 125	2034-1812	221	101	216	83	157



ELECTROFUSION 90° ELBOW

PE100 • SDR11 - SDR21 • PN16 WATER • 1000KPA GAS

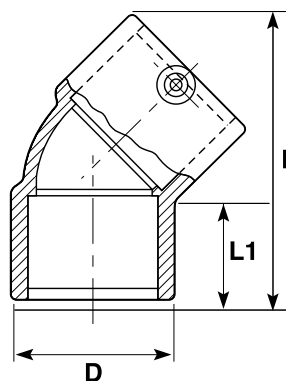
SIZE (MM)	CODE	L (MM)	L1 (MM)	L2 (MM)	D (MM)
20	2054-0020	83	40	63	43
25	2054-0025	76	41	60	35
32	2054-0032	84	40	62	44
40	2054-0040	91	42	65	52
50	2054-0050	103	45	72	63
63	2054-0063	123	50	84	81
75	2054-0075	141	53	92	95
90	2054-0090	165	60	109	113
110	2054-0110	204	73	135	137
125	2054-0125	228	78	152	154
160	2054-0160	305	87	205	201
180	2054-0180	308	90	197	222
200	2054-0200	423	173	298	250
225	2054-0225	458	178	318	280
250	2054-0250	502	192	347	310



ELECTROFUSION 45° ELBOW

PE100 • SDR11 - SDR21 • PN16 WATER • 1000KPA GAS

SIZE (MM)	CODE	L (MM)	L1 (MM)	D (MM)
25	2104-0025	77	38	35
32	2104-0032	99	40	44
40	2104-0040	108	42	53
50	2104-0050	124	45	63
63	2104-0063	137	50	79
75	2104-0075	153	53	94
90	2104-0090	177	60	117
110	2104-0110	213	75	137
125	2104-0125	240	79	154
160	2104-0160	283	89	201
180	2104-0180	299	90	222
200	2104-0200	n/a	104	250
225	2104-0225	n/a	112	280
250	2104-0250	n/a	123	310

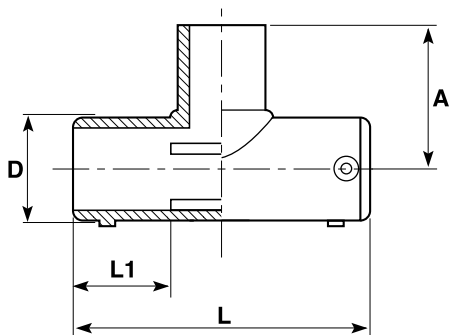


ELECTROFUSION EQUAL TEE

PE100 • SDR11 - SDR21 • PN16 WATER • 1000KPA GAS

SIZE (MM)	CODE	L (MM)	L1 (MM)	D (MM)	A (MM)
20	2154-0020	98	35	44	90
25	2154-0025	98	35	44	90
32	2154-0032	98	35	44	90
40	2154-0040	131	44	52	91
50	2154-0050	141	43	63	104
63	2154-0063	156	50	82	114
75	2154-0075	174	55	100	134
90	2154-0090	206	64	115	143
110	2154-0110	239	73	139	157
125	2154-0125	264	80	156	182
160	2154-0160	313	89	200	211
180	2154-0180	334	90	222	232
200	2154-0200	590	104	250	250
225	2154-0225	636	112	280	270
250	2154-0250	685	123	310	288

Note: Branch off tee is a spigot fitting. A coupler is required.

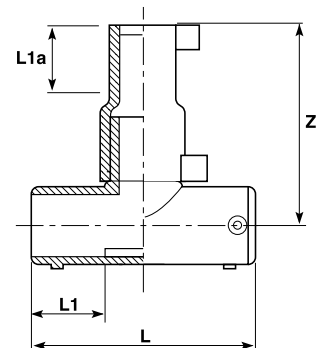


ELECTROFUSION REDUCING TEE

PE100 • SDR11 - SDR21 • PN16 WATER • 1000KPA GAS

SIZE (MM)	CODE	L (MM)	L1 (MM)	L1A (MM)	Z (MM)
25 x 20	2164-2520	98	35	37	138
32 x 20	2164-3220	98	35	37	138
32 x 25	2164-3225	210	65	37	116
40 x 32	2164-4032	144	49	41	145
50 x 32	2164-5032	144	49	40	178
63 x 32	2164-6332	174	61	40	205
63 x 40	2164-6340	174	61	44	206
63 x 50	2164-6350	174	61	44	205
90 x 63	2164-9063	210	65	61	277
110 x 63	2164-1163	265	88	58	330
110 x 90	2164-1190	265	88	62	316
125 x 90	2164-1290	266	79	79	344
160 x 110	2164-1611	367	112	72	380
160 x 125	2164-1612	367	112	83	486
180 x 125	2164-1812	372	105	83	493

Note: Fitting supplied as two parts.



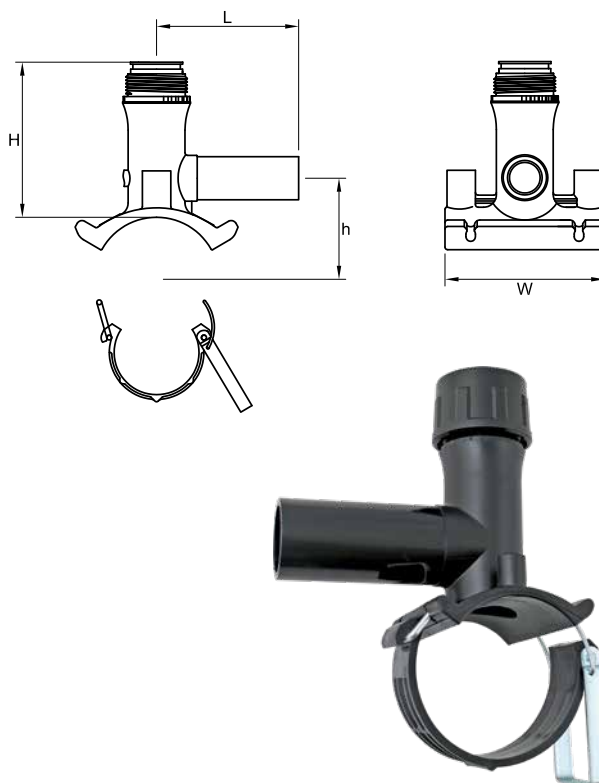
ELECTROFUSION LIVE TAPPING SADDLE

PE100 • SDR11 - SDR21 • PN16 WATER • 1000KPA GAS

SIZE (MM)	CODE	L (MM)	H (MM)	h (MM)	W (MM)
40 x 25	2214-4025	105	110	50	120
40 x 32	2214-4032	105	110	50	120
50 x 25	2214-5025	105	110	50	120
50 x 32	2214-5032	105	110	50	120
63 x 25	2214-6325	105	119	62	120
63 x 32	2214-6332	105	119	62	120
63 x 40	2214-6340	165	155	59.5	146
63 x 50	2214-6350	165	155	59.5	146
63 x 63	2214-6363	165	155	59.5	146
75 x 25	2214-7525	105	110	77	120
75 x 32	2214-7532	105	110	77	120
75 x 40	2214-7540	165	152	57	146
75 x 50	2214-7550	165	152	57	146
75 x 63	2214-7563	165	152	57	146
90 x 25	2214-9025	105	110	77	120
90 x 32	2214-9032	105	110	77	120
90 x 40	2214-9040	165	152	57	146
90 x 50	2214-9050	165	152	57	146
90 x 63	2214-9063	165	152	57	146
110 x 25	2214-1125	105	117	87	120
110 x 32	2214-1132	105	117	87	120
110 x 40	2214-1140	165	176	105	146
110 x 50	2214-1150	165	176	105	146
110 x 63	2214-1163	165	176	105	146
125 x 25	2214-1225	105	117	95	120
125 x 32	2214-1232	105	117	95	120
125 x 40	2214-1240	165	178	112	146
125 x 50	2214-1250	165	178	112	146
125 x 63	2214-1263	165	178	112	146
160 x 32	2214-1632	105	122	112	120
160 x 63	2214-1663	165	182	137	146
180 x 25	2214-1825	105	122	122	120
180 x 32	2214-1832	105	122	122	120
180 x 40	2214-1840	165	183	147	146
180 x 50	2214-1850	165	183	147	146
180 x 63	2214-1863	165	183	147	146
200 x 32	2214-2032	105	122	132	120
200 x 63	2214-2063	165	183	157	146
225 x 63	2214-2263	165	183	169	146

SIZE (MM)	CODE	L (MM)	H (MM)	h (MM)	W (MM)
250 x 32	2214-2532-TL	165	183	182	146
250 x 63	2214-2563-TL	165	183	182	146
280 x 63	2214-2863-TL	165	184	196	146
315 x 63	2214-3163-TL	165	187	217	146
355 x 63	2214-3563-TL	165	187	238	146
400 x 63	2214-4063-TL	165	190	262	146
450 x 63	2214-4563-TL	165	190	287	146

- Larger sizes and a range of other offtake sizes are available on request.
- Some saddles have electrofusion reducers to achieve correct offtake (2 piece).
- Some saddles are top load saddles, as indicated by "TL" in the code.
- Tapping keys are stocked to suit saddles



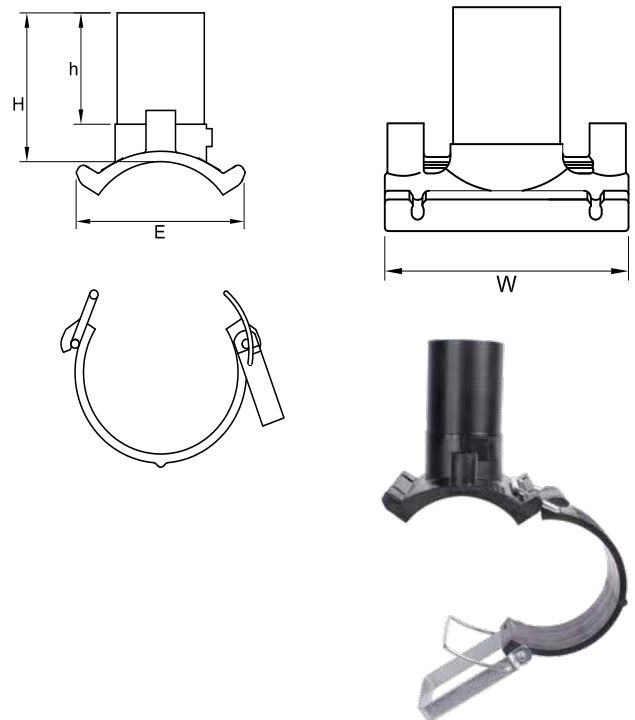
ELECTROFUSION BRANCH SADDLE

PE100 • SDR11 - SDR21 • PN16 WATER • 1000KPA GAS

SIZE (MM)	CODE	H (MM)	h (MM)	W (MM)	E (MM)
40 x 25	2224-4025	90	52	103	83
40 x 32	2224-4032	90	57	103	83
63 x 25	2224-6325	106	59	122	105
63 x 32	2224-6332	106	59	122	105
63 x 40	2224-6340	106	59	122	105
63 x 50	2224-6350	106	59	122	105
63 x 63	2224-6363	106	59	122	105
75 x 32	2224-7532	115	75	147	119
75 x 40	2224-7540	115	75	147	119
75 x 50	2224-7550	115	75	147	119
75 x 63	2224-7563	115	75	147	119
90 x 25	2224-9025	91	51	136	133
90 x 32	2224-9032	91	51	136	133
90 x 40	2224-9040	105	69	136	133
90 x 50	2224-9050	105	82	136	133
90 x 63	2224-9063	105	88	136	133
110 x 25	2224-1125	118	75	147	122
110 x 32	2224-1132	118	75	147	122
110 x 40	2224-1140	118	75	147	122
110 x 50	2224-1150	118	75	147	122
110 x 63	2224-1163	118	75	147	122
110 x 90	2224-1190	121	84	165	180
125 x 25	2224-1225	118	75	147	122
125 x 32	2224-1232	118	75	147	122
125 x 40	2224-1240	118	75	147	122
125 x 50	2224-1250	118	75	147	122
125 x 63	2224-1263	118	75	147	122
125 x 90	2224-1290	114	84	165	180
160 x 25	2224-1625	125	75	147	122
160 x 32	2224-1632	125	75	147	122
160 x 40	2224-1640	125	75	147	122
160 x 50	2224-1650	125	75	147	122
160 x 63	2224-1663	125	75	147	122
160 x 90	2224-1690	110	84	215	236
160 x 110	2224-1611	131	98	217	236
180 x 25	2224-1825	125	75	147	122
180 x 32	2224-1832	125	75	147	122
180 x 40	2224-1840	125	75	147	122
180 x 50	2224-1850	125	75	147	122
180 x 63	2224-1863	125	75	147	122
180 x 90	2224-1890	100	84	215	236
180 x 110	2224-1811	121	98	217	236
180 x 125	2224-1812	121	98	217	236

SIZE (MM)	CODE	H (MM)	h (MM)	W (MM)	E (MM)
225 x 63	2224-2263	125	75	147	122
225 x 90	2224-2290	113	84	165	291
225 x 125	2224-2212	123	98	310	327
250 x 63	2224-2563-TL	120	84	165	317
250 x 90	2224-2590	120	84	165	317
250 x 125	2224-2512	110	98	310	327
280 x 63	2224-2863-TL	140	75	146	122
280 x 90	2224-2890	115	102	300	305
280 x 125	2224-2812	121	109	300	305
315 x 63	2224-3163-TL	140	75	146	122
315 x 90	2224-3190	115	102	300	305
315 x 125	2224-3112	121	109	300	305
315 x 160	2224-3116	132	119	300	305
355 x 63	2224-3563-TL	140	75	146	122
355 x 90	2224-3590	115	102	300	305
355 x 125	2224-3512	121	109	300	305

- Range of offtake sizes and larger sizes available on request up to 1200mm.
- Some saddles are top load saddles, as indicated by "TL" in the code.
- Some saddles may be two part with electrofusion reducer to achieve correct offtake

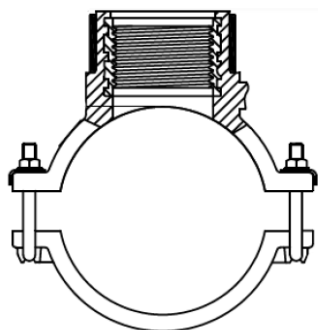


THREADED BRANCH SADDLE

PE100 • SDR11 - SDR21 • PN16 WATER • 1000KPA GAS

SIZE (MM)	THREAD SIZE 1"	THREAD SIZE 2"
63	2224-63-1	-
75	2224-75-1	-
90	2224-90-1	2224-90-2
110	2224-11-1	2224-11-2
125	2224-12-1	2224-12-2
160	2224-16-1	2224-16-2
180	2224-18-1	2224-18-2
200	2224-20-1	2224-20-2
225	2224-22-1	2224-22-2
250	2224-25-1	2224-25-2
280	2224-28-1	2224-28-2
315	2224-31-1	2224-31-2
355	2224-35-1	2224-35-2
400	2224-40-1	2224-40-2
450	2224-45-1	2224-45-2

Note: More sizes available, please enquire.

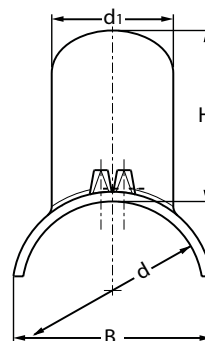


ELECTROFUSION 45° BRANCH SADDLE

PE100 • SDR11 - SDR26 • SUITABLE FOR WASTEWATER ONLY

SIZE (D x D1)	CODE	L (MM)	B (MM)	H (MM)
160-200 x 110	EFSS1611	255	182	158
225-315 x 110	EFSS2511	255	221	158

Note: Not supplied with holesaw or strap. These can be purchased separately

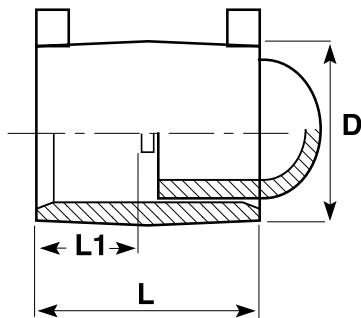


ELECTROFUSION END CAP

PE100 • SDR11 - SDR26 • PN16 WATER • 1000KPA GAS

SIZE (MM)	CODE	L (MM)	L1 (MM)	D (MM)
20	2274-0020	82	38	29
25	2274-0025	82	38	34
32	2274-0032	84	38	46
40	2274-0040	97	44	52
50	2274-0050	101	44	62
63	2274-0063	115	49	77
75	2274-0075	125	61	100
90	2274-0090	138	60	110
110	2274-0110	164	70	133
125	2274-0125	175	75	151
140	2274-0140	202	89	176
160	2274-0160	214	85	196
180	2274-0180	215	91	220
200	2274-0200	220	108	243
225	2274-0225	222	109	276
250	2274-0250	236	108	301
280	2274-0280	390	127	345
315	2274-0315	395	128	386

Note: This item is supplied in two parts.

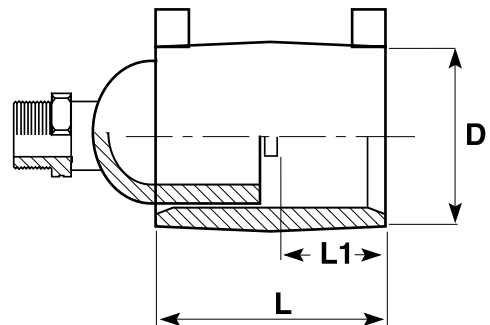


ELECTROFUSION TEST END CAP WITH BRASS THREAD

PE100 • SDR11 - SDR26 • PN16 WATER • 1000KPA GAS

SIZE (MM)	CODE 3/4" BSP	CODE 1" BSP	L (MM)	L1 (MM)	D (MM)
90	2284-9020	2284-9025	193	60	110
110	2284-1120	2284-1125	220	70	133
125	2284-1220	2284-1225	230	75	151
140	2284-1420	2284-1425	257	89	176
160	2284-1620	2284-1625	269	85	196
180	2284-1820	2284-1825	270	91	220
200	2284-2020	2284-2025	275	108	243
225	2284-2220	2284-2225	277	109	276
250	2284-2520	2284-2525	291	108	301
280	2284-2820	2284-2825	445	127	345
315	2284-3120	2284-3125	452	128	386

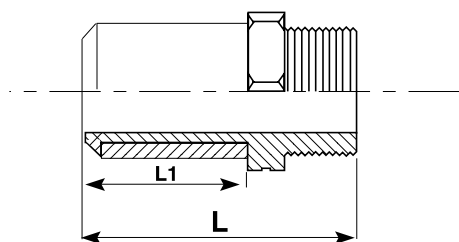
Note: Other sizes and female threads available on request.



BRASS MALE TRANSITION INSERT

PE100 • SDR11 • PN16 WATER • 1000KPA GAS

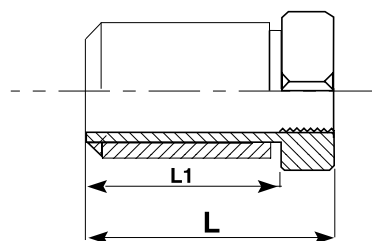
SIZE (MM)		BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE	L (MM)	L1 (MM)
20	x	1/2"	15	2334-2015	95	38
25	x	3/4"	20	2334-2520	95	38
32	x	1"	25	2334-3225	108	38
40	x	1 1/4"	32	2334-4032	122	44
50	x	1 1/2"	40	2334-5040	125	44
63	x	2"	50	2334-6350	143	49
75	x	2 1/2"	65	2334-7565	159	61
90	x	3"	75	2334-9080	178	60
110	x	4"	100	2334-1110	203	70
125	x	4"	100	2334-1210	225	78



BRASS FEMALE TRANSITION INSERT

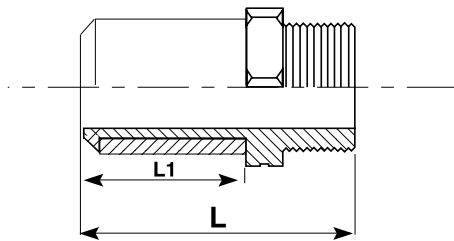
PE100 • SDR11 • PN16 WATER • 1000KPA GAS

SIZE (MM)		BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE	L (MM)	L1 (MM)
20	x	1/2"	15	2344-2015	80	38
25	x	3/4"	20	2344-2520	80	38
32	x	1"	25	2344-3225	90	38
40	x	1 1/4"	32	2344-4032	100	44
50	x	1 1/2"	40	2344-5040	103	44
63	x	2"	50	2344-6350	121	49
75	x	2 1/2"	65	2344-7565	136	61
90	x	3"	80	2344-9080	149	60
110	x	4"	100	2344-1110	166	70
125	x	4"	100	2344-1210	184	78



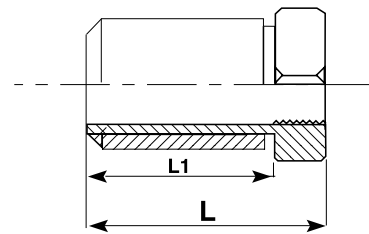
**STAINLESS STEEL MALE
TRANSITION INSERT**

SIZE (MM)		BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE	L (MM)	L1 (MM)
25	x	3/4"	20	2394-2520	99	40
32	x	1"	25	2394-3225	110	44
40	x	1 1/4"	32	2394-4032	121	49
50	x	1 1/2"	40	2394-5040	134	54
63	x	2"	50	2394-6350	150	63

**STAINLESS STEEL FEMALE
TRANSITION INSERT**

PE100 • SDR11 • PN16 WATER • 1000KPA GAS

SIZE (MM)		BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE	L (MM)	L1 (MM)
25	x	3/4"	20	2404-2520	91	40
32	x	1"	25	2404-3225	100	44
40	x	1 1/4"	32	2404-4032	109	49
50	x	1 1/2"	40	2404-5040	124	54
63	x	2"	50	2404-6350	141	63

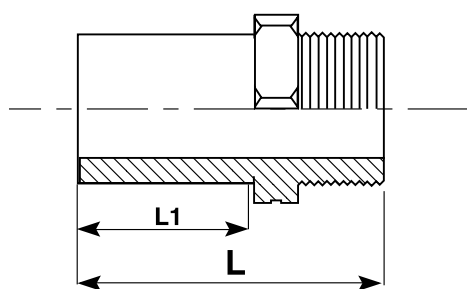


PE MALE BSP SPIGOT ADAPTOR

PE100 • SDR11 - SDR17 • PN10 WATER

SIZE (MM)		BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE	L (MM)	L1 (MM)
20	x	1/2"	15	2354-2015	95	38
25	x	3/4"	20	2354-2520	95	38
32	x	1"	25	2354-3225	108	38
40	x	1 1/4"	32	2354-4032	122	44
40	x	1 1/2"	40	2354-4040	122	44
50	x	1 1/2"	40	2354-5040	125	44
63	x	2"	50	2354-6350	143	49
75	x	2 1/2"	65	2354-7565	159	61
90	x	3"	80	2354-9080	178	60
110	x	4"	100	2354-1110	203	70

Note: these products are also suitable for the use with Stream HDPE Drainage system.

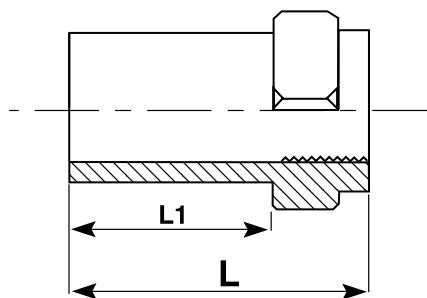


PE FEMALE BSP SPIGOT ADAPTOR

PE100 • SDR11 - SDR17 • PN10 WATER

SIZE (MM)		BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE	L (MM)	L1 (MM)
20	x	1/2"	15	2364-2015	80	38
25	x	3/4"	20	2364-2520	80	38
32	x	1"	25	2364-3225	90	38
40	x	1 1/4"	32	2364-4032	100	44
40	x	1 1/2"	40	2364-4040	100	44
50	x	1 1/2"	40	2364-5040	103	44
63	x	2"	50	2364-6350	121	49
75	x	2 1/2"	65	2364-7565	136	61
90	x	3"	80	2364-9080	149	60
110	x	4"	100	2364-1110	166	70

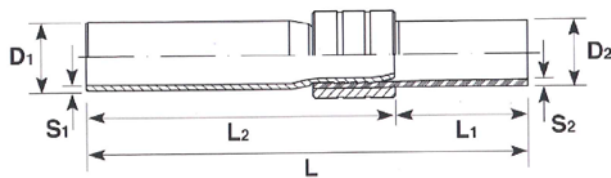
Note: these products are also suitable for the use with Stream HDPE Drainage system.



PE/STEEL TRANSITION**PE100 • SDR11 • 16BAR • 500KPA GAS**

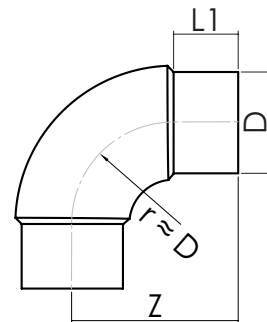
SIZE (MM)	CODE	D2 (MM)	L (MM)	L1 (MM)	L2 (MM)	S1 (MM)	S2 (MM)
25	2554-2525	25	495	160	335	2.6	3.0
32	2554-3232	32	495	160	335	3.2	3.0
40	2554-4040	40	495	160	335	3.2	3.7
50	2554-5050	50	495	160	335	3.2	4.6
63	2554-6363	63	520	185	335	3.6	5.8
90	2554-9090	90	525	190	335	4.0	8.2
110	2554-1111	110	525	190	335	4.5	10.0
125	2554-1212	125	525	190	335	4.5	11.4
160	2554-1616	160	670	200	470	5.0	14.6
180	2554-1818	180	670	200	470	5.0	16.4
200	2554-2020	200	730	200	520	5.6	18.2
225	2554-2222	225	680	200	500	5.6	20.5
250	2554-2525	250	720	220	500	6.3	22.7
315	2554-3131	315	850	350	500	8.0	28.6

Note: Please specify threaded or plain end

**90° MULTIBEND / RADIUS ELBOW****PE100 • SDR11 - SDR17**

SIZE (MM)	CODE SDR11	Z (MM)	L1 (MM)	CODE SDR17	Z (MM)	L1 (MM)
32	3884-0032	79	48	-	-	-
40	3884-0040	92	52	-	-	-
50	3884-0050	107	59	3886-0050	108	59
63	3884-0063	131	69	3886-0063	130	67
75	3884-0075	153	76	3886-0075	152	76
90	3884-0090	176	83	3886-0090	173	83
110	3884-0110	193	84	3886-0110	193	85
125	3884-0125	216	92	3886-0125	216	92
140	3884-0140	237	96	3886-0140	237	97
160	3884-0160	262	103	3886-0160	260	102
180	3884-0180	294	115	3886-0180	290	113
200	3884-0200	317	122	3886-0200	317	122
225	3884-0225	351	131	3886-0225	350	130
250	3884-0250	382	133	3886-0250	382	134
280	3884-0280	432	153	3886-0280	430	154
315	3884-0315	471	154	3886-0315	465	153

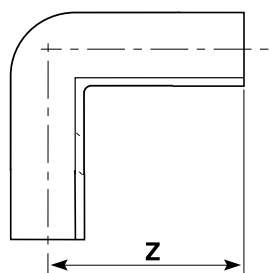
Note: suitable for electrofusion couplers



90° SPIGOT ELBOW

PE100 • SDR11 - SDR17

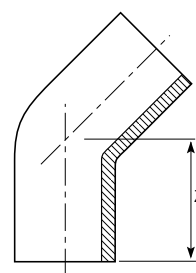
SIZE (MM)	CODE SDR11	CODE SDR17	Z (MM)
20	3054-0020	-	68
25	3054-0025	-	80
32	3054-0032	-	71
40	3054-0040	-	83
50	3054-0050	-	91
63	3054-0063	3056-0063	111
75	3054-0075	3056-0075	128
90	3054-0090	3056-0090	130
110	3054-0110	3056-0110	149
125	3054-0125	3056-0125	166
140	3054-0140	3056-0140	183
160	3054-0160	3056-0160	191
180	3054-0180	3056-0180	226
200	3054-0200	3056-0200	220
225	3054-0225	3056-0225	238
250	3054-0250	3056-0250	304
280	3054-0280	3056-0280	340
315	3054-0315	3056-0315	370
355	3054-0355	3056-0355	421
400	3054-0400	3056-0400	469
450	3054-0450	3056-0450	522
500	3054-0500	3056-0500	576
560	3054-0560	3056-0560	625
630	3054-0630	3056-0630	683



45° SPIGOT ELBOW

PE100 • SDR11 - SDR17

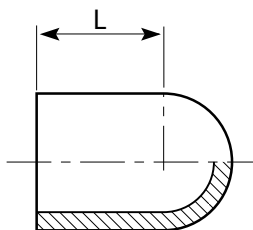
SIZE (MM)	CODE SDR11	CODE SDR17	Z (MM)
20	3104-0020	-	44
25	3104-0025	-	48
32	3104-0032	-	57
40	3104-0040	-	63
50	3104-0050	-	70
63	3104-0063	3106-0063	80
75	3104-0075	3106-0075	90
90	3104-0090	3106-0090	104
110	3104-0110	3106-0110	108
125	3104-0125	3106-0125	133
140	3104-0140	3106-0140	135
160	3104-0160	3106-0160	157
180	3104-0180	3106-0180	177
200	3104-0200	3106-0200	172
225	3104-0225	3106-0225	183
250	3104-0250	3106-0250	217
280	3104-0280	3106-0280	238
315	3104-0315	3106-0315	251
355	3104-0355	3106-0355	269
400	3104-0400	3106-0400	286
450	3104-0450	3104-0450	303
500	3104-0500	3104-0500	320
560	3104-0560	3104-0560	337
630	3104-0630	3104-0630	354



SPIGOT END CAP

PE100 • SDR11 - SDR17

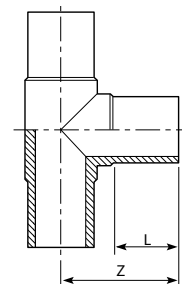
SIZE (MM)	CODE SDR11	CODE SDR17	L (MM)
20	3274-0020	-	41
25	3274-0025	-	41
32	3274-0032	-	44
40	3274-0040	-	49
50	3274-0050	-	55
63	3274-0063	-	63
75	3274-0075	-	70
90	3274-0090	-	79
110	3274-0110	-	82
125	3274-0125	-	87
140	3274-0140	-	92
160	3274-0160	-	98
180	3274-0180	-	105
200	3274-0200	-	112
225	3274-0225	-	120
250	3274-0250	-	129
280	3274-0280	-	139
315	3274-0315	3276-0315	150
355	3274-0355	3276-0355	163
400	3274-0400	3276-0400	179
450	3274-0450	3276-0450	295
500	3274-0500	3276-0500	305
560	3274-0560	3276-0560	315
630	3274-0630	3276-0630	325



SPIGOT EQUAL TEE

PE100 • SDR11 - SDR17

SIZE (MM)	CODE SDR11	CODE SDR17	L (MM)	Z (MM)
20	3154-0020	-	41	66
25	3154-0025	-	41	71
32	3154-0032	-	44	77
40	3154-0040	-	49	90
50	3154-0050	-	55	109
63	3154-0063	3156-0063	63	117
75	3154-0075	3156-0075	70	134
90	3154-0090	3156-0090	79	148
110	3154-0110	3156-0110	82	166
125	3154-0125	3156-0125	87	181
140	3154-0140	3156-0140	92	189
160	3154-0160	3156-0160	98	211
180	3154-0180	3156-0180	105	233
200	3154-0200	3156-0200	112	241
225	3154-0225	3156-0225	120	264
250	3154-0250	3156-0250	129	295
280	3154-0280	3156-0280	139	345
315	3154-0315	3156-0315	150	358
355	3154-0355	3156-0355	164	391
400	3154-0400	3156-0400	180	430
450	3154-0450	3156-0450	195	470
500	3154-0500	3156-0500	215	515
560	3154-0560	3156-0560	235	565
630	3154-0630	3156-0630	253	618

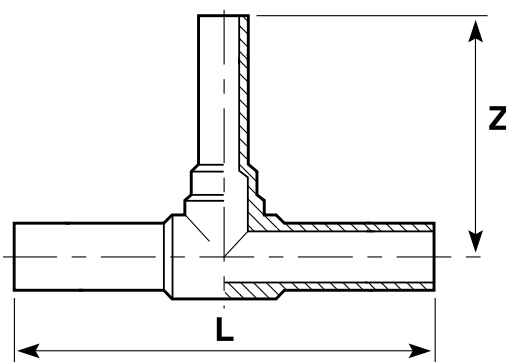


SPIGOT PRESSURE REDUCING TEE

PE100 • SDR11 - SDR17

SIZE (MM)	SIZE (MM)	L (MM)	Z (MM)	CODE SDR11	CODE SDR17
63	x 32	156	83	3164-6332	3166-6332
63	x 40	166	91	3164-6340	3166-6340
63	x 50	178	91	3164-6350	3166-6350
75	x 50	206	98	3164-7550	3166-7550
75	x 63	222	104	3164-7563	3166-7563
90	x 63	220	113	3164-9063	3166-9063
90	x 75	234	127	3164-9075	3166-9075
110	x 63	244	125	3164-1163	3166-1163
110	x 75	258	139	3164-1175	3166-1175
110	x 90	276	138	3164-1190	3166-1190
125	x 90	322	147	3164-1290	3166-1290
125	x 110	346	159	3164-1211	3166-1211
160	x 90	314	168	3164-1690	3166-1690
160	x 110	338	180	3164-1611	3166-1611
180	x 110	350	192	3164-1811	3166-1811
180	x 160	410	211	3164-1816	3166-1816
200	x 63	600	550	3164-2063	3166-2063
200	x 110	600	550	3164-2011	3166-2011
200	x 125	600	550	3164-2012	3166-2012
200	x 160	600	550	3164-2016	3166-2016
225	x 110	600	550	3164-2211	3166-2211
225	x 160	600	550	3164-2216	3166-2216
225	x 180	600	550	3164-2218	3166-2218
250	x 110	600	650	3164-2511	3166-2511
250	x 160	600	650	3164-2516	3166-2516
250	x 180	600	650	3164-2518	3166-2518

SIZE (MM)	SIZE (MM)	L (MM)	Z (MM)	CODE SDR11	CODE SDR17
250	x 200	600	650	3164-2521	3166-2521
280	x 160	600	650	3164-2816	3166-2816
280	x 180	600	650	3164-2818	3166-2818
280	x 200	600	650	3164-2820	3166-2820
315	x 110	600	700	3164-3111	3166-3111
315	x 160	650	700	3164-3116	3166-3116
315	x 180	650	700	3164-3118	3166-3118
315	x 200	650	700	3164-3120	3166-3120
315	x 225	650	700	3164-3122	3166-3122
315	x 250	650	700	3164-3125	3166-3125
355	x 110	650	700	3164-3511	3166-3511
355	x 125	650	700	3164-3512	3166-3512
355	x 160	650	700	3164-3516	3166-3516
355	x 180	650	700	3164-3518	3166-3518
355	x 200	700	700	3164-3520	3166-3520
400	x 110	800	750	3164-4011	3166-4011
400	x 125	800	750	3164-4012	3166-4012
400	x 160	800	750	3164-4016	3166-4016
400	x 180	800	750	3164-4018	3166-4018
400	x 200	800	750	3164-4020	3166-4020
400	x 225	900	750	3164-4022	3166-4022
400	x 250	900	750	3164-4025	3166-4025
400	x 280	900	750	3164-4028	3166-4028
450	x 110	900	750	3164-4511	3166-4511
450	x 125	900	750	3164-4512	3166-4512
450	x 160	900	750	3164-4516	3166-4516
450	x 180	900	750	3164-4518	3166-4518
450	x 200	1000	750	3164-4520	3166-4520
450	x 225	1000	750	3164-4522	3166-4522
450	x 250	1000	800	3164-4525	3166-4525
450	x 280	1000	800	3164-4528	3166-4528
450	x 315	1000	800	3164-4531	3166-4531
500	x 110	1000	800	3164-5011	3166-5011
500	x 125	1000	800	3164-5012	3166-5012
500	x 160	1000	800	3164-5016	3166-5016
500	x 180	1000	800	3164-5018	3166-5018
500	x 200	1000	800	3164-5020	3166-5020
500	x 225	1000	800	3164-5022	3166-5022
500	x 250	1000	900	3164-5025	3166-5025
500	x 280	1000	900	3164-5028	3166-5028
500	x 315	1000	900	3164-5031	3166-5031
500	x 355	1000	900	3164-5035	3166-5035



SPIGOT PRESSURE REDUCING TEE

PE100 • SDR11 - SDR17

SIZE (MM)	SIZE (MM)	L (MM)	Z (MM)	CODE SDR11	CODE SDR17
560	x 110	1000	900	3164-5611	3166-5611
560	x 125	1000	900	3164-5612	3166-5612
560	x 160	1000	900	3164-5616	3166-5616
560	x 180	1000	900	3164-5618	3166-5618
560	x 200	1000	900	3164-5620	3166-5620
560	x 225	1000	900	3164-5622	3166-5622
560	x 250	1000	900	3164-5625	3166-5625
560	x 315	1000	1200	3164-5631	3166-5631
560	x 355	1000	1200	3164-5635	3166-5635
560	x 400	1000	1200	3164-5640	3166-5640
630	x 110	1000	1200	3164-6311	3166-6311
630	x 125	1000	1200	3164-6312	3166-6312
630	x 160	1000	1200	3164-6316	3166-6316
630	x 180	1000	1200	3164-6318	3166-6318
630	x 200	1000	1200	3164-6320	3166-6320
630	x 225	1000	1200	3164-6322	3166-6322
630	x 250	1000	1200	3164-6325	3166-6325
630	x 315	1100	1200	3164-6331	3166-6331
630	x 355	1100	1200	3164-6335	3166-6335
630	x 400	1200	1200	3164-6340	3166-6340
630	x 450	1200	1200	3164-6345	3166-6345
710	x 110	1100	1200	3164-7111	3166-7111
710	x 125	1100	1200	3164-7112	3166-7112
710	x 160	1100	1200	3164-7116	3166-7116
710	x 180	1100	1200	3164-7118	3166-7118
710	x 200	1100	1200	3164-7120	3166-7120
710	x 225	1100	1200	3164-7122	3166-7122
710	x 250	1100	1200	3164-7125	3166-7125
710	x 280	1200	1200	3164-7128	3166-7128
710	x 315	1200	1200	3164-7131	3166-7131
710	x 355	1200	1200	3164-7135	3166-7135
710	x 400	1300	1500	3164-7140	3166-7140
710	x 450	1300	1500	3164-7145	3166-7145
710	x 500	1300	1500	3164-7150	3166-7150
710	x 560	1300	1500	3164-7156	3166-7156
800	x 110	1100	1200	3164-8011	3166-8011
800	x 125	1100	1200	3164-8012	3166-8012
800	x 160	1100	1200	3164-8016	3166-8016
800	x 180	1100	1200	3164-8018	3166-8018
800	x 200	1100	1200	3164-8020	3166-8020
800	x 225	1100	1200	3164-8022	3166-8022
800	x 250	1200	1200	3164-8025	3166-8025

SIZE (MM)	SIZE (MM)	L (MM)	Z (MM)	CODE SDR11	CODE SDR17
800	x 280	1200	1200	3164-8028	3166-8028
800	x 315	1200	1200	3164-8031	3166-8031
800	x 355	1300	1200	3164-8035	3166-8035
800	x 400	1300	1600	3164-8040	3166-8040
800	x 450	1400	1600	3164-8045	3166-8045
800	x 500	1400	1600	3164-8050	3166-8050
800	x 560	1400	1600	3164-8056	3166-8056
800	x 630	1400	1600	3164-8063	3166-8063
900	x 110	1200	1200	3164-9011	3166-9011
900	x 125	1200	1200	3164-9012	3166-9012
900	x 160	1200	1200	3164-9016	3166-9016
900	x 180	1200	1200	3164-9018	3166-9018
900	x 200	1200	1200	3164-9020	3166-9020
900	x 225	1200	1200	3164-9022	3166-9022
900	x 250	1200	1200	3164-9025	3166-9025
900	x 280	1200	1200	3164-9028	3166-9028
900	x 315	1200	1200	3164-9031	3166-9031
900	x 355	1300	1200	3164-9035	3166-9035
900	x 400	1300	1600	3164-9040	3166-9040
900	x 450	1400	1600	3164-9045	3166-9045
900	x 500	1400	1600	3164-9050	3166-9050
900	x 560	1500	1600	3164-9056	3166-9056
900	x 630	1500	1600	3164-9063	3166-9063
1000	x 110	1400	1200	3164-1011	3166-1011
1000	x 125	1400	1200	3164-1012	3166-1012
1000	x 160	1400	1200	3164-1016	3166-1016
1000	x 180	1400	1200	3164-1018	3166-1018
1000	x 200	1400	1200	3164-1020	3166-1020
1000	x 225	1400	1200	3164-1022	3166-1022
1000	x 250	1400	1200	3164-1025	3166-1025
1000	x 280	1400	1200	3164-1028	3166-1028
1000	x 315	1500	1200	3164-1031	3166-1031
1000	x 355	1500	1200	3164-1035	3166-1035
1000	x 400	1500	1700	3164-1040	3166-1040
1000	x 450	1600	1700	3164-1045	3166-1045
1000	x 500	1600	1700	3164-1050	3166-1050
1000	x 560	1700	1700	3164-1056	3166-1056
1000	x 630	1700	1700	3164-1063	3166-1063
1000	x 710	1700	1700	3164-1071	3166-1071

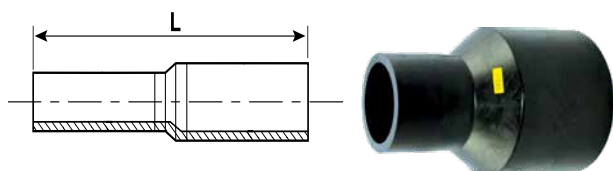
Note: other sizes and pressure ratings available

SPIGOT REDUCER

PE100 • SDR11 - SDR17

SIZE (MM)	CODE SDR11	CODE SDR17	L (MM)
40 x 25	3034-4025	-	130
40 x 32	3034-4032	-	130
50 x 25	3034-5025	-	140
50 x 32	3034-5032	-	140
50 x 40	3034-5040	-	140
63 x 32	3034-6332	-	150
63 x 40	3034-6340	-	150
63 x 50	3034-6350	-	150
75 x 50	3034-7550	-	175
75 x 63	3034-7563	-	175
90 x 63	3034-9063	-	196
90 x 75	3034-9075	-	200
110 x 63	3034-1163	-	214
110 x 75	3034-1175	-	216
110 x 90	3034-1190	-	213
125 x 63	3034-1263	-	195
125 x 90	3034-1290	-	222
125 x 110	3034-1211	-	222
160 x 90	3034-1690	3036-1690	245
160 x 110	3034-1611	3036-1611	250
160 x 125	3034-1612	3036-1612	250
160 x 140	3034-1614	3036-1614	245
180 x 125	3034-1812	3036-1812	255
180 x 160	3034-1816	3036-1816	255
200 x 160	3034-2016	3036-2016	270
225 x 160	3034-2216	3036-2216	280
225 x 180	3034-2218	3036-2218	280
250 x 180	3034-2518	3036-2518	294
250 x 200	3034-2521	3036-2521	310
250 x 225	3034-2522	3036-2522	305
280 x 250	3034-2825	3036-2825	348
315 x 200	3034-3120	3036-3120	330
315 x 225	3034-3122	3036-3122	375
315 x 250	3034-3125	3036-3125	375
315 x 280	3034-3128	3036-3128	355

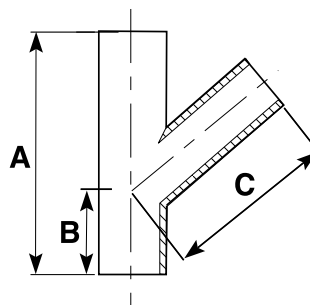
Note: other sizes are available.



SPIGOT 45° MOULDED JUNCTION

PE100 • SDR11 - SDR17

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)	C (MM)
40	3194-0040	3196-0040	189	65	120
50	3194-0050	3196-0050	222	78	145
63	3194-0063	3196-0063	244	86	156
75	3194-0075	3196-0075	290	109	182
90	3194-0090	3196-0090	371	136	234
110	3194-0110	3196-0110	400	140	249
125	3194-0125	3196-0125	447	150	290
160	3194-0160	3196-0160	538	165	375
180	3194-0180	3196-0180	580	191	388
200	3194-0200	3196-0200	633	216	408
225	3194-0225	3196-0225	700	220	485
250	3194-0250	3196-0250	792	252	540
280	3194-0280	3196-0280	852	266	586
315	3194-0315	3196-0315	965	303	662

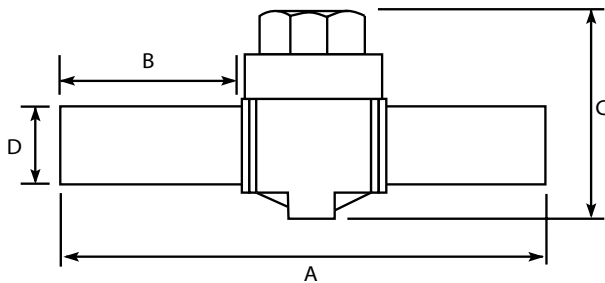


PE BALL VALVE - FULL PORT**PE100 • 16 BAR WATER • PN10 GAS**

SIZE (MM)	CODE	A (MM)	B (MM)	C (MM)
25	2962-0020	310	107	136
20	2962-0025	310	107	136
32	2962-0032	324	109	153
40	2962-0040	324	109	153
50	2962-0050	410	125	195
63	2962-0063	420	125	201
90	2962-0090	575	188	289
110	2962-0110	575	188	289
125	2962-0125	575	188	289
160	2962-0160	625	154	490
180	2962-0180	625	154	490
200	2962-0200	625	154	490
225	2962-0225	625	154	490

Notes:

- Keys for opening are available
- Other sizes available

**BUTTERFLY VALVE****16 BAR WATER**

SIZE (NB)	CODE WAFFER	CODE TABLE E LUGGED
50	BVFW50	BVFL50
65	BVFW65	BVFL65
80	BVFW80	BVFL80
100	BVFW100	BVFL100
125	BVFW125	BVFL125
150	BVFW150	BVFL150
200	BVFW200	BVFL200
250	BVFW250	BVFL250
300	BVFW300	BVFL300

Notes:

- Supplied with lever for operation, gear operated available
- Stainless Steel Disc
- EPDM Seat
- Larger sizes available

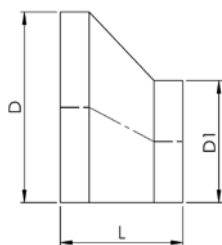


BUTT WELD ECCENTRIC REDUCER

PE100 • SDR11 - SDR17

SIZE (MM)	CODE SDR11	CODE SDR17	L (MM)
160 x 90	4044-1690	4046-1690	140
160 x 110	4044-1611	4046-1611	120
160 x 125	4044-1612	4046-1612	110
160 x 140	4044-1614	4046-1614	100
180 x 110	4044-1811	4046-1811	140
180 x 125	4044-1812	4046-1812	130
180 x 140	4044-1814	4046-1814	120
180 x 160	4044-1816	4046-1816	100
200 x 125	4044-2012	4046-2012	150
200 x 140	4044-2014	4046-2014	130
200 x 160	4044-2016	4046-2016	120
200 x 180	4044-2018	4046-2018	100
225 x 140	4044-2214	4046-2214	160
225 x 160	4044-2216	4046-2216	140
225 x 180	4044-2218	4046-2218	120
225 x 200	4044-2220	4046-2220	110
250 x 160	4044-2516	4046-2516	170
250 x 180	4044-2518	4046-2518	150
250 x 200	4044-2520	4046-2520	130
250 x 225	4044-2522	4046-2522	110
280 x 180	4044-2818	4046-2818	180
280 x 200	4044-2820	4046-2820	160
280 x 225	4044-2822	4046-2822	140
280 x 250	4044-2825	4046-2825	120
315 x 200	4044-3120	4046-3120	190
315 x 225	4044-3122	4046-3122	170
315 x 250	4044-3125	4046-3125	150
315 x 280	4044-3128	4046-3128	130

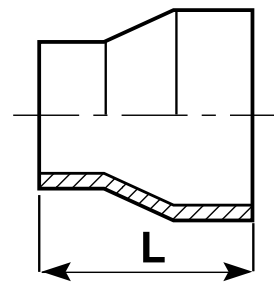
Note: larger sizes available on request



BUTT WELD REDUCER

PE100 • SDR11 - SDR26

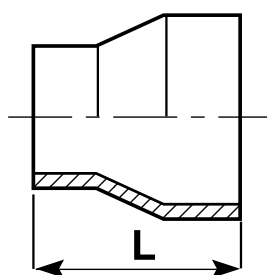
SIZE (MM)	SIZE (MM)	CODE SDR11	CODE SDR17	L (MM)	SIZE (MM)	SIZE (MM)	CODE SDR11	CODE SDR17	L (MM)
125	x 90	4034-1290	4036-1290	110	225	x 200	4034-2220	4036-2220	115
125	x 110	4034-1211	4036-1211	102	250	x 90	4034-2590	4036-2590	120
140	x 63	4034-1463	4036-1463	110	250	x 110	4034-2511	4036-2511	120
140	x 75	4034-1475	4036-1475	110	250	x 125	4034-2512	4036-2512	120
140	x 90	4034-1490	4036-1490	110	250	x 140	4034-2514	4036-2514	115
140	x 110	4034-1411	4036-1411	110	250	x 160	4034-2516	4036-2516	115
140	x 125	4034-1425	4036-1425	110	250	x 180	4034-2518	4036-2518	115
160	x 63	4034-1663	4036-1663	120	250	x 200	4034-2520	4036-2520	115
160	x 75	4034-1675	4036-1675	120	250	x 225	4034-2522	4036-2522	115
160	x 90	4034-1690	4036-1690	140	280	x 90	4034-2890	4036-2890	120
160	x 110	4034-1611	4036-1611	128	280	x 110	4034-2811	4036-2811	120
160	x 125	4034-1625	4036-1625	122	280	x 125	4034-2812	4036-2812	120
160	x 140	4034-1614	4036-1614	120	280	x 140	4034-2814	4036-2814	115
180	x 63	4034-1863	4036-1863	120	280	x 160	4034-2816	4036-2816	115
180	x 75	4034-1875	4036-1875	120	280	x 180	4034-2818	4036-2818	115
180	x 90	4034-1890	4036-1890	143	280	x 200	4034-2820	4036-2820	115
180	x 110	4034-1811	4036-1811	130	280	x 225	4034-2822	4036-2822	115
180	x 125	4034-1812	4036-1812	143	280	x 250	4034-2825	4036-2825	115
180	x 160	4034-1816	4036-1816	130					
200	x 63	4034-2063	4036-2063	120					
200	x 63	4034-2063	4036-2063	120					
200	x 75	4034-2075	4036-2075	120					
200	x 90	4034-2090	4036-2090	120					
200	x 110	4034-2011	4036-2011	120					
200	x 125	4034-2012	4036-2012	120					
200	x 160	4034-2016	4036-2016	120					
200	x 140	4034-2014	4036-2014	120					
200	x 180	4034-2018	4036-2018	120					
225	x 90	4034-2290	4036-2290	120					
225	x 110	4034-2211	4036-2211	120					
225	x 125	4034-2212	4036-2212	120					
225	x 140	4034-2214	4036-2214	115					
225	x 160	4034-2216	4036-2216	115					
225	x 180	4034-2218	4036-2218	115					



BUTT WELD REDUCER (CONT.)

PE100 • SDR11 - SDR26

SIZE (MM)	SIZE (MM)	CODE SDR11	CODE SDR17	L (MM)
315	x 90	4034-3190	4036-3190	120
315	x 110	4034-3111	4036-3111	120
315	x 125	4034-3112	4036-3112	120
315	x 140	4034-3114	4036-3114	120
315	x 160	4034-3116	4036-3116	120
315	x 180	4034-3118	4036-3118	120
315	x 200	4034-3120	4036-3120	120
315	x 225	4034-3122	4036-3122	120
315	x 250	4034-3125	4036-3125	120
315	x 280	4034-3128	4036-3128	120
355	x 90	4034-3590	4036-3590	120
355	x 110	4034-3511	4036-3511	120
355	x 125	4034-3512	4036-3512	120
355	x 140	4034-3514	4036-3514	120
355	x 160	4034-3516	4036-3516	120
355	x 180	4034-3518	4036-3518	120
355	x 200	4034-3520	4036-3520	120
355	x 225	4034-3522	4036-3522	120
355	x 250	4034-3525	4036-3525	120
355	x 280	4034-3528	4036-3528	120
355	x 315	4034-3531	4036-3531	120



SIZE (MM)	SIZE (MM)	CODE SDR11	CODE SDR17	L (MM)
400	x 90	4034-4090	4036-4090	125
400	x 110	4034-4011	4036-4011	125
400	x 125	4034-4012	4036-4012	125
400	x 140	4034-4014	4036-4014	125
400	x 160	4034-4016	4036-4016	125
400	x 180	4034-4018	4036-4018	125
400	x 200	4034-4021	4036-4021	125
400	x 225	4034-4022	4036-4022	125
400	x 250	4034-4025	4036-4025	125
400	x 280	4034-4028	4036-4028	125
400	x 315	4034-4031	4036-4031	125
400	x 355	4034-4035	4036-4035	125
450	x 160	4034-4516	4036-4516	125
450	x 180	4034-4518	4036-4518	125
450	x 200	4034-4520	4036-4520	125
450	x 225	4034-4522	4036-4522	125
450	x 250	4034-4525	4036-4525	125
450	x 280	4034-4528	4036-4528	125
450	x 315	4034-4531	4036-4531	125
450	x 355	4034-4535	4036-4535	125
500	x 200	4034-5021	4036-5021	125
500	x 225	4034-5022	4036-5022	125
500	x 250	4034-5026	4036-5026	125
500	x 280	4034-5028	4036-5028	125
500	x 315	4034-5031	4036-5031	125
500	x 355	4034-5035	4036-5035	125
500	x 400	4034-5041	4036-5041	125
500	x 450	4034-5045	4036-5045	125
560	x 500	4034-5650	4036-5650	125
630	x 500	4034-6351	4036-6351	125
630	x 560	4034-6356	4036-6356	125

Note: Other sizes up to 1200mm available.

FABRICATION SERVICES

- Our qualified and experienced fabrication team can construct pipe spools, manifolds, tanks and pontoons etc. to customer requirements in our fully equipped workshop.
- All butt welding is carried out according to the POP003 recommended parameters as advised by PIPA. Some fittings may be derated according to POP006 by the same advisory.
- Send your sketch to quotes@upg.net.nz

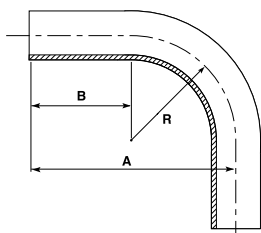


90° SWEEP BEND

PE100 • SDR11 - SDR17

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)	R (MM)
20	6754-0020	6756-0020	200	100	100
25	6754-0025	6756-0025	200	100	100
32	6754-0032	6756-0032	228	100	128
40	6754-0040	6756-0040	260	100	160
50	6754-0050	6756-0050	275	100	175
63	6754-0063	6756-0063	325	100	225
75	6754-0075	6756-0075	455	150	305
90	6754-0090	6756-0090	455	150	305
110	6754-0110	6756-0110	560	180	380
125	6754-0125	6756-0125	560	180	380
140	6754-0140	6756-0140	660	200	460
160	6754-0160	6756-0160	660	200	460
180	6754-0180	6756-0180	660	200	460
200	6754-0200	6756-0200	785	250	535
225	6754-0225	6756-0225	785	250	535
250	6754-0250	6756-0250	915	300	615
280	6754-0280	6756-0280	965	350	615
315	6754-0315	6756-0315	1115	400	715
355	6754-0355	6756-0355	1280	500	780
400	6754-0400	6756-0400	1620	550	1070
450	6754-0450	6756-0450	1650	550	1100
500	6754-0500	6756-0500	1950	700	1250
630	6754-0630	6756-0630	2164	699	1715

Note: Other degree and size bends made to order.

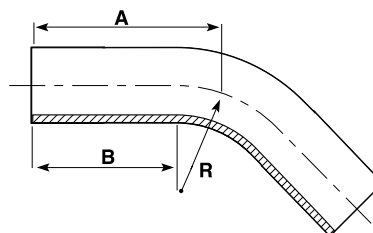


45° SWEEP BEND

PE100 • SDR11 - SDR17

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)	R (MM)
20	6774-0020	6776-0020	140	100	100
25	6774-0025	6776-0025	140	100	100
32	6774-0032	6776-0032	150	100	128
40	6774-0040	6776-0040	165	100	160
50	6774-0050	6776-0050	170	100	175
63	6774-0063	6776-0063	190	100	225
75	6774-0075	6776-0075	270	150	305
90	6774-0090	6776-0090	270	150	305
110	6774-0110	6776-0110	340	180	380
125	6774-0125	6776-0125	340	180	380
140	6774-0140	6776-0140	390	200	460
160	6774-0160	6776-0160	390	200	460
180	6774-0180	6776-0180	390	200	460
200	6774-0200	6776-0200	470	250	535
225	6774-0225	6776-0225	470	250	535
250	6774-0250	6776-0250	550	300	615
280	6774-0280	6776-0280	605	350	615
315	6774-0315	6776-0315	695	400	715
355	6774-0355	6776-0355	820	500	780
400	6774-0400	6776-0400	990	550	1070
450	6774-0450	6776-0450	1005	550	1100
500	6774-0500	6776-0500	1215	700	1250
630	6774-0630	6776-0630	1782	1175	1465

Note: Other degree and size bends made to order.

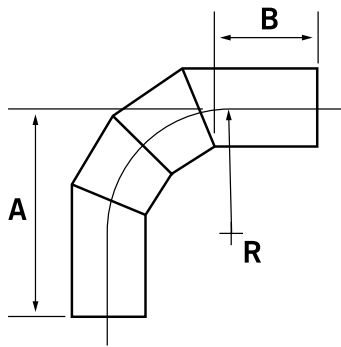


90° FABRICATED BEND

PE100 • SDR11 - SDR26

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)
90	6054-0090	6056-0090	335	200
110	6054-0110	6056-0110	365	200
125	6054-0125	6056-0125	388	200
140	6054-0140	6056-0140	410	200
160	6054-0160	6056-0160	440	200
180	6054-0180	6056-0180	460	200
200	6054-0200	6056-0200	500	200
225	6054-0225	6056-0225	588	250
250	6054-0250	6056-0250	625	250
280	6054-0280	6056-0280	720	300
315	6054-0315	6056-0315	777	300
355	6054-0355	6056-0355	883	350
400	6054-0400	6056-0400	1000	400
450	6054-0450	6056-0450	1125	450
500	6054-0500	6056-0500	1250	500
560	6054-0560	6056-0560	1390	550
630	6054-0630	6056-0630	1545	600

- Other sizes up to 1200mm and custom angle bends made to order.
- Derating may apply - discuss with our sales team

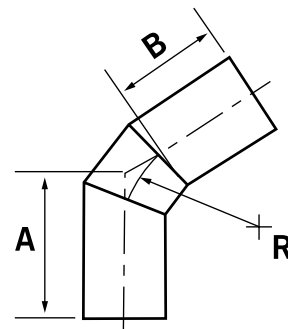


45° FABRICATED BEND

PE100 • SDR11 - SDR26

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)
90	6104-0090	6106-0090	248	200
110	6104-0110	6106-0110	259	200
125	6104-0125	6106-0125	267	200
140	6104-0140	6106-0140	275	200
160	6104-0160	6106-0160	286	200
180	6104-0180	6106-0180	297	200
200	6104-0200	6106-0200	307	200
225	6104-0225	6106-0225	371	250
250	6104-0250	6106-0250	384	250
280	6104-0280	6106-0280	450	300
315	6104-0315	6106-0315	469	300
355	6104-0355	6106-0355	540	350
400	6104-0400	6106-0400	614	400
450	6104-0450	6106-0450	691	450
500	6104-0500	6106-0500	768	500
560	6104-0560	6106-0560	850	550
630	6104-0630	6106-0630	938	600

- Other sizes up to 1200mm and custom angle bends made to order.
- Derating may apply - discuss with our sales team

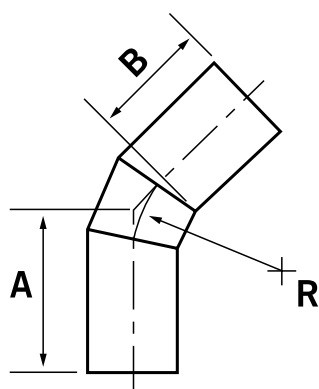


22° FABRICATED BEND

PE100 • SDR11 - SDR26

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)
90	6124-0090	6126-0090	242	200
110	6124-0110	6126-0110	251	200
125	6124-0125	6126-0125	258	200
140	6124-0140	6126-0140	265	200
160	6124-0160	6126-0160	274	200
180	6124-0180	6126-0180	283	200
200	6124-0200	6126-0200	292	200
225	6124-0225	6126-0225	354	250
250	6124-0250	6126-0250	366	250
280	6124-0280	6126-0280	429	300
315	6124-0315	6126-0315	446	300
355	6124-0355	6126-0355	512	350
400	6124-0400	6126-0400	585	400
450	6124-0450	6126-0450	658	450
500	6124-0500	6126-0500	731	500
560	6124-0560	6126-0560	809	550
630	6124-0630	6126-0630	891	600

- Other sizes up to 1200mm and custom angle bends made to order.

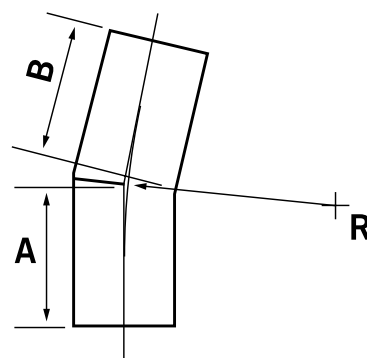


11° FABRICATED BEND

PE100 • SDR11 - SDR26

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)
90	6134-0090	6136-0090	209	200
110	6134-0110	6136-0110	211	200
125	6134-0125	6136-0125	212	200
140	6134-0140	6136-0140	214	200
160	6134-0160	6136-0160	216	200
180	6134-0180	6136-0180	218	200
200	6134-0200	6136-0200	220	200
225	6134-0225	6136-0225	272	250
250	6134-0250	6136-0250	275	250
280	6134-0280	6136-0280	328	300
315	6134-0315	6136-0315	331	300
355	6134-0355	6136-0355	385	350
400	6134-0400	6136-0400	440	400
450	6134-0450	6136-0450	495	450
500	6134-0500	6136-0500	550	500
560	6134-0560	6136-0560	606	550
630	6134-0630	6136-0630	663	600

- Other sizes up to 1200mm and custom angle bends made to order.

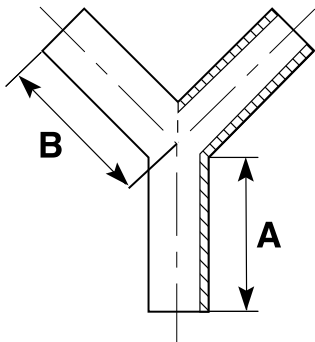


FABRICATED TRUE Y JUNCTION

PE100 • SDR11 - SDR26

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)
90	6704-0090	6706-0090	200	450
110	6704-0110	6706-0110	250	450
125	6704-0125	6706-0125	250	450
140	6704-0140	6706-0140	500	600
160	6704-0160	6706-0160	500	600
180	6704-0180	6706-0180	500	750
200	6704-0200	6706-0200	500	750
225	6704-0225	6706-0225	550	750
250	6704-0250	6706-0250	650	900
280	6704-0280	6706-0280	650	900
315	6704-0315	6706-0315	700	1050
355	6704-0355	6706-0355	700	1180
400	6704-0400	6706-0400	1100	1250
450	6704-0450	6706-0450	1100	1300
500	6704-0500	6706-0500	1200	1400
560	6704-0560	6706-0560	1200	1400
630	6704-0630	6706-0630	1200	1440

- Other sizes up to 1200mm and custom angle bends made to order.
- Derating may apply - discuss with our sales team

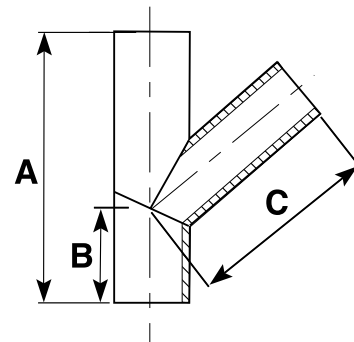


FABRICATED 45° JUNCTION

PE100 • SDR11 - SDR26

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)	C (MM)
90	6694-0090	6696-0090	700	270	430
110	6694-0110	6696-0110	700	270	430
125	6694-0125	6696-0125	750	300	450
140	6694-0140	6696-0140	780	300	480
160	6694-0160	6696-0160	850	330	520
180	6694-0180	6696-0180	950	360	590
200	6694-0200	6696-0200	960	370	590
225	6694-0225	6696-0225	1080	420	660
250	6694-0250	6696-0250	1150	450	710
280	6694-0280	6696-0280	1250	500	750
315	6694-0315	6696-0315	1350	530	820
355	6694-0355	6696-0355	1450	570	880
400	6694-0400	6696-0400	1550	600	950
450	6694-0450	6696-0450	1850	650	1200
500	6694-0500	6696-0500	2100	700	1400
560	6694-0560	6696-0560	2200	800	1400
630	6694-0630	6696-0630	2300	800	1500

- Other sizes up to 1200mm and custom angle bends made to order.
- Derating may apply - discuss with our sales team



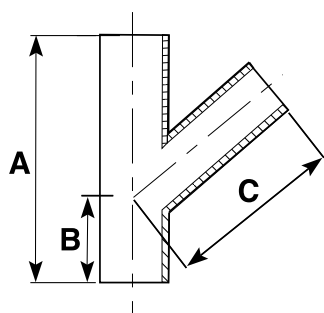
FABRICATED 45° REDUCING JUNCTION

PE100 • SDR11 - SDR26 • GRAVITY OR LOW PRESSURE ONLY

SDR11								
SIZE (MM)	110MM OFF-TAKE SDR11	A (MM)	B (MM)	C (MM)	160MM OFF-TAKE SDR11	A (MM)	B (MM)	C (MM)
160	6694-1611	700	350	350	-	-	-	-
180	6694-1811	700	350	350	6694-1816	850	350	310
200	6694-2011	850	350	350	6694-2016	950	350	320
225	6694-2211	900	350	350	6694-2216	950	350	330
250	6694-2511	900	350	350	6694-2516	1000	350	345
280	6694-2811	1000	400	350	6694-2816	1000	400	360
315	6694-3111	1000	400	360	6694-3116	1000	400	380
355	6694-3511	1200	400	380	6694-3516	1200	400	400
400	6694-4011	1200	400	400	6694-4016	1200	400	425
450	6694-4511	1300	400	425	6694-4516	1300	400	450
500	6694-5011	1300	450	450	6694-5016	1300	450	475
560	6694-5611	1400	450	475	6694-5616	1400	450	500
630	6694-6311	1400	450	500	6694-6316	1400	450	525

SDR17								
SIZE (MM)	110MM OFF-TAKE SDR17	A (MM)	B (MM)	C (MM)	160MM OFF-TAKE SDR17	A (MM)	B (MM)	C (MM)
160	6696-1611	700	350	350	-	-	-	-
180	6696-1811	700	350	350	6696-1816	850	350	310
200	6696-2011	850	350	350	6696-2016	950	350	320
225	6696-2211	900	350	350	6696-2216	950	350	330
250	6696-2511	900	350	350	6696-2516	1000	350	345
280	6696-2811	1000	400	350	6696-2816	1000	400	360
315	6696-3111	1000	400	360	6696-3116	1000	400	380
355	6696-3511	1200	400	380	6696-3516	1200	400	400
400	6696-4011	1200	400	400	6696-4016	1200	400	420
450	6696-4511	1300	400	425	6696-4516	1300	400	445
500	6696-5011	1300	450	450	6696-5016	1300	450	475
560	6696-5611	1400	450	475	6696-5616	1400	450	500
630	6696-6311	1400	450	500	6696-6316	1400	450	525

Note: Other sizes and pressure ratings available

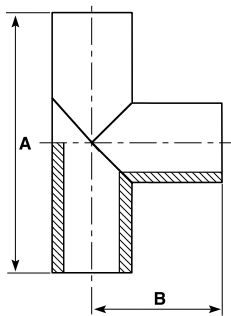


FABRICATED EQUAL TEE

PE100 • SDR11 - SDR17

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)
90	6154-0090	6156-0090	400	200
110	6154-0110	6156-0110	500	250
125	6154-0125	6156-0125	500	250
140	6154-0140	6156-0140	500	500
160	6154-0160	6156-0160	600	500
180	6154-0180	6156-0180	600	500
200	6154-0200	6156-0200	650	500
225	6154-0225	6156-0225	650	550
250	6154-0250	6156-0250	750	650
280	6154-0280	6156-0280	800	650
315	6154-0315	6156-0315	800	700
355	6154-0355	6156-0355	800	700
400	6154-0400	6156-0400	1000	1100
450	6154-0450	6156-0450	1000	1100
500	6154-0500	6156-0500	1200	1200
560	6154-0560	6156-0560	1200	1200
630	6154-0630	6156-0630	1200	1200

- Other sizes up to 1200mm and custom angle bends made to order.
- Derating applies - discuss with our sales team

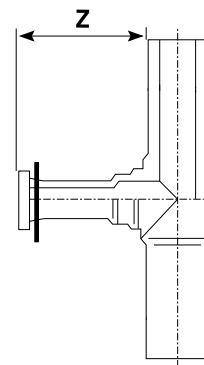


HYDRANT TEE

PE100 • SDR11 • PN12.5 • 3 1/2" HYDRANT FLANGE OR 4" FLANGE

SIZE (MM)	CODE 3 1/2" HYD FLANGE FULL FLOW (89MM Ø)	CODE 4" FLANGE (101MM Ø)	Z (MM)
125	3165-1280	3165-1210	200
160	3165-1680	3165-1610	200
180	3165-1880	3165-1810	200
200	3165-2080	3165-2010	250
225	3165-2280	3165-2210	250
250	3165-2580	3165-2510	250
280	3165-2880	3165-2810	250
315	3165-3180	3165-3110	250
355	3165-3580	3165-3510	250
400	3165-4080	3165-4010	250
450	3165-4580	3165-4510	250
500	3165-5080	3165-5010	250
560	3165-5680	3165-5610	250
630	3165-6380	3165-6310	250

- Other sizes and flange sizes available.
- Contact us for PN16 options
- Derating may apply - discuss with our sales team

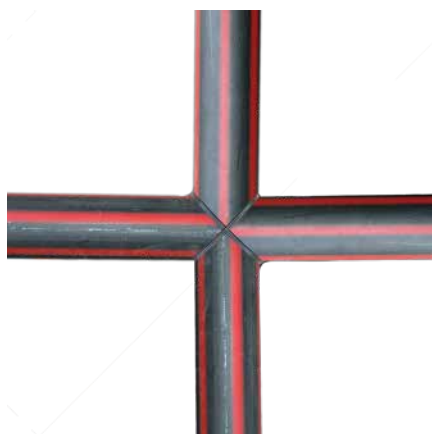
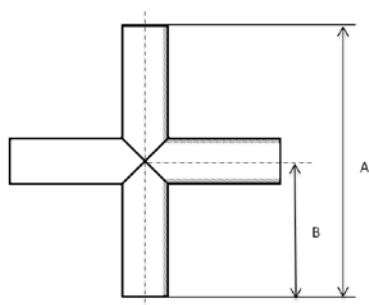


FABRICATED EQUAL CROSS

PE100 • SDR11 - SDR26

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)
110	6714-0110	6716-0110	500	250
125	6714-0125	6716-0125	500	250
140	6714-0140	6716-0140	500	250
160	6714-0160	6716-0160	600	300
180	6714-0180	6716-0180	780	390
200	6714-0200	6716-0200	800	400
225	6714-0225	6716-0225	820	410
250	6714-0250	6716-0250	850	425
280	6714-0280	6716-0280	880	440
315	6714-0315	6716-0315	920	460
355	6714-0355	6716-0355	950	475
400	6714-0400	6716-0400	1000	500
450	6714-0450	6716-0450	1050	525
500	6714-0500	6716-0500	1300	650
560	6714-0560	6716-0560	1360	680
630	6714-0630	6716-0630	1440	720

- More sizes and pressure ratings available.
- Derating applies - discuss with our sales team



PE-PVC RING SEAL ADAPTER

PE100 • SDR17

PE SIZE (MM)	PVC SIZE (MM)	CODE SDR17	L (MM)
110	100	HD-7080-0110EXT	210
160	150	HD-7080-0160EXT	280
180	150	HD-7080-1815EXT	280



PUDDLE FLANGES

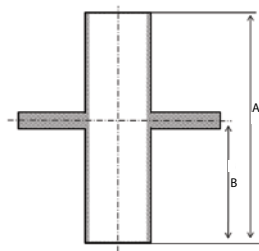
PE100 • SDR11 - SDR26

PIPE SIZE	STANDARD LENGTH 500MM*		
	SDR11	SDR17	SDR26
110	6424-0110	6426-0110	6428-0110
125	6424-0125	6426-0125	6428-0125
140	6424-0140	6426-0140	6428-0140
160	6424-0160	6426-0160	6428-0160
180	6424-0180	6426-0180	6428-0180
200	6424-0200	6426-0200	6428-0200
225	6424-0225	6426-0225	6428-0225
250	6424-0250	6426-0250	6428-0250

PIPE SIZE	STANDARD LENGTH 600MM*		
	SDR11	SDR17	SDR26
280	6424-0280	6426-0280	6428-0280
315	6424-0315	6426-0315	6428-0315
355	6424-0355	6426-0355	6428-0355
400	6424-0400	6426-0400	6428-0400
450	6424-0450	6426-0450	6428-0450
500	6424-0500	6426-0500	6428-0500
560	6424-0560	6426-0560	6428-0560
630	6424-0630	6426-0630	6428-0630

PIPE SIZE	STANDARD LENGTH 800MM*		
	SDR11	SDR17	SDR26
710	6424-0710	6426-0710	6428-0710
800	6424-0800	6426-0800	6428-0800
900	6424-0900	6426-0900	6428-0900
1000	6424-1000	6426-1000	6428-1000

Note: More sizes and puddle flange configurations available - contact us for more information.

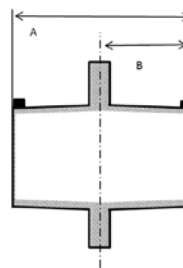


ELECTROFUSION PUDDLE COUPLER

PE100 • SDR11 OR SDR17

PIPE SIZE	PUDDLE OD (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)
63	142	2424-0063	2426-0063	102	51
75	156	2424-0075	2426-0075	125	63
90	179	2424-0090	2426-0090	122	61
110	202	2424-0110	2426-0110	144	72
125	219	2424-0125	2426-0125	154	77
140	235	2424-0140	2426-0140	181	91
160	258	2424-0160	2426-0160	175	88
180	281	2424-0180	2426-0180	185	93
200	306	2424-0200	2426-0200	186	93
225	338	2424-0225	2426-0225	222	111
250	370	2424-0250	2426-0250	220	110
280	401	2424-0280	2426-0280	260	130
315	449	2424-0315	2426-0315	261	131
355	465	2424-0355	2426-0335	260	130
400	518	2424-0400	2426-0400	340	170
450	582	2424-0450	2426-0450	380	190
500	639	2424-0500	2426-0500	400	200
560	698	2424-0560	2426-0560	450	225
630	776	2424-0630	2426-0560	500	250

Note: Other sizes available on request



90° TABLE E FLANGED BEND

PE100 • SDR11 - SDR26

SIZE (MM)	CODE SDR11	CODE SDR17
90	6954-0090	6956-0090
110	6954-0110	6956-0110
125	6954-4125	6956-4125
140	6954-5125	6956-5125
160	6954-0160	6956-0160
180	6954-0180	6956-0180
200	6954-0200	6956-0200
225	6954-0225	6956-0225
250	6954-0250	6956-0250
280	6954-0280	6956-0280
315	6954-0315	6956-0315

- Other sizes up to 630mm and custom angle bends made to order.
- Derating may apply - discuss with our sales team



45° TABLE E FLANGED BEND

PE100 • SDR11 - SDR26

SIZE (MM)	CODE SDR11	CODE SDR17
90	6944-0090	6946-0090
110	6944-0110	6946-0110
125	6944-4125	6946-4125
140	6944-5125	6946-5125
160	6944-0160	6946-0160
180	6944-0180	6946-0180
200	6944-0200	6946-0200
225	6944-0225	6946-0225
250	6944-0250	6946-0250
280	6944-0280	6946-0280
315	6944-0315	6946-0315

- Other sizes up to 630mm and custom angle bends made to order.
- Derating may apply - discuss with our sales team



TABLE E FLANGED TEE**PE100 • SDR11 - SDR26**

SIZE (MM)	CODE SDR11	CODE SDR17
90	6964-0090	6966-0090
110	6964-0110	6966-0110
125	6964-0125	6966-4125
140	6964-0140	6966-5125
160	6964-0160	6966-0160
180	6964-0180	6966-0180
200	6964-0200	6966-0200
225	6964-0225	6966-0225
250	6964-0250	6966-0250
280	6964-0280	6966-0280
315	6964-0315	6966-0315

- Other sizes up to 630mm and reducing tees made to order.
- Derating may apply - discuss with our sales team

**DOUBLE FLANGED SPOOL****PE100 • SDR17 - SDR26 • TABLE E FLANGES**

SIZE A (MM)	FLANGE A (INCH)	SIZE B (MM)	FLANGE B (INCH)	CODE SDR17
90	2.5"	90	2.5"	6976-9065
110	3"	110	3"	6976-1180
125	4"	125	4"	6976-1210
125	5"	125	5"	6976-1212
160	5"	160	5"	6976-1612
160	6"	160	6"	6976-1615
180	6"	180	6"	6976-1815
225	8"	225	8"	6976-2220

REDUCING FLANGED SPOOL**PE100 • SDR17 - SDR26 • T/E - PN16**

SIZE A (MM)	FLANGE A (TABLE E)	SIZE B (MM)	FLANGE B (TABLE PN16)	CODE SDR17
90	3"	63	2"	6986-8050
110	4"	63	2"	6986-1050
110	4"	90	2.5"	6986-1065
110	4"	110	3"	6986-1080
125	5"	90	5"	6986-1265
125	5"	110	3"	6986-1280
125	5"	125	4"	6986-1210
160	6"	110	3"	6986-1580
160	6"	125	4"	6986-1510
160	6"	160	5"	6986-1512
225	8"	125	4"	6986-2010
225	8"	160	5"	6986-2012
225	8"	180	6"	6986-2015

- Other sizes up to 630mm and other flange types made to order.
- Standard length is 300mm. Contact our sales team for other requirements.

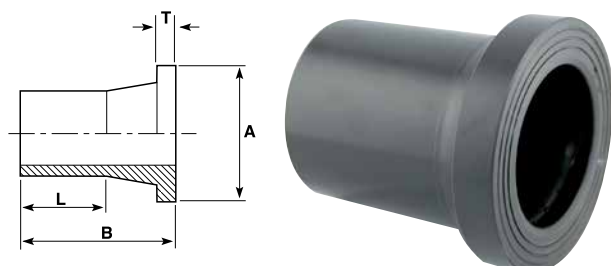


SPIGOT STUB FLANGE

PE100 • SDR11 - SDR17

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)	L (MM)	T (MM)
20	3414-0020	-	45	76	41	7
25	3414-0025	-	58	81	41	9
32	3414-0032	-	68	85	44	10
40	3414-0040	-	73	88	49	11
50	3414-0050	-	84	92	55	12
63	3414-0063	-	95	100	63	14
75	3414-0075	-	122	120	70	16
90	3414-0090	3416-0090	128	132	79	17
110	3414-0110	3416-0110	158	157	82	18
110	3414-0110V	3416-0110V	158	157	82	18
125	3414-0125	3416-0125	158	170	87	25
125	3414-0125V	3416-0125V	158	170	87	25
140	3414-0140	3416-0140	188	175	92	25
140	3414-0140V	-	188	175	92	25
160	3414-0160	3416-0160	212	180	98	25
160	3414-0160V	3416-0160V	212	180	98	25
180	3414-0180	3416-0180	212	190	105	30
200	3414-0200	3416-0200	268	200	112	32
200	3414-0200V	3416-0200V	268	200	112	32
225	3414-0225	3416-0225	268	200	120	32
225	3414-0225V	-	268	200	120	32
250	3414-0250	3416-0250	320	205	129	35
250	3414-0250V	3416-0250V	320	205	129	35
280	3414-0280	3416-0280	320	215	139	35
280	3414-0280V	-	320	215	139	35
315	3414-0315	3416-0315	370	220	150	35
315	3414-0315V	3416-0315V	370	220	150	35
355	3414-0355	3416-0355	430	243	164	40
355	3414-0355V	3416-0355V	430	243	164	40
400	3414-0400	3416-0400	480	259	179	46
450	3414-0450	3416-0450	545	301	195	60
500	3414-0500	3416-0500	585	314	212	60
560	3414-0560	3416-0560	685	345	235	72
630	3414-0630	3416-0630	685	360	255	65

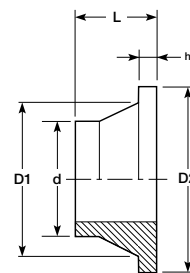
- Please specify if stub is to suit butterfly valves (add "V" to code).
- Stub flanges are also suited to HDPE Drainage



BUTT WELD STUB FLANGE

PE100 • SDR11 - SDR17

SIZE (MM)	CODE SDR11	CODE SDR17	D1 (MM)	D2 (MM)	L (MM)	H1 (MM)
110	4414-0110	4416-0110	124	158	80	18
125	4414-0125	4416-0125	128	158	80	25
140	4414-0140	4416-0140	151	188	80	25
160	4414-0160	4416-0160	168	212	80	25
180	4414-0180	4416-0180	190	212	80	30
200	4414-0200	4416-0200	225	268	95	30
225	4414-0225	4416-0225	230	268	95	30
250	4414-0250	4416-0250	284	320	100	35
280	4414-0280	4416-0280	294	320	100	35
315	4414-0315	4416-0315	335	370	105	35
355	4414-0355	4416-0355	366	430	110	40
400	4414-0400	4416-0400	420	480	110	45
450	4414-0450	4416-0450	470	545	110	45
500	4414-0500	4416-0500	520	585	125	60
560	4414-0560	4416-0560	580	685	125	60
630	4414-0630	4416-0630	650	685	130	60
710	4414-0710	4416-0710	735	800	130	60
800	4414-0800	4416-0800	825	904	130	60
900	4414-0900	4416-0900	940	1000	130	60
1000	4414-1000	4416-1000	1025	1113	130	60
1200	4414-1200	4416-1200	1230	1330	170	80



SLIM FLANGE - SDR11

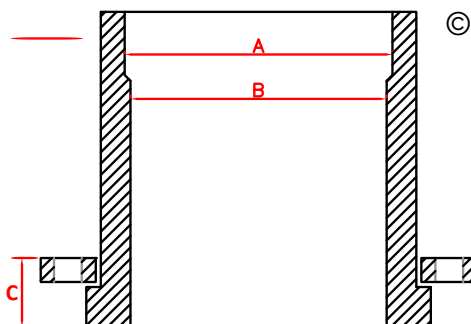
SDR11 (PN12.5) WITH AS4087 B7 CLASS 16 TABLE D BACKING RING

CODE (NYLON FLANGE)	CODE (STAINLESS FLANGE)	PE END SIZE	FLANGE SIZE	PRESSURE RATING	PIPE END SDR	PIPE ID FLANGE END (B)	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)
3444-2521	3464-2521	250mm	200mm (8")	PN12.5	SDR11/13.6	203mm	292mm	8x18	54
3444-3125	3464-3125	315mm	250mm (10")	PN12.5	SDR11/13.6	256mm	356mm	8x22	59
3444-3530	3464-3530	355mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12x22	63
3444-4030	3464-4030	400mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12x22	63
3444-4035	3464-4035	400mm	350mm (14")	PN12.5	SDR11/13.6	325mm	470mm	12x26	75
3444-4037	3464-4037	400mm	375mm (15")	PN12.5	SDR11/13.6	325mm	495mm	12x26	75
3444-4537	3464-4537	450mm	375mm (15")	PN12.5	SDR11/13.6	366mm	495mm	12x26	90
3444-4540	3464-4540	450mm	400mm (16")	PN12.5	SDR11/13.6	366mm	521mm	12x26	90
3444-5045	3464-5045	500mm	450mm (18")	PN12.5	SDR11/13.6	406mm	584mm	12x26	90
3444-5650	3464-5650	560mm	500mm (20")	PN12.5	SDR11/13.6	455mm	641mm	16x26	98

SDR11 (PN16) WITH AS4087 B7 CLASS 16 TABLE D BACKING RING

CODE (NYLON FLANGE)	CODE (STAINLESS FLANGE)	PE END SIZE	FLANGE SIZE	PRESSURE RATING	PIPE END SDR	PIPE ID FLANGE END (B)	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)
3443-2521	3463-2521	250mm	200mm (8")	PN16	SDR11	183mm	292mm	8x18	51
3443-3125	3463-3125	315mm	250mm (10")	PN16	SDR11	228mm	356mm	8x22	57
3443-3530	3463-3530	355mm	300mm (12")	PN16	SDR11	256mm	406mm	12x22	63
3443-4030	3463-4030	400mm	300mm (12")	PN16	SDR11	256mm	406mm	12x22	63
3443-4035	3463-4035	400mm	350mm (14")	PN16	SDR11	289mm	470mm	12x26	70
3443-4037	3463-4037	400mm	375mm (15")	PN16	SDR11	325mm	495mm	12x26	75
3443-4537	3463-4537	450mm	375mm (15")	PN16	SDR11	325mm	495mm	12x26	75
3443-4540	3463-4540	450mm	400mm (16")	PN16	SDR11	325mm	521mm	12x26	75
3443-5045	3463-5045	500mm	450mm (18")	PN16	SDR11	366mm	584mm	12x26	90
3443-5650	3463-5650	560mm	500mm (20")	PN16	SDR11	407mm	641mm	16x26	98

Note: All options are available with galvanised backing ring option. PN16, ANSI and other flange patterns are available on request.

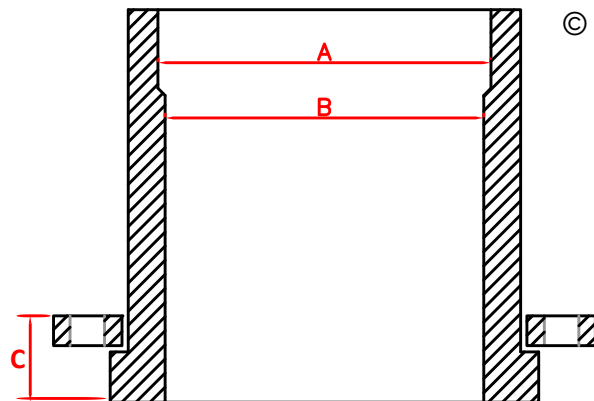


SLIM FLANGE - SDR11

SDR11 (PN12.5 / PN16) WITH AS2129 TABLE E BACKING RING

CODE (NYLON FLANGE)	CODE (STAINLESS FLANGE)	PE END SIZE	FLANGE SIZE	PRESSURE RATING	PIPE END SDR	PIPE ID FLANGE END (B)	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)
3454-9075	3474-9075	90mm	75mm (2 1/2")	PN16	SDR11	73mm	127mm	4x18	28
3454-1190	3474-1190	110mm	90mm (3")	PN16	SDR11	89mm	146mm	4x18	31
3454-1612	3474-1612	160mm	125mm (5")	PN16	SDR11	130mm	210mm	8x18	39
3454-2015	3474-2015	200mm	150mm (6")	PN16	SDR11	146mm	235mm	8x22	49
3454-2521	3474-2521	250mm	200mm (8")	PN12.5	SDR11/13.6	203mm	292mm	8x22	54
3454-3125	3474-3125	315mm	250mm (10")	PN12.5	SDR11/13.6	256mm	356mm	12x22	62
3454-3530	3474-3530	355mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12x26	65
3454-4030	3474-4030	400mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12x26	65
3454-4035	3474-4035	400mm	350mm (14")	PN12.5	SDR11/13.6	325mm	470mm	12x26	75
3454-4540	3474-4540	450mm	400mm (16")	PN12.5	SDR11/13.6	366mm	521mm	12x26	92
3454-5045	3474-5045	500mm	450mm (18")	PN12.5	SDR11/13.6	406mm	584mm	16x26	95
3454-5650	3474-5650	560mm	500mm (20")	PN12.5	SDR11/13.6	455mm	641mm	16x26	98
3454-6356	3474-6356	630mm	560mm (22")	PN12.5	SDR11/13.6	512mm	699mm	16x30	109
3453-6356	3493-6356	630mm	560mm (22")	PN16	SDR11	456mm	699mm	16x30	104

* Where noted, SDR11/SDR13.6 slim flanges are supplied with the pipe end suited to SDR13.6 (A) and can be cut back to a pipe end of SDR11 (B) to allow choice when butt welding, as per the diagram. Electrofusion welds can be completed without the need for trimming.



SLIM FLANGE - SDR17

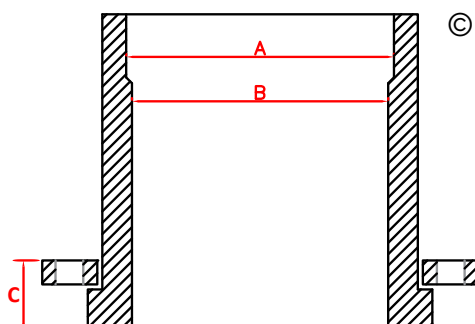
SDR17 (PN10) WITH AS4087 B7 CLASS 16 TABLE D BACKING RING

CODE (NYLON FLANGE)	CODE (STAINLESS FLANGE)	PE END SIZE	FLANGE SIZE	PRESSURE RATING	PIPE END SDR	PIPE ID FLANGE END (B)	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)
3446-2521	3466-2521	250mm	200mm (8")	PN10	SDR17	198mm	292mm	8x18	44
3446-3125	3466-3125	315mm	250mm (10")	PN10	SDR17	246mm	356mm	8x22	44
3446-3530	3466-3530	355mm	300mm (12")	PN10	SDR17	312mm	406mm	12x22	53
3446-4030	3466-4030	400mm	300mm (12")	PN10	SDR17	312mm	406mm	12x22	53
3446-4035	3466-4035	400mm	350mm (14")	PN10	SDR17	352mm	470mm	12x26	63
3446-4037	3466-4037	400mm	375mm (15")	PN10	SDR17	352mm	495mm	12x26	63
3446-4537	3466-4537	450mm	375mm (15")	PN10	SDR17	396mm	495mm	12x26	75
3446-4540	3466-4540	450mm	400mm (16")	PN10	SDR17	396mm	521mm	12x26	75
3446-5045	3466-5045	500mm	450mm (18")	PN10	SDR17	440mm	584mm	12x26	90
3446-5650	3466-5650	560mm	500mm (20")	PN10	SDR17	492mm	641mm	16x26	98

SDR17 (PN10) WITH AS2129 TABLE E BACKING RING

CODE (NYLON FLANGE)	CODE (STAINLESS FLANGE)	PE END SIZE	FLANGE SIZE	PRESSURE RATING	PIPE END SDR	PIPE ID FLANGE END (B)	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)
3456-9075	3476-9075	90mm	75mm (2 1/2")	PN10	SDR17	79mm	127mm	4x18	28
3456-1190	3476-1190	110mm	90mm (3")	PN10	SDR17	96mm	146mm	4x18	30
3456-1612	3476-1612	160mm	125mm (5")	PN10	SDR17	141mm	210mm	8x18	32
3456-2015	3476-2015	200mm	150mm (6")	PN10	SDR17	158mm	235mm	8x22	41
3456-2521	3476-2521	250mm	200mm (8")	PN10	SDR17	198mm	292mm	8x22	44
3456-3125	3476-3125	315mm	250mm (10")	PN10	SDR17	246mm	356mm	12x22	47
3456-3530	3476-3530	355mm	300mm (12")	PN10	SDR17	312mm	406mm	12x26	55
3456-4030	3476-4030	400mm	300mm (12")	PN10	SDR17	312mm	406mm	12x26	55
3456-4035	3476-4035	400mm	350mm (14")	PN10	SDR17	352mm	470mm	12x26	63
3456-4540	3476-4540	450mm	400mm (16")	PN10	SDR17	396mm	521mm	12x26	77
3456-5045	3476-5045	500mm	450mm (18")	PN10	SDR17	440mm	584mm	16x26	95
3456-5650	3476-5650	560mm	500mm (20")	PN10	SDR17	492mm	641mm	16x26	98
3456-6356	3476-6356	630mm	560mm (22")	PN10	SDR17	554mm	699mm	16x30	104

Note: All options are available with galvanised backing ring option. PN16, ANSI and other flange patterns are available on request.



**AS 4087 B7
PN16
TABLE D**

**GALVANISED BACKING RING (5441)
STAINLESS BACKING RING (5442)
NYLON COATED BACKING RING (5444)**

FOR EXAMPLE: A 110MM GALVANISED BACKING RING WOULD HAVE THE CODE 5441.0110B7

SIZE (MM)	NOMINAL FLANGE SIZE	INCH SIZE	P (MM)	I (MM)	D (MM)	T (MM)	BOLT HOLES NO X DIA	BOLT
20	15	1/2"	67	32	95	6	4x14	M12
25	20	3/4"	73	37	100	6	4x14	M12
32	25	1"	83	44	115	6	4x14	M12
40	32	1 1/4"	87	52	120	6	4x14	M12
50	40	1 1/2"	98	62	135	8	4x14	M12
63	50	2"	114	78	150	11	4x18	M16
75	65	2 1/2"	127	92	165	11	4x18	M16
90	80	3"	146	108	185	11	4x18	M16
110	100	4"	178	128	215	13	4x18	M16
125	100	4"	178	135	215	13	4x18	M16
160	150	6"	235	178	280	13	8x18	M16
180	150	6"	235	185	280	13	8x18	M16
200	200	8"	292	235	335	19	8x18	M16
225	200	8"	292	240	335	19	8x18	M16
250	250	10"	356	290	405	19	8x22	M20
280	250	10"	356	300	405	19	8x22	M20
315	300	12"	406	345	455	23	12x22	M20
355	350	14"	470	376	525	30	12x26	M24
n/a	375	15"	495	404	550	30	12x26	M24
400	400	16"	521	430	580	30	12x26	M24
450	450	18"	584	480	640	30	12x26	M24
500	500	20"	641	533	705	38	16x26	M24
630	600	24"	756	660	825	48	16x30	M27
710	700	28"	845	745	910	56	20x30	M27
800	800	32"	984	835	1060	56	20x36	M33

Note: these rings are suited to the Stream PE100 Pressure, Stream HDPE Drainage, Maxair, and Dynatherm PP-RCT ranges.

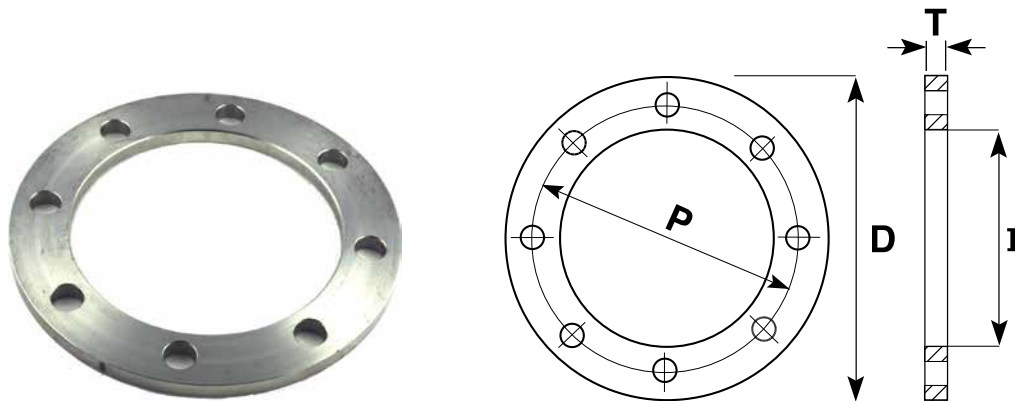
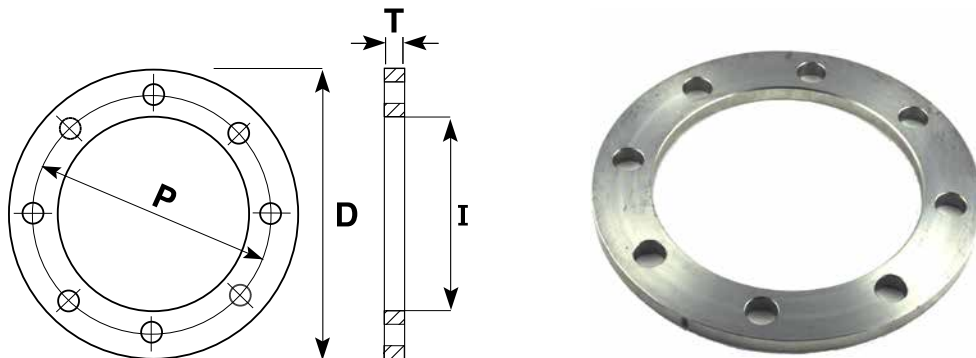


TABLE E **GALVANISED BACKING RING (5451)**
STAINLESS BACKING RING (5452)
NYLON COATED BACKING RING (5454)
 FOR EXAMPLE: A 110MM GALVANISED BACKING RING WOULD HAVE THE
 CODE 5451.0110

SIZE (MM)	NOMINAL FLANGE SIZE	INCH SIZE	P (MM)	I (MM)	D (MM)	T (MM)	BOLT HOLES NO X DIA	BOLT
20	15	1/2"	67	32	95	6	4X14	M12
25	20	3/4"	73	37	100	6	4X14	M12
32	25	1"	83	44	115	7	4X14	M12
40	32	1 1/4"	87	52	120	8	4X14	M12
50	40	1 1/2"	98	62	135	9	4X14	M12
63	50	2"	114	74	150	10	4X18	M16
75	65	2 1/2"	127	93	165	10	4X18	M16
90	80	3"	146	108	185	12	4X18	M16
110	100	4"	178	125	215	13	8X18	M16
125	100	4"	178	140	215	14	8X18	M16
125	125	5"	210	140	255	14	8X18	M16
140	125	5"	210	158	255	14	8X18	M16
160	150	6"	235	175	280	17	8X22	M20
180	150	6"	235	185	280	17	8X22	M20
200	200	8"	292	230	335	19	8X22	M20
225	200	8"	292	240	335	19	8X22	M20
250	250	10"	356	290	405	22	12X22	M20
280	250	10"	356	300	405	22	12X22	M20
315	300	12"	406	345	455	25	12X26	M24
355	350	14"	470	373	525	29	12X26	M24
400	400	16"	521	425	580	32	12X26	M24
450	450	18"	584	480	640	35	16X26	M24
500	500	20"	641	533	705	38	16X26	M24
560	-	22"	699	590	760	44	16X30	M27
630	600	24"	756	660	825	48	16X33	M30
710	700	28"	845	745	910	51	20X33	M30
800	800	32"	984	835	1060	54	20X36	M33

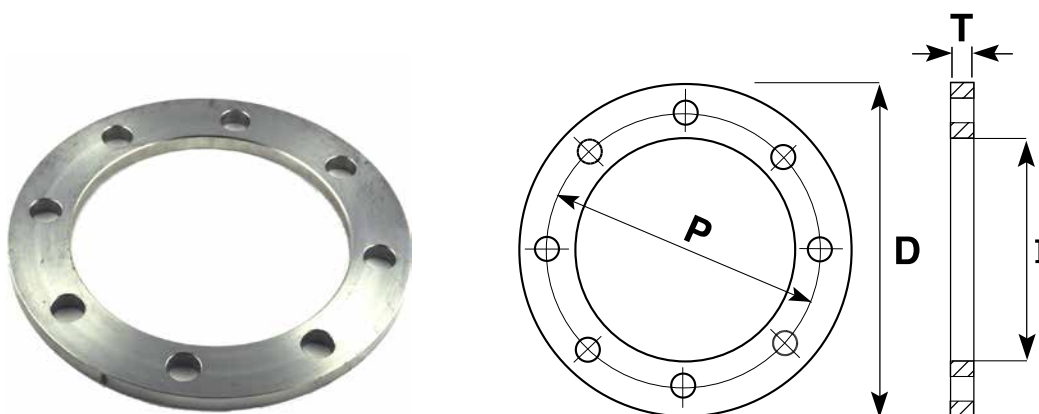
Note: these rings are suited to the Stream PE100 Pressure, Stream HDPE Drainage, Maxair, and Dynatherm PP-RCT ranges.



**TABLE ANSI GALVANISED BACKING RING (5461)
STAINLESS BACKING RING (5462)
NYLON COATED BACKING RING (5464)**
FOR EXAMPLE: A 110MM GALVANISED BACKING RING WOULD HAVE A CODE 5461.0110

SIZE (MM)	NOMINAL FLANGE SIZE	INCH SIZE	P (MM)	I (MM)	D (MM)	T (MM)	BOLT HOLES NO X DIA	BOLT
20	15	1/2"	60.5	32	90	6	4x16	1/2"
25	20	3/4"	70	37	98	6	4x16	1/2"
32	25	1"	79.5	44	108	6	4x16	1/2"
40	32	1 1/4"	89	52	117	6	4x16	1/2"
50	40	1 1/2"	98.5	62	127	8	4x16	1/2"
63	50	2"	120.5	78	152	8	4x20	5/8"
75	65	2 1/2"	139.5	92	178	8	4x20	5/8"
90	80	3"	152	108	191	10	4x20	5/8"
110	100	4"	190.5	128	229	10	8x20	5/8"
125	100	4"	190.5	140	229	10	8x20	5/8"
125	125	5"	216	140	254	13	8x23	3/4"
140	125	5"	216	158	254	13	8x23	3/4"
160	150	6"	241	178	279	13	8x23	3/4"
180	150	6"	241	195	279	13	8x23	3/4"
200	200	8"	298.5	235	343	13	8x23	3/4"
225	200	8"	298.5	240	343	13	8x23	3/4"
250	250	10"	362	290	406	13	12x26	7/8"
280	250	10"	362	300	406	16	12x26	7/8"
315	300	12"	432	345	483	16	12x26	7/8"
355	350	14"	476	376	535	19	12x29	1"
400	400	16"	540	430	600	22	16x29	1"
450	450	18"	578	480	635	22	16x32	1 1/8"
500	500	20"	635	533	700	25	20x32	1 1/8"
630	600	24"	749	660	813	29	20x35	1 1/4"

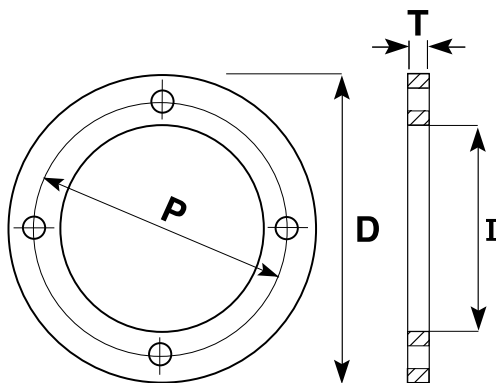
Note: these rings are suited to the Stream PE100 Pressure, Stream HDPE, Maxair, and Dynatherm ranges.



**BS EN 1092
PN16****PP BLACK COATED STEEL BACKING RING (5415)**FOR EXAMPLE: A 110MM GALVANISED BACKING RING WOULD HAVE A CODE
5415.0110

SIZE (MM)	NOMINAL FLANGE SIZE	INCH SIZE	P (MM)	I (MM)	D (MM)	T (MM)	BOLT HOLES NO X DIA	BOLT
20	15	1/2"	65	32	95	14	4x14	M12
25	20	3/4"	75	37	105	14	4x14	M12
32	25	1"	85	44	115	14	4x14	M12
40	32	1 1/4"	100	52	140	16	4x18	M16
50	40	1 1/2"	110	62	150	18	4x18	M16
63	50	2"	125	74	165	18	4x18	M16
75	65	2 1/2"	145	87	185	18	4x18	M16
90	80	3"	160	103	200	18	8x18	M16
110	100	4"	180	125	220	18	8x18	M16
125	100	4"	180	140	220	18	8x18	M16
125	125	5"	210	140	250	22	8x18	M16
140	125	5"	210	158	250	22	8x18	M16
160	150	6"	240	175	285	22	8x22	M20
180	150	6"	240	185	285	22	8x22	M20
200	200	8"	295	230	340	22	12x22	M20
225	200	8"	295	240	340	22	12x22	M20
250	250	10"	355	290	405	22	12x26	M24
280	250	10"	355	300	405	22	12x26	M24
315	300	12"	410	345	460	22	12x26	M24
355	350	14"	470	373	520	26	16x26	M24
400	400	16"	525	425	580	30	16x30	M27
450	450	18"	585	480	640	40	20x30	M27
500	500	20"	650	533	715	44	20x33	M30
630	600	24"	770	660	840	54	20x36	M33

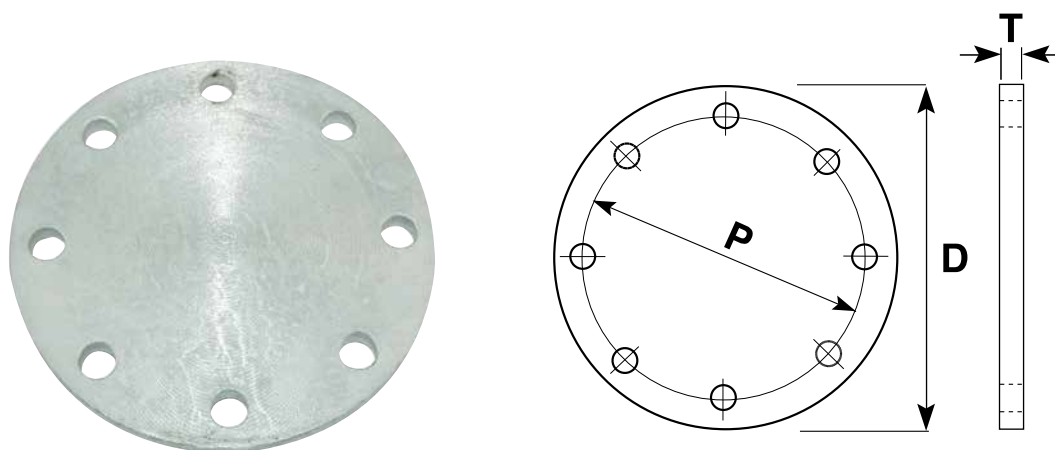
Note: these rings are suited to the Stream PE100 Pressure, Stream HDPE, Maxair, and Dynatherm ranges.



BLIND FLANGE

SIZE (MM)	NOMINAL FLANGE SIZE	INCH SIZE	TABLE D GALVANISED (5471)	TABLE D STAINLESS (5472)	TABLE E GALVANISED (5481)	TABLE E STAINLESS (5482)	ANSI 150 GALVANISED (5491)	ANSI 150 STAINLESS (5492)
20	15	1/2"	5471-0020	5472-0020	5481-0020	5482-0020	5491-0020	5492-0020
25	20	3/4"	5471-0025	5472-0025	5481-0025	5482-0025	5491-0025	5492-0025
32	25	1"	5471-0032	5472-0032	5481-0032	5482-0032	5491-0032	5492-0032
40	32	1 1/4"	5471-0040	5472-0040	5481-0040	5482-0040	5491-0040	5492-0040
50	40	1 1/2"	5471-0050	5472-0050	5481-0050	5482-0050	5491-0050	5492-0050
63	50	2"	5471-0063	5472-0063	5481-0063	5482-0063	5491-0063	5492-0063
75	65	2 1/2"	5471-0075	5472-0075	5481-0075	5482-0075	5491-0075	5492-0075
90	80	3"	5471-0090	5472-0090	5481-0090	5482-0090	5491-0090	5492-0090
110	100	4"	5471-0110	5472-0110	5481-0110	5482-0110	5491-0110	5492-0110
125	100	4"	5471-4125	5472-4125	5481-4125	5482-4125	5491-4125	5492-4125
125	125	5"	5471-5125	5472-5125	5481-5125	5482-5125	5491-5125	5492-5125
160	150	6"	5471-0160	5472-0160	5481-0160	5482-0160	5491-0160	5492-0160
180	150	6"	5471-0180	5472-0180	5481-0180	5482-0180	5491-0180	5492-0180
200	200	8"	5471-0200	5472-0200	5481-0200	5482-0200	5491-0200	5492-0200
225	200	8"	5471-0225	5472-0225	5481-0225	5482-0225	5491-0225	5492-0225
250	250	10"	5471-0250	5472-0250	5481-0250	5482-0250	5491-0250	5492-0250
280	250	10"	5471-0280	5472-0280	5481-0280	5482-0280	5491-0280	5492-0280
315	300	12"	5471-0315	5472-0315	5481-0315	5482-0315	5491-0315	5492-0315
355	350	14"	5471-0355	5472-0355	5481-0355	5482-0355	5491-0355	5492-0355
400	400	16"	5471-0400	5472-0400	5481-0400	5482-0400	5491-0400	5492-0400
450	450	18"	5471-0450	5472-0450	5481-0450	5482-0450	5491-0450	5492-0450
500	500	20"	5471-0500	5472-0500	5481-0500	5482-0500	5491-0500	5492-0500
560	550	22"	5471-0560	5472-0560	5481-0560	5482-0560	5491-0560	5492-0560
630	600	24"	5471-0630	5472-0630	5481-0630	5482-0630	5491-0630	5492-0630
710	650	26"	5471-0710	5472-0710	5481-0710	5482-0710	5491-0710	5492-0710
800	700	28"	5471-0800	5472-0800	5481-0800	5482-0800	5491-0800	5492-0800

Note: these rings are suited to the Stream PE100 Pressure, Stream HDPE, Maxair, and Dynatherm ranges.



EPDM RUBBER GASKET

TABLE D • TABLE E • PN16 • ANSI 150

PIPE SIZE (MM)	INCH SIZE	TABLE D		TABLE E		PN16		ANSI 150	
		PCD	CODE	PCD	CODE	PCD	CODE	PCD	CODE
20	1/2"	67	9644-0020	67	9644-0020	65	9654-0020	60.5	9624-0020
25	3/4"	73	9644-0025	73	9644-0025	75	9654-0025	70	9624-0025
32	1"	83	9644-0032	83	9644-0032	85	9654-0032	79.5	9624-0032
40	1 1/4"	87	9644-0040	87	9644-0040	100	9654-0040	89	9624-0040
50	1 1/2"	98	9644-0050	98	9644-0050	110	9654-0050	98.5	9624-0050
63	2"	114	9644-0063	114	9644-0063	125	9654-0063	120.5	9624-0063
75	2 1/2"	127	9644-0075	127	9644-0075	145	9654-0075	139.5	9624-0075
90	3"	146	9644-0090	146	9644-0090	160	9654-0090	152	9624-0090
110	4"	178	9634-0110	178	9644-0110	180	9654-0110	190.5	9624-0110
125	4"	178	9634-4125	178	9644-4125	180	9654-4125	-	-
125	5"	210	9634-5125	210	9644-5125	210	9654-5125	216	9624-0125
140	5"	210	9634-0140	210	9644-0140	210	9654-0140	216	9624-0140
160	6"	235	9634-0160	235	9644-0160	240	9654-0160	241	9624-0160
180	6"	235	9634-0180	235	9644-0180	240	9654-0180	241	9624-0180
200	8"	292	9634-0200	292	9644-0200	295	9654-0200	298.5	9624-0200
225	8"	292	9634-0225	292	9644-0225	295	9654-0225	298.5	9624-0225
250	10"	356	9634-0250	356	9644-0250	355	9654-0250	362	9624-0250
280	10"	356	9634-0280	356	9644-0280	355	9654-0280	362	9624-0280
315	12"	406	9634-0315	406	9644-0315	410	9654-0315	432	9624-0315
355	14"	470	9634-0355	470	9644-0355	470	9654-0355	476	9624-0355
400	16"	521	9634-0400	521	9644-0400	525	9654-0400	540	9624-0400
450	18"	584	9634-0450	584	9644-0450	585	9654-0450	578	9624-0450
500	20"	641	9634-0500	641	9644-0500	650	9654-0500	635	9624-0500
560	22"	699	9634-0560	699	9644-0560	-	-	692	9624-0560
630	24"	756	9634-0630	756	9644-0630	770	9654-0630	749	9624-0630
710	26"	845	9634-0710	845	9644-0710	-	-	-	-
800	28"	984	9634-0800	984	9644-0800	-	-	-	-

Note: these gaskets are suited to the Stream PE100 Pressure, Stream HDPE, Maxair, and Dynatherm ranges.



GASKET 1.5MM FIBRE RING TYPE

FOR POTABLE WATER, GAS & CHEMICALS DESCRIPTION

N30 Supra is a good quality compressed sheet material based on a blend of aramid and inorganic fibres with a nitrile rubber binder system.

SERVICE

N30 Supra is a general purpose material suitable for use in wide range of applications, including hot and cold water, steam, oils, fuels, gases and a wide range of general chemicals.

APPROVALS/ COMPLIANCE

DIN-DVGW (Gas Industry) 93.01-e-845

WRAS Potable Water: Registration No.0008505

Complies with BS Specification 7531 Grade

PRESSURE/TEMPERATURE LIMITS GRAPH

1. Suitable subject to chemical compatibility.
2. Suitable in some cases but check your application requirements with us.
3. Contact the Technical Team for applications with higher temperatures and pressures. Applicable to 1.5mm and below.

The operating temperature of non-asbestos sheet material is related to the thickness of materials selected. Thinner materials give better temperature and pressure properties.

TYPICAL PHYSICAL PROPERTIES

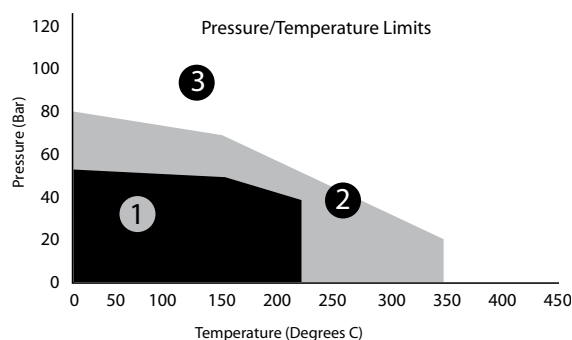
THICKNESS		1.5MM
DENSITY		2.0G/CC
TENSILE STRENGTH	ASTM F152	12MPA
COMPRESSION	ASTM F36	9%
RECOVERY	ASTM F36	50%MIN
RESIDUAL STRESS	BS7531 (3000C)	23MPA
	DIN 52913	29MPA
GAS LEAKAGE	BS 7531 <1.0CC/MIN	
ASTM OIL 1	THICKNESS INCREASE	2.00%
IRM 903 OIL	THICKNESS INCREASE	5.00%
ASTM FUEL B	THICKNESS INCREASE	4.00%



FLANGE SIZE (MM)	PRODUCT CODE
63	9641-1063
75	9641-1075
90	9641-1090
110	9641-1110
125	9641-1125
125	9641-1125
140	9641-1140
160	9641-1160
180	9641-1180
200	9641-1200
225	9641-1225
250	9641-1250
280	9641-1280
315	9641-1315
355	9641-1355
400	9641-1400
450	9641-1450
500	9641-1500
560	9641-1560
630	9641-1630

Note:

- These gaskets have inside diameter to suit SDR17.
- Other gasket sizes and materials are available on request.



Note: these rings are suited to the Stream PE100 Pressure, Stream HDPE, Maxair, and Dynatherm ranges.

CLIPS

For Dynatherm & Stream Pipe

PIPE SIZE (MM)	CODE ZINC/RUBBER SLEEVE
16	D430-016
20	D430-020
25	D430-025
32	D430-032
40	D430-040
50	D430-050
63	D430-063
75	D430-075
90	D430-090
110	D430-110
125	D430-125
160	D430-160



For Stream Pipe

PIPE SIZE (MM)	CODE LIGHT DUTY YOKE CLAMP
50	FM8-050
63	FM8-063
75	FM8-075
90	FM8-090
110	FM8-110
125	FM8-125
160	FM8-160
180	FM8-180
200	FM8-200
225	FM8-225
250	FM8-250
280	FM8-280
315	FM8-315



For Stream Pipe

PIPE SIZE (MM)	CODE HEAVY DUTY YOKE CLAMP
50	FM18-050
63	FM18-063
75	FM18-075
90	FM18-090
110	FM18-110
125	FM18-125
160	FM18-160
180	FM18-180
200	FM18-200
225	FM18-225
250	FM18-250
280	FM18-280
315	FM18-315



For Stream Pipe

PIPE SIZE (MM)	CODE MEDIUM DUTY SADDLE CLAMP
50	FM15-050
63	FM15-063
75	FM15-075
90	FM15-090
110	FM15-110
125	FM15-125
160	FM15-160
180	FM15-180
200	FM15-200
225	FM15-225
250	FM15-250
280	FM15-280
315	FM15-315



For Dynatherm, Maxair & Stream

PIPE SIZE (MM)	CODE LIGHT DUTY PLASTIC CLIP
20	CL20
25	CL25
32	CL32
40	CL40
50	CL50
63	CL63



For Maxair & Stream Pipe

PIPE SIZE (MM)	CODE HEAVY DUTY PLASTIC CLIP
63	HDCL63
90	HDCL90
110	HDCL110
160	HDCL160



Note: larger sized clips are available.

DRESS SETS GALVANISED (DS) STAINLESS (SSDS)

We stock parts for various different dressing sets. Use the following diagrams and tables to work out which bolts you require in your set. Included will be a single EPDM gasket to suit.

Note: the following tables are for standard flange connections. To determine requirements for slim flange connections, refer to pages 57-59.

DRESS SET CODE

Our dress set codes have four basic parts:

1. Begin with "DS" for galvanised or "SSDS" for stainless steel bolts/washers/nut
2. Followed by the nominal flange size (e.g. 4" would be 100). Refer to pages 60-63 for nominal sizes
3. Then you need to determine the required bolt length. Refer to the opposite page to calculate this.
4. The final value is the flange pattern (e.g. AS2129 Table E would be "TE"). This also determines the bolt size and quantity supplied

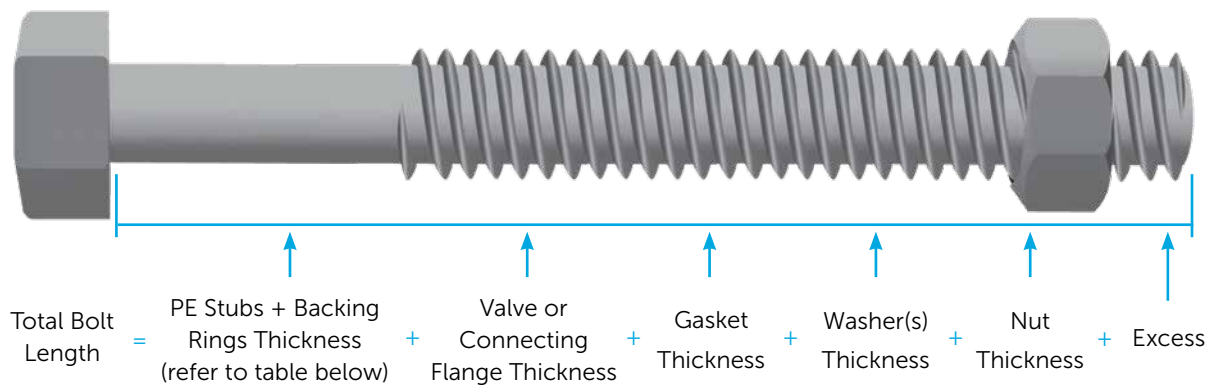
For example, the code for a dress set for 110mm-4" AS2129 Table E with 90mm long M16 galvanised bolts:

DS 100/90 TE

STANDARD FLANGES: BOLT QUANTITY AND SIZE

PIPE SIZE (MM)	FLANGE SIZE (INCH)		FLANGE PATTERN			
			AS2129 Table E	AS4087 PN16	BS 4504 PN16	ANSI 150
32	1"	Bolt Quantity and Size	4 x M12	-	4 x M12	4 x 1/2"
40	1 1/4"		4 x M12	-	4 x M16	4 x 1/2"
50	1 1/2"		4 x M12	-	4 x M16	4 x 1/2"
63	2"		4 x M16	4 x M16	4 x M16	4 x 5/8"
75	2 1/2"		4 x M16	4 x M16	4 x M16	4 x 5/8"
90	3"		4 x M16	4 x M16	8 x M16	4 x 5/8"
110	3 1/2"		4 x M16	-	8 x M16	4 x 5/8"
110	4"		8 x M16	4 x M16	8 x M16	8 x 5/8"
125	4"		8 x M16	4 x M16	8 x M16	8 x 5/8"
125	5"		8 x M16	-	8 x M16	8 x 3/4"
140	5"		8 x M16	-	8 x M16	8 x 3/4"
160	5"		8 x M16	-	8 x M16	8 x 3/4"
160	6"		8 x M20	8 x M16	8 x M20	8 x 3/4"
180	6"		8 x M20	8 x M16	8 x M20	8 x 3/4"
200	8"		8 x M20	8 x M16	12 x M20	8 x 3/4"
225	8"		8 x M20	8 x M16	12 x M20	8 x 3/4"
250	10"		12 x M20	8 x M20	12 x M24	12 x 7/8"
280	10"		12 x M20	8 x M20	12 x M24	12 x 7/8"
315	12"		12 x M24	12 x M20	12 x M24	12 x 7/8"
355	14"		12 x M24	12 x M24	16 x M26	12 x 1"
400	16"		12 x M24	12 x M24	16 x M26	16 x 1"
450	18"		16 x M24	12 x M24	20 x M27	16 x 1 1/8"
500	20"		16 x M24	16 x M24	20 x M30	20 x 1 1/8"
560	22"		16 x M27	-	-	-
630	24"		16 x M30	16 x M27	20 x M33	20 x 1 1/4"

DETERMINE THE REQUIRED LENGTH OF BOLTS



STANDARD FLANGES: COMBINED THICKNESS OF PE STUB FLANGE & BACKING RING

PIPE SIZE (MM)	FLANGE SIZE (INCH)		SDR11				SDR17			
			AS2129 Table E	AS4087 PN16	BS 4504 PN16	ANSI 150	AS2129 Table E	AS4087 PN16	BS 4504 PN16	ANSI 150
32	1"		17	-	24	16	-	-	-	-
40	1 1/4"		19	-	25	17	-	-	-	-
50	1 1/2"		21	-	30	20	21		30	20
63	2"		25	26	33	23	24	25	33	22
75	2 1/2"		27	28	35	25	28	29	35	26
90	3"		30	29	36	28	30	29	36	28
110	3 1/2"		31	31	-	-	30	30	-	-
110	4"		32	32	37	29	31	31	37	28
125	4"		40	39	44	36	32	31	44	28
125	5"		40	-	48	39	32	-	48	31
140	5"		39	-	47	38	32	-	47	31
160	5"		39	-	47	38	32	-	47	31
160	6"		42	38	47	38	35	31	47	31
180	6"		48	44	53	44	37	33	53	33
200	8"		51	51	54	45	43	43	54	37
225	8"		52	52	55	46	43	43	55	37
250	10"		57	54	57	48	47	44	57	38
280	10"		57	54	57	48	47	44	57	38
315	12"		65	63	62	56	50	48	62	41
355	14"		70	70	66	59	60	60	66	49
400	16"		77	75	75	67	65	63	75	55
450	18"		95	90	-	82	80	75	-	67
500	20"		98	98	-	85	98	98	-	85
560	22"		104	-	-		104	-	-	-
630	24"		113	113	-	94	108	108	-	89

MECHANICAL TAPPING BAND

FEMALE THREADED OFF-TAKE • SDR11 - 21 • WATER PN16

SIZE (MM)		OFF-TAKE SIZE INCH	OFF-TAKE SIZE (MM)	CODE
20	x	1/2"	15	7234-2015
25	x	1/2"	15	7234-2515
25	x	3/4"	20	7234-2520
32	x	1/2"	15	7234-3215
32	x	3/4"	20	7234-3220
40	x	1/2"	15	7234-4015
40	x	3/4"	20	7234-4020
40	x	1"	25	7234-4025
50	x	1/2"	15	7234-5015
50	x	3/4"	20	7234-5020
50	x	1"	25	7234-5025
63	x	1/2"	15	7234-6315
63	x	3/4"	20	7234-6320
63	x	1"	25	7234-6325



75	x	3/4"	20	7234-7520
75	x	1"	25	7234-7525
75	x	1 1/2"	40	7234-7540
75	x	2"	50	7234-7550
90	x	3/4"	20	7234-9020
90	x	1"	25	7234-9025
90	x	1 1/2"	40	7234-9040
90	x	2"	50	7234-9050



110	x	3/4"	20	7234-1120
110	x	1"	25	7234-1125
110	x	1 1/4"	32	7234-1132
110	x	1 1/2"	40	7234-1140
110	x	2"	50	7234-1150
125	x	3/4"	20	7234-1220
125	x	1"	25	7234-1225
125	x	1 1/4"	32	7234-1232
125	x	1 1/2"	40	7234-1240
125	x	2"	50	7234-1250
160	x	3/4"	20	7234-1620
160	x	1"	25	7234-1625
160	x	1 1/4"	32	7234-1632
160	x	1 1/2"	40	7234-1640
160	x	2"	50	7234-1650
180	x	3/4"	20	7234-1820
180	x	1"	25	7234-1825
180	x	1 1/4"	40	7234-1832
180	x	1 1/2"	40	7234-1840
180	x	2"	50	7234-1850
225	x	2"	50	7234-2250



Note: This product can be used on the Maxair compressed air system

STAINLESS STEEL CLAMPS

316 STAINLESS STEEL WITH EDPM RUBBER LINER • PN16 RATED

SIZE (MM)	OD RANGE	OFFTAKE SIZE			
		2" BSP THREAD	3" T/D FLANGE	4" T/D FLANGE	6" T/D FLANGE
110	104-111	SSCB-104-111-50B	SSCF-104-111-80F	SSCF-104-111-100F	SSCF-104-111-150F
125	121-128	SSCB-124-128-50B	SSCF-124-128-80F	SSCF-124-128-100F	SSCF-124-128-150F
180	174-181	SSCB-174-181-50B	SSCF-174-181-80F	SSCF-174-181-100F	SSCF-174-181-150F
200	200-215	SSCB-200-215-50B	SSCF-200-215-80F	SSCF-200-215-100F	SSCF-200-215-150F
225	215-230	SSCB-215-230-50B	SSCF-215-230-80F	SSCF-215-230-100F	SSCF-215-230-150F
250	230-250	SSCB-230-250-50B	SSCF-230-250-80F	SSCF-230-250-100F	SSCF-230-250-150F
280	270-290	SSCB-270-290-50B	SSCF-270-290-80F	SSCF-270-290-100F	SSCF-270-290-150F
315	310-330	SSCB-310-330-50B	SSCF-310-330-80F	SSCF-310-330-100F	SSCF-310-330-150F
355	330-350	SSCB-330-350-50B	SSCF-330-350-80F	SSCF-330-350-100F	SSCF-330-350-150F
400	390-410	SSCB-390-410-50B	SSCF-390-410-80F	SSCF-390-410-100F	SSCF-390-410-150F
450	450-470	SSCB-450-470-50B	SSCF-450-470-80F	SSCF-450-470-100F	SSCF-450-470-150F
500	490-510	SSCB-490-510-50B	SSCF-490-510-80F	SSCF-490-510-100F	SSCF-490-510-150F
560	550-570	SSCB-550-570-50B	SSCF-550-570-80F	SSCF-550-570-100F	SSCF-550-570-150F
630	620-650	SSCB-620-650-50B	SSCF-620-650-80F	SSCF-620-650-100F	SSCF-620-650-150F

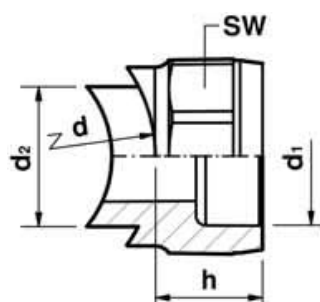
- Standard wrap clamps also available
- Suitable for temporary or permanent repairs
- Contact us for more information



SOCKET FUSION WELD-IN SADDLE

SIZE (D) (MM)	OFFTAKE SIZE (D ₁) 25MM	D ₂ (MM)	H (MM)	SW
50-110	PE8130S-6325	25	29	38
125-315	PE8130S-1625	25	29	38

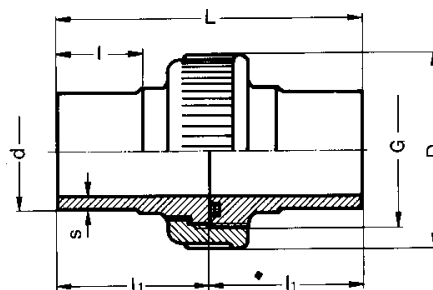
Note: See page 166 for welding mandrels and drill bits



PE MAC UNION

EPDM O-RING • SDR11 • WATER PN16

SIZE (D)	CODE	G	L	I	D
25	3514-0025	1¼	112	36	53
32	3514-0032	1½	130	42	60
40	3514-0040	2	142	45	74
50	3514-0050	2¼	162	52	83
63	3514-0063	2¾	178	57	103



ELECTROFUSION PROCEDURE GUIDELINES

1. Cut the pipe square and remove burrs. Check pipe end for damage, correct O.D. and ovality and wipe away loose dirt.
2. Without removing the protective wrap, place the centre of the electrofusion fitting alongside the pipe end and mark the pipe around the circumference, approximately 15mm past the end of the socket using a felt tip pen.
3. Using a pipe scraping tool, scrape the entire surface of the pipe over the marked area to a depth of approx 0.3mm, preferably as a continuous ribbon or strip.
Note: The use of mechanical scraping tools is recommended as hand scraping requires great care and can be time-consuming especially on larger diameter pipes. It is essential that material is removed by scraping or peeling; scratching or abrading is not sufficient, and will affect joint integrity.
4. Using disposable isopropanol welding wipes, clean the scraped area of the pipes (and the inside of the fitting if required). Once scraped and wiped do not touch the cleaned ends of the pipe or the inside of the fitting with your hands or rags. Ensure that pipe and fitting are completely dry before assembling fitting. Do not use any other cleaning fluid, primer or solvent.
5. Good practice is to cut one side of the bag around the fitting, check that the inside of the fitting is clean and dry and insert the first scraped pipe end. Leave the bag over the fitting whilst you scrape the second pipe end to protect fitting from contamination. Then remove bag and insert second pipe into the fitting. If fitting is a very tight fit and has to be tapped on, take care to keep the fitting square as the windings can be damaged. Alternatively, scrape pipe again.
6. Ensure the pipe ends are in contact with the centre stop and then put a witness mark at both ends of the fitting.
7. For all socket electrofusion fittings, (couplers, reducers, elbows, and tees) clamps must be used. The clamps must be adjusted to suit the particular size and type of fitting being welded so the pipes cannot move during the fusion cycle. If possible, rotate the fitting to check that the pipe ends are correctly aligned. If pipe is out of shape, re-rounding clamps should also be used.
8. If using a generator, check that there is sufficient fuel in the generator to complete the joint. Start the generator and check for correct operation.
9. Turn on the welder and connect the ECU output leads to the fitting terminals.
10. Operate the ECU according to the instructions, which should be carefully read and understood prior to any welding operations. The ECU will either have some form of automatic operating system or require manual operation. Whichever system the ECU uses, all fittings are marked with fusion time and cool time in seconds plus the necessary input voltage.
11. Once the weld is complete and the machine has stopped, remove the leads to the fitting, taking care not to disturb the fitting. Visually check the fitting to make sure the two rising melt indicators have come out (usually min. of 3mm) and that the pipe has not moved during the weld. Allow the full cool time to elapse before removing clamps or moving pipe. The last joint should have completely cooled down before the pipeline is pressurized.

NB: Electrofusion fittings should be left in the protective bag until needed and must not be left in direct sunlight.



TECHNICAL INFORMATION

POLYETHYLENE

Most of our fittings are made from PE, which benefits from the following characteristics:

- Good insulator – can help prevent the freezing of liquid pipe system contents.
- Resistant to abrasion and corrosion.
- Flexible and rugged.
- Resistant to chemical attack – It does not rot, rust, pit, corrode or lose wall thickness through chemical or electrical reaction with the surrounding soil.
- Light weight – reducing the need and costs of heavy machinery.

PE is therefore a good choice where traditional pipe materials would be unsuitable, where ground movement occurs and where aggressive ground conditions are present.

Several types of PE exist. Each type is characterised by its minimal required stress. PE used in electrofusion fittings has the following characteristics:

ISO PE CLASSIFICATION	MINIMAL REQUIRED STRESS	LONG-TERM HYDROSTATIC RESISTANCE AT 20°C
PE80	8 MPa	6.3 MPa
PE100	10 MPa	8 MPa

PE80 has been widely used for gas, water and industrial applications for many years. Whilst we still continue to produce products made from PE80 we hope to offer, where possible all products in PE100.

PE100 is a higher performance, higher density PE, which demonstrates exceptional resistance to rapid crack propagation and long-term stress cracking. Due to the higher performance this type of PE allows for thinner walls at the same operating pressure.

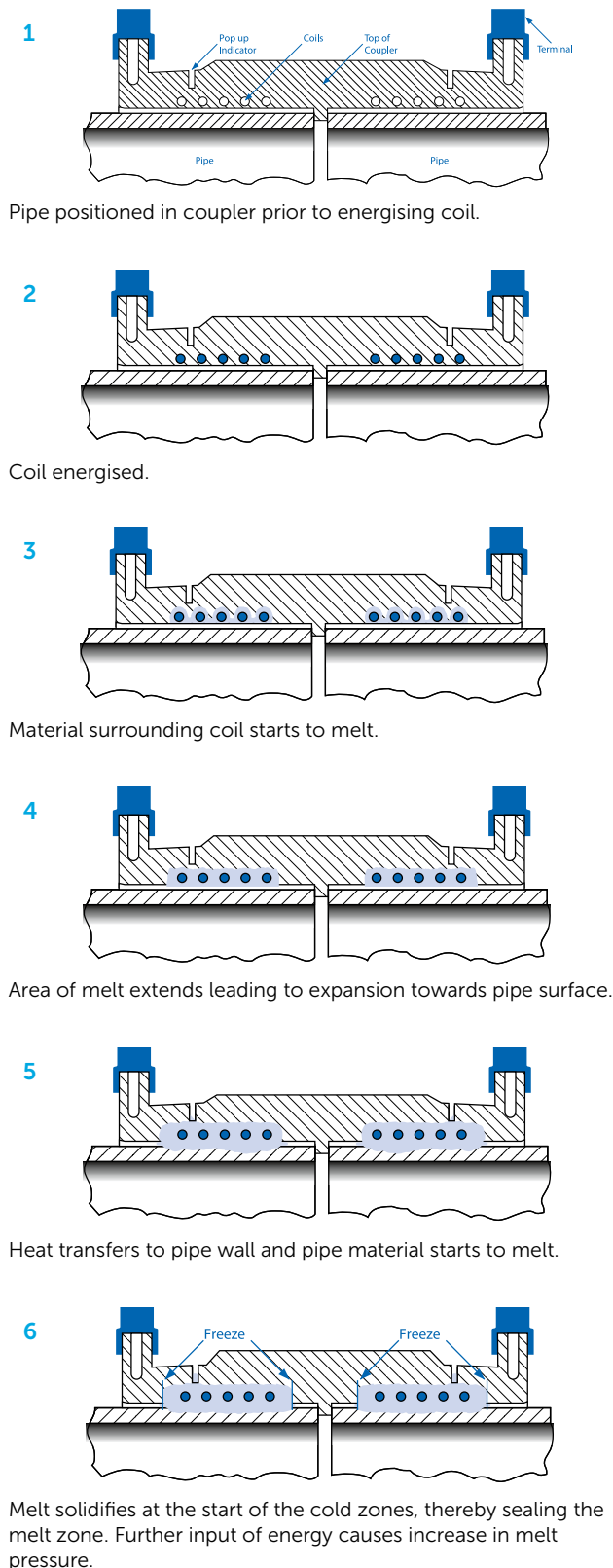
JOINTING PE TO PE BY FUSION

Pipes of similar materials and/or wall thickness can be joined by butt-fusion or electrofusion. Pipes of similar materials but differing wall thickness can only be jointed through the use of electrofusion. Butt-welding different pipe materials i.e. PE80 to PE100 is not recommended on site.

ELECTROFUSION

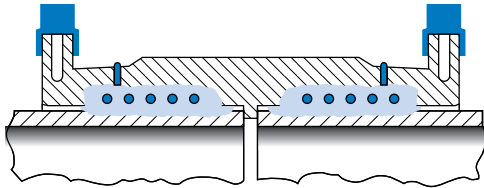
All electrofusion fittings contain an electrical heating coil, which when energised causes the adjacent material to melt and form an expanding pool. When this comes into contact with the pipe it also causes the surface of the pipe to melt, this molten material then mixes together. After the heat cycle the fitting and pipe are left to cool so that the molten material can solidify and form a sound joint.

ELECTROFUSION CYCLE



TECHNICAL INFORMATION

7



Melt pressure reaches optimum value at end of energising cycle. The pop up indicator appears to show fusion is complete.

The **Stream** electrofusion range contains couplers, reducers, tapping tees, branching saddles, elbows, tees, repair saddles and the module "O". Available in both metric and imperial sizes with 4.0mm terminal pins.

Our fittings are available in 16 bar (water) and 10 bar (gas) rating. Care should be taken to ensure that the pressure rating of the fittings is equal to or greater than that of the pipe.

The electrical heating coils within **Stream** fittings are positioned to ensure optimum melt pressure. This is achieved by:

- Positioning heating coils as close to the joint surface as possible.
- Keeping heat distribution uniform.
- Controlling melt pressure and temperature.
- Protecting the heating coils from damage.

All our electrofusion products contain a universal fitting, which can be fused with two types of fusion sets that will energise the electrical heating coil:

1. MANUAL

Each fitting displays the parameters required to program a manual electrofusion unit, either on the fitting itself or on an instruction card contained within the fitting packaging. The information will display the voltage required, fusion time, temperature correction with regards to the surrounding temperature and also the cooling down period.

2. BAR CODE

Each fitting displays a bar code that contains the information required by the electrofusion unit. This information can be scanned and the machine will automatically start the fusion process.

As part of our range we also offer electrofusion control units. These can be purchased with the bar code reading function or with manual fusion parameter entry.

3. TRACEABILITY

Traceability bar codes containing specific information relating to the manufacture of the product are available on request.

If using the bar code reading facility of electrofusion units the bar code system will automatically adjust the fusion time by small amounts to compensate for variations in ambient temperatures. Contact our Technical Team for additional data relating to extremes of temperature.

BUTT-FUSION

Butt-fusion should only be used for joining PE of the same SDR value and is the method where the ends of two pieces of PE (pipe and fitting) are heated to a molten state and pressed together for a specific fusion/cooling time to form a homogeneous bond. The surfaces are heated through the use of electrically heated plates on a butt-fusion welding machine.

The joint formed is fully resistant to end thrust and has identical performance under pressure as the pipe.

We offer a range of spigot fittings in both PE80 and PE100 including reducers, tees, elbows, caps, stub flanges and butt-fusion machines.

CONDITIONS OF USE

Temperature

The normal fusing temperature range is from -5°C to +23°C. The fittings are designed to work between -10°C and +45°C (metric sizes) and -30°C and +50°C (imperial sizes) with automatic fusion temperature correction.

Operating Pressure

The levels of pressure used for the hydraulic pressure resistance tests, allow the definition, according to the current regulation in each country, the maximum operating pressures:

MARKING	MAXIMUM PRESSURES GENERALLY USED	TEST PRESSURES AND TEST DURATION
PE80 - SDR 11	4 bar gas 12.5 bar water	80 °C 8 bar ($\sigma=4\text{MPa}$) 1,000 hours 80 °C 9 bar ($\sigma=4.5\text{MPa}$) 165 hours
PE80 - SDR 9	10 bar gas 16 bar water	80 °C 10 bar ($\sigma=4\text{MPa}$) 1,000 hours 80 °C 11.25 bar ($\sigma=4.5\text{MPa}$) 165 hours
PE100 - SDR11	10 bar gas 16 bar water	80 °C 10 bar ($\sigma=5\text{MPa}$) 1,000 hours 80 °C 10.8 bar ($\sigma=5.4\text{MPa}$) 165 hours

In no case should the pressure be higher than the values authorised by the current regulations in each country.

MAXIMUM OPERATING PRESSURE

The maximum operating pressure (PMS) of piping items is the maximum inner allowable operating pressure for this item for the kind of application considered.

The PMS is linked to the nominal pressure according to the use envisaged. It can be inferior or superior to the nominal pressure depending on whether the conditions of service are more or less severe than the reference conditions.

TECHNICAL INFORMATION / STANDARDS

NOMINAL PRESSURE

The nominal pressure (PN) of piping items is expressed by a number that indicates the capability of this item to withstand an inner pressure. It corresponds to the value expressed in bar of an inner water pressure maintained constant that the piping items have to withstand without failing for 50 years at a temperature of 20°C. The nominal pressures are directly calculated from the long-term hydrostatic resistance at 20 °C.

$$PN = 20 \frac{\sigma \cdot e}{D - e}$$

PN = nominal pressure

σ = long-term hydrostatic resistance at 20 °C (MPa)

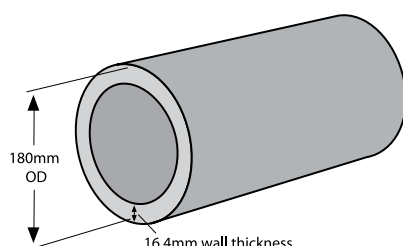
e = (Minimum) nominal thickness of the pipe walls expressed in mm

D = nominal outside diameter (mm)

STANDARD DIMENSIONAL RATIO

The Standard Dimensional Ratio (SDR) is a rounded number expressing the ratio of the nominal diameter (outside minimal diameter) – DN on the nominal thickness (minimal wall thickness) – e

$$SDR = \frac{DN}{e} \quad SDR11 = \frac{180}{16.4}$$



Relationship between wall thickness and outside diameter (OD)

APPROVALS

The Stream range of electrofusion and spigot fittings are approved for use in many countries. Examples of where second/third party certification has been achieved are:

France	NF mark/ACS Gaz De France
Algeria	Sonelgaz
Argentina	Argentinian Gas Institute
Australia	WSAA
Belgium	Becetel
Canada	CSA
Czech Republic	TSU
Germany	DVGW
Greece	DEPA
Hungary	Hungarian Mining Office
Iran	NIGC
Italy	IIP-UNI
Poland	IGNIG
Romania	Central Laboratory
Russia	Gost-R Gosgorteknatzor
Spain	Gas Natural
UK	British Gas/National Grid Transco

GAS STANDARD

ISO 4437	Buried polyethylene pipes for the supply of gaseous fuels - metric series - specifications
ISO 8085-2	Polyethylene fittings for use with polyethylene pipes for the supply of gaseous fuels – metric series – specifications – Part 2: Spigot fittings for butt-fusion or for socket-fusion using heated tools and for use with electrofusion fittings.
ISO 8085-3	Polyethylene fittings for use with polyethylene pipes for the supply of gaseous fuels – metric series – specification – Part 3: Electrofusion fittings.
ISO 10838-1	Mechanical fittings for polyethylene piping systems for the supply of gaseous fuels – Part 1: Metal fittings for pipe of nominal outside diameter less than or equal to 63mm.
ISO 10838-2	Mechanical fittings for polyethylene piping systems for the supply of gaseous fuels – Part 2: Metal fittings for pipes of nominal outside diameter greater than 63mm.
ISO 12176-4	Plastic pipes and fittings – equipment for fusion jointing polyethylene systems – Part 4: Traceability coding.
ISO/TR 13950	Plastic pipes and fittings – automatic recognition systems for electrofusion joints.
NF EN 1555-1	Plastic piping systems for the supply of gaseous fuels – polyethylene – Part 1: General.
NF EN 1555-3	Plastic piping systems for the supply of gaseous fuels – polyethylene – Part 3: Fittings.
NF EN 1555-4	Plastic piping systems for the supply of gaseous fuels – polyethylene – Part 4: Valves.
NF EN 1555-5	Plastic piping systems for the supply of gaseous fuels – polyethylene – Part 5: Fitness for purpose of the system.
XP CEN/TS 1555-7	Plastic piping systems for the supply of gaseous fuels – polyethylene – Part 7: Guidance for assessment of conformity.
ASTM F1055	Standard specification for electrofusion type polyethylene fittings for outside diameter controlled polyethylene pipe and tubing.
CSA B137.4	Polyethylene piping systems for gas services.
AS/NZS 4129	Fittings for polyethylene pipes for pressure applications.
AS/NZS 4130	Polyethylene pipes for pressure applications
AS/NZS 4131	Polyethylene compounds for pressure pipes and fittings

STANDARDS / GUARANTEES

WATER STANDARDS

NF EN 12201-1	Plastic piping systems for water supply – polyethylene – Part 1: General.
NF EN 12201-3	Plastic piping systems for water supply – polyethylene – Part 3: Fittings.
NF EN 12201-4	Plastic piping systems for water supply – polyethylene – Part 4: Valves.
NF EN 12201-5	Plastic piping systems for water supply – polyethylene – Part 5: Fitness for purpose of the system.
XP CEN/TS 12201-7	Plastic piping systems for water supply – polyethylene – Part 7: Guidance for assessment of conformity.
NF EN 13244-1	Plastic piping systems for buried and above ground pressure systems for water for general purposes, drainage and sewerage – polyethylene – Part 1: General.
NF EN 13244-3	Plastic piping systems for buried and above ground pressure systems for water for general purposes, drainage and sewerage – polyethylene – Part 3: Fittings.
NF EN 13244-4	Plastic piping systems for buried and above ground pressure systems for water for general purposes, drainage and sewerage – polyethylene – Part 4: Valves.
NF EN 13244-5	Plastic piping systems for buried and above ground pressure systems for water for general purposes, drainage and sewerage – polyethylene – Part 5: Fitness for purpose of the system.
XP CEN/TS 13244-7	Plastic piping systems for buried and above ground pressure systems for water for general purposes, drainage and sewerage – polyethylene – Part 7: Guidance for assessment of conformity.
AS/NZS 4020	Testing of products for use in contact with drinking water.

QUALITY ASSURANCE

Our fittings are designed to ensure total security during use.

Important cold areas prevent any spraying of molten substance. The fusion area dimensions allow optimum quality fusion.

All fittings are manufactured according to the quality system based on the requirements of the ISO 9001 standard. Quality controls and checks take place throughout all stages of our manufacturing process ensuring the highest quality. These tests are completed by qualified technicians within a laboratory environment.

Our quality system is certified by AFAQ an independent organisation, internationally recognised and is regularly audited by our customers to ensure we meet their high standards and expectations.

PRODUCT MARKINGS

Where applicable, our fittings incorporate the following information:

- Material
- SDR
- Nominal Size (mm)
- Fusion Time
- Cooling Time
- Application Information (Gas or Water)
- Certifying Symbols and Standards
- System Voltage if Applicable

TECHNICAL SUPPORT

For further information on our products or for help and support please contact our Technical Team on 0800 4 PE 100 (0800 4 73100).

PRODUCT PACKAGING

Stream PE fittings are packaged in individual bags, within boxes/crates to prevent exposure to dust and light.

INSTALLATION PROCEDURES

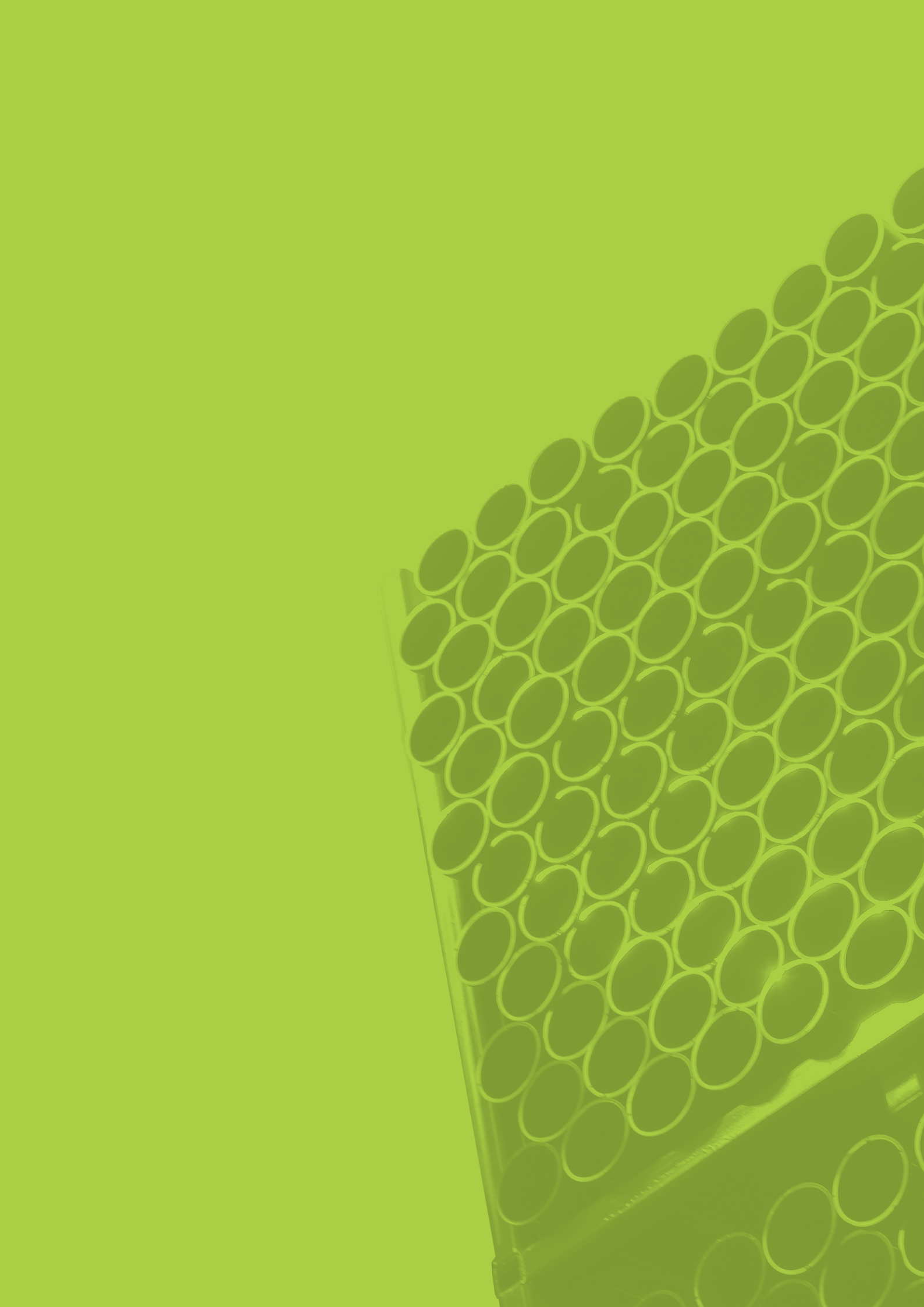
The information contained within this brochure is provided as a guide to the products and product dimensions of the Stream range.

For information on technical guidelines and how to install Stream products please contact us for further information.

Due to our continuous product improvement policy, we reserve the right to modify product specifications in line with market requirements.

DISCLAIMER

As the company's products are used for a multiplicity of purposes and as the company has no control over the method of their applications or use, the company excludes all conditions or warranties, expressed or implied by statute or otherwise, as to their products and/or their fitness for any particular purpose. Any technical co-operation between the company and the customer is given for customers assistance only and without liability on the part of the company.





STREAM HDPE DRAINAGE



DRAINAGE PIPE

PIPE SIZE (MM)	NOMINAL BORE	PVC EQUIVALENT	CODE
50	40	40	HD-1801-1050
56	50	50	HD-1801-1056
63	57	-	HD-1801-1063
75	65	65	HD-1801-1075
90	80	80	HD-1801-1090
110	100	100	HD-1801-1110
125	115	-	HD-1801-1125
160	150	150	HD-1801-1160
200	185	175	HD-1801-1200
250	225	225	HD-1801-1250
315	300	300	HD-1801-1315

Note: 40mm available on request



DRAIN EF COUPLING

FITTING SIZE (MM)	NOMINAL BORE	CODE
50	40	HD-2010-0050
56	50	HD-2010-0056
63	57	HD-2010-0063
75	65	HD-2010-0075
90	80	HD-2010-0090
110	100	HD-2010-0110
125	115	HD-2010-0125
160	150	HD-2010-0160



DRAIN EF COUPLING (LARGE Ø)

FITTING SIZE (MM)	NOMINAL BORE	CODE
200	185	HD-2014-0200
250	225	HD-2014-0250
315	300	HD-2014-0315



88.5° BEND

FITTING SIZE (MM)	NOMINAL BORE	CODE
50	40	HD-3050-0050
56	50	HD-3050-0056
63	57	HD-3050-0063
75	65	HD-3050-0075
90	80	HD-3050-0090
110	100	HD-3050-0110
125	115	HD-3050-0125
160	150	HD-3050-0160

**90° SEGMENTED BEND**

FITTING SIZE (MM)	NOMINAL BORE	CODE
200	185	HD-6050-0200
250	225	HD-6050-0250
315	300	HD-6050-0315

**45° BEND**

FITTING SIZE (MM)	NOMINAL BORE	CODE
50	40	HD-3100-0050
56	50	HD-3100-0056
63	57	HD-3100-0063
75	65	HD-3100-0075
90	80	HD-3100-0090
110	100	HD-3100-0110
125	115	HD-3100-0125
160	150	HD-3100-0160

**45° SEGMENTED BEND**

FITTING SIZE (MM)	NOMINAL BORE	CODE
200	185	HD-6100-0200
250	225	HD-6100-0250
315	300	HD-6100-0315



60° SEGMENTED BEND

FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100	HD-6830-0110
125	115	HD-6830-0125
160	150	HD-6830-0160
200	185	HD-6830-0200
250	225	HD-6830-0250
315	300	HD-6830-0315



22° SEGMENTED BEND

FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100	HD-6120-0110
125	115	HD-6120-0125
160	150	HD-6120-0160
200	185	HD-6120-0200
250	225	HD-6120-0250
315	300	HD-6120-0315



15° SEGMENTED BEND

FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100	HD-6860-0110
125	115	HD-6860-0125
160	150	HD-6860-0160
200	185	HD-6860-0200
250	225	HD-6860-0250
315	300	HD-6860-0315



RAMP BEND

FITTING SIZE (MM)	NOMINAL BORE	OFFTAKE SIZE (MM)	CODE
75	65	56	HD-6080-0075
90	80	63	HD-6080-0090
110	100	75	HD-6080-0110
125	115	90	HD-6080-0125
160	150	110	HD-6080-0160



Note: please enquire for any special angle bends

45° JUNCTION

FITTING SIZE (MM)	NOMINAL BORE	CODE
50 x 50	40 x 40	HD-3200-5050
56 x 50	50 x 40	HD-3200-5650
56 x 56	50 x 50	HD-3200-5656
63 x 50	57 x 40	HD-3200-6350
63 x 56	57 x 50	HD-3200-6356
63 x 63	57 x 57	HD-3200-6363
75 x 50	65 x 40	HD-3200-7550
75 x 56	65 x 50	HD-3200-7556
75 x 63	65 x 57	HD-3200-7563
75 x 75	65 x 65	HD-3200-7575
90 x 50	80 x 40	HD-3200-9050
90 x 56	80 x 50	HD-3200-9056
90 x 63	80 x 57	HD-3200-9063
90 x 75	80 x 65	HD-3200-9075
90 x 90	80 x 80	HD-3200-9090
110 x 50	100 x 40	HD-3200-1150
110 x 56	100 x 50	HD-3200-1156
110 x 63	100 x 57	HD-3200-1163
110 x 75	100 x 65	HD-3200-1175
110 x 90	100 x 80	HD-3200-1190
110 x 110	100 x 100	HD-3200-1111
125 x 110	115 x 100	HD-3200-1211
125 x 125	115 x 115	HD-3200-1212
160 x 110	150 x 100	HD-3200-1611
160 x 125	150 x 115	HD-3200-1612
160 x 160	150 x 150	HD-3200-1616



45° FABRICATED JUNCTION

FITTING SIZE (MM)	NOMINAL BORE	CODE
200 x 110	185 x 100	HD-6200-2011
200 x 125	185 x 115	HD-6200-2012
200 x 160	185 x 150	HD-6200-2016
200 x 200	185 x 185	HD-6200-2020
250 x 110	225 x 100	HD-6200-2511
250 x 125	225 x 115	HD-6200-2512
250 x 160	225 x 150	HD-6200-2516
250 x 200	225 x 185	HD-6200-2520
250 x 250	225 x 225	HD-6200-2525
315 x 110	300 x 100	HD-6200-3111
315 x 125	300 x 115	HD-6200-3112
315 x 160	300 x 150	HD-6200-3116
315 x 200	300 x 185	HD-6200-3120
315 x 250	300 x 225	HD-6200-3125
315 x 315	300 x 300	HD-6200-3131



45° DOUBLE JUNCTION

FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100 x 100	HD-3220-1111



88.5° JUNCTION

FITTING SIZE (MM)	NOMINAL BORE	CODE
50 x 50	40 x 40	HD-3150-5050
56 x 50	50 x 40	HD-3150-5650
56 x 56	50 x 50	HD-3150-5656
63 x 50	57 x 40	HD-3150-6350
63 x 56	57 x 50	HD-3150-6356
63 x 63	57 x 57	HD-3150-6363
75 x 50	65 x 40	HD-3150-7550
75 x 56	65 x 50	HD-3150-7556
75 x 63	65 x 57	HD-3150-7563
75 x 75	65 x 65	HD-3150-7575
90 x 50	80 x 40	HD-3150-9050
90 x 56	80 x 50	HD-3150-9056
90 x 63	80 x 57	HD-3150-9063
90 x 75	80 x 65	HD-3150-9075
90 x 90	80 x 80	HD-3150-9090
110 x 50	100 x 40	HD-3150-1150
110 x 56	100 x 50	HD-3150-1156
110 x 63	100 x 57	HD-3150-1163
110 x 75	100 x 65	HD-3150-1175
110 x 90	100 x 80	HD-3150-1190
110 x 110	100 x 100	HD-3150-1111
160 x 110	150 x 100	HD-3150-1611
160 x 160	150 x 150	HD-3150-1616



88.5° FABRICATED JUNCTION

FITTING SIZE (MM)	NOMINAL BORE	CODE
200 x 110	185 x 100	HD-6160-2011
200 x 125	185 x 115	HD-6160-2012
200 x 160	185 x 150	HD-6160-2016
200 x 200	185 x 185	HD-6160-2020
250 x 110	225 x 100	HD-6160-2511
250 x 125	225 x 115	HD-6160-2512
250 x 160	225 x 150	HD-6160-2516
250 x 200	225 x 185	HD-6160-2520
250 x 250	225 x 225	HD-6160-2525
315 x 110	300 x 100	HD-6160-3111
315 x 125	300 x 115	HD-6160-3112
315 x 160	300 x 150	HD-6160-3116
315 x 200	300 x 185	HD-6160-3120
315 x 250	300 x 225	HD-6160-3125
315 x 315	300 x 300	HD-6160-3131



88.5° SWEEP JUNCTION

FITTING SIZE (MM)	NOMINAL BORE	CODE
110 x 110	100 x 100	HD-3170-1111



VERTICAL INSPECTION ACCESS PIPE

FITTING SIZE (MM)	NOMINAL BORE	CODE
110 Vert. *	100	HD-3970-110V
110 Vert w plug	100	HD-3970-110VP

* Pictured below



HORIZONTAL INSPECTION ACCESS PIPE

FITTING SIZE (MM)	NOMINAL BORE	CODE
50	40	HD-3970-0050
56	50	HD-3970-0056
63	57	HD-3970-0063
75	65	HD-3970-0075
90	80	HD-3970-0090
110 Horz. *	100	HD-3970-110H
160 x 110	150 x 100	HD-3970-1611
160 x 160	150 x 150	HD-3970-1616

* Pictured below



EXPANSION SOCKET

FITTING SIZE (MM)	NOMINAL BORE	CODE
50	40	HD-7070-0050
56	50	HD-7070-0056
63	57	HD-7070-0063
75	65	HD-7070-0075
90	80	HD-7070-0090
110	100	HD-7070-0110
160	150	HD-7070-0160
200	185	HD-7070-0200
250	225	HD-7070-0250
315	300	HD-7070-0315



RING SEAL SOCKET

SIZE (MM)	NOMINAL BORE	CODE FOR EF WELD	CODE SHORT LEG
50	40	HD-7080-0050	HD-7080-0050-SHT
56	50	HD-7080-0056	HD-7080-0056-SHT
63	57	HD-7080-0063	HD-7080-0063-SHT
75	65	HD-7080-0075	HD-7080-0075-SHT
90	80	HD-7080-0090	HD-7080-0090-SHT
110	100	HD-7080-0110	HD-7080-0110-SHT
160	150	HD-7080-0160	HD-7080-0160-SHT
200	185	HD-7080-0200	HD-7080-0200-SHT
250	225	HD-7080-0250	HD-7080-0250-SHT
315	300	HD-7080-0315	HD-7080-0315-SHT



P TRAP - ADJUSTABLE STYLE

FITTING SIZE (MM)	NOMINAL BORE	CODE
50	40	HD-6310-0050
56	50	HD-6310-0056
63	57	HD-6310-0063
75	65	HD-6310-0075
90	80	HD-6310-0090
90 x 75	80 x 65	HD-6310-9075
110	100	HD-6310-0110
110 x 75	100 x 65	HD-6310-1175
160	150	HD-6310-0160



P TRAP - FIXED STYLE

FITTING SIZE (MM)	NOMINAL BORE	CODE
50	40	HD-6320-0050
56	50	HD-6320-0056
63	57	HD-6320-0063
75	65	HD-6320-0075
90	80	HD-6320-0090
110	100	HD-6320-0110
160	150	HD-6320-0160



PALAZZI TRAP

FITTING SIZE (MM)	NOMINAL BORE	CODE
110 x 56	100 x 50	HD-6300-1156
110 x 75	100 x 65	HD-6300-1175
110 x 110	100 x 100	HD-6300-1111
160 x 110	150 x 100	HD-6300-1611
160 x 160	150 x 150	HD-6300-1616



S&P COMBINATION TRAP

FITTING SIZE (MM)	THREAD SIZE	HDPE OFFTAKE	CODE
40	*40mm	40mm	HD-6330-0040
50	50mm	56mm	HD-6330-0056

Note 1: 40mm trap is white & 50mm trap is black

Note 2: *40mm trap comes with 32mm thread option.
Both traps are manufactured from PP



ECCENTRIC REDUCER

FITTING SIZE (MM)	NOMINAL BORE	CODE
56 x 50	50 x 40	HD-3040-5650
63 x 50	57 x 40	HD-3040-6350
63 x 56	57 x 50	HD-3040-6356
75 x 50	65 x 40	HD-3040-7550
75 x 56	65 x 50	HD-3040-7556
75 x 63	65 x 57	HD-3040-7563
90 x 50	80 x 40	HD-3040-9050
90 x 56	80 x 50	HD-3040-9056
90 x 63	80 x 57	HD-3040-9063
90 x 75	80 x 65	HD-3040-9075
110 x 50	100 x 40	HD-3040-1150
110 x 56	100 x 50	HD-3040-1156
110 x 63	100 x 57	HD-3040-1163
110 x 75	100 x 65	HD-3040-1175
110 x 90	100 x 80	HD-3040-1190
125 x 110	115 x 100	HD-3040-1211
160 x 110	150 x 100	HD-3040-1611
160 x 125	150 x 115	HD-3040-1612
200 x 110*	185 x 100	HD-3040-2011
200 x 160*	185 x 150	HD-3040-2016
250 x 160*	225 x 150	HD-3040-2516
250 x 200*	225 x 185	HD-3040-2520
315 x 200*	300 x 185	HD-3040-3120
315 x 250*	300 x 225	HD-3040-3125

Note: *Sizes 200, 250 & 315 are Fabricated.
110mm In-Pipe Reducers are also available.



CONCENTRIC REDUCER

FITTING SIZE (MM)	NOMINAL BORE	CODE
56 x 50	50 x 40	HD-3030-5650
63 x 50	57 x 40	HD-3030-6350
63 x 56	57 x 50	HD-3030-6356
75 x 50	65 x 40	HD-3030-7550
75 x 56	65 x 50	HD-3030-7556
75 x 63	65 x 57	HD-3030-7563
90 x 50	80 x 40	HD-3030-9050
90 x 56	80 x 50	HD-3030-9056
90 x 63	80 x 57	HD-3030-9063
90 x 75	80 x 65	HD-3030-9075
110 x 50	100 x 40	HD-3030-1150
110 x 56	100 x 50	HD-3030-1156
110 x 63	100 x 57	HD-3030-1163
110 x 75	100 x 65	HD-3030-1175
110 x 90	100 x 80	HD-3030-1190
160 x 110	150 x 100	HD-3030-1611



IN-PIPE ADAPTOR

FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100	HD-7590-0110



BUCKET TRAP

FITTING SIZE (MM)	NOMINAL BORE	CODE
250 x 110	225 x 100	HD-6920-2511
250 x 160	225 x 150	HD-6920-2516

- Includes Standard 5mm Stainless Steel Grate.
- Anti-skid coating available on request
- Doesn't include bucket. See below



WC PAN COLLAR

FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100	HD-7520-0110



STAINLESS STEEL BASKET

TYPE	DESCRIPTION	CODE
A - Fully Perforated	For Sand + Silt Etc	HD-6931-0250
C - Solid Bottom	For Food Prep Areas Etc	HD-6932-0250



Type A



Type C

WELD ON END CAP

FITTING SIZE (MM)	NOMINAL BORE	CODE
50	40	HD-3270-0050
56	50	HD-3270-0056
63	57	HD-3270-0063
75	65	HD-3270-0075
90	80	HD-3270-0090
110	100	HD-3270-0110
125	115	HD-3270-0125
160	150	HD-3270-0160
200	185	HD-3270-0200
250	225	HD-3270-0250
315	300	HD-3270-0315



STOP END COMPLETE

FITTING SIZE (MM)	NOMINAL BORE	CODE
50	40	HD-7280-0050
56	50	HD-7280-0056
63	57	HD-7280-0063
75	65	HD-7280-0075
90	80	HD-7280-0090
110	100	HD-7280-0110
160	150	HD-7280-0160



4 WAY RISER 88.5°

FITTING SIZE (MM)	NOMINAL BORE	CODE
90 x 63 x 50	80 x 57 x 40	HD-3243-9065
110 x 56 x 50	100 x 50 x 40	HD-3243-1155
110 x 56	100 x 50	HD-3242-1156
110 x 63	100 x 57	HD-3242-1163
110 x 63 x 50	100 x 57 x 40	HD-3243-1165
110 x 75 (3-Way)	100 x 65	HD-3242-1173



DWV TO HDPE ADAPTOR

DWV SIZE (MM)	HDPE SIZE MM	CODE
40	50	HD-7530-4050
50	50	HD-7530-5050
40	56	HD-7530-4056
50	56	HD-7530-5056
50	63	HD-7530-5063
65	63	HD-7530-6563
65	75	HD-7530-6575
80	75	HD-7530-8075
80	90	HD-7530-8090
100	110	HD-7530-1011
150	160	HD-7530-1516
175	200	HD-7530-1720
225	250	HD-7530-2225
300	315	HD-7530-3031

- Flow from DWV to HDPE
- HDPE Drain EF Coupling required



HDPE TO DWV ADAPTOR

HDPE SIZE (MM)	DWV SIZE MM	CODE
110	100	HD-7540-0110
160	150	HD-7540-0160

- Flow from HDPE to DWV



FLOOR GRATE - DROP IN STYLE

FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100	HD-6460-0110
160	150	HD-6460-0160

- Comes standard with 2mm plain finish stainless steel grate.
- Anti-slip coating available on request.



BOLTED TRAP SCREW - DROP IN STYLE

FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100	HD-6470-0110
160	150	HD-6470-0160

- Comes standard with 2mm plain finish stainless steel grate.
- Anti-slip coating available on request.



PP FLOOR WASTE WITH GRATE

FLOOR TYPE	SHAPE	NOMINAL BORE	CODE
Vinyl	Round	100	VR100CP HDPE
Tile	Square	100	TFW100SC HDPE
Tile	Square	100	TFW100RC HDPE

- Vinyl floor waste also suits membrane finish floors
- Tile floor wastes are height adjustable



SOVENT VENTILATION BRANCH

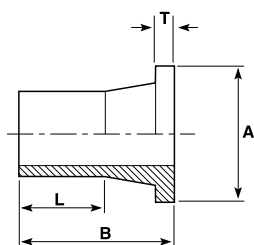
FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100	HD-SOV-110
160	150	HD-SOV-160

- Fabricated options available - contact UPG



SPIGOT STUB FLANGE

SIZE (MM)	CODE	A (MM)	B (MM)	L (MM)	T (MM)
50	3418-0050	84	92	55	12
56	3418-0056	84	92	55	12
63	3418-0063	95	100	63	14
75	3418-0075	122	120	70	16
90	3418-0090	128	132	79	17
110	3418-0110	158	157	82	18
125	3418-0125	158	170	87	25
160	3418-0160	212	180	98	25
200	3418-0200	268	200	112	32
250	3418-0250	320	205	129	35
315	3418-0315	370	220	150	35



PUDDLE FLANGE

FITTING SIZE (MM)	NOMINAL BORE	CODE
50	40	HD-6420-0050
56	50	HD-6420-0056
63	57	HD-6420-0063
75	65	HD-6420-0075
90	80	HD-6420-0090
110	100	HD-6420-0110
160	150	HD-6420-0160
200	175	HD-6420-0200
250	225	HD-6420-0250
315	300	HD-6420-0315

- Non-Standard Puddle Flanges made to order.



FABRICATION SERVICES

Our qualified and experienced fabrication team can construct pipe spools, manifolds, tanks, special bends, customised risers, etc. to customer requirements in our fully equipped workshop.



TRAINING COURSE

UPG have an online test facility so that you can quickly and easily gain certification in HDPE Electrofusion Drainage welding. Takes less than an hour to get your ticket.

Visit our website to register: upg.nz/services/training



CLIPPING METHODS - INSTALLATION GUIDE

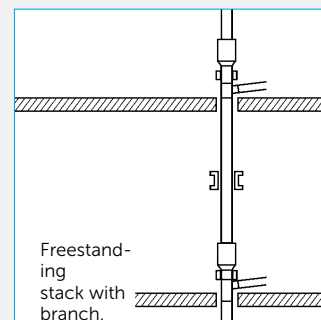
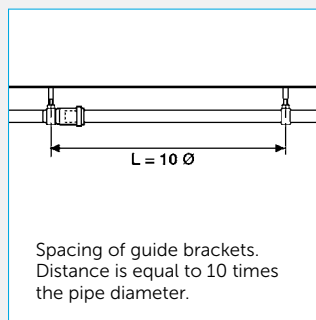
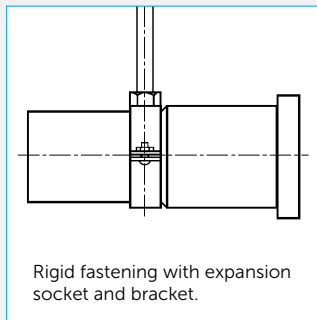
Like all materials HDPE expands and contracts with temperature changes. HDPE expands by 0.2mm per metre for every degree C increase in temperature. The installation of expansion sockets on each floor of a vertical stack, at no more than 5 metres apart on horizontal runs and upstream of each junction fitting or change of direction compensates for expansion and contraction.

Expansion sockets should be bracketed rigidly to prevent any movement of the expansion socket.

In addition, to allow axial movement caused by the effects of expansion and contraction, loose guide brackets are used at no more than 10 pipe diameters apart and from the expansion joint.

For a vertical stack one rigid bracket is located at the expansion joint and one guide bracket is located between the expansion joint and the branch.

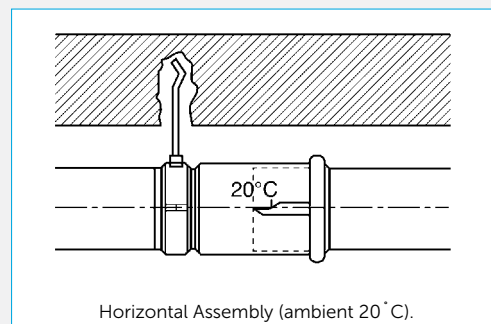
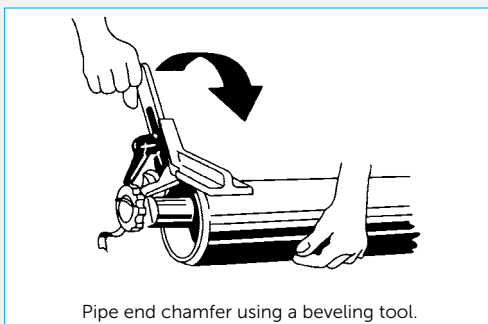
Installers should also refer to the requirements of AS/NZS 3500.2:2003 "Sanitary Plumbing & Drainage."



EXPANSION SOCKET - INSTALLATION GUIDE

1. Chamfer the pipe end to be inserted to approximately 15 degrees.
2. Lubricate the pipe end with soft soap or other suitable lubricant. Do not use oil or grease.

3. Insert pipe to the depth indicated on the expansion socket which for an ambient temperature of 20 degrees C is a depth of 105mm or 2/3 of the depth of the socket approximately.



BURIED HDPE DRAINAGE - INSTALLATION GUIDE

Polyethylene pipes can also be used in several underground applications. Installation should follow the requirements of AS/NZS 2566.2:2002 "Buried Flexible Pipelines" and AS/NZS 3500.2:2003 "Sanitary Plumbing & Drainage," and the requirements of local authorities.

Particular attention must be paid to the trench which is to hold the pipes and it should be carried out with the recommended sizes as illustrated below.

The bed of the trench where the pipe is to be laid must be completely flat and should be free from stones or sharp objects. The pipe bedding material needs to be a minimum of 10cm of sand to provide a continuous support along the whole length of the pipe. The first 15-20cm of cover over the pipe should be of the same material. The cover must be compressed to prevent pipe movement. Sand compacting should be carried out immediately after the pipe has been covered.

The depth of the trench will depend on the presence of heavy vehicles or also the possibility of freezing temperatures.

For calculation the following indications in Figures

7 to 10, the official guidelines, standards and regulations should be observed.

A minimum of 80cm must cover the top of the pipe (see Figure 7); if heavy vehicles are to pass over the top it is recommended to cover the layer of sand with light concrete casting in order to evenly distribute the ground pressure (see Figure 8). If two or more pipes are to be laid in the same trench, they should not come into contact. A distance of 10 to 15 cm should be left between the two pipes to allow for future maintenance work. This space should be filled with sand and compacted on both sides at the same time. The examples indicated represent normal laying conditions. Figure 9 shows a trench where the pipe is covered with concrete; here the behaviour of the pipeline will be rigid and will not undergo deformations; whereas Figures 7 and 8 represent flexible installations.

In underground installations, the ambient temperature is fairly stable and the fluid temperatures from many inlets have usually mixed and stabilised through the above ground pipe work. Expansion sockets therefore may not be required.

Figure 7 Light Traffic

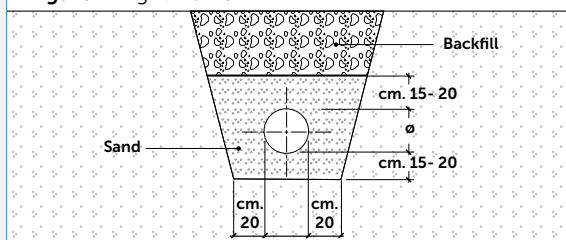


Figure 8 Heavy Traffic

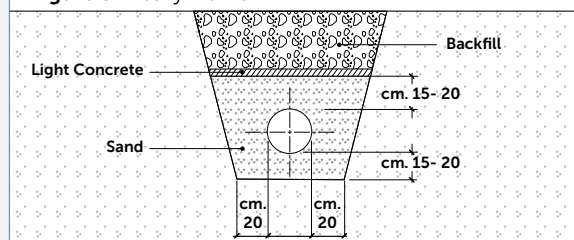
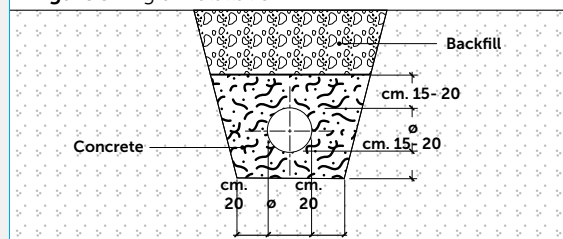


Figure 9 Rigid Installation



FIRE PROTECTION - INSTALLATION GUIDE

HDPE is not self-extinguishing and therefore fire stops must be installed in accordance with the relevant standard.

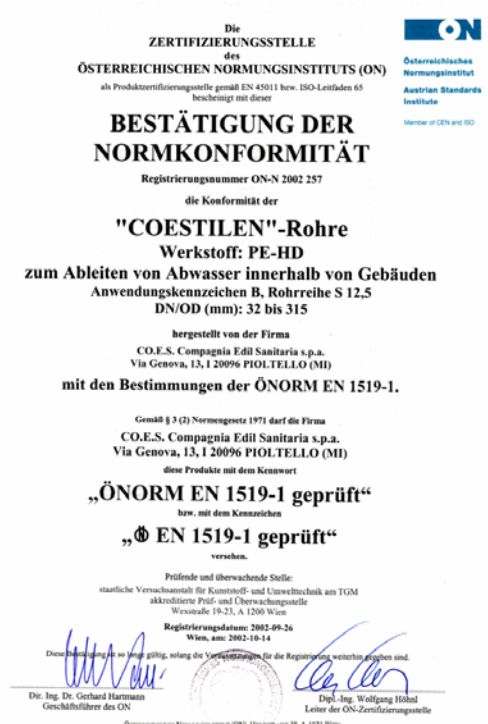
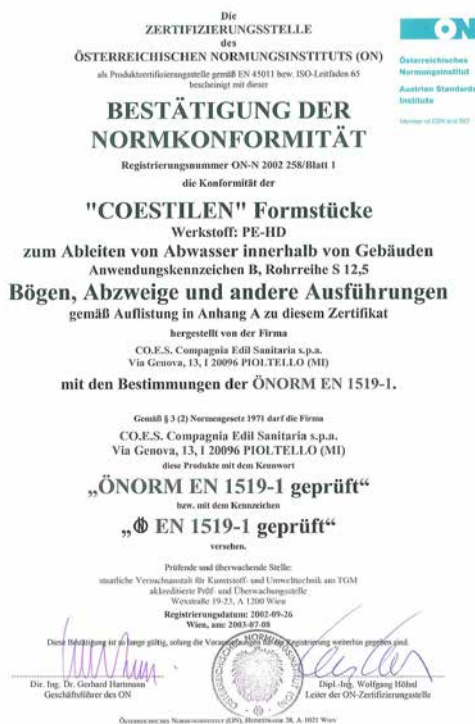
ELECTROFUSION WELDING - INSTALLATION GUIDE

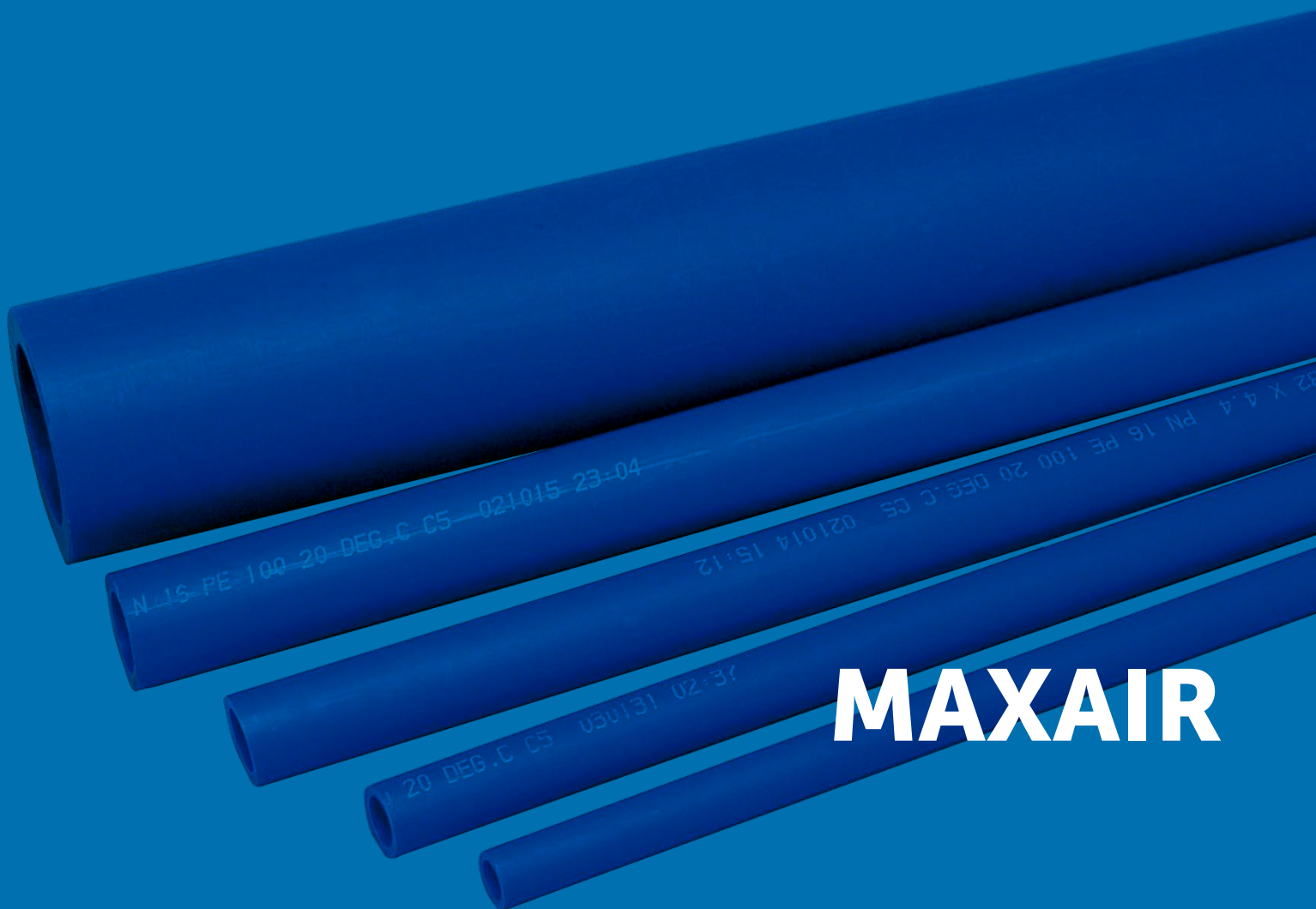
1. Cut pipe square using a proper pipe cutter or a hand saw.
2. Using a HDPE pipe scraper, scrape the pipe ends (or the fittings to be welded) in order to remove the oxide layer. It is critical to ensure that the scrapes overlap, and that all the oxide layer is completely removed. Scratching or abrading is not sufficient, and will affect joint integrity.
3. Remove burrs on the pipe end using the scraper. Clean the pipe ends and fittings using disposable UPG Welding Wipes and ensure that pipe and fittings are completely dry before assembly.
4. Insert pipe or fitting end in to the electrofusion coupling. Make sure that the pipes/ fittings are straight and there is no moisture present. Plug EF welding machine into mains power or start generator before switching the EF welder on. It is also important to ensure that the EF welder is protected from power surges.
5. Connect leads from EF welder to the EF coupling and start the welding process by pushing the button. Detailed instructions on the use of the EF welder can be found in the case.
6. When the EF welder stops, remove the leads. Visually check the EF coupling to ensure that the indicators have come out, or the white welding indicator has turned grey, depending on the brand. Also ensure that the pipe has not moved during the weld.
7. Allow 10-15 minutes cool time before putting any strain on the welded joint.

Please Contact Our Technical Department If You Would Like Us To Send You A Copy Of Our Comprehensive 'HDPE Drainage Installation Manual'.



CERTIFICATES/APPROVALS





MAXAIR

maxair

AIR PIPE SYSTEMS

Maxair® is the original and market leader in compressed air pipe systems since 1995. This Maxair® Technical Manual is designed to give you access to a superior system for your compressed air reticulation requirements. Maxair® pipe is extruded from PE100, an advanced material technology - the highest grade commercially available. Maxair® outperforms other pipes for pressure, flow, corrosion resistance, compatibility with compressor oils & ease of installation or alteration.

Complementing this outstanding and proven development in clean robust pipework is a comprehensive range of quality components to help you select the best solution for your individual requirements. This range is a result of ongoing research, experience and continual improvement within a broad cross-section of industrial applications.

Compressed gasses have inherent dangers, so an uncompromising standard of quality, conservative pressure ratings and the highest safety factors of any polymer piping system as set out in New Zealand Standards is here available.

- 50 YEAR WARRANTY
- SIMPLE & FAST TO INSTALL
- EASY TO ALTER OR ADAPT
- LIGHTWEIGHT
- STRONG, ROBUST, SAFE
- NO CORROSION
- FOOD GRADE MATERIALS
- LOW FRICTION, SMOOTH BORE
- BROAD CHEMICAL RESISTANCE
- NO METALLIC CONTAMINATION
- WIDE RANGE OF PIPE SIZES 20MM TO 160MM
- SUITABLE FOR BREATHING AIR
- DISTINCTIVE BLUE COLOUR
- GOOD THERMAL PROPERTIES
- SUITABLE UNDERGROUND



CONFORMANCE TO RELATIVE NEW ZEALAND STANDARDS

Maxair® conforms to AS/NZS 4020 (requirements are of a higher level than European standards BS 6920) for contact with drinking water. Our product is manufactured from food grade material and will not taint purified air, or support micro-organisms. Maxair® is safe for breathing air applications where air supply has been filtered in the correct manner, provided appropriate cleaning and sterilisation occurs.

Maxair® pipes are manufactured in accordance with AS/NZS 4131 and are suitable for long term use when correctly handled, installed, and operated.

AS/NZS 4130, PE pipes for pressure applications, requires that PE pressure pipes be manufactured from compounds conforming with AS/NZS 4131.

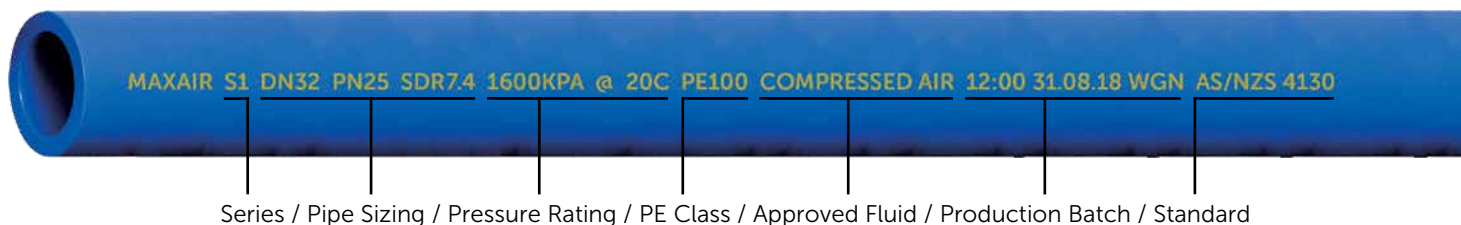
In AS/NZS 4131, the basis of stress rating is the 50 year figure on long term stress regression. This figure is used as a design basis only, and actual life is expected to be much longer, provided recommended design, installation, and operational practices are adopted.

As established from long term testing, Maxair® pipe may be operated continuously under pressure for up to 200 years at 20°C. With AS/NZS 4131, non-conformance is not specifically limited by time.

Warranties that may be offered by other manufacturers often limit the user's rights in setting time limits and often do not quantify the warranty conditions that may also limit the user's rights.

Maxair® PE 100 is the highest grade of PE in New Zealand Standard AS/NZS 4131. Blue colour to assist in identification and colour coding without painting (standards require marking/colour coding).

PIPE MARKINGS AS PER AS/NZS 4130



Meets Australian and NZ Standards AS/NZS4130 & AS/NZS4131 and made in Australia under strict ISO 9002 Certified Quality Systems. Maxair PE100 is the highest grade of PE in pipe standard AS/NZS 4131. Blue colour to assist in identification and colour coding without painting. (Australian and New Zealand Standards require marking/colour coding).

GUARANTEE

Maxair PE100 pipe is manufactured in accordance with AS/NZS4130 and AS/NZS4131 and is accordingly guaranteed for 50 years provided recommended design, installation and operation practices are adopted. As established from long term testing, PE100 may be operated continuously under pressure for up to 200 years at 20°C.

ECONOMIC ADVANTAGES OF MAXAIR AIR PIPE SYSTEMS

- \$ Elimination of costly air leaks. This is now possible with fusion welded fittings and/or proven O-Ring fittings.
- \$ Common problems with traditional materials such as maintaining air pressure and recurring air leaks, prove costly in both wastage of valuable compressed air and downtime/maintenance costs to rectify leaks.
- \$ Energy savings through reduced friction. Ultra smooth bore and low friction material.
- \$ Savings in labour costs in installation & modification.
- \$ Low capital costs.
- \$ Low maintenance. Along with low initial costs, the true economy of the Maxair® PE 100 pipe system is realised in long term efficiency, reliability, versatility and minimisation of maintenance.

DESIGN FLEXIBILITY

The three extensive ranges of Maxair® fittings - Socket Fusion, Electro Fusion or Compression, all using the same pipe, offer the Designer/Engineer maximum design flexibility.

The value to Industry of a total package which is readily altered at any stage is inestimable. This system is ideally suited to today's requirement for rapid installation schedules.

ELIMINATION OF PIPE CORROSION

A major disadvantage with traditional galvanised iron air pipe has been corrosion of pipe with consequent problems: Contamination of air supply, damaging tools & pneumatics, increased friction giving energy losses, reduced bore and eventual need for replacement. Maxair® eliminates this corrosion giving cleaner air and long lasting smooth bore.

Even copper develops green corrosion and can contaminate the airstream.

The smooth bore of Maxair® resists attachment and build-up of impurities.

REDUCE NOISE AND VIBRATION TRANSMISSION

One of the inherent qualities of PE100 compared to any metal pipe system is its ability to absorb and dampen transmission of noise and vibration making a quieter working environment. Transmitted vibrations can cause problems with pneumatic valves and equipment.

Maxair® is also Electrically non-conductive, so can be installed on cable trays along with cables etc.

QUICK, CLEAN, SIMPLE INSTALLATION

No tedious threading of pipe, flaring or gluing.

Installation can be 2-5 times quicker than with traditional materials. Simple to modify.

New branches, extensions or take-offs can be added with a minimum of disruption & cost. The typical inflexibility of traditional systems is overcome. An extensive range of fittings provides further design versatility.

CHEMICAL RESISTANCE

Maxair® has broad chemical compatibility and provides a solution for harsh corrosive environments. Fusion welded fittings provide a high degree of safety in these areas.

Welded PE 100 is the ultimate Polyethylene system due to its fused jointing, minimum entrapment and high safety factor.

PE pipe is suitable for use with compressor oils, whereas some other thermoplastics have limited or poor resistance. Some synthetic oils including aromatic, polyester, and di-ester types may not be suitable.

Please refer to Technical Department for specific applications.

FOOD CONTACT GRADE MATERIALS

Maxair® PE100 pipe and fittings conform with AS2070.1 "Plastic material for food contact use", providing system approval for use within a food plant.

Maxair® PE100 does not support micro-organisms or bacterial growth. Maxair® Compression fittings conform to AS4129, BS6920.

Maxair® Heavy Duty B.S.P threaded fittings conform with AS3855.3.

SUPERIOR STRENGTH

Maxair® has set the standard in the industry for high strength, and a conservative safety factor of 2:1 in compressed air pipe. By comparison a safety factor of 1:1.25 is approved for water. Maxair® has excellent pressure/ temperature capabilities with minimum 50 year design life.

Manufactured to PN25 providing a compressed air rating in accordance with New Zealand Standard AS4130 of 16 bar or 235 P.S.I. @ 20°C with a 2:1 safety factor.

Extremely robust. Impact resistant - is ductile in nature so will not shatter like PVC (PVC is not safe for compressed air). Excellent for underground applications.

Thermally stable and suitable for -20°C to +60°C continuous, with peaks of up to 95°C.

Meets New Zealand Standards AS4130 & AS4131 and made in New Zealand under strict ISO 9002 Certified Quality Systems.

STORAGE AND TRANSPORT

Pipe should be stored and transported straight and true. The storage area must be free from sharp objects (e.g. stones, metal components). The pipes should be uniformly supported to prevent any distortion of the pipes prior to installation. Care should be exercised to prevent scuffing or scoring the pipes by rough handling.

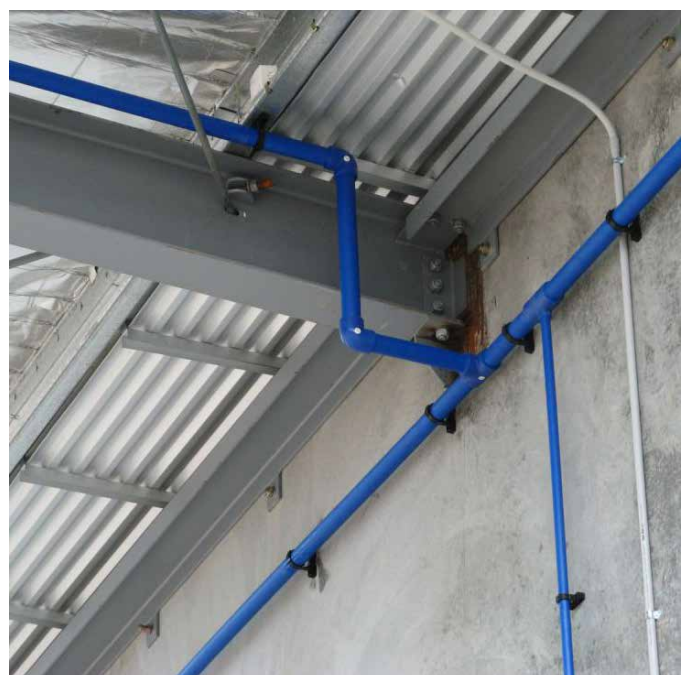
BREATHING AND MEDICAL APPLICATIONS

Maxair® is suitable for breathing air and medical applications, provided Technical Department recommendations are adopted.

It is the user's responsibility to provide and maintain supply air at a suitable level of purity for these applications.

JOINTING

It is especially important that installation be carried out by qualified and experienced operators under controlled conditions. All jointing should be conducted in accordance with the manufacturer's recommendations. There are three approved jointing methods, each with their own distinct benefits. Fabricated fittings should not be used for compressed gases.



CHOOSING YOUR MAXAIR SYSTEM

STEP ONE: SELECTION OF PIPE SIZE.

Five factors need to be considered when selecting pipe sizes for compressed air reticulation -

► Flow ► Pressure ► Distance ► Number of fittings ► Future Expansion

A pipe size should be selected using the compressor's output Free Air Delivery (F.A.D.) at the required operating pressure, and allow for length of pipe and future growth or expansion.

PRESSURE / FLOW

PRESSURE		20mm		25mm		32mm		40mm		50mm		63mm		90mm		110mm	
Bar	psi	l/sec	cfm	l/sec	cfm	l/sec	cfm	l/sec	cfm	l/sec	cfm	l/sec	cfm	l/sec	cfm	l/sec	cfm
3	43.5	7	15	14	30	28	59	48	101	88	186	475	370	475	1006	781	1654
4	58	10	21	20	42	39	83	67	141	122	259	661	515	661	1401	1087	2303
5	72.5	13	28	26	55	50	107	86	182	158	335	855	665	855	1811	1405	2977
6	87	16	34	32	68	62	132	106	225	195	413	1054	820	1054	2233	1732	3671
7	102	19	41	38	81	74	157	127	268	233	494	1258	980	1258	2667	2068	4383
7.5	109	21	44	41	87	80	170	137	291	252	534	1362	1060	1362	2887	2239	4745
8	116	22	47	44	94	87	184	148	313	272	576	1467	1142	1467	3109	2412	5111
10	145	29	61	57	122	112	237	191	405	351	744	1896	1476	1896	4019	3117	6606
13	189	39	83	78	164	151	321	258	547	475	1006	2564	1996	2564	5434	4215	8933

The flow values allow for a pressure drop of 4% of applied pressure over 30 metres of pipe. If a maximum pressure drop of 2% is desired, figures listed above should be de-rated by approximately 20%-30%.

The above table is calculated using values derived from Mueller's formula for gaseous flows.

PIPE EQUIVALENTS OF FITTINGS (IN METRES)

	20mm	25mm	32mm	40mm	50mm	63mm	90mm	110mm
45° Elbow	0.2	0.3	0.3	0.4	0.5	0.7	1	1.2
90° Elbow	0.8	1	1.3	1.6	2	2.6	3.7	4.5
Tee in line	0.3	0.3	0.4	0.5	0.6	0.8	1.1	14
Tee branch	0.9	1.2	1.5	1.9	2.4	3	4.2	5.2
Reducer	0	0	0	0.1	0.1	0.1	0.1	0.2
Ball Valve	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.5

Approximate compressor output calculation: $1 \text{ kw} \times 1.35 = \text{HP} \times 4 = \text{CFM}$ for Screw compressors.

For Piston compressors some manufacturers quote displacement which needs to be derated by 0.75 to calculate F.A.D. (Free Air Delivery).

STEP TWO: SELECTION OF FITTINGS.

Select the fitting style most suitable to your requirements. Three ranges are presented. Note that a combination is often used.

SOCKET FUSION (SEE PAGES 105-108)

Pipe and fittings are welded by means of socket fusion according to AS2033-1980. Fittings comply with DIN16963. These specially engineered fittings, in dimensions and tolerances to co-ordinate with pipe, are heated simultaneously with pipe then joined to give an extremely strong weld of high pressure capability, fusing pipe and fitting into one integral piece. Made in Europe from PE100 expressly for compressed air pipe systems, the fittings are joined quickly and easily using a welding tool and results in a fully fused joint of highest integrity which is leak free, tamper proof and visually pleasing.

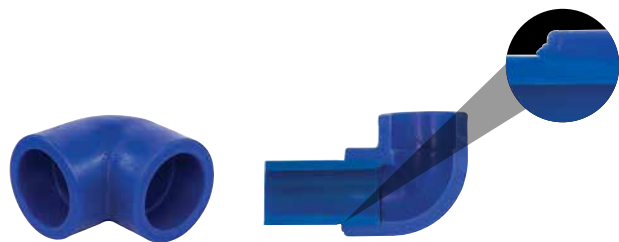


Photo of cutaway weld shows the homogenous weld joint of the pipe and fitting.

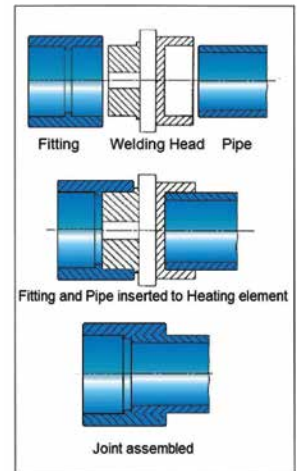
The fittings are very compact, and being the same raw material as the pipe, form a homogenous whole. Designed for sizes 20 mm to 110mm, however they excel in the sizes 20mm to 50mm.

The fusion process is achieved by heating the spigot and socket jointing surfaces above the crystalline melt point temperature of PE by insertion into a heated element tool. The heated joint sections are then assembled, and held until cooling to ambient temperature takes place.

The heater elements are PTFE coated, and at all times must be kept clean and free from contamination.

The heater tools need to be set and calibrated to maintain a surface temperature range of 260°C +/- 5°C. All jointing must be performed in a protected area to prevent contamination of the joints by dirt, moisture or cold wind.

SOCKET FUSION WELDING



ELECTROFUSION WELD FITTINGS (SEE PAGES 25-31)

Electrofusion Fittings are positioned on the pipework by hand and then an electric current is applied via an Electrofusion Welder. These fittings enable one or more joints to be assembled and aligned or adjusted prior to welding. This makes the installation of large bore pipework extremely quick and simple plus giving the advantage of a fully welded system.

Also included in this range are "Under pressure air saddles" which are designed for installation under pressure thus eliminating the need to shut down plant and equipment for new connections. They are particularly useful in large plants with 24 hour operations.



COMPRESSION "O" RING FITTINGS (SEE PAGES 109-112)

Compression fittings are joined easily by hand and offer the advantage of being removable and reusable.

In order for PP mechanical compression fittings to comply with the requirements of AS/NZS 4129, it is normally considered necessary to provide reinforcement to female threads larger than 25mm. This reinforcement should also be corrosion resistant and is normally provided in the form of a stainless steel ring. Threaded outlets larger than 50mm should be avoided. The use of PTFE (Teflon) tape is solely recommended for all fittings with plastics threads.



STEP THREE: SELECTION OF OUTLET REQUIREMENTS

Select the outlet that suits your requirements (page 116-118) from our ready-to-use outlet options.



MAXAIR PE100 COMPRESSED AIR PIPE

MANUFACTURED TO
AS/NZS4130 STANDARD.



PRODUCT CODE	WALL THICKNESS	IMPERIAL EQUIVALENT	SIZE (MM)	LENGTH Metres
1241-020-2	2.8mm	5/8"	20mm	6m
1241-025-2	3.5mm	3/4"	25mm	6m
1241-032-2	4.4mm	1"	32mm	6m
1241-040-2	5.5mm	1 1/4"	40mm	6m
1241-050-2	6.9mm	1 1/2"	50mm	6m
1241-063-2	8.6mm	2"	63mm	6m
1241-090-2	12.5mm	3"	90mm	6m
1241-110-2	15.2mm	4"	110mm	6m

Coils for underground application and larger sizes are available on request



PIPE CLIPS

PIPE SIZE (MM)	CODE LIGHT DUTY PLASTIC CLIP
20	CL20
25	CL25
32	CL32
40	CL40
50	CL50
63	CL63



PIPE SIZE (MM)	CODE HEAVY DUTY PLASTIC CLIP
63	HDCL63
90	HDCL90
110	HDCL110
160	HDCL160



Refer to page 67 for other clipping options.

MAXAIR BLUE PE100 COMPRESSED AIR FITTINGS TO DIN 16963

COUPLINGS

PIPE x PIPE	CODE
20 x 20	WC20
25 x 25	WC25
32 x 32	WC32
40 x 40	WC40
50 x 50	WC50
63 x 63	WC63



REDUCING COUPLINGS

FITTING x PIPE	CODE
25 x 20	WRC2520
32 x 20	WRC3220
32 x 25	WRC3225
40 x 20	WRC4020
40 x 25	WRC4025
40 x 32	WRC4032
50 x 20	WRC5020
50 x 25	WRC5025
50 x 32	WRC5032
50 x 40	WRC5040
63 x 25	WRC6325
63 x 32	WRC6332
63 x 40	WRC6340
63 x 50	WRC6350



90 DEG ELBOW

PIPE x PIPE	CODE
20 x 20	WE20
25 x 25	WE25
32 x 32	WE32
40 x 40	WE40
50 x 50	WE50
63 x 63	WE63



45 DEG ELBOW

PIPE x PIPE	CODE
20 x 20	W45E20
25 x 25	W45E25
32 x 32	W45E32
40 x 40	W45E40
50 x 50	W45E50
63 x 63	W45E63



90 DEG TEE

PIPE x PIPE x PIPE	CODE
20 x 20 x 20	WT20
25 x 25 x 25	WT25
32 x 32 x 32	WT32
40 x 40 x 40	WT40
50 x 50 x 50	WT50
63 x 63 x 63	WT63



REDUCING 90 DEG TEE

PIPE x PIPE x PIPE	CODE
25 x 20 x 25	WRT2520
32 x 20 x 32	WRT3220
32 x 25 x 32	WRT3225
40 x 20 x 40	WRT4020
40 x 25 x 40	WRT4025
40 x 32 x 40	WRT4032
50 x 20 x 50	WRT5020
50 x 25 x 50	WRT5025
50 x 32 x 50	WRT5032
50 x 40 x 50	WRT5040
63 x 25 x 63	WRT6325
63 x 32 x 63	WRT6332
63 x 40 x 63	WRT6340
63 x 50 x 63	WRT6350



THREADED 90 DEG TEE

PIPE x THREAD	CODE
20 x 1/2"	WTF2015
25 x 1/2"	WTF2515
32 x 1/2"	WTF3215
40 x 1/2"	WTF4015



END CAPS

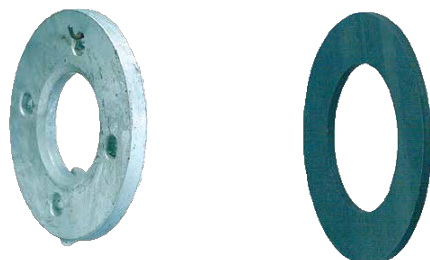
PIPE	CODE
20	WEC20
25	WEC25
32	WEC32
40	WEC40
50	WEC50
63	WEC63



BACKING RING & GASKETS

SIZE	TABLE E RING	GASKET
20	5451-0020	9644-0020
25	5451-0025	9644-0025
32	5451-0032	9644-0032
40	5451-0040	9644-0040
50	5451-0050	9644-0050
63	5451-0063	9644-0063
90	5451-0090	9644-0090
110	5451-0110	9644-0110

Other flange patterns are available



STUB FLANGE

PIPE	CODE
20	WF20
25	WF25
32	WF32
40	WF40
50	WF50
63	WF63



FLANGE KITS TYPE A

PIPE x PIPE	CODE
20 x 20	FKA20
25 x 25	FKA25
32 x 32	FKA32
40 x 40	FKA40
50 x 50	FKA50
63 x 63	FKA63

CONSISTS OF: 2 x BACKING RING, 2 x STUB FLANGE, 1 x GASKET, BOLTS, WASHERS & NUTS



FLANGE KITS TYPE B

PIPE x THREAD	CODE
20 x 1/2"	FKB20
25 x 3/4"	FKB25
32 x 1"	FKB32
40 x 1 1/4"	FKB40
50 x 1 1/2"	FKB50
63 x 2"	FKB63

CONSISTS OF: 1 x BACKING RING, 1 x THREADED FLANGE, 1 x STUB FLANGE, 1 x GASKET, BOLTS, WASHERS & NUTS



THREADED FLANGE TABLE D

FLANGE x THREAD	CODE
20 x 1/2"	FT20
25 x 3/4"	FT25
32 x 1"	FT32
40 x 1 1/4"	FT40
50 x 1 1/2"	FT50
63 x 2"	FT63
90 x 3"	FT90



THREADED 90 DEGREE ELBOWS

PIPE x THREAD	CODE
20 x 1/2"	WEF 2015 Lugged (Right)
25 x 3/4"	WEF 2520 No lug (Left)



FEMALE ADAPTOR

PIPE x THREAD	CODE
20 x 1/2"	WFA2015
25 x 3/4"	WFA2520
32 x 1"	WFA3225
40 x 1 1/4"	WFA4032
50 x 1 1/2"	WFA5040
63 x 2"	WFA6350



MALE ADAPTOR

PIPE x THREAD	CODE
20 x 1/2"	WMA2015
25 x 3/4"	WMA2520
32 x 1"	WMA3225
40 x 1 1/4"	WMA4032
50 x 1 1/2"	WMA5040
63 x 2"	WMA6350



MAXAIR COMPRESSION FITTINGS FOR COMPRESSED AIR AS1460

COUPLING

PIPE x PIPE	CODE
20 x 20	7014-0020
25 x 25	7014-0025
32 x 32	7014-0032
40 x 40	7014-0040
50 x 50	7014-0050
63 x 63	7014-0063
90 x 90	7014-0090
110 x 110	7014-0110



REDUCING COUPLING

PIPE x PIPE	CODE
25 x 20	7034-2520
32 x 25	7034-3225
40 x 32	7034-4032
50 x 40	7034-5040
63 x 50	7034-6350



MALE ADAPTOR

PIPE x THREAD	CODE
20 x 1/2"	7294-2015
25 x 1/2"	7294-2515
25 x 3/4"	7294-2520
32 x 1"	7294-3225
40 x 1 1/4"	7294-4032
50 x 1 1/2"	7294-5040
63 x 2"	7294-6350
90 x 3"	7294-9075
110 x 4"	7294-1110



FEMALE ADAPTOR

PIPE x THREAD	CODE
20 x 1/2"	7304-2015
25 x 3/4"	7304-2520
32 x 1"	7304-3225
40 x 1 1/4"	7304-4032
50 x 1 1/2"	7304-5040
63 x 2"	7304-6350
90 x 3"	7304-9075
110 x 4"	7304-1110



90 DEG ELBOW

PIPE x PIPE	CODE
20 x 20	7054-0020
25 x 25	7054-0025
32 x 32	7054-0032
40 x 40	7054-0040
50 x 50	7054-0050
63 x 63	7054-0063
90 x 90	7054-0090
110 x 110	7054-0110

90 DEG ELBOW
WITH THREADED FEMALE OFFTAKE

PIPE x PIPE	CODE
20 x 1/2"	7064-2015
25 x 3/4"	7064-2520
32 x 1"	7064-3225
40 x 1 1/4"	7064-4032
50 x 1 1/2"	7064-5040
63 x 2"	7064-6350

90 DEG ELBOW
WITH THREADED MALE OFFTAKE

PIPE x THREAD	CODE
20 x 1/2"	7074-2015
25 x 3/4"	7074-2520
32 x 1"	7074-3225
40 x 1 1/4"	7074-4032
50 x 1 1/2"	7074-5040
63 x 2"	7074-6350



ELBOW FEMALE (LUGGED)

PIPE x THREAD	CODE
20 x 1/2"	7084-2015
25 x 3/4"	7084-2520



90 DEG TEE

PIPE x PIPE x PIPE	CODE
20 x 20 x 20	7154-0020
25 x 25 x 25	7154-0025
32 x 32 x 32	7154-0032
40 x 40 x 40	7154-0040
50 x 50 x 50	7154-0050
63 x 63 x 63	7154-0063
90 x 90 x 90	7154-0090
110 x 110 x 110	7154-0110



REDUCING 90 DEG TEE

PIPE x PIPE x PIPE	CODE
25 x 20 x 25	7164-2520
32 x 25 x 32	7164-3225
40 x 25 x 40	7164-4025
40 x 32 x 40	7164-4032
50 x 25 x 50	7164-5025
50 x 40 x 50	7164-5040
63 x 50 x 63	7164-6350



90 DEG TEE WITH THREADED FEMALE OFFTAKE

PIPE x THREAD x PIPE	CODE
20 x 1/2" x 20	7174-2015
25 x 3/4" x 25	7174-2520
32 x 1" x 32	7174-3225
40 x 1 1/4" x 40	7174-4032
50 x 1 1/2" x 50	7174-5040
63 x 2" x 63	7174-6350
90 x 3" x 90	7174-9075



END CAPS

PIPE	CODE
20	7274-0020
25	7274-0025
32	7274-0032
40	7274-0040
50	7274-0050
63	7274-0063
90	7274-0090
110	7274-0110



BLANKING PLUG

PIPE	CODE
20mm	8264-0020
25mm	8264-0025
32mm	8264-0032
40mm	8264-0040
50mm	8264-0050
63mm	8264-0063



UNIVERSAL ADAPTOR

PIPE x METAL PIPE	CODE
25 x 15-22mm	7394-2515
25 x 20-27mm	7394-2520
25 x 27-34mm	7394-2527
32 x 20-27mm	7394-3220
32 x 27-34mm	7394-3227

- Clamps to metal pipe within the size range indicated



REDUCING SET

FITTING x PIPE	CODE
25 x 20	8904-2520
32 x 20	8904-3220
32 x 25	8904-3225
40 x 25	8904-4025
40 x 32	8904-4032
50 x 25	8904-5025
50 x 32	8904-5032
50 x 40	8904-5040
63 x 25	8904-6325
63 x 32	8904-6332
63 x 40	8904-6340
63 x 50	8904-6350



COMPRESSION VALVE

PIPE	CODE
20	0804-0020
25	0804-0025
32	0804-0032



MAXAIR BSP THREADED FITTINGS

Heavy duty fittings made from highest quality engineering grade materials. Maximum material temperature range with load is 100°C. Pressure ratings at 20°C. Up to 50mm 16bar/235psi. 65mm 12 bar/175psi. 80 and 100mm 10 bar/145 psi. Most fittings listed are available in brass. When ordering in brass, substitute "P" with "B".

REDUCING HEX BUSH

NYLON	CODE
1/2" x 1/4"	PRB1508
1/2" x 3/8"	PRB1510
3/4" x 1/4"	PRB2008
3/4" x 3/8"	PRB2010
3/4" x 1/2"	PRB2015
1" x 1/2"	PRB2515
1" x 3/4"	PRB2520
1 1/4" x 3/4"	PRB3220
1 1/4" x 1"	PRB3225
1 1/2" x 3/4"	PRB4020
1 1/2" x 1"	PRB4025
1 1/2" x 1 1/4"	PRB4032
2" x 3/4"	PRB5020
2" x 1"	PRB5025
2" x 1 1/4"	PRB5032
2" x 1 1/2"	PRB5040
2 1/2" x 2"	PRB6550
3" x 1 1/2"	PRB8040
3" x 2"	PRB8050
3" x 2 1/2"	PRB8065
4" x 2"	PRB10050
4" x 2 1/2"	PRB10065
4" x 3"	PRB10080
BRASS	CODE
1/4" x 1/8"	BRB0806
3/8" x 1/4"	BRB1008
1/2" x 1/4"	BRB1508
1/2" x 3/8"	BRB1510
3/4" x 1/4"	BRB2008
3/4" x 1/2"	BRB2015



ELBOW M & F

NYLON	CODE
1/2"	PMFE15
3/4"	PMFE20
1"	PMFE25
1 1/4"	PMFE32
1 1/2"	PMFE40
2"	PMFE50
BRASS	CODE
1/8"	BMFE06
1/4"	BMFE08
3/8"	BMFE10
1/2"	BMFE15



ELBOW F & F

NYLON	CODE
1/2"	PE15
3/4"	PE20
1"	PE25
1 1/4"	PE32
1 1/2"	PE40
2"	PE50
BRASS	CODE
1/8"	BE06
1/4"	BE08
3/8"	BE10
1/2"	BE15



HEX NIPPLE

NYLON	CODE
1/4"	PHN08
3/8"	PHN10
1/2"	PHN15
3/4"	PHN20
1"	PHN25
1 1/4"	PHN32
1 1/2"	PHN40
2"	PHN50
2 1/2"	PHN65
3"	PHN80
4"	PHN100
BRASS	CODE
1/8"	BHN06
1/4"	BNH08
3/8"	BNH10
1/2"	BHN15



REDUCING HEX NIPPLE

NYLON	CODE
1/2" x 1/8"	PRHN1506
1/2" x 1/4"	PRHN1508
1/2" x 3/8"	PRHN1510
3/4" x 3/8"	PRHN2010
3/4" x 1/2"	PRHN2015
1" x 1/2"	PRHN2515
1" x 3/4"	PRHN2520
1 1/4" x 3/4"	PRHN3220
1 1/4" x 1"	PRHN3225
1 1/2" x 3/4"	PRHN4020
1 1/2" x 1"	PRHN4025
1 1/2" x 1 1/4"	PRHN4032
2" x 3/4"	PRHN5020
2" x 1"	PRHN5025
2" x 1 1/4"	PRHN5032
2" x 1 1/2"	PRHN5040
2 1/2" x 2"	PRHN6550
3" x 1 1/2"	PRHN8040
3" x 2"	PRHN8050
3" x 2 1/2"	PRHN8065
4" x 2"	PRHN10050
4" x 2 1/2"	PRHN10065
4" x 3"	PRHN10080
BRASS	CODE
1/4" x 1/8"	BRHN0806
3/8" x 1/4"	BRHN1008
1/2" x 1/4"	BRHN1508
1/2" x 3/8"	BRHN1510
3/4" x 1/4"	BRHN2008



TEE

NYLON	CODE
1/2"	PT15
3/4"	PT20
1"	PT25
1 1/4"	PT32
1 1/2"	PT40
2"	PT50
BRASS	CODE
1/8"	BT06
1/4"	BT08
3/8"	BT10
1/2"	BT15



SOCKET

NYLON	CODE
1/2"	PS15
3/4"	PS20
1"	PS25
1 1/4"	PS32
1 1/2"	PS40
2"	PS50
2 1/2"	PS65
3"	PS80
4"	PS100
BRASS	CODE
1/8"	BS06
1/4"	BS08
3/8"	BS10
1/2"	BS15



REDUCING SOCKET

NYLON	CODE
3/4" x 1/2"	PRS2015
1" x 1/2"	PRS2515
1" x 3/4"	PRS2520
1 1/4" x 3/4"	PRS3220
1 1/4" x 1"	PRS3225
1 1/2" x 3/4"	PRS4020
1 1/2" x 1"	PRS4025
1 1/2" x 1 1/4"	PRS4032
2" x 3/4"	PRS5020
2" x 1"	PRS5025
2" x 1 1/4"	PRS5032
2" x 1 1/2"	PRS5040
2 1/2" x 1 1/2"	PRS6540
2 1/2" x 2"	PRS6550



PLUG

NYLON	CODE
1/2"	PP15
3/4"	PP20
1"	PP25
1 1/4"	PP32
1 1/2"	PP40
2"	PP50
2 1/2"	PP65
3"	PP80
4"	PP100
BRASS	CODE
1/8"	BP06
1/4"	BP08
3/8"	BP10
1/2"	BP15



Codes for all outlets and drains are formulated as follows:
Identifier / Incoming Pipe Size / Qty of Outlets / Size of Outlet

32mm outlets are able to be fabricated also

MOUNTING BRACKETS

SIZE	CODE
1/2"	TFWM 15
3/4"	TFWM 20
1"	TFWM 25



TFWM
Bracket
in use

COMPRESSION SYSTEM OUTLETS

CODE
CSO/20/1/1/4
CSO/20/2/1/4
CSO/20/3/1/4
CSO/20/1/3/8 *
CSO/20/2/3/8
CSO/25/1/1/4
CSO/25/2/1/4
CSO/25/3/1/4
CSO/25/1/3/8
CSO/25/2/3/8



COMPRESSION SYSTEM DRAIN OUTLETS

CODE
CSD/20/1/1/4
CSD/20/2/1/4
CSD/20/3/1/4
CSD/20/1/3/8
CSD/20/2/3/8
CSD/25/1/1/4
CSD/25/2/1/4
CSD/25/3/1/4
CSD/25/1/3/8
CSD/25/2/3/8 *



COMPRESSION SYSTEM DRIP LEG DRAIN OUTLETS

CODE
DLD/20/1/1/4
DLD/20/2/1/4
DLD/20/3/1/4
DLD/20/1/3/8
DLD/20/2/3/8
DLD/25/1/1/4
DLD/25/2/1/4
DLD/25/3/1/4
DLD/25/1/3/8
DLD/25/2/3/8 *



* As pictured.

AUTOMATIC DRAIN FILTER OUTLETS

CODE

ADF/20/1/1/4

ADF/20/2/1/4

ADF/20/3/1/4

ADF/20/1/3/8

ADF/20/2/3/8 *

ADF/20/3/3/8

ADF/25/1/1/4

ADF/25/2/1/4

ADF/25/3/1/4

ADF/25/1/3/8

ADF/25/2/3/8

ADF/25/3/3/8



AIR SUPPLY TEE WITH DRAIN

Mains air dump/drain. Install between compressor and factory mains.

CODE

AST 20 *

AST 25

AST 32

AST 40



WELDED SYSTEM DRAIN OUTLETS

CODE

WDLD/20/1/1/4

WDLD/20/2/1/4

WDLD/20/3/1/4

WDLD/20/1/3/8

WDLD/20/2/3/8

WDLD/25/1/1/4

WDLD/25/2/1/4 *

WDLD/25/3/1/4

WDLD/25/1/3/8

WDLD/25/2/3/8



WELDED SYSTEM DRAIN OUTLETS

CODE

WSO/20/1/1/4

WSO/20/2/1/4

WSO/20/3/1/4

WSO/20/1/3/8 *

WSO/20/2/3/8



DOUBLE OULET - BRASS FEMALE INLET

SIZE	CODE
1/4" x 1/4"	BDO08
3/8" x 3/8"	BDO10
1/2" x 1/2"	BDO15



DOUBLE OULET - BRASS MALE INLET

SIZE	CODE
1/4" x 1/4"	BDOMF08
3/8" x 3/8"	BDOMF10
1/2" x 1/2"	BDOMF15



STRAIGHT MANIFOLD - 1/2" INLET

SIZE	CODE
2x 1/4" Outlet	AMT-2
3x 1/4" Outlet	AMT-3
4x 1/4" Outlet	AMT-4
5x 1/4" Outlet	AMT-5



STRAIGHT MANIFOLD - 1/4" INLET

SIZE	CODE
2x 1/4" Outlet	AN 2
3x 1/4" Outlet	AN 3
4x 1/4" Outlet	AN 4
5x 1/4" Outlet	AN 5



A210 COUPLER OUTLET - 1/4" INLET

SIZE	CODE
Double Outlet	ATO2-A210
Triple Outlet	ATO3-A210



A380 COUPLER OUTLET - 3/8" INLET

SIZE	CODE
Triple Outlet	ATO3-A380



BALL VALVES FEMALE/FEMALE

SIZE	CODE
1/2"	BV15
3/4"	BV20
1"	BV25
1 1/4"	BV32
1 1/2"	BV40
2"	BV50



BUTTERFLY VALVES - LEVER OPERATED

TYPE	CODE
50mm WAFER	BVFW50
50mm LUGGED	BVFL50
80mm WAFER	BVFW80
80mm LUGGED	BVFL80
100mm WAFER	BVFW100
100mm LUGGED	BVFL100

Lugged Valves are Table D/E.



BALL VALVES MALE/FEMALE

SIZE	CODE
1/4"	VMF08



PURLIN HANGER

CODE	DESCRIPTION
HS 1 (left)	Used to hang wire or rod
HS 1A (right)	Used to mount CL pipe clips



BEAM CLAMP PIPE HANGER

CODE	DESCRIPTION	BEAM SIZE
HS 2A H1	For pipe up to 32mm	3mm-7mm
HS 2B H1	For pipe up to 32mm	8mm-13mm
HS 2C H1	For pipe up to 32mm	14mm-20mm
HS 2A H2	For pipe up to 50mm	3mm-7mm
HS 2B H2	For pipe up to 50mm	8mm-13mm
HS 2C H2	For pipe up to 50mm	14mm-20mm



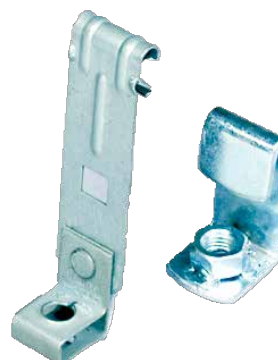
BEAM CLAMPS

CODE	DESCRIPTION
HS 2U (left)	For up to 16mm beams (For hanging 10mm threaded rod, mounting CL pipe clips etc)
HS 2A	For 3mm-7mm beams
HS 2B	For 8mm-13mm beams
HS 2C (right)	For 14mm-20mm beams (For hanging HS4 rod, mounting CL pipe clips/cable ties etc)



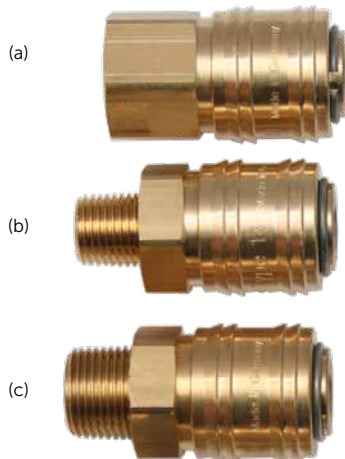
ROD PURLIN HANGER

CODE	DESCRIPTION
HSP 10	Light duty suits M10 rod
HSPH 10	Heavy duty suits M10 rod
HSPH 12	Heavy duty suits M12 rod



210 SERIES COUPLINGS

CODE	DESCRIPTION
A210-F	Coupler - 1/4" BSPF (a)
A210-14M	Coupler - 1/4" BSPM (b)
A210-38M	Coupler - 3/8" BSPM (c)
A210-12M	Coupler - 1/2" BSPM

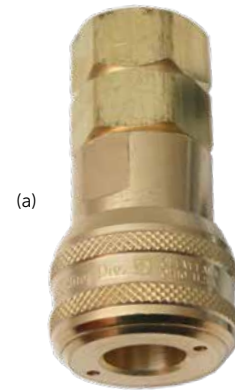


To suit:



400 SERIES COUPLINGS

CODE	DESCRIPTION
A400	Coupler - 1/2" BSPF (a)

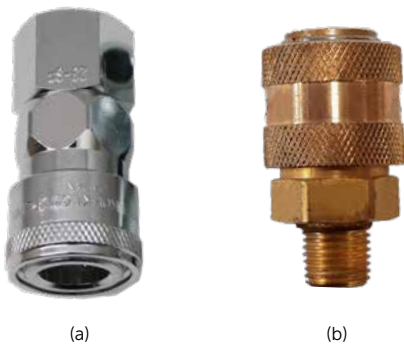


To suit:



380 SERIES COUPLINGS

CODE	DESCRIPTION
A380	Coupler - 3/8" BSPF (a)
A380-14M	Coupler - 1/4" BSPM (b)



To suit:



COMPRESSED AIR SYSTEMS CONTAINS SUBSTANTIAL STORED ENERGY, WHICH, IF RELEASED SUDDENLY, COULD CAUSE INJURY. IT IS RECOMMENDED THAT PIPE SYSTEM DESIGN, INSTALLATION AND MAINTENANCE BE CONDUCTED BY THOSE WITH APPROPRIATE KNOWLEDGE AND EXPERIENCE.

CONDENSATE DRAINAGE

Ideally, condensate should be removed as soon as possible in the system. A suitably sized compressed air dryer after the Air Receiver is the recommended method for removing condensate from the air supply. If high, short term peaks of dry air are required, then the dryer would be better installed prior to the Receiver. The good thermal characteristics of Maxair® are a further advantage.

The system should be designed to minimise or eliminate harmful condensate from being discharged into air tools and equipment when dryers are not fitted. Various methods are suitable for this purpose.

- Sloping of horizontal pipe at a slight gradient to strategically positioned drainlegs.
- Outlet droppers to come off the top of the pipework to avoid precipitated condensate being discharged in the airstream.
- In most instances however the recommended method is to install the dropper from the bottom of the branch or mainline with a short extra length of pipe extending below the outlet with a drain valve.



UNDERGROUND PIPEWORK

Maxair® pipe is ideal for underground installation with its high strength characteristics and ability to absorb ground movement.

It is recommended to lay pipework in sand and grade to avoid low points. A drain valve with a purge line should be installed in strategic positions to trap and purge any condensate that may accumulate.

When passing through foundations, it's recommended to sleeve the pipe as pictured.

HAZARDOUS AREAS

A. Corrosive Chemicals - Maxair® has excellent resistance to a broad range of chemicals and is ideal for use in many areas where corrosive liquids or atmosphere may contact the pipe. Compression fittings come standard in polypropylene construction with O-Rings of nitrile rubber and Split Grip Rings in Polyacetal. The Nitrile gives excellent resistance to oils in the compressed air.

Fusion welded fittings provide a further degree of safety in these areas. User should verify compatibility of components with their application. Extensive compatibility charts are available. Resistance to specific chemicals should be checked with Technical Department.

B. Explosive or ignitable atmosphere. Compressed air can carry static charges which may accumulate. The user/customer/purchaser is responsible to identify any potential hazardous areas and to take necessary measures or precautions for complete safety. Information on protective measures is available with advice on your specific application.



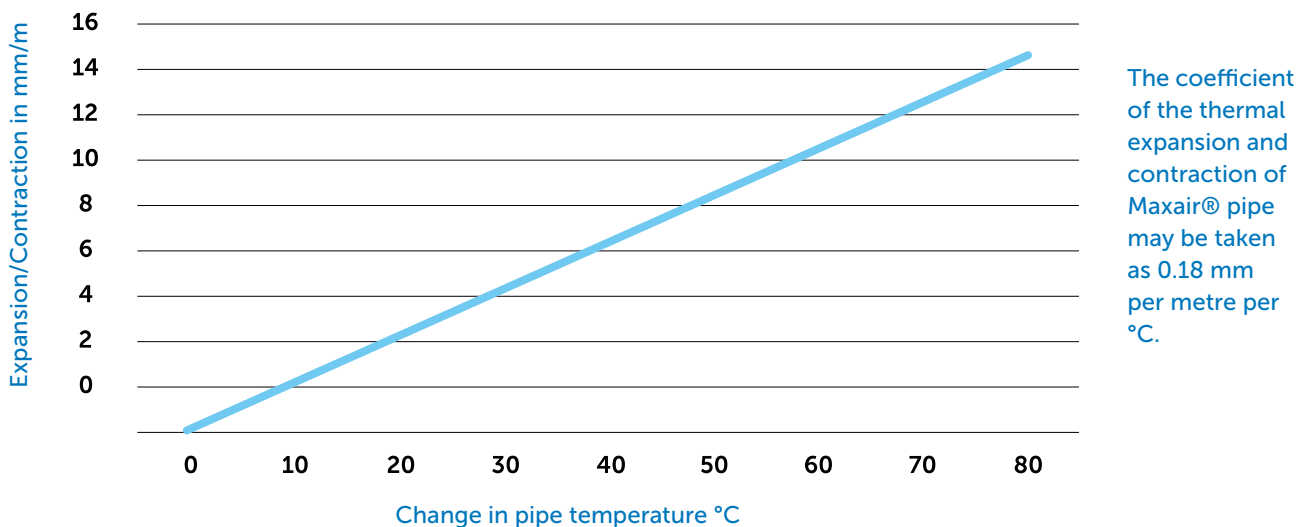
HEAT SOURCES AND EXTERIOR PIPEWORK

Care is needed to avoid unplanned overheating of the system. Air compressors will produce air which may be considerably above ambient temperature. For air-cooled compressors without dryers, conveyed air averages 15°C above ambient temperatures.

Industry best practice of shielding equipment and pipework from direct heat sources should be adopted to prevent excessive heat buildup. In the event that pipe is exposed to direct sunlight a surface layer forms overtime, creating a barrier which impedes further effects. As with all plastic pipe systems exposed to direct UV there may be some reduction of impact resistance over time; however longevity and pressure rating of the pipe system are not affected by UV rays.

In addition, compounds used in the manufacture of Maxair® pipes and fittings meet the UV exposure requirements of AS/NZS 4131 and ISO Standards applicable to gas and water pipes. These requirements, whilst having only temporary exposure in mind, ensure that UV protection is optimised for Maxair® pipes and fittings.

THERMAL EXPANSION AND CONTRACTION



If pipework is to be subjected to thermal temperature change, expansion and contraction needs to be considered during installation. Generally movement can be absorbed on changes of direction, elbows, etc. but on longer lengths the recommended installation principles as set out on the following page should be adhered to.

This movement is virtually eliminated in constant temperature areas.

Operating Temperature °C	Design life years	Permissible Working Pressure		
		Bar	kpa	psi
-20° to 20°	50	16	1600	235
30°	50	14.1	1410	205
40°	50	12	1200	175
50°	50	10.2	1020	150
60°	50	8.8	880	130
Above ratings are at safety factor of 2:1				
Fluid at 20°	50	25	2500	360
For fluids other than compressed gases, the safety factor is 1.25:1				

SHORT TERM TEMPERATURE RISES

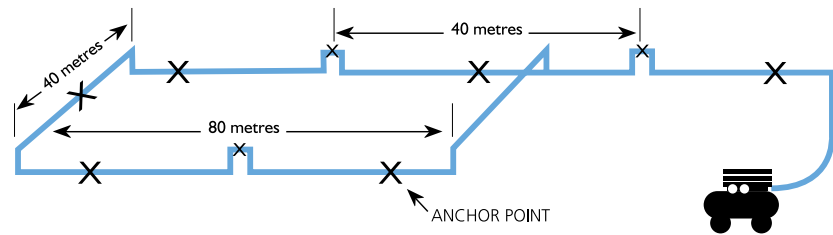
Temperatures quoted relate to constant temperature over a period of 50 years, rather than short term peak temperatures. Maxair® can safely handle short term peaks in compressed air temperature up to 95°C.

Circumstances vary and each high temperature application should be checked with the Technical Department.

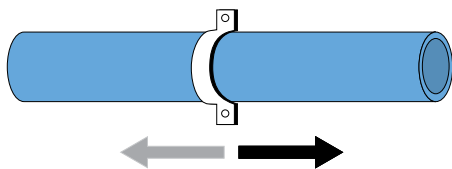
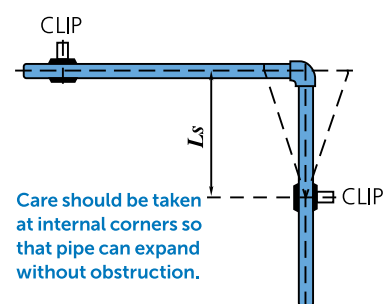
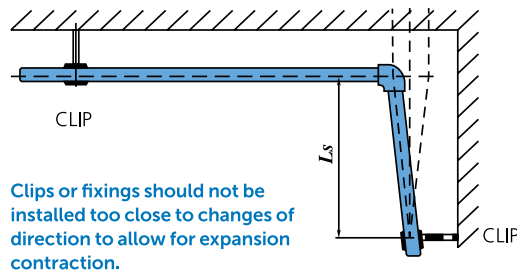
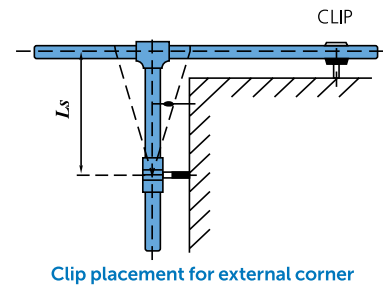
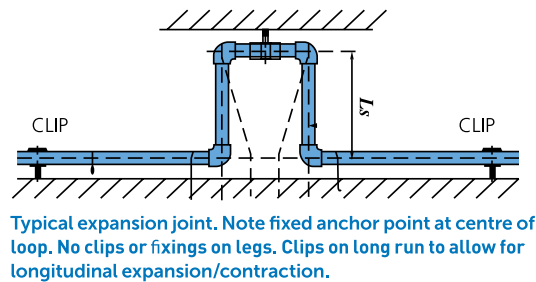
EXPANSION LOOPS

Expansion loops are recommended at intervals of approx. 30-40m on long runs. Suggested leg lengths are as per table.

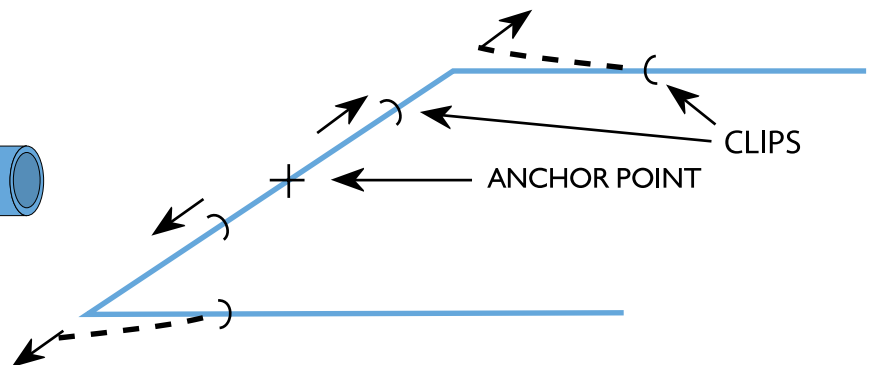
It is general practice for loops up to 63mm to span between purlins. Space constraints may also need to be considered. Please contact our technical department for accurate sizing if required.



Pipe Diameter	Min Leg L_s (metres)
20	0.5
32	0.6
32	0.7
40	0.9
50	1.0
63	1.2
90	1.8
110	2.0



Free axial movement of pipework should be allowed with any form of support. Pipework should be able to move longitudinally without conflicting with elbows, tees, etc.



Anchor points are clips which don't allow free axial movement. Anchor points can be used as shown to evenly spread the effects of expansion and contraction.

ASSEMBLY OF COMPRESSION FITTINGS

SIZES 20 UP TO 63MM



Cut pipe to length with pipe cutters for a clean swarf free finish.



Use chamfer tool to remove sharp edge off the pipe and facilitate insertion through the O-Ring.



Witness mark the insertion depth.



Lubricate the pipe if needed with water or siliconespray.*



Undo the nut up to the last thread, do not remove the nut from the body. Insert the pipe through the nut into the fitting until it meets the stop.



Firmly hand tighten the nut. Check witness mark.



For sizes 40-63, use a nut wrench to tighten the nut a further half turn.

SIZES 75 UP TO 110MM



Cut pipe to length with pipe cutters for a clean swarf free finish.



Use chamfer tool to remove sharp edge off the pipe and facilitate insertion through the O-Ring.



Loosen the nut and grip ring off the fitting and assemble onto the pipe a distance about 2x the pipe diameter.



Assembly is easier if the pipe and inside of fitting is lubricated with water or silicone spray.*



Insert the pipe through the O-Ring until it meets the stop.



Slide the grip ring and nut forward until they touch the fitting, then hand tighten.



For sizes 75 -110mm use two nut wrenches to tighten the nut. Nut should be firmly tightened, but does not need to actually meet the external stop.

*Lubrication with water, soapy water or silicone spray will assist inserting the pipe through the O-Ring.

Do not use silicone spray if intended use is for powder coating, spray painting or breathing air.

Do NOT use fluids such as WD40, 5-56, Penetrene, etc.

WELDING GUIDELINES

SOCKET FUSION WELDING 20MM TO 63MM

- Heating element Socket Fusion to welding guidelines AS/NZS 2033-2008.
- Weld surfaces must be clean and dry.
- Welding tool must be up to temperature 260°C before commencing.
- Protect against cold and windy conditions.
- Do not realign joint after adjusting time
- Do not over scrape pipe - interference fit must be retained.
- Do not twist pipe into fitting when fusing.

Pipe O.D. (mm)	Pre-heating (sec)	Adjusting (sec)	Cooling (min)
20	5	4	2
25	7	4	2
32	8	6	4
40	12	6	4
50	18	6	4
63	24	8	6
90	40	8	6
110	50	10	8



1. Turn on welder. Do not attempt welding unless tool is up to temperature (250°C). The indicator LED will cycle on/off with thermostat control when temp is correct. Cut pipe to length with approved cutters for a square swarf-free finish.



2. Use scraper to remove oxide layer from pipe and ensure correct tolerance. Use welding wipes to clean surfaces if needed.



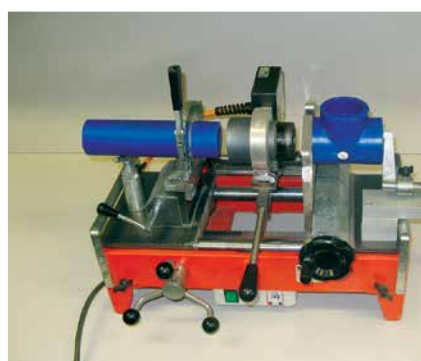
3. Simultaneously insert pipe and fitting onto socket and spigot to full depth without twisting. Hold for 'pre-heat' time as per table.



4. Remove pipe and fitting from heating element, immediately insert pipe into fitting without twisting.



5. Check alignment within 'adjusting seconds' as per table. During 'cooling' avoid mechanical strain or movement on welded joint.



The bench mounted socket fusion welder is recommended for 90mm and 110mm, but is great for 63mm and smaller sizes. It provides mechanical advantage and consistency for the larger sizes.

ELECTROFUSION WELDING

Recommended for 63mm and larger. Available for smaller sizes.

- We recommend being trained by UPG prior to undertaking electrofusion welding
- Fittings for electrofusion comply with AS/NZS 4129-2008.
- Automatic control box tool reads inbuilt resistor and sets and welds the correct time. Fittings are also labelled for manual setting times.
- Weld surfaces must be clean and dry.
- Do not over scrape pipe. Use correct scrapers. Do not use emery or metal files.
- Ensure uninterrupted electricity supply during weld cycle.
- IMPORTANT: Do not allow movement in the joint until cooling period (marked on fitting) has been completed. In some cases, clamps may be required.



1. Cut pipe to length with approved cutters for a square swarf-free finish.



2. Use scraper to remove oxide layer approx. 0.3mm from pipe and ensure correct tolerance.



3. Use welding wipes to clean pipe and fitting surfaces. Allow cleaner to evaporate



4. Witness mark correct insertion depth.



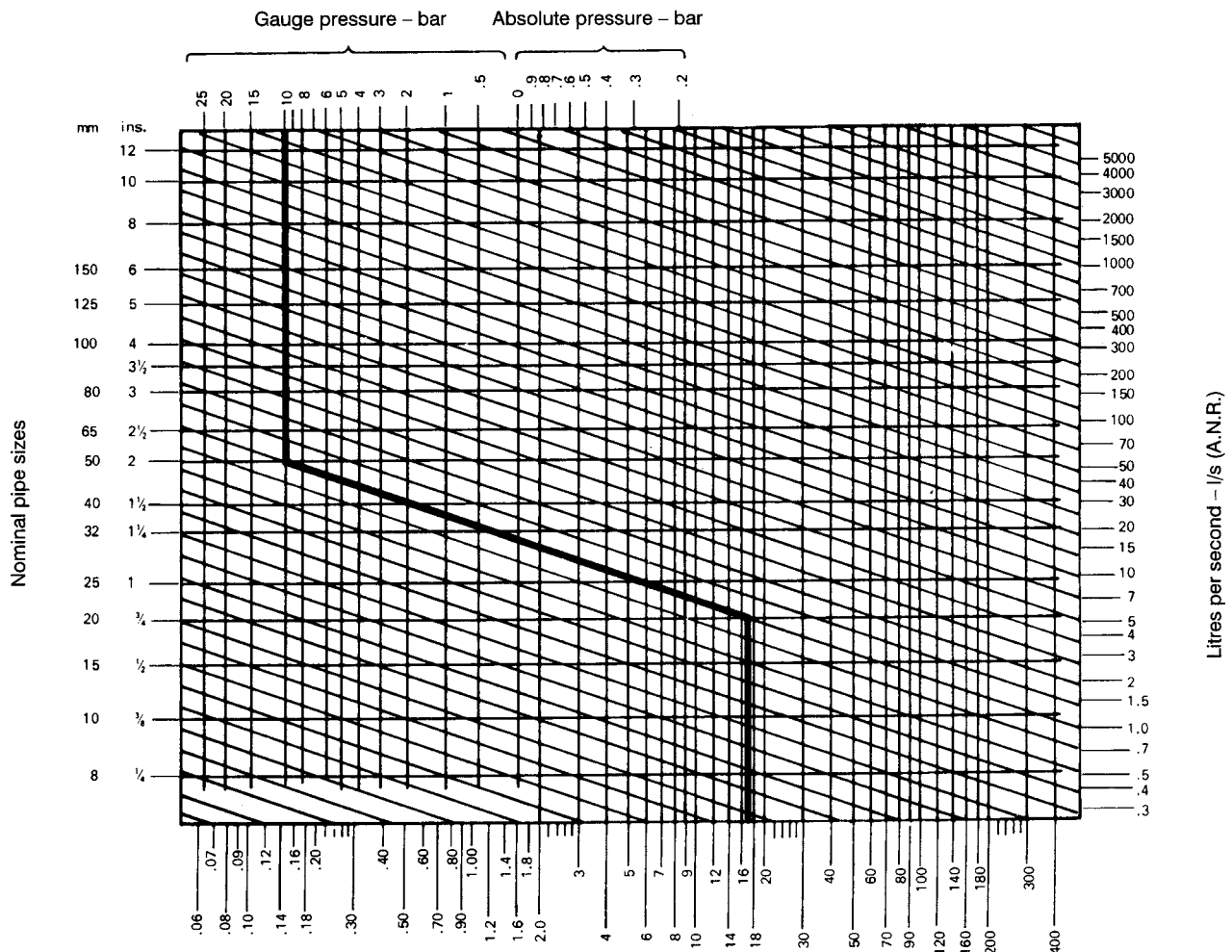
5. Assemble pipe and fitting making sure pipe is fully inserted, check witness mark. Clamps can be used to stabilise joint during welding.



6. Connect welder leads onto fitting terminals (non specific). If using manual setting follow weld time as per label on fitting. Press start to commence weld cycle. Rising melt indicators confirm successful completion of weld. Remove leads and allow to cool without movement or strain on joint.

HOW TO USE THE COMPRESSED AIR FLOW CHART

Four quantities are involved in the use of this chart, these being air pressure, rate of flow, pipe size and pressure drop. Any one of these can be determined providing the remaining three are known.



PROBLEM 1:

Air initially at 10 bar is being transmitted at a rate of 60 l/s free air through 20mm pipe. What will be the pressure drop due to friction through 30 metres of pipe?

SOLUTION:

(This example is plotted on the chart) From the point representing 10 bar at the top of the chart proceed down vertically to intersect with the horizontal line representing 60 l/s on the right hand scale.

Proceed diagonally downwards, parallel to the guide lines to intersect the horizontal line representing 20mm on the left hand side scale.

From this point proceed vertically to the pressure drop scale on the bottom of the chart and take the reading.

The pressure drop is found to be approximately 17 mbar per metre of pipe or 510 mbar (0.5 bar) per 30 metres of pipe.

PROBLEM 2:

10 l/s of free air is required at a pressure of 4 bar with a maximum allowable pressure drop of 140 mbar per 30 metres of pipe. What would be the recommended pipe size for this application?

SOLUTION:

From the point representing 4 bar on the top axis of the chart proceed down vertically to intersect the horizontal line representing 10 l/s on the right hand scale.

Proceed diagonally, parallel to the guide lines to intersect the vertical line from the bottom scale representing the allowable pressure drop of 140 mbar per 30 metres of pipe (Read $140/30 = 4.5$).

From this intersection point proceed horizontally to the left hand side of the chart. The point falls between 10mm and 15mm pipe sizes. The correct selection herefore, is 15mm pipe.

STORAGE

Shipping Weights.

20mm	0.9 Kg / length
25mm	1.4 Kg / length
32mm	2.4 Kg / length
40mm	3.5 Kg / length
50mm	5.5 Kg / length
63mm	8.7 Kg / length
90mm	18.2 Kg / length
110mm	27 Kg / length

OTHER USES

Products in this section are also suitable for High pressure Fluid to 25 bar, Inert Gasses, Chemical Piping, Vacuum Piping.

Please refer to Technical Department for details.

TECHNICAL SPECIFICATIONS FOR MAXAIR®

1.1 The Compressed Air Reticulation Pipe shall be of non-metallic, blue in colour, corrosion free, High Density Polyethylene (HDPE) PE100 conforming to AS/NZS 4130/4131 and be made to PN 25 under an accredited AS 3902 Quality Control System and commercially known as Maxair®.

1.2 The pipe shall be PN 25 rated at 16 Bar / 20degC / 50 year design life and 8.8 Bar / 60degC / 50 year with applied safety factor of 2:1.

2.1 All fittings shall be Socket Fusion, Electrofusion or Compression style fittings which comply with Australian Standards as listed below and commercially known as Maxair®.

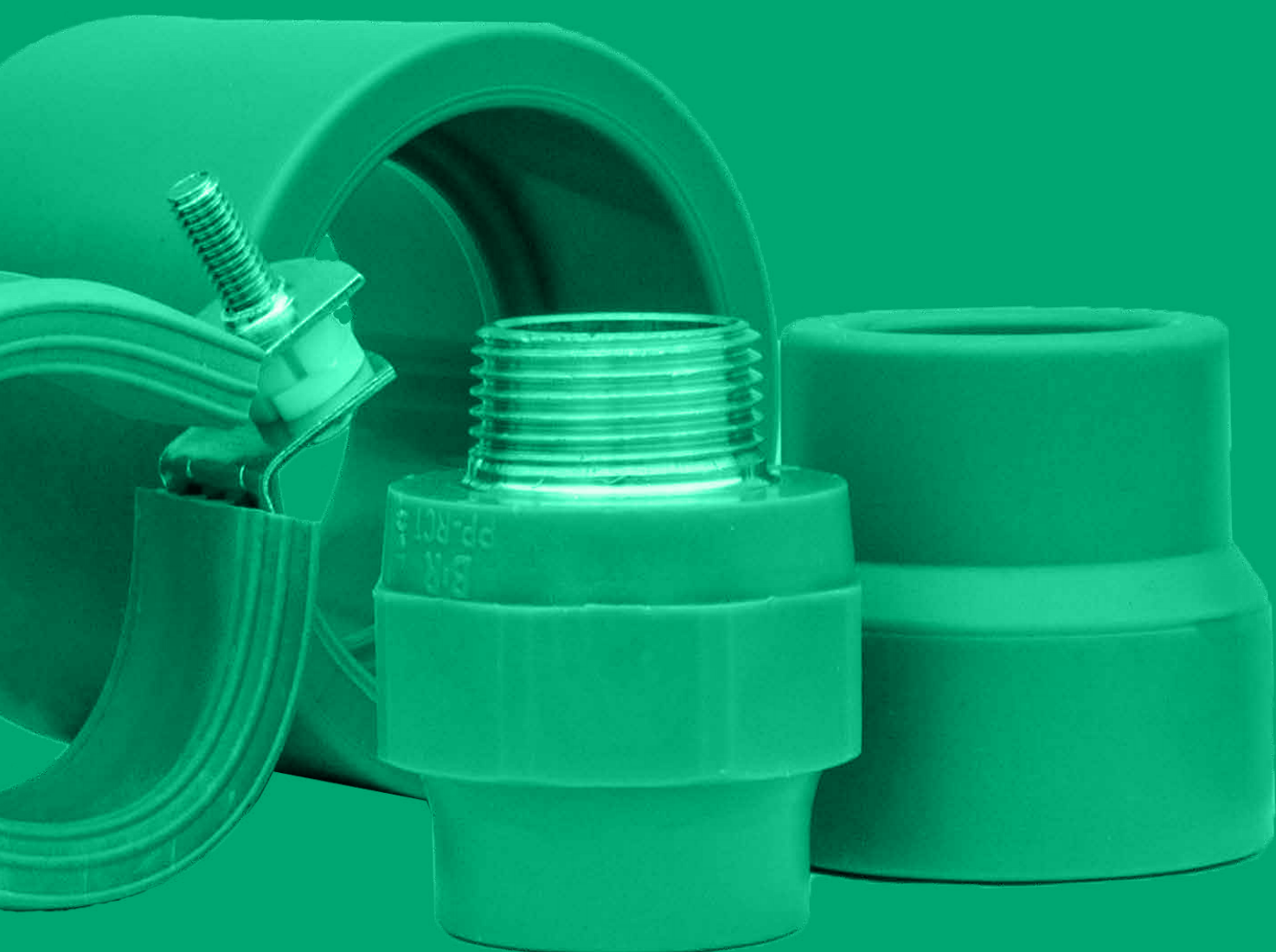
2.2 Socket Fusion fittings shall be Blue PE100 type made to DIN 16963 which shall be welded to AS 2033.

2.3 Electrofusion fittings shall comply with AS/NZS 4129 and carry a Standards Mark Licence under Quality Assurance System in accordance with ISO 9002.

2.4 Compression fittings shall be either 'O' Ring or tapered seal to comply with AS/NZS 4129 and carry a Standards Mark Licence No. 26038 in accordance with ISO 9002.

3.1 Fixing of pipe shall be of a type and spacing approved for use on HDPE PE100 as per Maxair® Technical Manual.





DYNATHERM PP-RCT



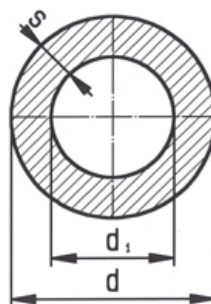
dynatherm[®]
PP-RCT PIPE SYSTEMS

PP-RCT SOLID WALL PIPE - PN16

CODE	OD	DN	s	d ₁	kg/m	SDR
D130-016	16	10	2.7	10.6	0.110	6
D125-020	20	15	2.3	15.4	0.139	9
D125-025	25	20	2.8	19.4	0.203	9
D125-032	32	25	2.9	26.2	0.284	11
D125-040	40	32	3.7	32.6	0.420	11
D125-050	50	40	4.6	40.8	0.640	11
D125-063	63	50	5.8	51.4	1.395	11
D125-075	75	-	6.8	61.4	1.440	11
D125-090	90	65	8.2	73.6	2.030	11
D125-110	110	80	10.0	90.0	3.080	11
D125-125	125	100	11.4	102.2	3.910	11
D125-160	160	125	14.6	130.8	6.330	11
D125-200	200	160	18.2	163.6	9.950	11
D125-250	250	200	22.7	204.6	15.289	11
D125-315	315	250	28.6	257.8	24.600	11
D125-400	400	-	36.3	327.4	39.560	11
D125-450	450	350	40.9	368.2	50.100	11
D125-500	500	400	45.4	409.2	61.700	11

DESCRIPTION

Material:	PP-RCT
Type:	Solid Wall
Pressure Rating:	SDR6: PN 25 SDR9: PN 20 SDR11: PN 16
Identification:	Green
Standard:	DIN 8077 / 8078
Length:	4 Mtr
Application:	Cold Water, Potable Water, Mechanical Systems, Cold Reticulation

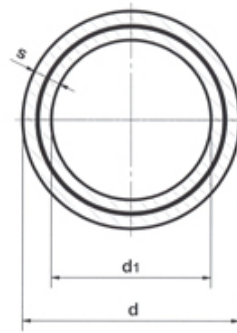


PP-RCT 'CLIMATEC' FASER PIPE - PN16

CODE	OD	DN	s	d1	kg/m	SDR
D111-020	20	15	2.8	14.4	0.151	7.4
D111-025	25	20	3.5	18.0	0.232	7.4
D111-032	32	25	3.6	24.8	0.293	9
D111-040	40	32	3.7	32.6	0.439	11
D111-050	50	40	4.6	40.8	0.678	11
D111-063	63	50	5.8	51.4	0.996	11
D111-075	75	-	6.8	61.4	1.419	11
D111-090	90	65	8.2	73.6	2.039	11
D111-110	110	80	10.0	90.0	3.031	11
D111-125	125	100	11.4	102.2	3.760	11

DESCRIPTION

Material:	PP-RCT
Type:	Solid Wall
Pressure Rating:	SDR7.4: PN 25 SDR9: PN20 SDR11: PN16
Identification:	Green with 4 grey stripes, 1 orange stripe
Standard:	DIN 8077 / 8078
Length:	4 Mtr
Application:	Potable Water, Hot and Cold Water Services, Mechanical services, Hot and Cold

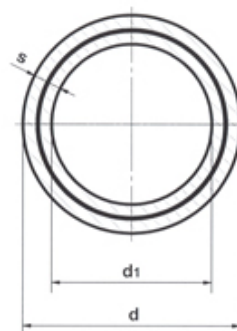


PP-RCT 'CLIMATEC' LARGE BORE PIPE - PN10

CODE	OD	DN	s	d1	kg/m	SDR
D117-160	160	150	9.5	141.0	4.635	17
D117-200	200	180	11.9	176.2	7.321	17
D117-250	250	220	14.8	220.4	11.065	17
D117-315	315	250	18.7	277.6	17.229	17
D117-355	355	300	21.2	312.6	21.890	17
D117-400	400	350	23.7	352.6	27.808	17
D117-450	450	400	26.7	396.6	38.200	17
D117-500	500	450	29.7	440.6	45.000	17

DESCRIPTION

Material:	PP-RCT
Type:	PP-RCT with Faser Composite
Pressure Rating:	PN 10
Identification:	Green with 4 grey stripes, 1 orange stripe
Standard:	DIN 8077 / 8078
Length:	4 Mtr
Application:	Potable Water, Hot and Cold Water Services, Mechanical services, Hot and Cold

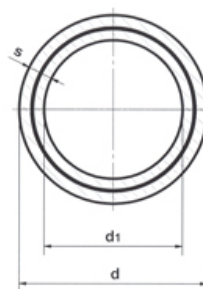


PP-RCT 'WATERTEC' FASER PIPE - PN20

CODE	OD	DN	s	d1	kg/m	SDR
D101-020	20	15	2.8	14.4	0.151	7.4
D101-025	25	20	3.5	18.0	0.232	7.4
D101-032	32	25	3.6	24.8	0.340	9
D101-040	40	32	4.5	31.0	0.513	9
D101-050	50	40	5.6	38.4	0.746	9
D101-063	63	50	7.1	48.8	1.244	9
D101-075	75	-	8.4	58.2	1.700	9
D101-090	90	65	10.1	69.8	2.450	9
D101-110	110	80	12.3	85.4	3.647	9
D101-125	125	100	14.0	97.0	4.480	9

DESCRIPTION

Material: PP-RCT
Type: PP-RCT with Faser Composite
Pressure Rating: SDR7.4: PN 25
SDR9: PN 20
Identification: Green with 4 grey stripes
Standard: DIN 8077 / 8078
Length: 4 Mtr
Application: High Pressure Potable Water and Cold Water Services
High Pressure Hot Water
High Pressure Mechanical services, Hot and Cold

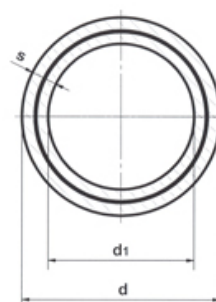


PP-RCT 'WATERTEC' LARGE BORE FASER PIPE - PN16

CODE	OD	DN	s	d1	kg/m	SDR
D105-160	160	125	14.6	130.8	6.755	11
D105-200	200	160	18.2	163.6	10.640	11
D105-250	250	200	22.7	204.6	16.160	11
D105-315	315	250	28.6	257.8	25.387	11
D105-355	355	300	32.2	290.6	36.520	11
D105-400	400	-	36.3	327.4	40.601	11
D105-450	450	350	40.9	368.2	57.310	11
D105-500	500	400	45.4	409.2	-	11

DESCRIPTION

Material: PP-RCT
Type: PP-RCT with Faser Composite
Pressure Rating: PN 16
Identification: Green with 4 grey stripes
Standard: DIN 8077 / 8078
Length: 4 Mtr
Application: Potable Water
Hot and Cold Water Services
Mechanical services, Hot and Cold, Clean Compressed Air

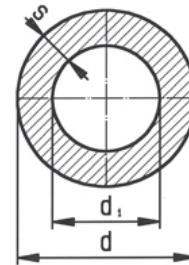


PP-RCT LILAC FASER PIPE - PN16

CODE	OD	DN	s	d1	kg/m	SDR
D127-020	20	15	2.3	15.4	0.139	9
D127-025	25	20	2.8	19.4	0.203	9
D127-032	32	25	2.9	26.2	0.284	11
D127-040	40	32	3.7	32.6	0.420	11
D127-050	50	40	4.6	40.8	0.640	11
D127-063	63	50	5.8	51.4	1.395	11
D127-075	75	-	6.8	61.4	1.440	11
D127-090	90	65	8.2	73.6	2.030	11
D127-110	110	80	10.0	90.0	3.080	11

DESCRIPTION

Material:	PP-RCT
Type:	Solid Wall
Pressure Rating:	SDR9: PN 20 SDR11: PN 16
Identification:	Lilac Coloured
Standard:	DIN 8077 / 8078
Length:	4 Mtr
Application:	Recycled Water Systems

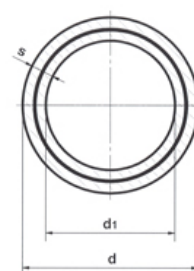


PP-RCT BLACK UV FASER PIPE - PN16

CODE	OD	DN	s	d1	kg/m	SDR
D101-020UV	20	15	2.8	14.4	0.151	7.4
D101-025UV	25	20	3.5	18	0.232	7.4
D101-032UV	32	25	3.6	24.8	0.293	9
D101-040UV	40	32	3.7	32.6	0.439	11
D101-050UV	50	40	4.6	40.8	0.678	11
D101-063UV	63	50	5.8	51.4	0.996	11
D101-075UV	75	-	6.8	61.4	1.419	11
D101-090UV	90	65	8.2	73.6	2.039	11
D101-110UV	110	80	10	90	3.031	11
D101-125UV	125	100	11.4	102.2	3.76	11

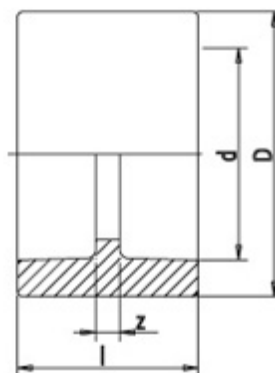
DESCRIPTION

Material:	PP-RCT
Type:	PP-RCT with Faser Composite
Pressure Rating:	SDR7.4: PN 25 SDR9: PN 20 SDR11: PN 16
Identification:	Black coloured
Standard:	DIN 8077 / 8078
Length:	4 Mtr
Application:	Potable Water Hot and Cold Water Services Mechanical services, Hot and Cold



COUPLER

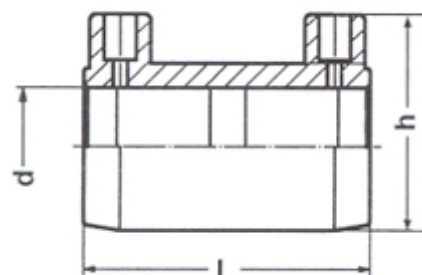
CODE	d	D	l	z
D201-0016	16	23	31	5
DCT201-0020	20	29	34	5
DCT201-0025	25	34	37	5
DCT201-0032	32	43	41	5
DCT201-0040	40	52	46	5
DCT201-0050	50	65	52	5
DCT201-0063	63	84	60	5
DCT201-0075	75	99	65	5
DCT201-0090	90	120	76	10
DCT201-0110	110	148	80	6
DCT201-0125	125	165	90	10



ELECTROFUSION COUPLER

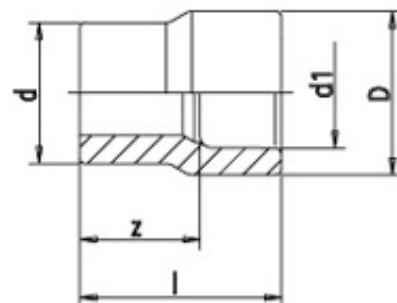
CODE	d	h	L
DCT202-0020	20	52	70
DCT202-0025	25	57	70
DCT202-0032	32	65	70
DCT202-0040	40	75	85
DCT202-0050	50	86	87
DCT202-0063	63	100	97
DCT202-0075	75	114	120
DCT202-0090	90	130	147
DCT202-0110	110	144	157
DCT202-0125	125	167	165

CODE	d	h	L
DCT203-0160	160	205	176
DCT203-0200	200	245	187
DCT203-0250	250	315	243
DCT203-0315	315	375	280
DCT203-0355	355	435	315
DCT203-0400	400	482	355
DCT203-0450	450	534	350
DCT203-0500	500	593	360



REDUCER

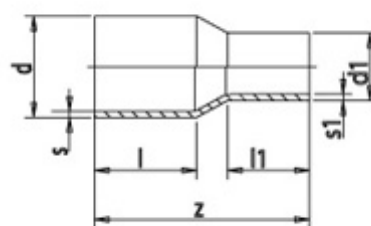
CODE	d	d1	D	l	z
D206-002016	20	16	23	33	20
D206-002516	25	16	23	32	19
DCT206-002520	25	20	29	36	22
DCT206-003220	32	20	29	37	23
DCT206-003225	32	25	34	39	23
DCT206-004020	40	20	34	43	28
DCT206-004025	40	25	34	43	27
DCT206-004032	40	32	43	45	27
DCT206-005020	50	20	43	51	36
DCT206-005025	50	25	43	51	35
DCT206-005032	50	32	43	51	33
DCT206-005040	50	40	52	53	33
DCT206-006320	63	20	34	56	42
DCT206-006325	63	25	34	56	40
DCT206-006332	63	32	43	58	40
DCT206-006340	63	40	52	60	40
DCT206-006350	63	50	65	63	40
DCT206-007550	75	50	65	67	44
DCT206-007563	75	63	80	71	44
DCT206-009050	90	50	65	74	51
DCT206-009063	90	63	80	78	51
DCT206-009075	90	75	99	81	51
DCT206-110063	110	63	85	87	60
DCT206-110075	110	75	100	90	60
DCT206-110090	110	90	110	93	61



SPIGOT REDUCER

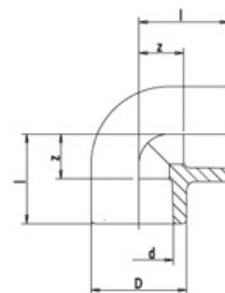
CODE	d	d1	s	s1	l	l1	z	SDR
DCT207-125110	125	110	14	12.3	100	85	225	9
DCT207-160110	160	110	14.6	10	110	93	255	11
DCT207-160125	160	125	14.6	11.4	113	95	260	11
DCT207-200160	200	160	18.2	14.6	142	117	303	11
DCT207-250160	250	160	22.7	14.6	138	111	339	11
DCT207-315250	315	250	28.6	22.7	160	145	400	11

Larger sizes available on request



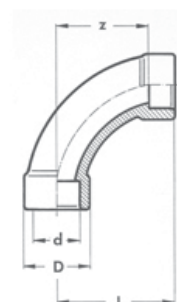
90° ELBOW

CODE	d	D	l	z
D210-0016	16	26	24	11
DCT210-0020	20	29	28	13
DCT210-0025	25	34	32	16
DCT210-0032	32	43	38	20
DCT210-0040	40	52	44	23
DCT210-0050	50	65	52	28
DCT210-0063	63	84	62	34
DCT210-0075	75	101	71	41
DCT210-0090	90	120	83	50
DCT210-0110	110	148	99	62
DCT210-0125	125	165	124	84



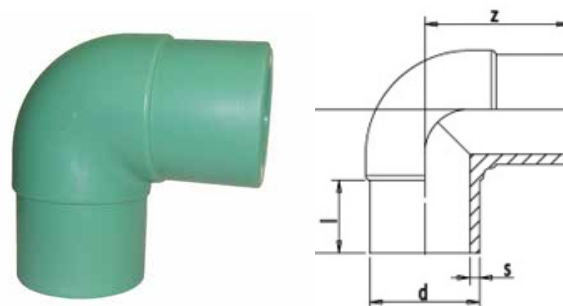
90° LONG RADIUS BEND

CODE	d	D	l	z
DCT211-0020	20	28	56	42
DCT211-0025	25	34	69	53
DCT211-0032	32	42	86	68
DCT211-0040	40	52	106	86



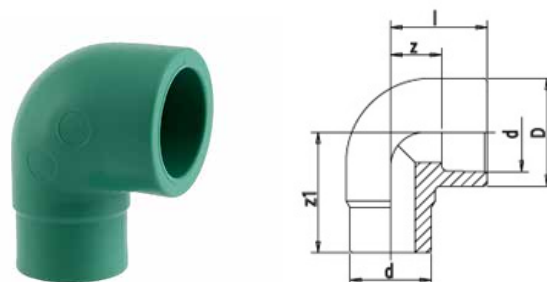
90° SPIGOT ELBOW

CODE	d	D	l	z
DCT212-0160	160	14.6	117	210
DCT212-0200	200	18.2	128	250
DCT212-0225	225	20.5	136	269
DCT212-0250	250	22.7	180	307
DCT212-0315	315	28.6	192	393
DCT212-0355	355	32.2	170	411
DCT212-0400	400	36.3	187	470
DCT212-0450	450	40.9	204	527
DCT212-0500	500	45.4	222	562



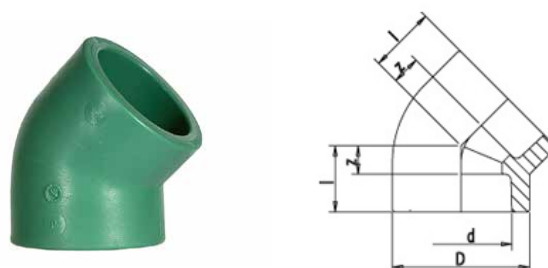
90° M/F ELBOW

CODE	d	D	l	z	z1
DCT214-0020	20	29	27	12	36
DCT214-0025	25	34	30	14	41
DCT214-0032	32	43	36	18	48



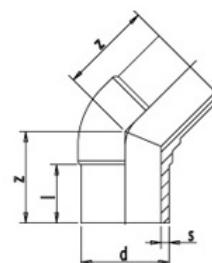
45° ELBOW

CODE	d	D	l	z
D230-0016	16	23	19	6
DCT230-0020	20	29	21	6
DCT230-0025	25	34	24	8
DCT230-0032	32	43	28	10
DCT230-0040	40	52	32	11
DCT230-0050	50	65	37	13
DCT230-0063	63	82	44	16
DCT230-0075	75	99	50	20
DCT230-0090	90	120	58	25
DCT230-0110	110	148	69	32
DCT230-0125	125	165	77	37



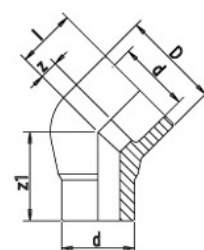
45° SPIGOT ELBOW

CODE	d	D	l	z
DCT231-0160	160	14.6	113	169
DCT231-0200	200	18.2	127	201
DCT231-0250	250	22.7	155	217
DCT231-0315	315	28.6	161	280
DCT231-0355	355	32.2	170	320
DCT231-0400	400	36.3	187	350
DCT231-0450	450	40.9	204	383
DCT231-0500	500	45.4	220	410



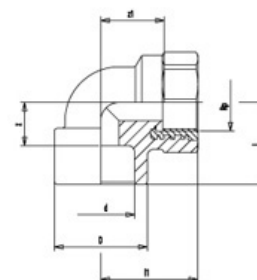
45° M/F ELBOW

CODE	d	D	l	z	z1
DCT233-0020	20	29	20	5	28
DCT233-0025	25	34	22	6	34
DCT233-0032	32	43	26	8	39



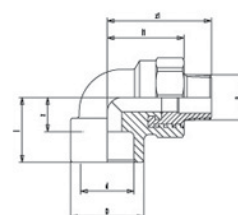
90° FEMALE THREAD ELBOW

CODE	d – Rp	D	l	l1	z	z1	SW
D220-1615	16–1/2	23	25	32	12	18	36
DCT220-2015	20–1/2	29	28	34	14	20	36
DCT220-2020	20–3/4	34	32	40	18	25	44
DCT220-2515	25–1/2	34	32	36	14	24	36
DCT220-2520	25–3/4	34	32	40	16	25	44
DCT220-3225	32–1	43	38	48	20	30	51



90° MALE THREAD ELBOW

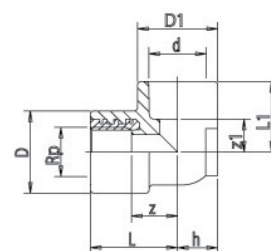
CODE	d – R	D	l	l1	z	z1	SW
DCT224-2015	20–1/2	29	28	34	14	49	36
DCT224-2515	25–1/2	34	32	36	16	53	36



90° FEMALE ELBOW WINGBACK / BACKPLATE

CODE	d - Rp	D	D1	L	L1	h	t*	z	z1
DCT225-1615	16-1/2	35	29	35	27	15	40	21	14
DCT225-2015	20-1/2	35	29	35	27	15	40	21	11
DCT225-2515	25-1/2	35	34	37	30	17	40	23	14
DCT225-2520	25-3/4	43	43	43	35	22	50	28	19
DCT225-3220	32-3/4	43	43	43	35	22	50	28	17

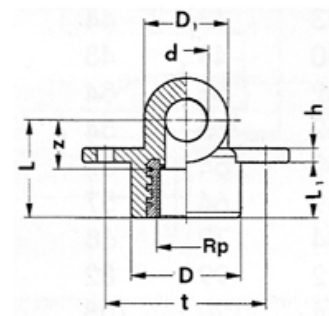
t* = Distance of mounting holes



90° FEMALE ELBOW FOR HOLLOW WALL

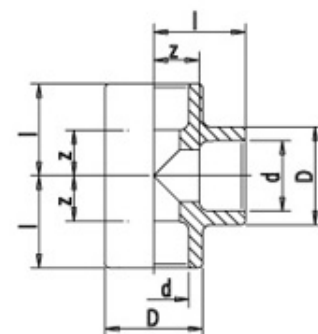
CODE	d - Rp	D	D1	z	L1	L1	t*	h
DCT226-2015	20-1/2	35	29	21	35	11	59	5

t* = Distance of mounting holes



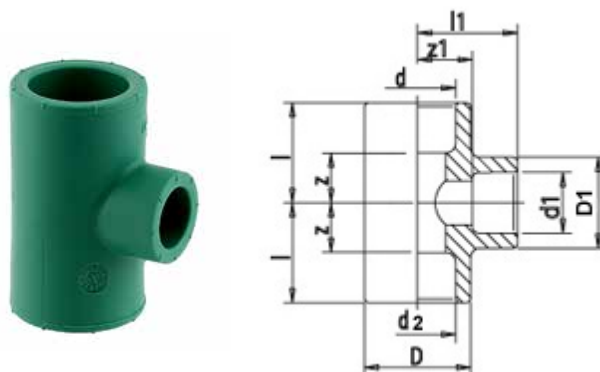
EQUAL TEE

CODE	d	D	l	z
D240-0016	16	23	24	11
DCT240-0020	20	29	28	13
DCT240-0025	25	34	32	16
DCT240-0032	32	43	38	20
DCT240-0040	40	52	44	23
DCT240-0050	50	65	52	28
DCT240-0063	63	84	62	34
DCT240-0075	75	100	71	41
DCT240-0090	90	120	83	50
DCT240-0110	110	148	99	62
DCT240-0125	125	165	124	84



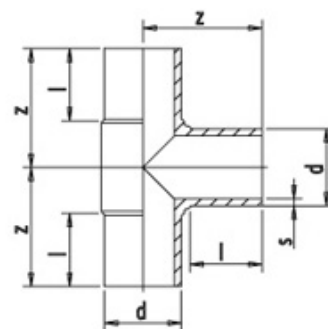
REDUCING TEE

CODE	d – d1 – d2	D	D1	l	l1	z	z1
D241-201620	20–16–20	29	29	28	28	13	15
D241-251625	25–16–25	34	29	32	32	16	19
DCT241-252025	25–20–25	34	29	32	32	16	17
DCT241-322032	32–20–32	43	29	38	36	20	21
DCT241-322532	32–25–32	43	34	38	36	20	20
DCT241-402040	40–20–40	52	43	44	39	24	24
DCT241-402540	40–25–40	52	43	44	40	23	24
DCT241-403240	40–32–40	52	43	44	40	23	22
DCT241-502050	50–20–50	65	43	52	46	28	31
DCT241-502550	50–25–50	65	43	52	46	28	30
DCT241-503250	50–32–50	65	43	52	46	28	28
DCT241-504050	50–40–50	85	85	62	62	39	35
DCT241-632063	63–20–63	85	43	62	62	35	48
DCT241-632563	63–25–63	85	43	62	62	35	46
DCT241-633263	63–32–63	85	43	62	62	35	44
DCT241-634063	63–40–63	85	85	62	62	35	42
DCT241-635063	63–50–63	85	85	62	62	35	39
DCT241-752075	75–20–75	100	43	71	71	41	57
DCT241-752575	75–25–75	100	43	71	71	41	55
DCT241-753275	75–32–75	100	43	71	71	41	53
DCT241-754075	75–40–75	100	65	71	71	41	51
DCT241-755075	75–50–75	100	65	71	71	41	48
DCT241-756375	75–63–75	100	101	71	71	41	44
DCT241-906390	90–63–90	120	85	83	83	50	55
DCT241-907590	90–75–90	120	100	83	83	50	53
DCT241-110063	110–63–110	148	85	99	99	62	71
DCT241-110075	110–75–110	148	100	99	99	62	69
DCT241-110090	110–90–110	148	120	99	99	62	66
DCT241-125075	125–75–125	165	100	124	104	84	74
DCT241-125090	125–90–125	165	120	124	106	84	73
DCT241-125110	125–110–125	165	148	124	110	84	87



SPIGOT EQUAL TEE

CODE	d	D	l	z
DCT242-0160	160	14.6	124	225
DCT242-0200	200	18.2	127	251
DCT242-0250	250	22.7	148	314
DCT242-0315	315	28.6	165	357
DCT242-0355	355	32.2	170	392
DCT242-0400	400	36.3	187	435
DCT242-0450	450	40.9	204	480
DCT242-0500	500	45.4	220	523



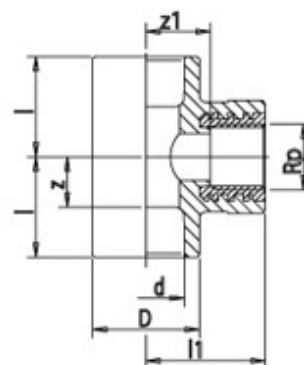
SPIGOT REDUCING TEE

CODE	d – d1 – d2	s	s1	l	l1	z	z1
DCT244-160090	160–90–160	14.6	8.2	111	84	212	190
DCT244-160110	160–110–160	14.6	10.0	222	93	212	197

Larger sizes available on request

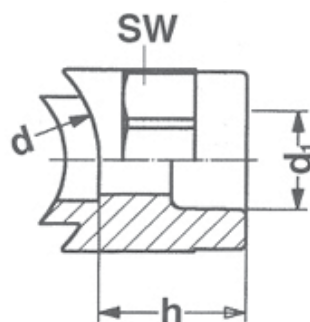
FEMALE THREAD TEE

CODE	d – Rp	D	l	l1	z	z1	SW
D246-1615	16–1/2	23	25	32	12	18	36
DCT246-2015	20–1/2	29	28	34	14	20	36
DCT246-2020	20–3/4	29	28	35	14	20	44
DCT246-2515	25–1/2	34	32	38	16	24	36
DCT246-2520	25–3/4	34	32	40	16	25	44
DCT246-3220	32–3/4	43	38	45	20	30	44
DCT246-3225	32–1	43	38	48	20	30	51



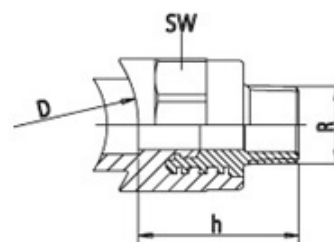
WELD-IN SADDLE

CODE	d	d1	h	SW
DCT250-4620	40-63	20	29	38
DCT250-4625	40-63	25	29	38
DCT250-4632	40-63	32	35	51
DCT250-6120	63-125	20	29	38
DCT250-6125	63-125	25	29	38
DCT250-6132	63-125	32	35	51
DCT250-7140	75-125	40	38	63
DCT250-9150	90-125	50	39	70
DCT250-1163	110-125	63	45	85
DCT250-1620	160-250	20	29	38
DCT250-1625	160-250	25	29	38
DCT250-1632	160-250	32	35	51
DCT250-1640	160-250	40	38	63
DCT250-1650	160-250	50	39	70
DCT250-1663	160-250	63	45	85
DCT250-3620	315-630	20	29	38
DCT250-3625	315-630	25	29	38
DCT250-3632	315-630	32	35	51
DCT250-3640	315-630	40	38	63
DCT250-3650	315-630	50	39	70
DCT250-3663	315-630	63	45	85



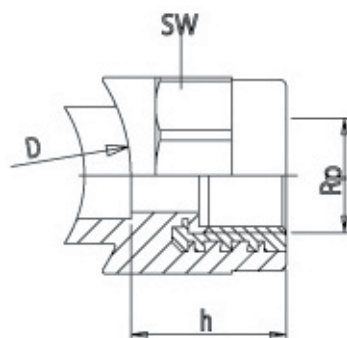
WELD-IN SADDLE WITH MALE THREAD

CODE	d	R	d2	h	SW
DCT254-4615	40-63	1/2	25	43	38
DCT254-4620	40-63	3/4	-	-	-
DCT254-6115	63-125	1/2	25	43	38
DCT254-6120	63-125	3/4	32	50	51
DCT254-7125	75-125	1	32	52	51
DCT254-9132	90-125	1 1/4	40	58	63
DCT254-9140	90-125	1 1/2	50	59	70
DCT254-1150	110-125	2	63	70	85
DCT254-1615	160-250	1/2	25	43	38
DCT254-1620	160-250	3/4	32	50	51
DCT254-1625	160-250	1	32	52	51
DCT254-1640	160-250	1 1/2	50	59	70
DCT254-1650	160-250	2	63	70	85
DCT254-3620	315-630	3/4	32	50	51
DCT254-3625	315-630	1	32	52	51
DCT254-3632	315-630	1 1/2	40	58	63



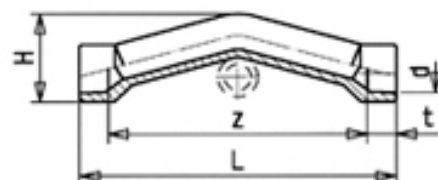
WELD-IN SADDLE WITH FEMALE THREAD

CODE	d x Rp	d2	h	SW
DCT257-4615	40-63 x 1/2	25	43	38
DCT257-6115	63-125 x 1/2	25	43	38
DCT257-6120	63-125 x 3/4	32	50	51
DCT257-7125	75-125 x 1	32	52	51
DCT257-9132	90-125 x 1 1/4	40	38	63
DCT257-9140	90-125 x 1 1/2	50	39	70
DCT257-1150	110-125 x 2	63	45	85
DCT257-1615	160-250 x 1/2	25	29	38
DCT257-1620	160 - 250 x 3/4	32	35	51
DCT257-1625	160-250 x 1	32	52	51
DCT257-1632	160-250 x 1 1/4	40	38	63
DCT257-1640	160-250 x 1 1/2	50	39	70
DCT257-1650	160-250 x 2	63	45	85
DCT257-3620	315-630 x 3/4	32	35	51
DCT257-3625	315-630 x 1	32	52	51
DCT257-3632	315-630 x 1 1/4	40	38	63
DCT257-3640	315-630 x 1 1/2	50	39	70
DCT257-3650	315-630 x 2	63	45	85



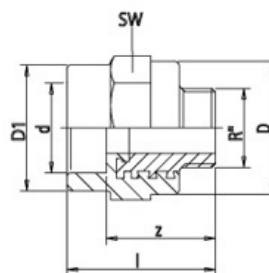
CROSSOVER CONNECTION

CODE	d	t	H	z	L
DCT268-0020	20	14.5	45	131	160
DCT268-0025	25	16	55	168	200
DCT268-0032	32	26	70	204	240



BRASS MALE THREAD ADAPTOR

CODE	d – R	D	D1	l	z	SW
D270-1615	16–1/2	35	24	53	40	36
DCT270-2015	20–1/2	35	29	55	40	36
DCT270-2020	20–3/4	43	34	58	42	44
DCT270-2515	25–1/2	35	34	56	40	36
DCT270-2520	25–3/4	43	34	58	42	44
DCT270-3225	32–1	50	43	66	48	51
DCT270-4032	40–1 1/4	62	52	74	53	63
DCT270-5040	50–1 1/2	69	64	77	54	70
DCT270-6350	63–2	84	79	92	65	85
DCT270-7565	75–2 1/2	112	99	112	82	115
DCT270-9080	90–3	134	120	143	111	135
DCT270-1110	110–4	169	148	161	124	170
DCT270-1212	125–5	206	168	170	130	208



PP-RCT FEMALE THREAD ADAPTOR

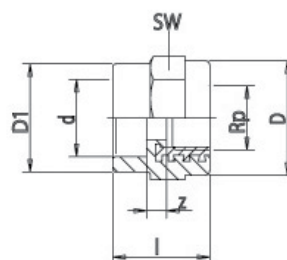
CODE	d – R
DCT271-2015	20–1/2
DCT271-2520	25–1/2
DCT271-3225	32–1
DCT271-4032	40–1 1/4
DCT271-5040	50–1 1/2
DCT271-6350	63–2
DCT271-7565	75–2 1/2



*Note: suitable for cold water only

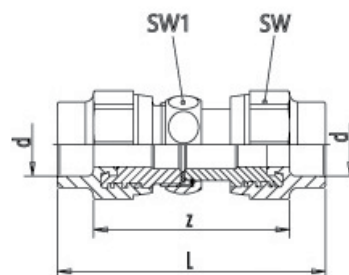
BRASS FEMALE THREAD ADAPTOR

CODE	d – Rp	D	D1	l	z	SW
D273-1615	16–1/2	35	24	38	11	36
DCT273-2015	20–1/2	35	29	40	11	36
DCT273-2020	20–3/4	43	34	42	11	44
DCT273-2515	25–1/2	35	34	41	11	36
DCT273-2520	25–3/4	43	34	42	11	44
DCT273-3220	32–3/4	43	43	44	11	44
DCT273-3225	32–1	50	43	48	12	51
DCT273-4032	40–1 1/4	62	55	54	13	63
DCT273-5040	50–1 1/2	69	64	57	14	70
DCT273-6350	63–2	84	79	68	19	85
DCT273-7565	75–2 1/2	112	99	82	22	115
DCT273-9080	90–3	134	120	108	39	135
DCT273-1110	110–4	169	148	121	42	170



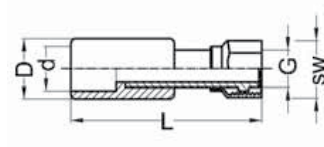
UNION COMPLETE (PP-R)

CODE	d	L	z	SW	SW1
D280-0020	20	116	86	44	37
D280-0025	25	119	83	44	37
D280-0032	32	134	96	51	46
D280-0040	40	152	110	63	52
D280-0050	50	163	115	70	59
D280-0063	63	187	131	85	74



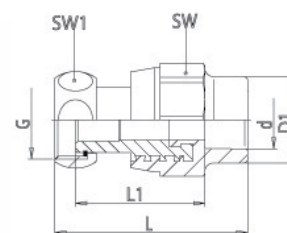
CROX FITTING (PP-R)

CODE	d	L	z	SW
D281-1615CROX	16-1/2	24	70	24
D281-2015CROX	20-1/2	28	70	24
D281-2020CROX	20-3/4	28	70	30
D281-2520CROX	25-3/4	34	70	30



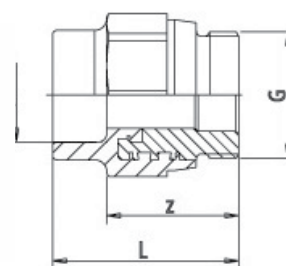
FEMALE UNION ADAPTOR (PP-R)

CODE	d	Nut Thread	D1	L	L1	SW	SW1
D281-2525	25-1	G 1	34	72	47	44	37
D281-3225	32-1	G 1	43	80	53	44	37
D281-3232	32-1 1/4	G 1 1/4	43	80	53	51	46
D281-4032	40-1 1/4	G 1 1/4	55	86	56	63	46
D281-4040	40-1 1/2	G 1 1/2	52	90	58	63	52



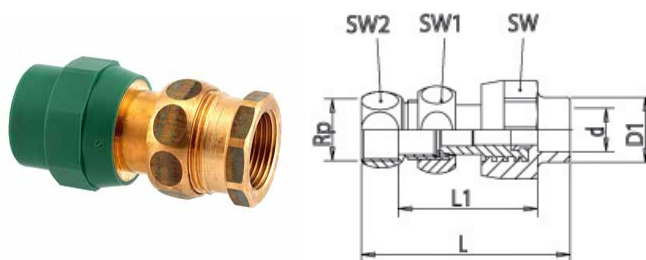
MALE UNION ADAPTOR (PP-R)

CODE	d - G	L	z	SW
D282-2020	20-3/4	50	34	36
D282-2520	25-3/4	51	35	36
D282-2525	25-1	54	38	44
D282-3232	32-1 1/4	62	43	51



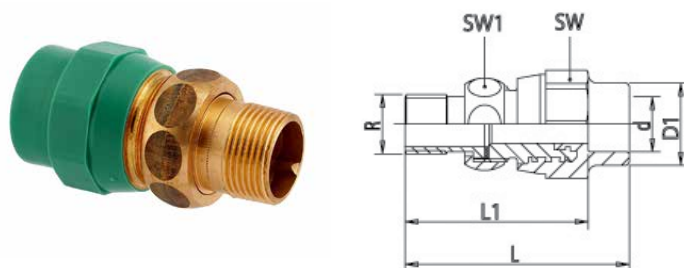
UNION TO FEMALE THREAD ADAPTOR

CODE	d – Rp	Nut Thread	D1	L	L1	SW	SW1	SW2
D283-1615	16–1/2	G 3/4	29	85	58	36	30	27
DCT283-2015	20–1/2	G 3/4	29	85	56	36	30	27
DCT283-2020	20–3/4	G 1	29	93	62	44	37	34
DCT283-2515	25–1/2	G 3/4	34	87	57	36	30	27
DCT283-2520	25–3/4	G 1	34	95	62	44	37	34
DCT283-3220	32–3/4	G 1	43	97	62	44	37	34
DCT283-3225	32–1	G 1 1/4	43	103	67	51	46	44
DCT283-4032	40–1 1/4	G 1 1/2	52	115	77	63	52	50
DCT283-5040	50–1 1/2	G 1 3/4	64	126	85	70	59	55
DCT283-6350	63–2	G 2 3/8	79	142	91	85	74	70
DCT283-7565	75–2 1/2	G 2 3/4	99	169	112	113	90	90



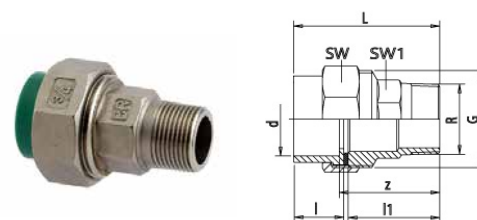
UNION TO MALE THREAD ADAPTOR

CODE	d – R	Nut Thread	D1	L	L1	SW	SW1
D284-1615	16–1/2	G 3/4	29	79	66	36	30
DCT284-2015	20–1/2	G 3/4	29	79	65	36	30
DCT284-2020	20–3/4	G 1	29	86	72	44	37
DCT284-2515	25–1/2	G 3/4	34	81	65	36	30
DCT284-2520	25–3/4	G 1	34	88	72	44	37
DCT284-3220	32–3/4	G 1	43	81	63	44	37
DCT284-3225	32–1	G 1 1/4	43	98	80	51	46
DCT284-4032	40–1 1/4	G 1 1/2	52	113	92	63	52
DCT284-5040	50–1 1/2	G 1 3/4	64	119	96	70	59
DCT284-6350	63–2	G 2 3/8	79	137	109	85	74
DCT284-7565	75–2 1/2	G 2 3/4	99	175	145	113	90



S/S MALE UNION ADAPTOR

CODE	d - R	DN	G	L	I	I1	z	SW	SW1
DCT285-2015	20-1/2	15	1	68	21	43	52	38	27
DCT285-2520	25-3/4	20	1 1/4	73	21	49	58	47	27
DCT285-3225	32-1	25	1 1/2	79	23	53	61	52	34
DCT285-4032	40-1 1/4	32	2	87	26	58	82	66	43
DCT285-5040	50-1 1/2	40	2 1/4	94	29	62	89	72	50
DCT285-6350	63-2	50	2 3/4	107	33	71	102	87	61



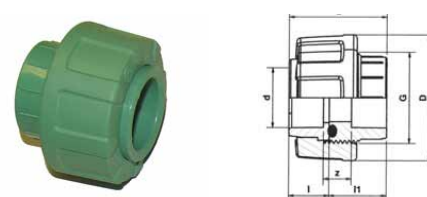
S/S FEMALE UNION ADAPTOR

CODE	d - R	D	NG	L	I	I1	z	SW	SW1
DCT286-2015	20-1/2	15	1	49	21	25	21	38	27
DCT286-2520	25-3/4	20	1 1/4	52	21	28	20	47	32
DCT286-3225	32-1	25	1 1/2	57	23	31	21	52	38
DCT286-4032	40-1 1/4	32	2	62	26	33	21	66	47
DCT286-5040	50-1 1/2	40	2 1/4	68	29	36	24	72	53
DCT286-6350	63-2	50	2 3/4	78	33	42	26	87	65



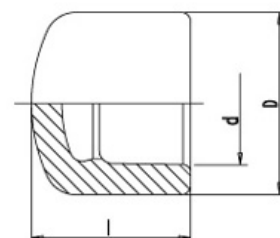
PP-RCT PN10 SOCKET FUSION MAC UNION (COLD WATER ONLY)

CODE	d	DN	G	L	I	I1	z	D
DCT287-0020	20	15	1	44.0	17.5	26	15	46
DCT287-0025	25	20	1 1/4	47.5	19.0	28	15	56
DCT287-0032	32	25	1 1/2	51.5	21.0	30	15	66
DCT287-0040	40	32	2	58.0	23.5	34	17	79
DCT287-0050	50	40	2 1/4	66.0	26.5	39	19	87
DCT287-0063	63	50	2 3/4	78.5	30.5	47	23	107



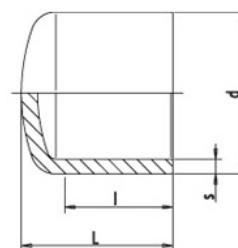
END CAP

CODE	d	D	l
D290-0016	16	23	24
DCT290-0020	20	29	25
DCT290-0025	25	34	28
DCT290-0032	32	43	32
DCT290-0040	40	52	36
DCT290-0050	50	65	41
DCT290-0063	63	79	48
DCT290-0075	75	99	54
DCT290-0090	90	120	66
DCT290-0110	110	148	79
DCT290-0125	125	165	87



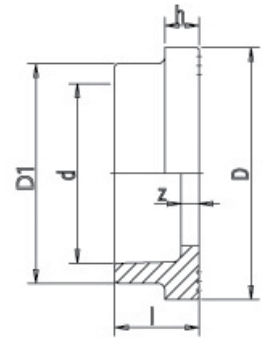
SPIGOT END CAP

CODE	d	s	L	l
DCT291-0160	160	14.6	140	100
DCT291-0200	200	18.2	190	145
DCT291-0250	250	22.7	218	163
DCT291-0315	315	28.6	250	192
DCT291-0355	355	32.2	275	215
DCT291-0400	400	36.3	283	228
DCT291-0450	450	40.9	306	195
DCT291-0500	500	45.4	335	212



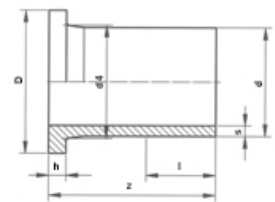
STUB FLANGE ADAPTOR

CODE	d	D	D1	l	z	h
DCT295-0040	40	61	50	29	9	8
DCT295-0050	50	74	61	27	4	8
DCT295-0063	63	102	76	40	13	17
DCT295-0075	75	122	90	38	8	19
DCT295-0090	90	137	108	45	12	25
DCT295-0110	110	158	131	50	13	21
DCT295-0125	125	162	146	53	13	25



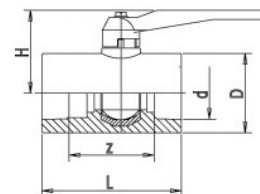
SPIGOT STUB FLANGE ADAPTOR

CODE	d	s	h	D1	d4	z	l
DCT296-0160	160	14.6	25	212	175	175	110
DCT296-0200	200	18.2	32	268	232	205	127
DCT296-0250	250	22.7	35	320	285	235	146
DCT296-0315	315	28.6	36	372	337	262	185
DCT296-0355	355	32.2	40	430	373	280	182
DCT296-0400	400	36.3	45	482	427	315	192
DCT296-0450	450	40.9	60	585	514	340	220
DCT296-0500	500	45.4	60	585	530	344	234



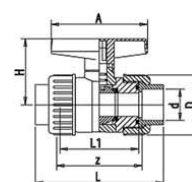
BALL VALVE

CODE	d	D	L	z	H
DCT301-0020	20	30	74	45	54
DCT301-0025	25	37	78	46	72
DCT301-0032	32	48	91	55	56
DCT301-0040	40	60	105	64	62
DCT301-0050	50	75	122	75	67
DCT301-0063	63	94	145	90	85
DCT301-0075	75	108	166	106	98



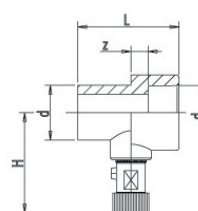
UNION BALL VALVE

CODE	d	DN	L	L1	z	D	H	A
DCT302-0020	20	15	98	63	70	46	51	68
DCT302-0025	25	20	113	75	82	56	61	78
DCT302-0032	32	25	121	79	87	66	70	88
DCT302-0040	40	32	138	91	98	79	81	98
DCT302-0050	50	40	148	95	101	87	90	108
DCT302-0063	63	50	175	115	121	107	110	118



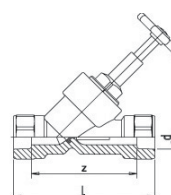
DRAIN VALVE (PP-R)

CODE	d	L	z	H
D390-020	20	52	8	51
D390-025	25	54	8	53



ANGLE SEAT VALVE (PP-R)

CODE	d	L	z
BR8700-20	20	115	86
BR8700-25	25	115	83
BR8700-32	32	120	84



WELD-IN SADDLE MANDREL

CODE	SIZE(MM)
D940-4022	40-20/25
D940-5022	50-20/25
D940-5032	50-32
D940-6322	63-20/25
D940-6332	63-32
D940-7522	75-20/25
D940-7532	75-32
D940-7540	75-40
D940-9022	90-20/25
D940-9032	90-32
D940-9040	90-40
D940-9050	90-50
D940-1122	110-20/25
D940-1132	110-32
D940-1140	110-40
D940-1150	110-50
D940-1163	110-63
D940-1220	125-20/25/32
D940-1622	160-20/25/32
D940-1640	160-40
D940-1650	160-50
D940-1663	160-63
D940-2220	225-20/25/32



*other options available on request

DRILL BIT FOR WELD-IN SADDLES

CODE	SIZE(MM)
D954-0025	20/25
D954-0032	32
D954-0040	40
D954-0050	50
D954-0063	63



REPAIRING SET

CODE	SIZE(MM)
BR8983-7	7
BR8983-11	11



REPAIRING PLUG

CODE	SIZE(MM)
BR8593-	10mm



Note: Other tools and mandrels can be found in the tooling section (page 166)

PIPE SUPPORT SPACINGS PN16 PP-RCT/CLIMATEC (CM)

DIAMETER mm	Spans L in cm to T°C						
	20°C	30°C	40°C	50°C	60°C	70°C	80°C
20 SDR7.4	100	90	85	85	80	70	65
25 SDR7.4	105	100	95	90	85	80	75
32 SDR9	120	115	110	105	100	95	90
40 SDR11	120	115	110	105	100	95	90
50 SDR11	140	135	130	125	120	115	110
63 SDR11	150	145	140	135	130	125	120
75 SDR11	165	160	155	150	145	140	130
90 SDR11	175	170	165	160	155	150	135
110 SDR11	185	180	175	165	160	155	145
125 SDR11	205	195	190	180	170	160	150
160 SDR11	220	210	205	195	185	175	165

PIPE SUPPORT SPACINGS PN16 PP-RCT/SOLID WALL (CM)

DIAMETER mm	Spans L in cm to T°C				
	20°C	30°C	40°C	50°C	60°
20 SDR9	60	55	50	45	40
25 SDR9	75	70	65	60	55
32 SDR11	95	85	75	70	65
40 SDR11	100	95	90	85	75
50 SDR11	120	115	105	100	90
63 SDR11	140	130	120	110	100
75 SDR11	150	145	135	125	115
90 SDR11	160	155	150	145	130
110 SDR11	180	170	160	155	140
125 SDR11	190	185	175	165	150
160 SDR11	200	195	185	175	160
200 SDR11	245	235	225	215	205
225 SDR11	260	250	240	230	210
250 SDR11	275	265	255	245	235
315 SDR11	290	280	270	260	250

* Refer to page 67 for clip options

SOCKET FUSION WELD TIMES

Diameter (mm)	Heating Time			Weld Together Time	Cooling Time
	@ 20°C amb.	> +5°C amb.	Weld in Saddles		
16	5 sec	10 sec	–	4 sec	2 min
20	5 sec	10 sec	–	4 sec	2 min
25	7 sec	14 sec	–	4 sec	2 min
32	8 sec	16 sec	–	6 sec	4 min
40	12 sec	24 sec	20 sec	6 sec	4 min
50	18 sec	36 sec	25 sec	6 sec	4 min
63	24 sec	48 sec	30 sec	8 sec	6 min
75	30 sec	60 sec	35 sec	8 sec	6 min
90	40 sec	80 sec	40 sec	10 sec	8 min
110	50 sec	100 sec	45 sec	10 sec	8 min
125	60 sec	120 sec	45 sec	10 sec	8 min

POINTS TO NOTE:

- It is essential to observe the above welding times
- Pipes and fittings from 75mm to 125mm should only be welded with a bench socket fusion machine
- The welder temperature should always be checked prior to welding (socket fusion welders should be 260°C)
- Cold welds can be caused by:
 - Welder temperature not being reached
 - Wind cooling the tool down
 - Lengthened welding time
 - Loose mandrels
 - Disregard of heating time



In a large number of projects, major benefits can be achieved by using the Insultherm pre-insulated pipe system. The insulation, with its low density and high closed cell rate has relatively low thermal conductivity, along with this, it also has good self extinguishing properties therefore providing you an option with which you can rest assured.

INSULTHERM CAN BE USED FOR TRANSPORTING EITHER ABOVEGROUND OR UNDERGROUND

- Drinking water
- Waste water
- Cooling water
- Hot water
- Condensate
- Chemicals
- Gases
- Air heating/cooling

YOUR CHOICE OF INTERNAL PIPE

- Dynatherm PP-RCT
- Stream PE100
- Primed Steel
- Copper

ENERGY SAVING

- Half the thickness of mineral wool
- More energy efficient.

NO MAINTENANCE COSTS

- Maintenance free
- 100% watertight
- 100% corrosion protected.

QUALITY ASSURED

- Manufactured under carefully monitored factory conditions
- Consistent procedures and controlled conditions throughout manufacture
- No reduction in quality due to site conditions or remoteness.

REDUCED SITE COSTS

- Quick, problem-free installation
- Less disruption of operations
- Doesn't rely on highly skilled installers.

UV RESISTANT

- The outer pipe is black high density polyethylene, which is 100% UV resistant.

INCREASED SURFACE STRENGTH

- High strength casing
- Self supports on casing.

FITTINGS AVAILABLE

Elbows, Tees, Reducing Tees, Flanges, Off-sets. Custom fittings can be supplied, e.g. flanged tees.

UPG SERVICE & TRAINING

Our technicians offer full service in all phases of a project from initial planning to commissioning. After sales service, including training of fitters is an integral part of UPG's services. Our training courses can be arranged onsite - NZ wide.

INSULATION TECHNICAL DATA

- Thermal conductivity: 0.023 W/mK
- Compressive strength: 150 kPa
- Density: 32-35 kg/m³
- Closed cells: 90-95%
- System temperature range: -10°C to 90°C
- Standard pipe lengths: 4mt, 6mt or 8mt
- Dimensional Stability
 - 24 hrs @ 100°C - 1 to 5%
 - 24 hrs @ -40°C - 0%
 - 24 hrs @ 70°C/100% RH - 0 to 5%
- Water Absorption: (23°C/kg/m²) 0.49
- Water Vapour Permeability: 1.8 (Perm-in ASTM C-355 @ 23°C)

Thickness of insulation is specified at design stage

PROPERTIES AND SUSTAINABILITY OF POLYURETHANE FOAM

Polyurethane rigid foams have a closed cell structure and high cross-linking density give them the characteristics of good heat stability, high compressive strength and excellent insulation properties.

PU insulation has a very low thermal conductivity, starting from as low as 0.017W/m.K, making it one of the most effective insulants available today for a wide range of applications.

All types of insulation can also play a role in improving the energy efficiency of buildings and reducing CO₂ emissions.

The environmental impact Polyurethane offers is as follows:

- Excellent thermal efficiency – leading to optimum energy savings and reduced CO₂ emissions.
 - Relatively low environmental impact at the building level – the product saves more than 100 times the energy than is used in its manufacture.
 - Durability – leading to long term performance and reducing the need for replacement, therefore saving energy.
- The economic impact from polyurethane is:
- Increased energy efficiency – leading to immediate savings for the end user.

TYPICAL VALUES OF INSULATING MATERIALS ARE:

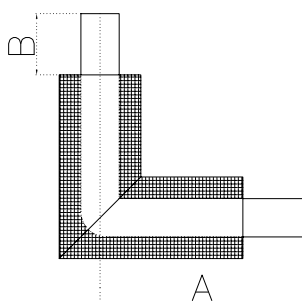
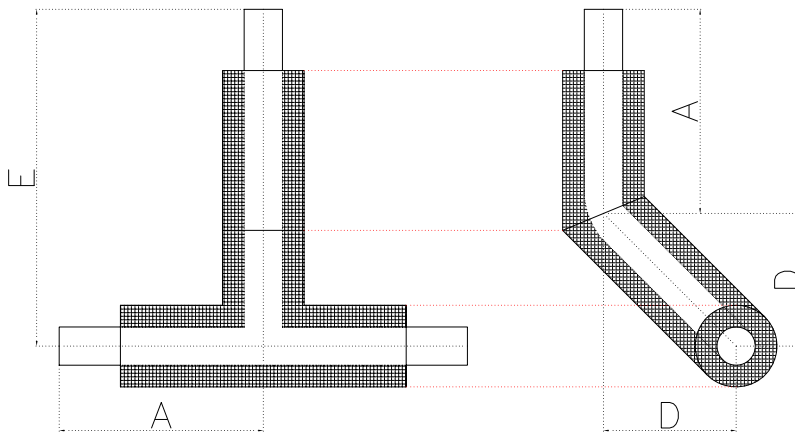
MATERIAL	DENSITY (KG/M ³)	K-FACTOR (W/MK)
Polyurethane foam closed cell	32	0.023
Polyurethane foam open cell	10-12	0.035
Polystyrene foam	16	0.035
Rockwool	100	0.037
Glasswool	65-160	0.041
Timber – white pine	350-500	0.112

Insulation with the above k-factor of 0.023 would give an estimated R-value of 2.17 m² K/W @50mm thickness.

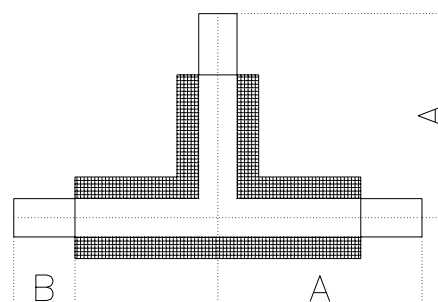


COMMON FITTINGS

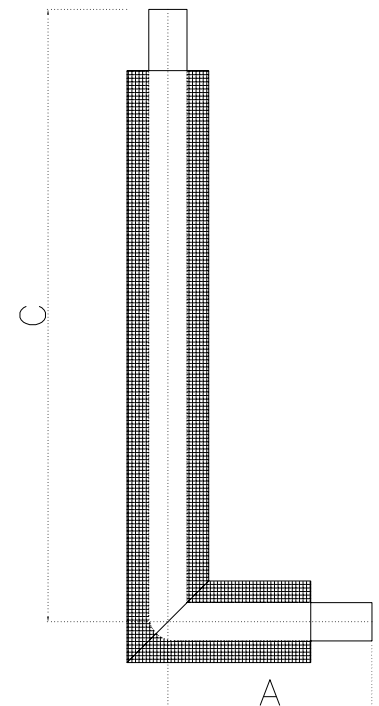
CROSSOVER TEE



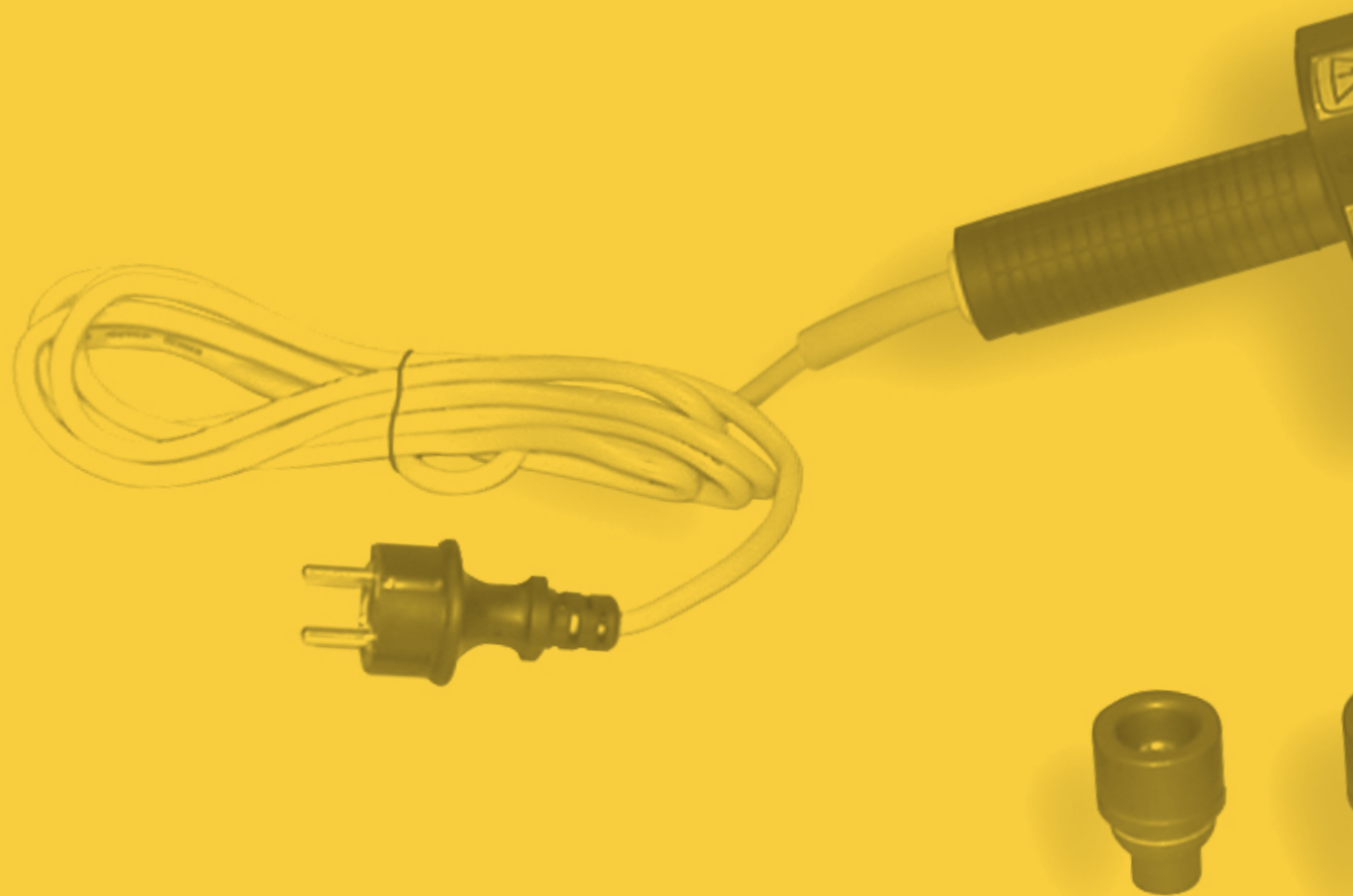
BEND



TEE





RISER BEND





CONSUMABLES & TOOLING

CONSUMABLES

CODE	DESCRIPTION	
9991-0001	Isopropyl Alcohol - 1 Litre Sold in packs of 6 100% IPA for use in electrofusion welding	
9991-0100	Disposable Welding Wipes Prevent contamination of the weld zone by using these convenient & safe disposable wiping cloths (tub of 100). Wipes are >98% isopropyl alcohol for NZ conditions that leave no residue.	

REPAIR AND CALIBRATION SERVICES

Our technical department offers repair and calibration services for most types of PE welding equipment. Contact us to discuss. We also stock a range of spare/replacement parts.



Butt Fusion



Planing



Drilling



Forming



Creasing



Slotting



Routing



Cutting



Machining



Welding



Moulding



Threading

CalderSafe® ELECTROFUSION WELD SOFTWARE

CalderSafe Mobile® is the technology enabling the easy acquisition of weld data from any job site. Data is automatically transferred to the app on your mobile device using Bluetooth then can be sent to pre-configured email addresses of your choice, along with images of the prepared and clamped fitting. Great for project managers!

The weld data can be read using the CalderSafe Weld Analyser software from any global location. This provides quality assurance and verification for completed welds before any reinstatement works are carried out, reducing risks of failed welds and unnecessary reworks.

Features:

- GPS location of fused fittings
- Up to 4 images can be taken
- Print individual or summary of weld records
- CalderSafe Mobile® App is available free on Google Play.
- Send weld data to 4 email addresses
- Provides 124 point graph of the weld

ELECTROFUSION WELDERS

CODE	DESCRIPTION	
PEGASUS-CS	<p>Pegasus EF Welder with Scanner & Caldersafe</p> <p>The Pegasus has been designed to meet the needs of today's market place with barcode, manual and fusamatic welding data entry with a 2000 welding joint recording capacity which are downloadable by supplied USB flash drive. CalderSafe software is pre-installed and can be activated or deactivated as required.</p> <p>The unit is constructed of ABS plastic incorporated within a rugged protection frame with integrated cable storage facility.</p> <p>Welder is supplied within a steel case for extra protection when not in use.</p> <p>Features:</p> <ul style="list-style-type: none"> • Operating modes: Manual, Barcode Automatic, and Fusamatic • Data recording of 2000 welds downloadable by USB or Caldersafe Mobile App • 3.0m output lead with terminals to 4.7mm • 4.7mm male to 4mm female adaptors • Fitting size range of 16-630mm • Capable of welding 8-48V couplers 	
GRIFFON-CS	<p>Griffon EF Welder with Scanner & Caldersafe</p> <p>At only 10kg and supplied in a tough fabric case with an over-shoulder strap, the Griffon is the ideal machine for contractors who do a lot of EF welding under 200mm. CalderSafe software is pre-installed and can be activated or deactivated as required.</p> <p>Features:</p> <ul style="list-style-type: none"> • Operating modes: Manual, Barcode Automatic, and Fusamatic • Data recording of 2000 welds downloadable by USB or Caldersafe Mobile App • Fan cooled electronics • 4.0m output lead with terminals to 4.7mm • 4.7mm male to 4mm female adaptors • Fitting size range of 16-200mm 	
01-01-101	Terminal Adaptor Pins 4.7mm Male x 4.0mm Female (Pair)	
01-01-116	Terminal Adaptor Pins 4.0mm Male x 4.7mm Female (Pair)	
01-01-179	Right Angle Terminal Adaptor 4.0-4.0mm (Pair)	

Note: Welders capable of welding up to 1200mm and right angle adaptors are available - please enquire.

CODE	DESCRIPTION
01-01-314	Barcode Scanner with USB Connection for Connexion Red EF Welder
01-01-319	Barcode Scanner with PS2 Connection for Pegasus/ Griffon EF Welder




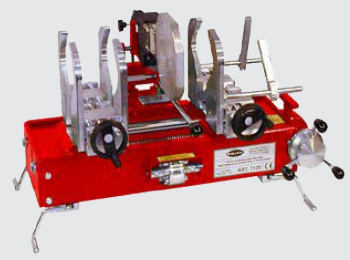


Note: we stock a range of replacement parts and offer full calibration and service of all Caldertech Electrofusion welders and tooling.




HDPE DRAINAGE WELDERS

CODE	DESCRIPTION
EFW-2160	HDPE Drainage EF Welder with bag Suitable for welding HDPE Drainage EF couplers from 40-160mm. Automatic setting of welding parameters. Comes with carry bag.
2160-0F	Replacement Welding Leads for EFW-2160
6160/N	HDPE Drainage Bench Welder Suitable for butt welding HDPE drainage pipe and fittings 40mm-160mm. Comes with steel case/mounting bench, inserts, and required tools.










SOCKET FUSION WELDERS

CODE	DESCRIPTION	
1045/TFA	Socket Fusion Welder Kit 20-63mm Suitable for socket fusion welding of PP-R, PP-RCT & PE pipe from 20-63mm. Comes complete with mandrels, steel carry case, and stand.	
7125	Bench Socket Fusion Welder Suitable for socket fusion welding 16mm – 125mm PP-R & PE. Comes complete with steel case/mounting bench, 75mm-125mm mandrel set, and required tools.	
10125/TF	Socket Fusion Welder Paddle to suit 16mm-125mm Manual polywelder for socket welding of pipes and fittings in PP, PE and other thermoplastic materials. Mandrels not included.	
1042/TF	Socket Fusion Welder Paddle (as above) with Mandrels Manual polywelder for socket welding of pipes and fittings in PP, PE and other thermoplastic materials. Comes with 20mm-110mm mandrel set, and steel box.	
7125/LI	In Situ Socket Fusion Welder Suitable for socket fusion welding 50mm-110mm PP-R & PE. Comes complete with paddle welder, clamps, stand, and mandrel set.	

CODE	DESCRIPTION	
Type A Socket Fusion Mandrel		
M20-A	20mm Type A	
M25-A	25mm Type A	
M32-A	32mm Type A	
M40-A	40mm Type A	
M50-A	50mm Type A	
M63-A	63mm Type A	
M75-A	75mm Type A	
M90-A	90mm Type A	
M110-A	110mm Type A	
M125-A	125mm Type A	
M160-A	160mm Type A	
Saddle Weld In Mandrel		
	<i>Main Size x Offtake Size</i>	
D940-4022	40mm x 20/25mm	
D940-5022	50mm x 20/25mm	
D940-5032	50mm x 32mm	
D940-6322	63mm x 20/25mm	
D940-6332	63mm x 32mm	
D940-7522	75mm x 20/25mm	
D940-7532	75mm x 32mm	
D940-7540	75mm x 40mm	
D940-9022	90mm x 20/25mm	
D940-9032	90mm x 32mm	
D940-9040	90mm x 40mm	
D940-9050	90mm x 50mm	
D940-1122	110mm x 20/25mm	
D940-1132	110mm x 32mm	
D940-1140	110mm x 40mm	
D940-1150	110mm x 50mm	
D940-1163	110mm x 63mm	
D940-1220	125mm x 20/25/32mm	
D940-1240	125mm x 40mm	
D940-1250	125mm x 50mm	
D940-1622	160mm x 20/25/32mm	
D940-1640	160mm x 40mm	
D940-1650	160mm x 50mm	
D940-1663	160mm x 63mm	
Drill Bit for Weld In Saddles		
D954-0025	20mm/25mm	
D954-0032	32mm	
D954-0040	40mm	
D954-0050	50mm	
D954-0063	63mm	

BUTT WELDERS

CODE	DESCRIPTION	
	<p><i>Hydraulically operated butt-welding machines suitable for welding PE and PP pipes and fittings in the field. The use of high quality pressure-cast aluminium castings allows for lower weight without compromising strength and performance, while providing extra strength when welding out-of-round pipe. Welding can be carried out between clamps 3 & 4 for tees, bends and manifold work. Each can be immediately integrated with optional data logger.</i></p>	
WP250	<p>Worldpoly 250mm Hydraulic Butt Welder</p> <p>Standard configuration includes layer clamp circles for 50mm-225mm. Extras available include: narrow clamp circles, stub holders, and a trolley.</p>	
WP315	<p>Worldpoly 315mm Hydraulic Butt Welder</p> <p>Standard configuration includes layer clamp circles for 90mm-280mm. Extras available include: narrow clamp circles, stub holders, and a trolley.</p>	
WP355-HF	<p>Worldpoly 355mm High Force Hydraulic Butt Welder</p> <p>Suitable for both high and low force welding methods. Standard configuration includes layer clamp circles for 110mm-280mm. Extras available include: narrow clamp circles, stub holders, and a trolley.</p>	
WP450	<p>Worldpoly 450mm Hydraulic Butt Welder</p> <p>Standard configuration includes layer clamp circles for 200mm-450mm. Extras available include: narrow clamp circles, stub holders, trolley, and crane/hoist assembly.</p>	
WP500	<p>Worldpoly 500mm Hydraulic Butt Welder</p> <p>Standard configuration includes layer clamp circles for 200mm-500mm. Extras available include: narrow clamp circles, stub holders, trolley, and crane/hoist assembly.</p>	
WP630	<p>Worldpoly 630mm Hydraulic Butt Welder</p> <p>Standard configuration includes layer clamp circles for 315mm-560mm. Extras available include: narrow clamp circles, stub holders, trolley, and crane/hoist assembly.</p>	
WP800	<p>Worldpoly 800mm Hydraulic Butt Welder</p> <p>Standard configuration includes layer clamp circles for 450mm-800mm. Extras available include: narrow clamp circles, stub holders, trolley, and crane/hoist assembly.</p> <p><i>Note: larger butt welders (up to 2500mm) and workshop welders are available. Rental options also available.</i></p>	

CODE	DESCRIPTION	
	<p><i>Hydraulically operated butt-welding machines suitable for PE and PP pipes and fittings in the field. Integrated full CNC operation ensures correct welding procedures including temperature, time and pressure functions, and provides on-board data logging for every weld. The use of high quality pressure-cast aluminium castings allows for lower weight without compromising strength and performance, while providing extra strength when welding out-of-round pipe. Welding can be carried out between clamps 3 & 4 for tees, bends and manifold work.</i></p>	
WP315-CNC	<p>Worldpoly 315mm CNC Butt Welding Machine</p> <p>Standard configuration includes layer clamp circles for 110mm-280mm and integrated data logger with USB output. Extras available include: stub holders.</p>	
WP355-CNC	<p>Worldpoly 355mm CNC Butt Welding Machine</p> <p>Standard configuration includes layer clamp circles for 160mm-315mm and integrated data logger with USB output. Extras available include: stub holders.</p>	
	<p><i>Note: 630mm and 1000mm machines also available as all-terrain or trench models with semi-automatic or full CNC operation.</i></p>	
SPG2000	<p>Basic Data Logger SPG2000 with Case</p> <p>The SPG 2.0 data logger is made for easy and safe welding process control, and report generation pursuant to ISO 12176 standard. 10,000+ welds are recorded, with output to USB and printing to Excel. Its control software ships ex-works with configurations for many third-party systems already installed. At every step in the welding process, the SPG 2.0 indicates the nominal and the actual values of the welding pressures and times, to walk the welder operating the hydraulic unit easily and correctly through the process.</p>	

CUTTERS & SCRAPERS

CODE	DESCRIPTION	
PC 40	20mm-40mm Pipe Cutter	
PC 63	20mm-63mm Pipe Cutter	
QRC63	6-64mm Quick Release Wheel Pipe Cutter	
QRC110	50-140mm Quick Release Wheel Pipe Cutter	
QRC160	110-160mm Quick Release PE Pipe Cutter	
<p><i>Note: Guillotines, electric saws and rotary cutters for larger pipe are available on request.</i></p>		
CHAM 2063	20mm-63mm Chamfering Tool Puts chamfer on end of pipe for ease of installation when using compression fittings. Suitable for 20mm-63mm pipe.	
HS50	Linbide 50mm Hand Scraper	
01-07-370	Calderprep Plus Scraper SDR7.4 Complete Kit 25-63mm with case	
01-07-338	Calderprep Plus Scraper SDR11 Complete Kit 20-63mm with case	
01-07-368 AU	Calderprep Aluminium Power Drive Adaptor	

CODE	DESCRIPTION	
REC-180	Rotary REC Scraper Tool 75-180mm w black case Scrape Length: 170mm Cut Depth: 0.2mm	
REC-315	Rotary REC Scraper Tool 75-315mm w black case Scrape Length: 170mm Cut Depth: 0.2mm	
S1700001	REC Replacement Blade	
01-05-002	Uniprep 4 Rotary Scraper 63mm-250mm with steel case Scrape Length: 130mm Cut Depth: 0.25mm	
01-02-002	Uniprep 1 Rotary Scraper 110mm-400mm with steel case Scrape Length: 150mm Cut Depth: 0.25mm	
01-03-002	Uniprep 2 Rotary Scraper 125mm-500mm with steel case Scrape Length: 180mm Cut Depth: 0.25mm	
01-06-001	Uniprep 5 Rotary Scraper 450mm-710mm with steel case Scrape Length: 345mm Cut Depth: 0.25mm	
01-02-023	Uniprep universal spare blade four sided	

CODE	DESCRIPTION
	Patch Scraping Tool
01-18-001	200x150mm Patch Scraping Tool with case (no chains)
01-18-002	200x150mm & 250x280mm Double Patch Saddle Scraping Tool with case (no chains)
01-18-005	Chain Set (2pcs) 300mm length
01-18-006	Chain Set (2pcs) 650mm length for 75-180mm pipe
01-18-007	Chain Set (2pcs) 1000mm length for 75-315mm pipe



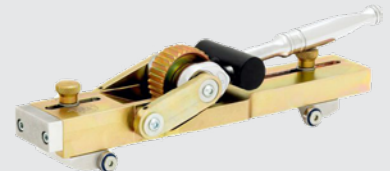
DEBEADERS

CODE	DESCRIPTION
	Internal Debeading Kit
01-07-530	Internal Debeader Full Kit (90-500mm)
01-07-535	Internal Debeader Rod Set – 9 x 1.5m
01-07-536	Internal Debeader Head Kit No.1 (90-110mm)
01-07-537	Internal Debeader Head Kit No.2 (125-140-160mm)
01-07-538	Internal Debeader Head Kit No.3 (160-180-200mm)
01-07-539	Internal Debeader Head Kit No.4 (225-250-280-315mm)
01-07-540	Internal Debeader Head Kit No.5 (355-400-450-500mm)


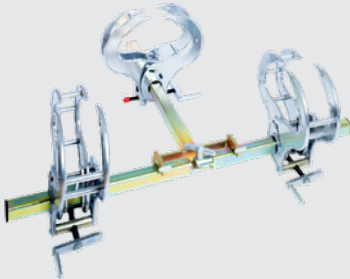









Note: larger head kits and replacement blades are available.

	External Debeader
01-07-520	63-125mm External Debeader
06-20-454	90-400mm External Debeader
01-07-504	355-630mm External Debeader
01-07-525	500-900mm External Debeader













PIPE CLAMPS

CODE	DESCRIPTION	
01-08-117	Superclamp Universal 20-63mm Mk2	
01-17-001	Magicclamp Positioner 20-63mm 2 way with angle maker	
01-17-002	Magicclamp Positioner 20-63mm 3 way with angle maker (pictured)	
01-09-007	Joint-master clamp 3 way 63mm-180mm with angle base + bag Does not require shells or liners, limited re-rounding capability. 3 way configuration with 750mm angle maker & branch leg.	
01-09-004	Joint-master clamp 2 way 63mm-180mm with angle base + bag Does not require shells or liners, limited re-rounding capability. 2 way configuration with angle maker	
SC200-2-K-4	40-200mm Double Strap Clamp with angle maker Lightweight, fast set up, alignment clamp for use on 40-200mm pipe. A centrally located adjustment knuckle allows it to be used for 22.5°, 45° and 90° elbows.	
SC500-2-K-4	160-500mm Double Strap Clamp Mk2 with angle maker Lightweight, fast set up, alignment clamp for use on 160-500mm pipe. A centrally located adjustment knuckle allows it to be used for 22.5°, 45° and 90° elbows.	
SC200T	40-200mm Mini Titan Double Clamp (KX4) Lightweight, fast set up, alignment clamp for use on 40mm-200mm pipe. Used on couplers only. Pulls pipe into position with minimal effort using a rack and pinion system.	
SC500T	160-500mm Titan Double Clamp (KX4) Fast set up, alignment clamp for use on 160-500mm pipe. Used on couplers only. Capable of pulling 12m lengths of pipe into position, using a rack and pinion system.	

CODE	DESCRIPTION	
01-15-001	Mains Restraining Clamp with 63/90/125/180mm Liners Will hold HDPE pipe securely during the weld process while also providing excellent re-rounding abilities for coiled pipe. Made from lightweight die cast aluminium & steel, the mains clamp is quick to install and easy to use. Also available with 3 way or angle maker base 22.5° increments. Comes with carry bag and liners for 63/90/125/180mm. Other liners sold separate.	
01-15-101	Mains Restraining Clamp 200mm - straight base Will hold HDPE pipe securely during the weld process while also providing excellent re-rounding abilities for coiled pipe. Made from lightweight die cast aluminium & steel, the mains clamp is quick to install and easy to use. Also available with 3 way or angle maker base 22.5° increments. Reducing liners sold separate.	
	EF Clamp K Pattern Type The K pattern clamp uses a simple strap design to securely hold PE pipe in position for the Electrofusion weld and cool down cycle.	
01-16-001	EF Clamp K Pattern 63mm-250mm - straight base	
01-16-002	EF Clamp K Pattern 63mm-250mm - angle maker	
01-16-101	EF Clamp K Pattern 125mm-500mm - straight base	

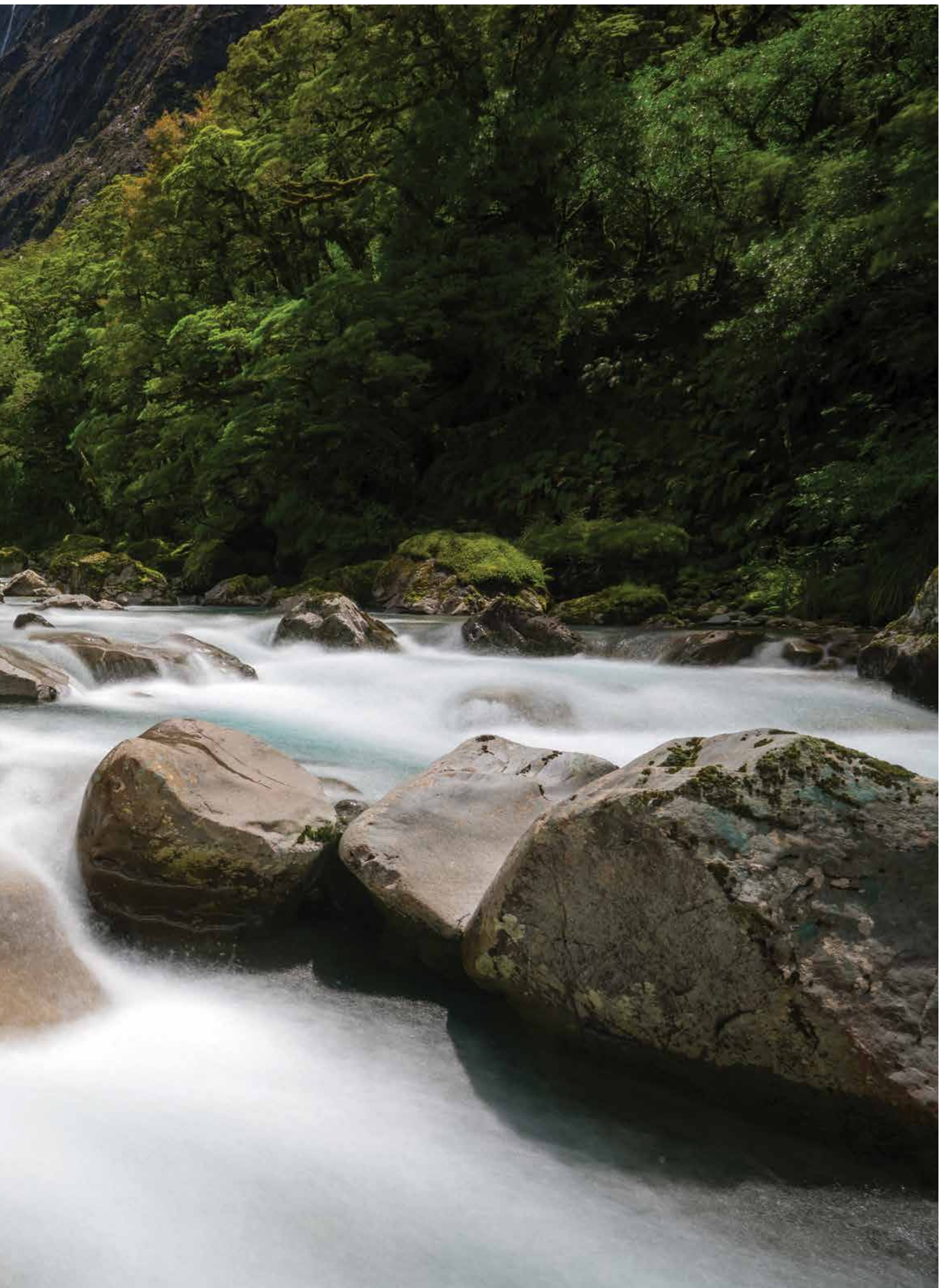
ACCESSORIES

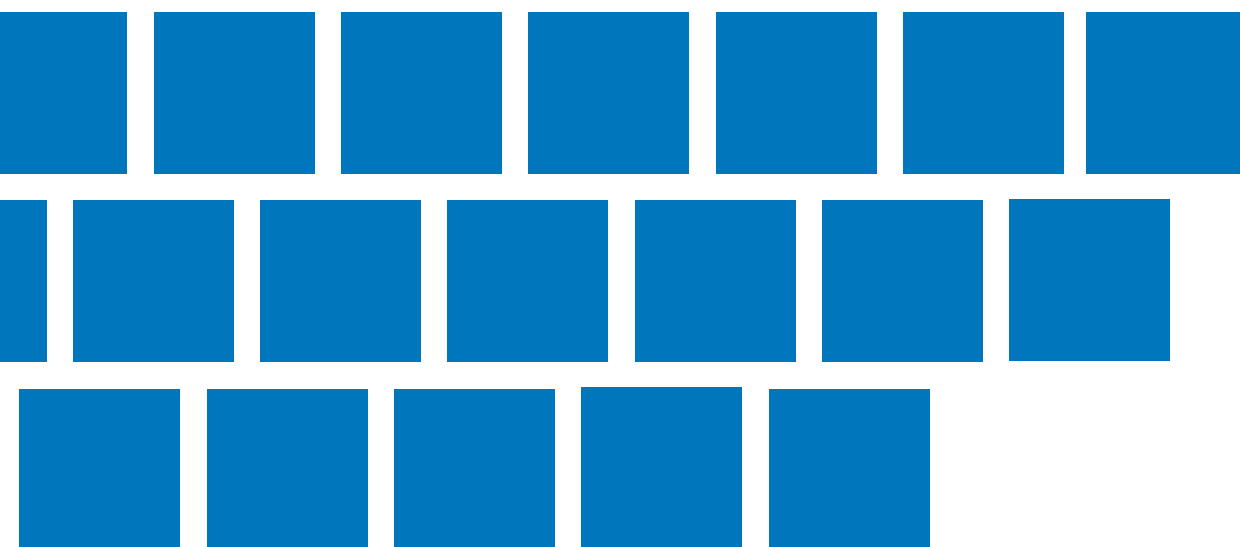
CODE	DESCRIPTION	
53MY001	Variable Height Pipe Roller up to 355mm	
53MY002	Variable Height Pipe Roller 400-710mm	
PolyRoller1000	Adjustable pipe roller stand for 50mm-1000mm pipe	

CODE	DESCRIPTION	
01-13-003	Top Loading Clamp Strap Type 63-630mm For Tapping Saddles	
01-12-021	Top Loading Clamp Adaptor Foot for 63/90/125mm Branch Saddle Offtakes	
CUTKEY-12 CS0007	12mm Tapping Key for Fusion EF Tapping Saddle Tapping Tee Key / Cutting Lever for GF Gas	
01-08-006	63mm Rerounding Clamp Hinged Collar	
01-08-007	75mm Rerounding Clamp Hinged Collar	
01-08-008	90mm Rerounding Clamp Hinged Collar	
01-08-009	110mm Rerounding Clamp Hinged Collar	
01-08-010	125mm Rerounding Clamp Hinged Collar	
01-08-011	140mm Rerounding Clamp Hinged Collar	
01-08-012	160mm Rerounding Clamp Hinged Collar	
01-08-013	180mm Rerounding Clamp Hinged Collar	
01-08-014	200mm Rerounding Clamp Hinged Collar	
01-08-015	225mm Rerounding Clamp Hinged Collar	
01-08-016	250mm Rerounding Clamp Hinged Collar	
01-08-028	280mm Rerounding Clamp Split Collar with Ratchet	
01-08-020	315mm Rerounding Clamp Split Collar with Ratchet	
01-08-024	355mm Rerounding Clamp Split Collar with Ratchet	
01-08-029	400mm Rerounding Clamp Split Collar with Ratchet	
01-08-030	400-355mm Rerounder Reducing Liners (Mechanical 2pc)	
01-08-036	400-315mm Rerounder Reducing Liners (Mechanical 2pc)	
01-08-039	315-280mm Rerounder Reducing Liners (Mechanical 2pc)	
01-08-046	315-250mm Rerounder Reducing Liners (Mechanical 2pc)	
01-08-047	315-225mm Rerounder Reducing Liners (Mechanical 2pc)	

CODE	DESCRIPTION	
01-08-100	400mm Rerounding Clamp Hydraulic + Pump	 
01-08-103	500mm Rerounding Clamp Hydraulic + Pump	
01-08-106	630mm Rerounding Clamp Hydraulic + Pump	
01-08-111	710mm Rerounding Clamp Hydraulic + Pump	
01-08-112	800mm Rerounding Clamp Hydraulic + Pump	
01-08-101	400-355mm Rerounder Reducing Liners (Hydraulic 3pc)	
01-08-102	400-315mm Rerounder Reducing Liners (Hydraulic 3pc)	
01-08-104	500-450mm Rerounder Reducing Liners (Hydraulic 3pc)	
01-08-105	500-400mm Rerounder Reducing Liners (Hydraulic 3pc)	
01-08-107	630-560mm Rerounder Reducing Liners (Hydraulic 3pc)	
01-08-108	630-500mm Rerounder Reducing Liners (Hydraulic 3pc)	
01-08-110	710-630mm Rerounder Reducing Liners (Hydraulic 3pc)	
04-61-001	Caliper External 300mm / 12inch	
04-61-002	Caliper External 600mm / 24inch	
04-61-003	Caliper External 1000mm / 36inch	
<p><i>Holesaws suitable for cutting the pipe after installing electrofusion branch saddles. Enquire for other sizes or extended hole saws.</i></p>		
HS-48	48mm Saddle Bi-Metal Hole Saw	
HS-70	70mm Saddle Bi-Metal Hole Saw	
HS-86	86mm Saddle Bi-Metal Hole Saw	
HS-98	98mm Saddle Bi-Metal Hole Saw	
HS-98-EXT	98mm Saddle Bi-Metal Hole Saw for wastewater saddles	
HS-111	111mm Saddle Bi-Metal Hole Saw	
HS-127	127mm Saddle Bi-Metal Hole Saw	
HS-ARBOR-A10E	Arbor to suit Saddle Hole Saws 32-210mm	
HS-ARBOR-EXT	Hole Saw Arbor Extension 300mm	
02-31-001	Squeeze Off Tool 0-42mm (pocket)	
02-31-202	Heavy Duty Squeeze Tool 20-63mm SDR11 w stops	
02-31-205	Heavy Duty Squeeze Tool 20-63mm SDR11 w stops + chain	
02-31-206	Heavy Duty Squeeze Tool 20-63mm SDR17 w stops + chain	
02-31-801	Heavy Duty Squeeze Tool 63-110mm SDR11 + 125 SDR17 <i>Larger squeeze off tools available</i>	
PI TAPE	Pipe OD Measuring Tape (Pi) - 2metre	







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