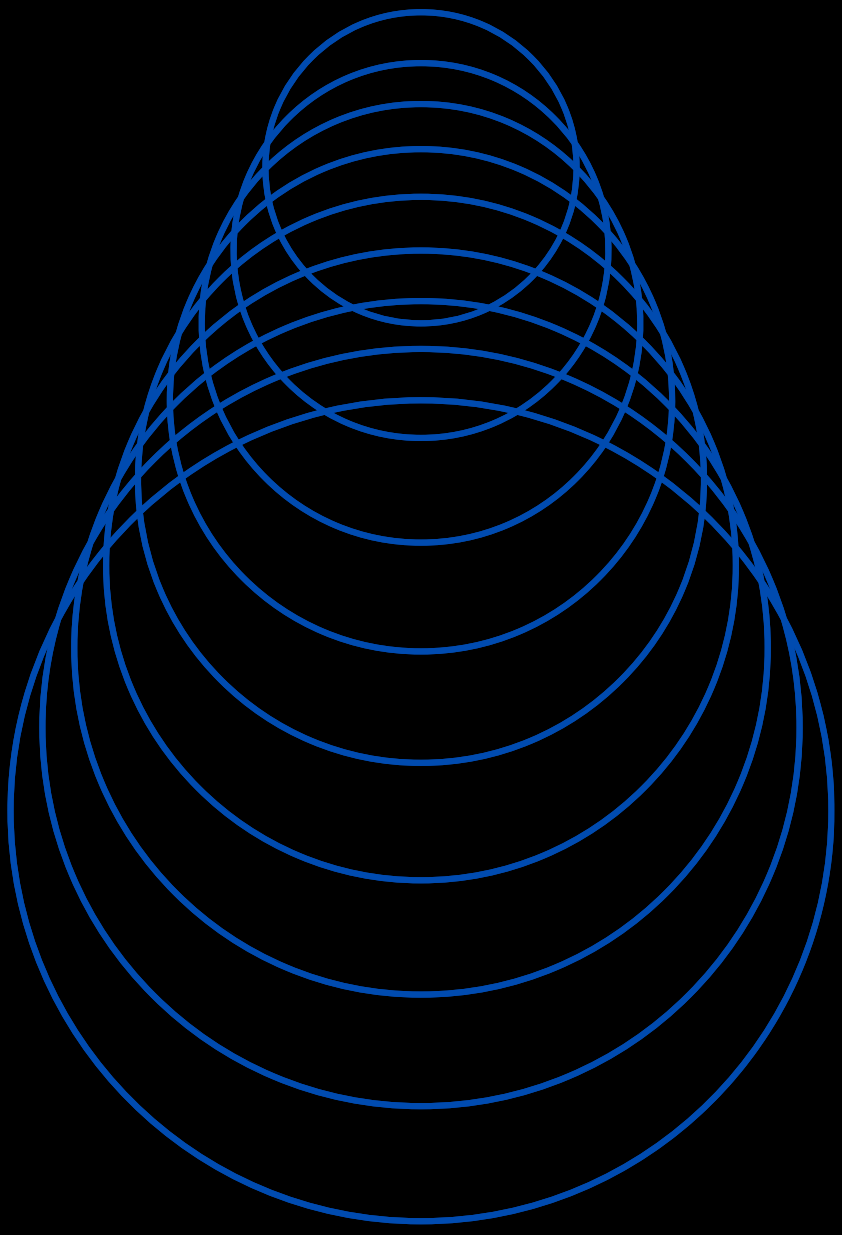
upg PIPE SYSTEMS



Product Catalogue

Ultimate Solutions.
Intelligent Delivery.

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Industry Data

Stream PE100 Pressure

Gas

Stream HDPE Drainage

Maxair

Insultherm

Dynatherm PP-RCT

Equipment & Tooling

Our Company

UPG Pipe Systems

Ultimate Solutions, Intelligent Delivery.

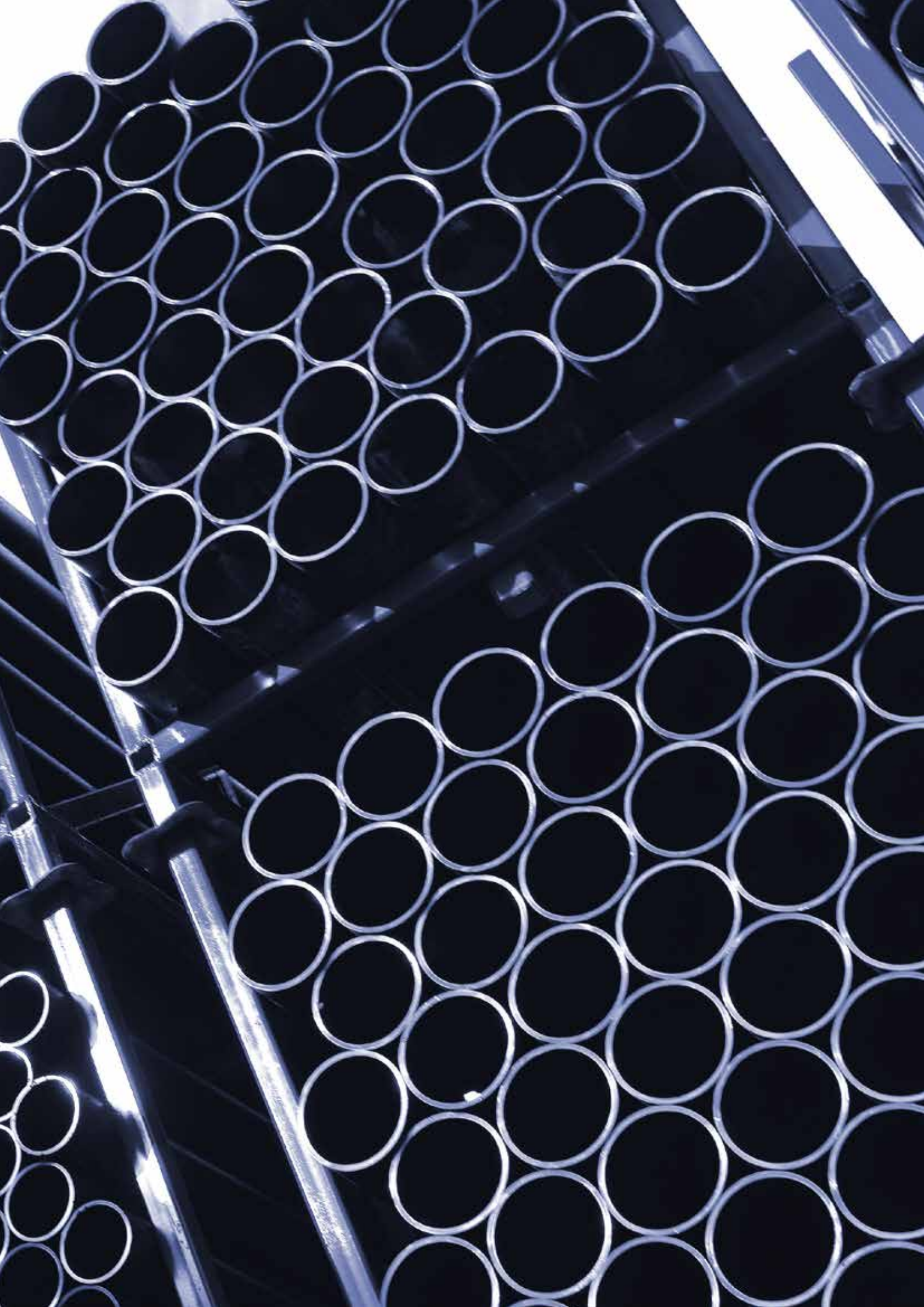
Ultimate Pipeline Group

Our ingenuity powers the delivery of world-class poly pipe systems, and expert technical support, tailored to your project requirements.

Our Story

Collaborating seamlessly with the construction industry we take pride in creating world-class pipe systems engineered to work hard. Working exclusively with robust HDPE our pipe systems offer superior durability delivering performance that will stand the test of time.

We understand that each project is unique and are committed to being your dedicated partner to success. With tailored solutions and specialist technical support we deliver complex projects while meeting your project specifications and timeline.



Market Oriented

Sustainability

High-Density Polyethylene (HDPE) and Polypropylene
(PP) pipelines play a crucial role in sustainable infrastructure, offering a robust and environmentally responsible solution. Our Polymer products can be recycled over and over again which reduces the demand for virgin materials and minimises waste in landfills. Additionally, HDPE and PP pipelines exhibit exceptional resistance to corrosion and chemical reactions ensuring they will stand the test of time and minimise the risk of environmental contamination

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.


AS/NZS4130 LIC2729 GR3

Our Values

Partnership

We're not just a provider; we are your dedicated partner to success. With expert technical support, we stand alongside you, ensuring you get the job done efficiently.

Consideration

Consideration is integral to our operations, encompassing environmental consciousness and unwavering commitment to safety.

Ingenuity

We thrive on ingenuity. We don't just provide solutions; we harness our specialist knowledge to deliver the ultimate solution for your project. Every project is a testament to our commitment to intelligent delivery, ensuring the success of your project.

Product Range

stream PE100 NEW ZEALAND PRESSURE SYSTEM

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 jointing methods - Electrofusion, Butt-fusion, Socket-fusion and Mechanical Fittings.
- No anchor or thrust blocks needed (most systems are fully end load restrained).
- Ease of installation, maintenance and repair.

stream HDPE NEW ZEALAND DRAINAGE SYSTEM

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.

POLYETHYLENE GAS

PE has been used in underground Gas Networks for years and is the perfect product for this, being durable, lightweight to install, and a fully welded system. Be aware that New Zealand has 2 different pipes available in PE Gas:

- North Island is Imperial sizing (ie; 1")
- South Island is Metric sizing

The product range we have here is imperial sizing, so suitable for North Island gas reticulation.

maXair

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

dynatherm PP-RCT PIPE SYSTEMS

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

Insultherm PRE-INSULATED PIPE SYSTEMS

Insultherm is a pre-insulated product of pipe and fittings primarily used for underground applications, for a range of uses including: Chilled Water, Gylcol, Heating or Hot Water, Chemicals, Condensate and more.
We offer two system options:

- Stream PE100 Insultherm in 6 metre lengths
- Dynatherm PP-RCT Insultherm in 4 or 8 metre lengths

Ritmo PLASTIC WELDING TECHNOLOGY

With over 100 years manufacturing high quality plastic welding equipment, Ritmo from Italy have a wide product offering that UPG are proud to represent in NZ. To ensure you get the best equipment and support we have trained services and technicians who can provide calibration and servicing. We hold a range of spare parts as we know how important it is to keep your equipment operating.

Industry Data

Nominal Pressure Ratings

SPECIFICATIONS ACCORDING TO AS/NZS 4130:2018

	PE80				PE100			
Standard Dimension Ratio (SDR)	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)	Min Life (Yr)	Design Factor	PN4/ SDR41	PN6.3/ SDR26	PN8/ SDR21	PN10/ SDR17	PN12.5/ SDR13.6	PN16/ SDR11	PN20/ SDR9	PN25/ SDR7.4
20	100	1.0	40	64	80	100	127	160	200	250
25	100	1.1	36	58	73	91	115	145	182	227
30	100	1.1	36	58	73	91	115	145	182	227
35	50	1.2	33	53	67	83	106	133	167	208
40	50	1.2	33	53	67	83	106	133	167	208
45	35	1.3	31	49	62	77	99	123	154	192
50	22	1.4	29	46	57	71	91	114	143	179
55	15	1.4	29	46	57	71	91	114	143	179
60	7	1.5	27	43	53	67	85	107	133	167

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. At 50'C and 55'C the lifetime of the pipe can only be based on 36 and 24 years as stated for the extrapolated performance of the pipe.

Polyethylene Pipe - Standard Dimensions

SPECIFICATIONS ACCORDING TO AS/NZS 4130:2018

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

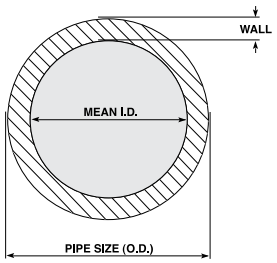
SPECIFICATIONS ACCORDING TO AS/NZS 4130:2018

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 4130:2018

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	—	—	—	—	—	—	—	—



SDR = OD ÷ 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 g/cm³, the support distances can be increased as stated below.

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

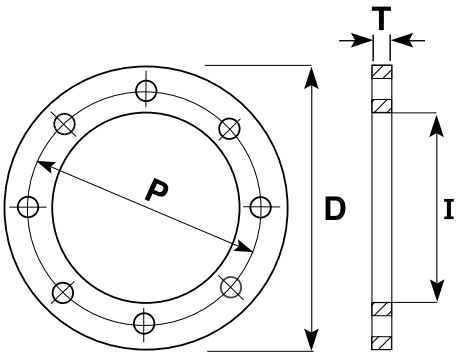
As polyethylene is a flexible pipe material, adequate pipe support must be provided to prevent sagging when polyethylene pipes have to be installed above ground. Pipe supports should be designed to support both the pipe weights and its contents and also accommodate the weight of any heavy fittings, valves 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 0.38w°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
63	50	2”	114	78	150	11	4X18	M16
75	65	2 1/2”	127	92	165	11	4X18	M16
90	80	3.5”	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	238	335	19	8X18	M16
250	250	10”	356	288	405	19	8X22	M20
280	250	10”	356	300	405	19	8X22	M20
315	300	12”	406	338	455	23	12X22	M20
355	350	14”	470	376	525	30	12X26	M24
n/a	375	15”	495	n/a	550	30	12X26	M24
400	400	16”	521	430	580	30	12X26	M24
450	450	18”	584	470	640	30	12X26	M24
500	500	20”	641	533	705	38	16X26	M24
630	600	24”	756	645	825	48	16X30	M27
710	700	28”	845	740	910	56	20X30	M27
n/a	750	30”	927	n/a	995	56	20X33	M30
800	800	32”	984	843	1060	56	20X36	M33
900	900	36”	1092	947	1175	66	24X36	M33
1000	1000	40”	1175	1050	1255	66	24X36	M33
1200	1200	44”	1410	-	1490	76	32X36	M33



AS 2129 Table E 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	28	95	6	4X14	M12
25	20	3/4"	73	34	100	6	4X14	M12
32	25	1"	83	42	115	7	4X14	M12
40	32	1 1/4"	87	51	120	8	4X14	M12
50	40	1 1/2"	98	62	135	9	4X14	M12
63	50	2"	114	78	150	10	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	8X18	M16
125	100	4"	178	135	215	13	8X18	M16
125	125	5"	210	140	255	14	8X18	M16
140	125	5"	210	158	255	14	8X18	M16
160	150	6"	235	178	280	17	8X22	M20
180	150	6"	235	188	280	17	8X22	M20
200	200	8"	292	235	335	19	8X22	M20
225	200	8"	292	238	335	19	8X22	M20
250	250	10"	356	288	405	22	12X22	M20
280	250	10"	356	294	405	22	12X22	M20
315	300	12"	406	338	455	25	12X26	M24
355	REFER TO TABLE AS 4087 B7 PN16 FOR THIS SIZE (PAGE 63)							
400	400	16"	521	430	580	32	12X26	M24
450	450	18"	584	470	640	35	16X26	M24
500	500	20"	641	533	705	38	16X26	M24
560	-	22"	699	618	760	44	16X30	M27
630	600	24"	756	645	825	48	16X33	M30
710	700	28"	845	740	910	51	20X33	M30
800	800	32"	984	843	1060	54	20X36	M33
900	900	36"	1092	947	1175	64	24X36	M33
1000	1000	40"	1175	1050	1255	67	24X39	M36

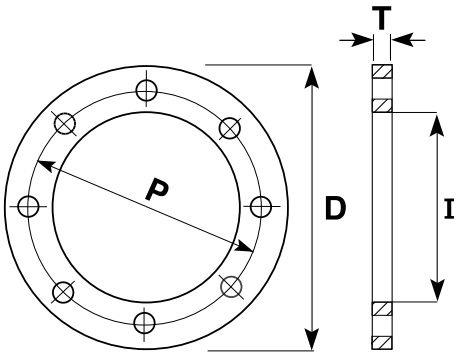
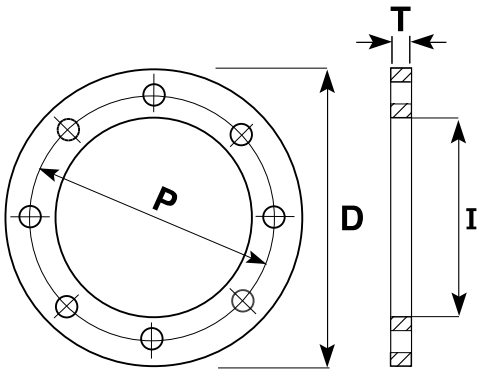


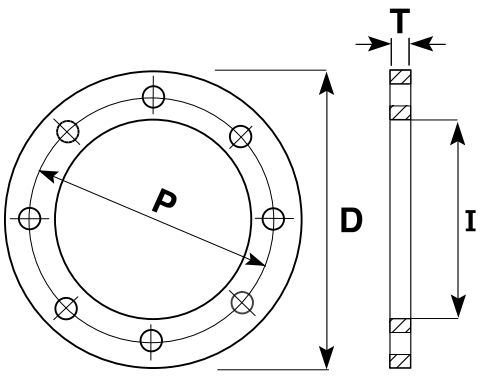
Table ANSI Flange Pattern

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”	60.5	28	90	11.2	4X16	M14
25	20	3/4”	73	34	100	6	4X14	M12
32	25	1”	79.5	42	108	14.2	4X16	M14
40	32	1 1/4”	89	51	117	15.7	4X16	M14
50	40	1 1/2”	98.5	62	127	17.5	4X16	M14
63	50	2”	120.5	78	152	19	4X20	M18
75	65	2 1/2”	139.5	92	178	22.3	4X20	M18
90	80	3”	152	108	191	23.9	4X20	M18
110	100	4”	190.5	128	229	23.9	8X20	M18
125	100	4”	190.5	135	229	23.9	8X20	M18
125	125	5”	216	135	254	23.9	8X22	M20
140	125	5”	216	158	254	23.9	8X22	M20
160	150	6”	241	178	279	25.4	8X22	M20
180	150	6”	241	188	279	25.4	8X22	M20
200	200	8”	298.5	235	343	28.4	8X22	M20
225	200	8”	298.5	238	343	28.4	8X22	M20
250	250	10”	362	288	406	30.2	12X26	M24
280	250	10”	362	294	406	30.2	12X26	M24
315	300	12”	432	338	482	31.8	12X26	M24
355	350	14”	476	376	533	35	12X30	M27
400	400	16”	540	430	600	36.6	16X30	M27
450	450	18”	578	470	635	39.6	16X33	M30
500	500	20”	635	533	700	43	20X33	M30
630	600	24”	750	645	815	47.8	20X36	M33



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	4×14	M12
25	20	3/4”	75	37	105	18	4×14	M12
32	25	1”	85	44	115	18	4×14	M12
40	32	1 1/4”	100	52	140	18	4×18	M16
50	40	1 1/2”	110	62	150	18	4×18	M16
63	50	2”	125	74	165	18	4×18	M16
75	65	2 1/2”	145	87	185	18	4×18	M16
90	80	3”	160	103	200	20	8×18	M16
110	100	4”	180	125	220	20	8×18	M16
125	100	4”	180	140	220	20	8×18	M16
125	125	5”	210	140	250	22	8×18	M16
140	125	5”	210	158	250	22	8×18	M16
160	150	6”	240	175	285	22	8×22	M20
180	150	6”	240	185	285	22	8×22	M20
200	200	8”	295	230	340	24	12×22	M20
225	200	8”	295	240	340	24	12×22	M20
250	250	10”	355	290	405	26	12×26	M24
280	250	10”	355	300	405	26	12×26	M24
315	300	12”	410	345	460	28	12×26	M24
355	350	14”	470	373	520	30	16×26	M24
400	400	16”	525	425	580	32	16×30	M27
450	450	18”	585	480	640	40	20×30	M27
500	500	20”	650	533	715	44	20×33	M30
630	600	24”	770	660	840	54	20×36	M33



Stream
PE100 Pressure

Notes on 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.

Unless specified, all measurements are in millimetres.

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.

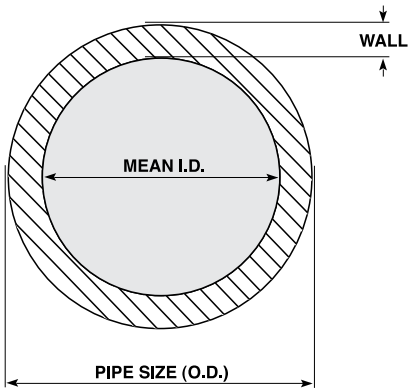
All dimensions shown in this catalogue are intended as a guide only, and may change without notice. If exact measurements are required, please contact our sales team.

Please contact our sales team if there are 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 4130:2018

	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	...	...	...	...	...	...	...	...



SDR = OD ÷ WALL THICKNESS

Polyethylene Pipe - Lengths

STANDARD STOCK SIZES
PE100 • SDR11 • PN16 WATER • 1000KPA GAS • BLACK

SIZE OD (MM)	CODE 6 METRE LENGTHS	CODE 12 METRE LENGTHS	ID SIZE (MM)
25	1401-025-2	-	20.2
32	1401-032-2	-	26.0
40	1401-040-2	-	32.3
50	1401-050-2	-	40.4
63	1401-063-2	-	50.9
75	1401-075-2	-	60.9
90	1401-090-2	1401-090-3	72.9
110	1401-110-2	1401-110-3	89.3
125	1401-125-2	1401-125-3	101.0
140	1401-140-2	1401-140-3	114.0
160	1401-160-2	1401-160-3	129.9
180	1401-180-2	1401-180-3	146.2
200	1401-200-2	1401-200-3	162.0
225	1401-225-2	1401-225-3	183.0
250	1401-250-2	1401-250-3	203.0
280	1401-280-2	1401-280-3	228.0
315	1401-315-2	1401-315-3	256.0
355	1401-355-2	1401-355-3	288.7
400	1401-400-2	1401-400-3	325.2
450	1401-450-2	1401-450-3	365.8
500	1401-500-2	1401-500-3	406.5
560	1401-560-2	1401-560-3	455.5
630	1401-630-2	1401-630-3	512.3

STANDARD STOCK SIZES
PE100 • SDR17 • PN10 WATER • 500KPA GAS • BLACK

SIZE OD (MM)	CODE 6 METRE LENGTHS	CODE 12 METRE LENGTHS	ID SIZE (MM)
90	1601-090-2	1601-090-3	78.8
110	1601-110-2	1601-110-3	96.4
125	1601-125-2	1601-125-3	109.8
140	1601-140-2	1601-140-3	123.0
160	1601-160-2	1601-160-3	140.6
180	1601-180-2	1601-180-3	158.2
200	1601-200-2	1601-200-3	175.7
225	1601-225-2	1601-225-3	197.6
250	1601-250-2	1601-250-3	219.8
280	1601-280-2	1601-280-3	246.2
315	1601-315-2	1601-315-3	276.9
355	1601-355-2	1601-355-3	312.0
400	1601-400-2	1601-400-3	351.7
450	1601-450-2	1601-450-3	395.6
500	1601-500-2	1601-500-3	439.7
560	1601-560-2	1601-560-3	492.4
630	1601-630-2	1601-630-3	554.1

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

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

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

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 available (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

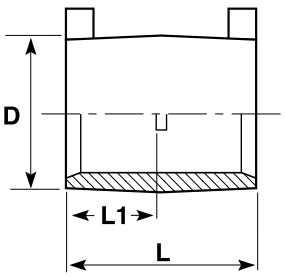
SIZE OD (MM)	CODE SDR11	STD LENGTH (M)	FLANGE SIZE (INCH)	ID SIZE (MM)
90	1601-090-2-FF-3	6	3	78.8
110	1601-110-2-FF-4	6	4	96.4
125	1601-125-2-FF-4	6	4	109.8
125	1601-125-2-FF-5	6	5	109.8
160	1601-160-2-FF-5	6	5	140.6
160	1601-160-2-FF-6	6	6	140.6
180	1601-180-2-FF-6	6	6	158.2
200	1601-200-2-FF-8	6	8	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

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

Electrofusion Coupler PN16 Pressure

PE100 • PN16 WATER • 1000KPA GAS

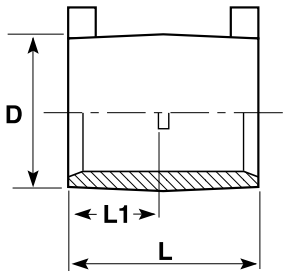
SIZE	CODE	L	L1	D	SDR RANGE
20	2014-0020	77	37.5	29	11
25	2014-0025	77	37.5	33.5	11
32	2014-0032	77	37.5	43	11
40	2014-0040	91	44	51.5	11
50	2014-0050	91	44	61.5	11
63	2014-0063	102	50	78	11
75	2014-0075	122	59.5	92.5	11-17.6
90	2014-0090	122	60	109.5	11-17.6
110	2014-0110	144	70	133	11-17.6
125	2014-0125	154	75	151	11-17.6
140	2014-0140	165	81	173	11-17.6
160	2014-0160	175	86	195	11-17.6
180	2014-0180	187	92	219	11-17.6
200	2014-0200	187	92	242	11-17.6
225	2014-0225	222	111	270	11-17.6
250	2014-0250	222	111	303	11-21
280	2014-0280	260	130	345	11-21
315	2014-0315	261	128	386	11-21
355	2014-0355	260	126	437	11-21
400	2014-0400	295	147	499	11-21
450	2014-0450	320	160	522	11-26
500	2014-0500	360	180	621	11-26
560	2014-0560	390	195	694	11-26
630	2014-0630	430	215	780	11-26
710	2014-0710	500	245	812	11-13.6
800	2014-0800	500	245	915	11-13.6
900	2014-0900	550	270	1110	11-13.6
1000	2014-1000	600	395	1238	11-13.6



Electrofusion Coupler PN10 Low Pressure

PE100 • PN10 WATER • 600KPA GAS

SIZE	CODE	L	L1	D	SDR RANGE
250	2016-0250	222	111	303	17-26
315	2016-0315	261	128	386	17-26
450	2016-0450	320	160	522	17-26
500	2016-0500	360	180	621	17-26
560	2016-0560	390	195	694	17-26
630	2016-0630	430	215	780	17-26
710	2016-0710	475	236	819	17-26
800	2016-0800	520	260	921	17-26
900	2016-0900	550	275	1035	17-26
1000	2016-1000	600	300	1149	17-26
1200	2016-1200	650	325	1376	17-26
1400	2016-1400	700	350	1603	17-26



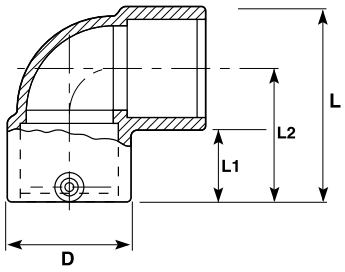
Notes:

- SDR17 couplers are rated to Water PN10 – Gas PN6
- SDR7.4 (PN25) couplers available on request.

Electrofusion 90° Elbow

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

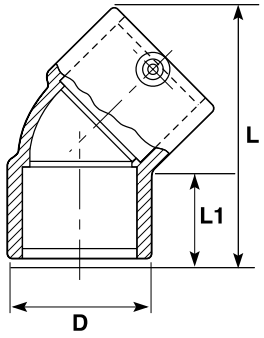
SIZE	CODE	L	L1	L2	D
20	2054-0020	77	40	62	30
25	2054-0025	76	41	60	35
32	2054-0032	84	40	62	44
40	2054-0040	91	42	65	52
50	2054-0050	103	45	72	63
63	2054-0063	123	50	84	80
75	2054-0075	141	53	92	95
90	2054-0090	165	60	109	113
110	2054-0110	204	73	135	137
125	2054-0125	228	75	152	154
160	2054-0160	312	87	211.5	201
180	2054-0180	308	90	197	222
200	2054-0200	335	90	213	243
225	2054-0225	376	100	239	274
250	2054-0250	409	109	257	304



Electrofusion 45° Elbow

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

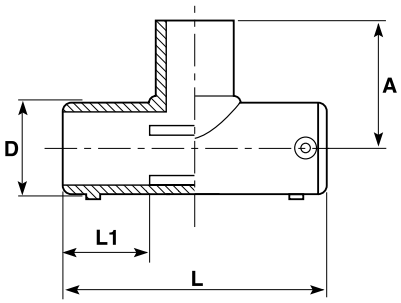
SIZE	CODE	L	L1	D
25	2104-0025	99	39	44
32	2104-0032	108	41.5	44
40	2104-0040	124	44.5	53
50	2104-0050	137	50	64
63	2104-0063	165	54	78.5
75	2104-0075	165	60	94
90	2104-0090	213	75	117
110	2104-0110	240	81	137
125	2104-0125	287	89	154
160	2104-0160	290	90	201
180	2104-0180	350	90	222
200	2104-0200	350	90	243
225	2104-0225	377	100	274
250	2104-0250	421	109	304



Electrofusion Equal Tee

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

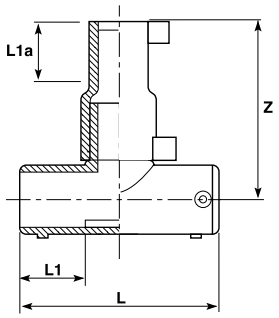
SIZE	CODE	L	L1	D	A
20	2154-0020	98	35	30	86
25	2154-0025	98	35	35	88.5
32	2154-0032	98	30	44	93
40	2154-0040	131	44	52	91
50	2154-0050	141	43	63	104
63	2154-0063	156	50	82	118
75	2154-0075	174	55	97	134
90	2154-0090	207	64	115	150
110	2154-0110	239	73	139	168
125	2154-0125	264	80	156	182
160	2154-0160	313	89	200	213.5
180	2154-0180	334	90	222	232
200	2154-0200	358	90	242	260
225	2154-0225	406	105	271	285
250	2154-0250	448	109	303	314



Electrofusion Reducing Tee

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

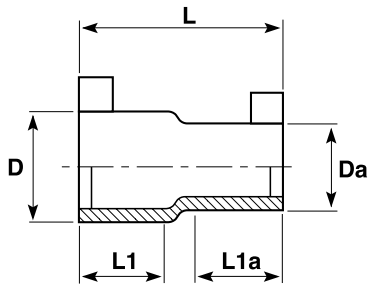
SIZE	CODE	L	L1	L1A	Z
25 × 20	2164-2520	98	35	35	138
32 × 20	2164-3220	98	35	35	138
32 × 25	2164-3225	98	30	49	116
40 × 32	2164-4032	131	44	50	145
50 × 32	2164-5032	141	43	50	178
63 × 32	2164-6332	156	50	50	205
63 × 40	2164-6340	174	55	63.5	206
63 × 50	2164-6350	207	64	73	205
90 × 63	2164-9063	239	73	73	277
110 × 63	2164-1163	264	80	58	330
110 × 90	2164-1190	313	89	62	316
125 × 90	2164-1290	334	90	79	344
160 × 110	2164-1611	358	90	72	380
160 × 125	2164-1612	406	105	83	486
180 × 125	2164-1812	448	109	83	493



Electrofusion Reducer

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

SIZE	CODE	L	L1	D	L1A	DA
25 × 20	2034-2520	77	38.5	34	36.5	25
32 × 20	2034-3220	77	38.5	43	36.5	32
32 × 25	2034-3225	77	38.5	43	36.5	32
40 × 25	2034-4025	91	46	52	41	32
40 × 32	2034-4032	91	46	52	41	40
50 × 25	2034-5025	91	46.5	62	41	50
50 × 32	2034-5032	91	46.5	62	41	50
50 × 40	2034-5040	102	52	77	41	63
63 × 32	2034-6332	102	52	77	43	63
63 × 40	2034-6340	102	52	77	45.5	63
63 × 50	2034-6350	126	63	97	58.5	75
75 × 63	2034-7563	123	62	109.5	53	90
90 × 63	2034-9063	137	75	140	54	110
110 × 63	2034-1163	137	70	134	62	110
110 × 90	2034-1190	145	76	152	62	125
125 × 90	2034-1211	175	90	200	67	160
125 × 110	2034-1290	186	90	200	78	160
160 × 110	2034-1611	221	101	216	83	180
180 × 125	2034-1812	221	101	216	83	157



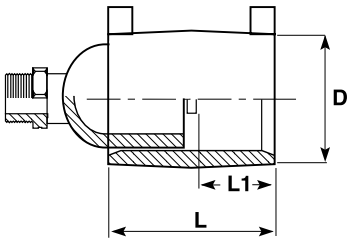
Electrofusion Test End Cap With Brass Thread

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

SIZE	CODE 3/4" BSP	CODE 1" BSP	L	L1	D
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

Notes:

Other sizes and female threads available on request.



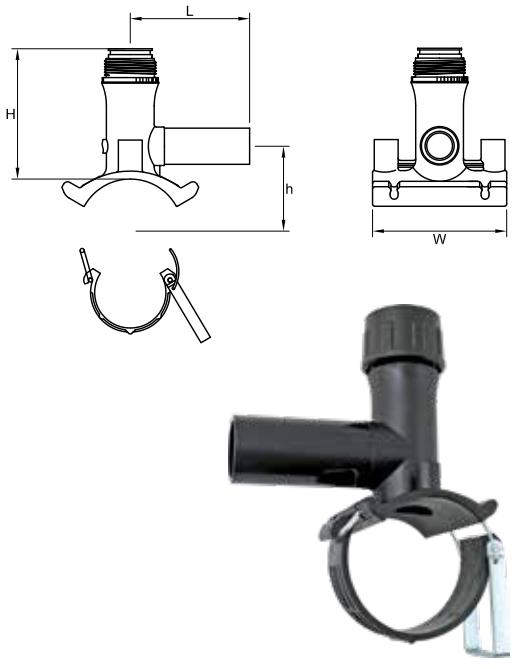
Electrofusion Live Tapping Saddle

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

SIZE	CODE	L	H	h	W
40 × 25	2214-4025	105	110	50	120
40 × 32	2214-4032	105	110	50	120
50 × 25	2214-5025	105	110	50	120
50 × 32	2214-5032	105	110	50	120
63 × 25	2214-6325	105	119	62	120
63 × 32	2214-6332	105	119	62	120
63 × 40	2214-6340	165	155	59.5	146
63 × 50	2214-6350	165	155	59.5	146
63 × 63	2214-6363	165	155	59.5	146
75 × 25	2214-7525	105	110	77	120
75 × 32	2214-7532	105	110	77	120
75 × 40	2214-7540	165	152	57	146
75 × 50	2214-7550	165	152	57	146
75 × 63	2214-7563	165	152	57	146
90 × 25	2214-9025	105	110	77	120
90 × 32	2214-9032	105	110	77	120
90 × 40	2214-9040	165	152	57	146
90 × 50	2214-9050	165	152	57	146
90 × 63	2214-9063	165	152	57	146
110 × 25	2214-1125	105	117	87	120
110 × 32	2214-1132	105	117	87	120
110 × 40	2214-1140	165	176	105	146
110 × 50	2214-1150	165	176	105	146
110 × 63	2214-1163	165	176	105	146
125 × 25	2214-1225	105	117	95	120
125 × 32	2214-1232	105	117	95	120
125 × 40	2214-1240	165	178	112	146
125 × 50	2214-1250	165	178	112	146
125 × 63	2214-1263	165	178	112	146
140 × 63	2214-1463	175	180	134	118
160 × 32	2214-1632	105	122	112	120
160 × 63	2214-1663	165	182	137	146
180 × 25	2214-1825	105	122	122	120
180 × 32	2214-1832	105	122	122	120
180 × 40	2214-1840	165	183	147	146
180 × 50	2214-1850	165	183	147	146
180 × 63	2214-1863	165	183	147	146
200 × 32	2214-2032	105	122	132	120
200 × 63	2214-2063	165	183	157	146
225 × 63	2214-2263	165	183	169	146
250 × 32	2214-2532-TL	165	183	182	146
250 × 63	2214-2563-TL	165	183	182	146
280 × 63	2214-2863-TL	165	184	196	146
315 × 63	2214-3163-TL	165	187	217	146
355 × 63	2214-3563-TL	165	187	238	146
400 × 63	2214-4063-TL	165	190	262	146
450 × 63	2214-4563-TL	165	190	287	146

* The above saddles are Top Load saddles as indicated by "TL" in the code.

- Larger sizes and a range of other offtake sizes are available on request.
- Tapping keys are stocked to suit saddles



Electrofusion Branch Saddle

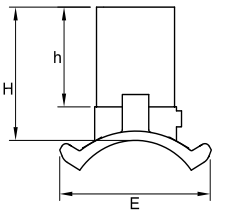
PE100 • SDR11 - SDR21 • PN16 WATER • 1000KPA GAS

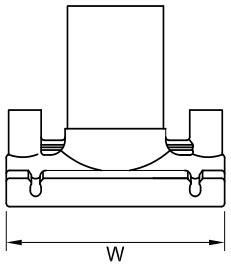
SIZE	CODE	H	h	W	E
40 × 25	2224-4025	90	52	103	83
40 × 32	2224-4032	90	57	103	83
63 × 25	2224-6325	106	59	122	105
63 × 32	2224-6332	106	59	122	105
63 × 40	2224-6340	106	59	122	105
63 × 50	2224-6350	106	59	122	105
63 × 63	2224-6363	106	59	122	105
75 × 32	2224-7532	115	75	147	119
75 × 40	2224-7540	115	75	147	119
75 × 50	2224-7550	115	75	147	119
75 × 63	2224-7563	115	75	147	119
90 × 32	2224-9032	91	51	136	133
90 × 40	2224-9040	105	69	136	133
90 × 50	2224-9050	105	82	136	133
90 × 63	2224-9063	105	88	136	133
110 × 32	2224-1132	118	75	147	122
110 × 40	2224-1140	118	75	147	122
110 × 50	2224-1150	118	75	147	122
110 × 63	2224-1163	118	75	147	122
110 × 90	2224-1190	121	84	165	180
125 × 32	2224-1232	118	75	147	122
125 × 40	2224-1240	118	75	147	122
125 × 50	2224-1250	118	75	147	122
125 × 63	2224-1263	118	75	147	122
125 × 90	2224-1290	114	84	165	180
140 × 63	2224-1463	110	94	118	180
140 × 90	2224-1490	125	105	176	174
160 × 32	2224-1632	125	75	147	122
160 × 40	2224-1640	125	75	147	122
160 × 50	2224-1650	125	75	147	122
160 × 63	2224-1663	125	75	147	122
160 × 90	2224-1690	110	84	215	236
160 × 110	2224-1611	131	98	217	236
180 × 32	2224-1832	125	75	147	122
180 × 40	2224-1840	125	75	147	122
180 × 50	2224-1850	125	75	147	122

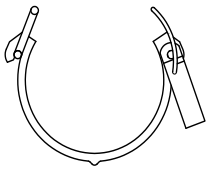
SIZE	CODE	H	h	W	E
250 × 90	2224-2590	120	84	165	317
250 × 125	2224-2512	110	98	310	327
280 × 90	2224-2890	115	102	300	305
280 × 125	2224-2812	121	109	300	305
315 × 90	2224-3190	115	102	300	305
315 × 125	2224-3112	121	109	300	305
315 × 160	2224-3116	132	119	300	305
355 × 90	2224-3590	115	102	300	305
355 × 125	2224-3512	121	109	300	305
400 × 180	2224-4018	193	150	300	360
450 × 180	2224-4518	193	150	300	360
450 × 280	2224-4528	-	-	-	-
630 × 180	2224-6318	193	150	300	360

SIZE	CODE	H	h	W	E
250 × 63	2224-2563-TL	120	84	165	317
280 × 63	2224-2863-TL	140	75	146	122
315 × 63	2224-3163-TL	140	75	146	122
355 × 63	2224-3563-TL	140	75	146	122
400 × 63	2224-40/45-63-TL	146	72	146	152
450 × 63	2224-40/45-63-TL	146	72	146	152

* The above saddles are Top Load saddles as indicated by "TL" in the code.







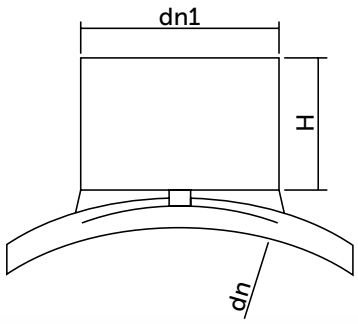
Electrofusion Branch Saddle - Multi Size

PE100 • SDR11 • PN16 WATER

MAIN SIZE	OFFTAKE	CODE	H
200-225	125	2224-20/22-125	90
225-280	63	2224-22/28-63	90
225-280	90	2224-22/28-90	106
225-280	110	2224-25/28-110	106
225-280	125	2224-25/28-125	106
315-450	63	2224-31/45-63	106
315-450	90	2224-31/45-90	106
315-450	125	2224-31/40-125	115
315-450	160	2224-31/40-160	115
450-500	125	2224-45/50-125	115
450-500	160	2224-45/50-160	115
560-630	125	2224-56/63-125	91
560-630	160	2224-56/63-160	91
710-800	125	2224-71/80-125	105
710-800	160	2224-71/80-160	105
900-1000	125	2224-90/10-125	105
900-1000	160	2224-90/10-160	118

• Comes with straps

• Other sizes available - contact UPG technical team for information



Electrofusion Branch Saddle - Large Bore

PE100 • PN16 WATER

MAIN SIZE	OFFTAKE	CODE	H
450	200	2224-4520	150
450	250	2224-4525	150
500	200	2224-5020	150
500	250	2224-5025	150
560	200	2224-5620	150
560	250	2224-5625	150
630	200	2224-6320	150
630	250	2224-6325	150
630	315	2224-6331	200
710	200	2224-7120	150
710	250	2224-7125	150
710	315	2224-7131	200
800	200	2224-8020	150
800	250	2224-8025	150
800	315	2224-8131	200
900	200	2224-9020	150
900	250	2224-9025	150
900	315	2224-9031	200
1000	200	2224-1020	150
1000	250	2224-1025	150
1000	315	2224-1031	200

• Above saddles require a positioner kit to be ordered separately

Positioner Kit

• Required for saddles with offtake from 200-315mm

• Comes with 2x Straps and top-plate to secure saddle during the weld cycle.

• Can be re-used.

Threaded Branch Saddle

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

SIZE	CODE	H
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	2224-11-2
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

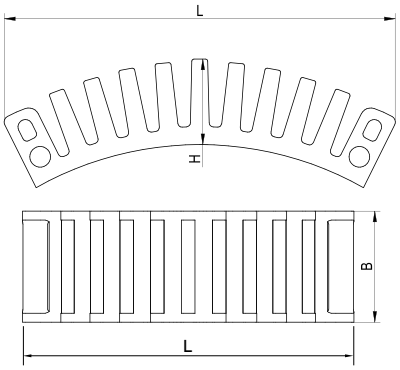
Note: More sizes available, please enquire.
Supplied with underclamp

Electrofusion Flex Restraint

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

SIZE	CODE	L	H	B
-	2004-0001	188	40.5	62

Note: SDR6-41 (to suit 160-1600mm OD Pipe)

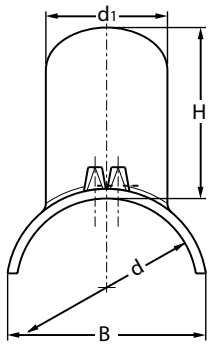


Electrofusion 45° Wastewater Saddle

PE100 • SDR11 - SDR26 •
SUITABLE FOR WASTEWATER ONLY

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

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

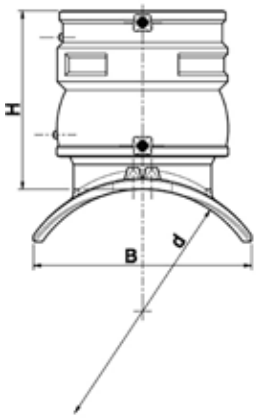


Electrofusion 90° Wastewater Saddle

PE100 • SDR11 - SDR26 • SUITABLE FOR
WASTEWATER ONLY • OFFTAKE IS ADJUSTABLE BY 5°

SIZE	CODE	B	H
225-250 × 160	EFTS2216	225	202
280-315 × 160	EFTS2316	247	202
355-560 × 160	EFTS3516	263	202
560-710 × 160	EFTS5716	277	202

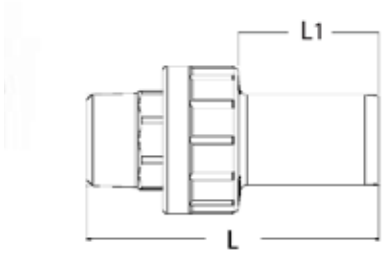
Note: Not supplied with holesaw or strap.
These can be purchased separately



Brass Male Transition Insert

PE100 • SDR11 • PN16 WATER • 100KPA GAS

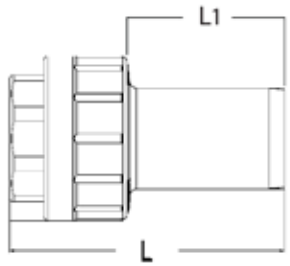
SIZE	BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE	L	L1
20	1/2”	15	2334-2015	95	38
25	3/4”	20	2334-2520	95	38
32	1”	25	2334-3225	108	38
40	1 1/4”	32	2334-4032	122	44
50	1 1/2”	40	2334-5040	125	44
63	2”	50	2334-6350	143	49
75	2 1/2”	65	2334-7565	159	61
90	3”	75	2334-9080	178	60
110	4”	100	2334-1110	203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



Brass Female Transition Insert

PE100 • SDR11 • PN16 WATER • 1000KPA GAS

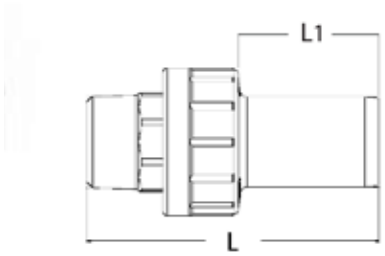
SIZE	BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE	L	L1
20	1/2”	15	2344-2015	80	38
25	3/4”	20	2344-2520	80	38
32	1”	25	2344-3225	90	38
40	1 1/4”	32	2344-4032	100	44
50	1 1/2”	40	2344-5040	103	44
63	2”	50	2344-6350	121	49
75	2 1/2”	65	2344-7565	136	61
90	3”	80	2344-9080	149	60
110	4”	100	2344-1110	166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



Stainless Steel Male Transition Insert

PE100 • SDR11 • PN16 WATER • 1000KPA GAS

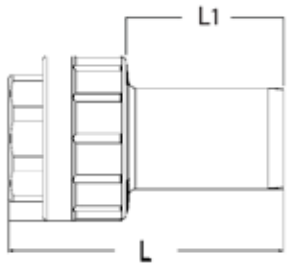
SIZE	BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE	L	L1
25	3/4”	20	2394-2520	99	40
32	1”	25	2394-3225	110	44
40	1 1/4”	32	2394-4032	121	49
50	1 1/2”	40	2394-5040	134	54
63	2”	50	2394-6350	150	63
75	2 1/2”	65	2394-7565	155	110
90	3”	80	2394-9080	170	125
110	4”	100	2394-1110	200	155



Stainless Steel Female Transition Insert

PE100 • SDR11 • PN16 WATER • 1000KPA GAS

SIZE	BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE	L	L1
25	3/4”	20	2404-2520	91	40
32	1”	25	2404-3225	100	44
40	1 1/4”	32	2404-4032	109	49
50	1 1/2”	40	2404-5040	124	54
63	2”	50	2404-6350	141	63
75	2 1/2”	65	2404-7565	130	110
90	3”	80	2404-9080	145	125
110	4”	100	2404-1110	160	155

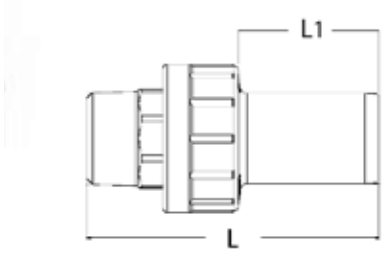


PE Male Plastic Spigot Adaptor

PE100 • SDR11 - SDR17 • PN10 WATER

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

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

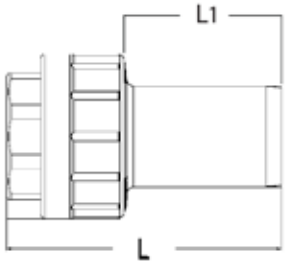


PE Female Plastic Spigot Adaptor

PE100 • SDR11 - SDR17 • PN10 WATER

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

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

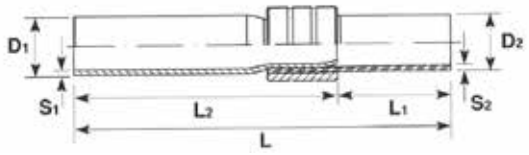


PE/Steel Transition

PE100 • SDR11 • 16BAR • 500KPA GAS

SIZE	CODE	D2	L	L1	L2	S1	S2
25	2554-2525	25	495	160	335	2.6	3
32	2554-3232	32	495	160	335	3.2	3
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	8.2
110	2554-1111	110	525	190	335	4.5	10
125	2554-1212	125	525	190	335	4.5	11.4
160	2554-1616	160	670	200	470	5	14.6
180	2554-1818	180	670	200	470	5	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	28.6

Note: please specify threaded or plain end

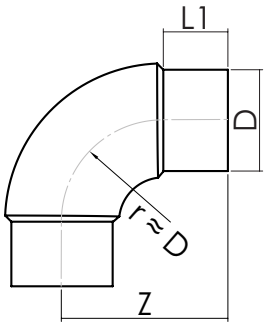


90° Multibend / Radius Elbow

PE100 • SDR11 - SDR17

SIZE	CODE SDR11	Z	L1	CODE SDR17	Z	L1
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

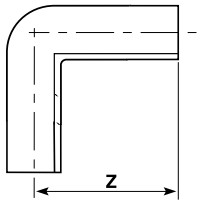
Note: suitable for electrofusion couplers



90° Spigot Elbow

PE100 • SDR11 - SDR17

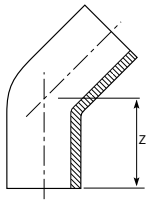
SIZE	CODE SDR11	CODE SDR17	Z
20	3054-0020	-	68
25	3054-0025	-	80
32	3054-0032	-	71
40	3054-0040	-	83
50	3054-0050	-	91
63	3054-0063	3056-0063	111
75	3054-0075	3056-0075	128
90	3054-0090	3056-0090	130
110	3054-0110	3056-0110	149
125	3054-0125	3056-0125	166
140	3054-0140	3056-0140	183
160	3054-0160	3056-0160	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

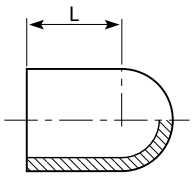
SIZE	CODE SDR11	CODE SDR17	Z
20	3104-0020	-	44
25	3104-0025	-	48
32	3104-0032	-	57
40	3104-0040	-	63
50	3104-0050	-	70
63	3104-0063	3106-0063	80
75	3104-0075	3106-0075	90
90	3104-0090	3106-0090	104
110	3104-0110	3106-0110	108
125	3104-0125	3106-0125	133
140	3104-0140	3106-0140	135
160	3104-0160	3106-0160	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

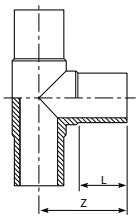
SIZE	CODE SDR11	CODE SDR17	Z
20	3274-0020	-	41
25	3274-0025	-	41
32	3274-0032	-	44
40	3274-0040	-	49
50	3274-0050	-	55
63	3274-0063	-	63
75	3274-0075	-	70
90	3274-0090	-	79
110	3274-0110	-	82
125	3274-0125	-	87
140	3274-0140	-	92
160	3274-0160	-	98
180	3274-0180	-	105
200	3274-0200	-	112
225	3274-0225	-	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

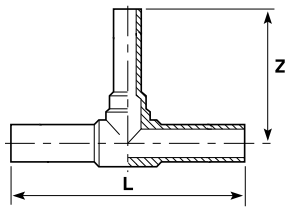
SIZE	CODE SDR11	CODE SDR17	L	Z
20	3154-0020	-	41	44
25	3154-0025	-	41	48
32	3154-0032	-	44	57
40	3154-0040	-	49	63
50	3154-0050	-	55	70
63	3154-0063	3156-0063	63	80
75	3154-0075	3156-0075	70	90
90	3154-0090	3156-0090	79	104
110	3154-0110	3156-0110	82	108
125	3154-0125	3156-0125	87	133
140	3154-0140	3156-0140	92	135
160	3154-0160	3156-0160	98	157
180	3154-0180	3156-0180	105	177
200	3154-0200	3156-0200	112	172
225	3154-0225	3156-0225	120	183
250	3154-0250	3156-0250	129	217
280	3154-0280	3156-0280	139	238
315	3154-0315	3156-0315	150	251
355	3154-0355	3156-0355	164	269
400	3154-0400	3156-0400	180	286
450	3154-0450	3156-0450	195	303
500	3154-0500	3156-0500	215	320
560	3154-0560	3156-0560	235	337
630	3154-0630	3156-0630	253	354



Spigot Moulded Reducing Tee

PE100 • SDR11 - SDR17

SIZE	L	Z	CODE SDR11	CODE SDR17
75 × 50	206	98	3164-7550	3166-7550
75 × 63	222	104	3164-7563	3166-7563
90 × 63	220	113	3164-9063	3166-9063
90 × 75	234	127	3164-9075	3166-9075
110 × 63	244	125	3164-1163	3166-1163
110 × 75	258	139	3164-1175	3166-1175
110 × 90	276	138	3164-1190	3166-1190
125 × 90	322	147	3164-1290	3166-1290
125 × 110	346	159	3164-1211	3166-1211
160 × 90	314	168	3164-1690	3166-1690
160 × 110	338	180	3164-1611	3166-1611
180 × 110	350	192	3164-1811	3166-1811
180 × 160	410	211	3164-1816	3166-1816
200 × 63	600	550	3164-2063	3166-2063
200 × 110	600	550	3164-2011	3166-2011
200 × 125	600	550	3164-2012	3166- 2012
200 × 160	600	550	3164-2016	3166-2016
225 × 110	600	550	3164-2211	3166-2211
225 × 160	600	550	3164-2216	3166-2216
225 × 180	600	550	3164-2218	3166-2218
250 × 110	600	650	3164-2511	3166-2511
250 × 160	600	650	3164-2516	3166-2516
250 × 180	600	650	3164-2518	3166-2518
250 × 200	600	650	3164-2521	3166-2521
280 × 160	600	650	3164-2816	3166-2816
280 × 180	600	650	3164-2818	3166-2818
280 × 200	600	650	3164-2820	3166-2820
315 × 110	600	700	3164-3111	3166-3111
315 ×160	650	700	3164-3116	3166-3116
315 × 180	650	700	3164-3118	3166-3118
315 × 200	650	700	3164-3120	3166-3120
315 × 225	650	700	3164-3122	3166-3122
315 × 250	650	700	3164-3125	3166-3125
355 × 110	650	700	3164-3511	3166-3511
355 × 125	650	700	3164-3512	3166-3512
355 × 160	650	700	3164-3516	3166-3516
355 × 180	650	700	3164-3518	3166-3518
355 × 200	700	700	3164-3520	3166-3520
400 × 125	800	750	3164-4012	3166-4012
400 × 160	800	750	3164-4016	3166-4016
400 × 180	800	750	3164-4018	3166-4018
400 × 200	800	750	3164-4020	3166-4020
400 × 225	900	750	3164-4022	3166-4022
400 × 250	900	750	3164-4025	3166-4025
400 × 280	900	750	3164-4028	3166-4028
450 × 125	900	750	3164-4512	3166-4512
450 × 160	900	750	3164-4516	3166-4516
450 × 180	900	750	3164-4518	3166-4518
450 × 200	1000	750	3164-4520	3166-4520
450 × 225	1000	750	3164-4522	3166-4522
450 × 250	1000	800	3164-4525	3166-4525
450 × 280	1000	800	3164-4528	3166-4528
450 × 315	1000	800	3164-4531	3166-4531
500 × 125	1000	800	3164-5012	3166-5012
500 × 160	1000	800	3164-5016	3166-5016
500 × 180	1000	800	3164-5018	3166-5018
500 × 200	1000	800	3164-5020	3166-5020
500 × 225	1000	800	3164-5022	3166-5022
500 × 250	1000	900	3164-5025	3166-5025
500 × 280	1000	900	3164-5028	3166-5028
500 × 315	1000	900	3164-5031	3166-5031
500 × 355	1000	900	3164-5035	3166-5035



Spigot Moulded Reducing Tee

PE100 • SDR11 - SDR17

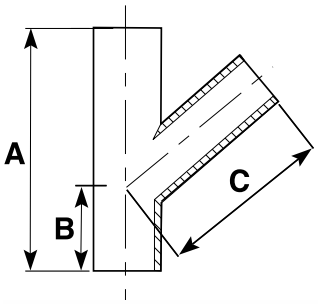
SIZE	L	Z	CODE SDR11	CODE SDR17
560 × 110	1000	900	3164-5611	3166-5611
560 × 125	1000	900	3164-5612	3166-5612
560 × 160	1000	900	3164-5616	3166-5616
560 × 180	1000	900	3164-5618	3166-5618
560 × 200	1000	900	3164-5620	3166-5620
560 × 225	1000	900	3164-5622	3166-5622
560 × 250	1000	900	3164-5625	3166-5625
560 × 315	1000	1200	3164-5631	3166-5631
560 × 355	1000	1200	3164-5635	3166-5635
560 × 400	1000	1200	3164-5640	3166-5640
630 × 125	1000	1200	3164-6312	3166-6312
630 × 160	1000	1200	3164-6316	3166-6316
630 × 180	1000	1200	3164-6318	3166-6318
630 × 200	1000	1200	3164-6320	3166-6320
630 × 225	1000	1200	3164-6322	3166-6322
630 × 250	1000	1200	3164-6325	3166-6325
630 × 315	1100	1200	3164-6331	3166-6331
630 × 355	1100	1200	3164-6335	3166-6335
630 × 400	1200	1200	3164-6340	3166-6340
630 × 450	1200	1200	3164-6345	3166-6345
710 × 125	1100	1200	3164-7112	3166-7112
710 × 160	1100	1200	3164-7116	3166-7116
710 × 180	1100	1200	3164-7118	3166-7118
710 × 200	1100	1200	3164-7120	3166-7120
710 × 225	1100	1200	3164-7122	3166-7122
710 × 250	1100	1200	3164-7125	3166-7125
710 × 280	1200	1200	3164-7128	3166-7128
710 × 315	1200	1200	3164-7131	3166-7131
710 × 355	1200	1200	3164-7135	3166-7135
710 × 400	1300	1500	3164-7140	3166-7140
710 × 450	1300	1500	3164-7145	3166-7145
710 × 500	1300	1500	3164-7150	3166-7150
710 × 560	1300	1500	3164-7156	3166-7156
800 × 125	1100	1200	3164-8012	3166-8012
800 × 160	1100	1200	3164-8016	3166-8016
800 × 180	1100	1200	3164-8018	3166-8018
800 × 200	1100	1200	3164-8020	3166-8020
800 × 225	1100	1200	3164-8022	3166-8022
800 × 250	1200	1200	3164-8025	3166-8025
800 × 280	1200	1200	3164-8028	3166-8028
800 × 315	1200	1200	3164-8031	3166-8031
800 × 355	1300	1200	3164-8035	3166-8035
800 × 400	1300	1600	3164-8040	3166-8040
800 × 450	1400	1600	3164-8045	3166-8045
800 × 500	1400	1600	3164-8050	3166-8050
800 × 560	1400	1600	3164-8056	3166-8056
800 × 630	1400	1600	3164-8063	3166-8063
900 × 180	1200	1200	3164-9018	3166-9018
900 × 200	1200	1200	3164-9020	3166-9020
900 × 225	1200	1200	3164-9022	3166-9022
900 × 250	1200	1200	3164-9025	3166-9025
900 × 280	1200	1200	3164-9028	3166-9028
900 × 315	1200	1200	3164-9031	3166-9031
900 × 355	1300	1200	3164-9035	3166-9035
900 × 400	1300	1600	3164-9040	3166-9040
900 × 450	1400	1600	3164-9045	3166-9045
900 × 500	1400	1600	3164-9050	3166-9050
900 × 560	1500	1600	3164-9056	3166-9056
900 × 630	1500	1600	3164-9063	3166-9063
1000 × 180	1400	1200	3164-1018	3166-1018
1000 × 200	1400	1200	3164-1020	3166-1020
1000 × 225	1400	1200	3164-1022	3166-1022
1000 × 250	1400	1200	3164-1025	3166-1025
1000 × 280	1400	1200	3164-1028	3166-1028
1000 × 315	1500	1200	3164-1031	3166-1031
1000 × 355	1500	1200	3164-1035	3166-1035
1000 × 400	1500	1700	3164-1040	3166-1040
1000 × 450	1600	1700	3164-1045	3166-1045
1000 × 500	1600	1700	3164-1050	3166-1050
1000 × 560	1700	1700	3164-1056	3166-1056
1000 × 630	1700	1700	3164-1063	3166-1063

Note: other sizes and pressure ratings available

Spigot 45° Moulded Junction

PE100 • SDR11 PN16 - SDR17 PN10

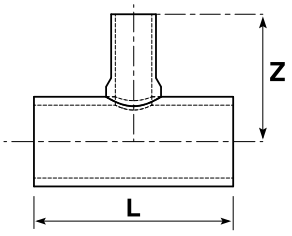
SIZE	CODE SDR11	CODE SDR17	A	B	C
40	3194-0040	3196-0040	189	65	120
50	3194-0050	3196-0050	222	78	145
63	3194-0063	3196-0063	244	86	156
75	3194-0075	3196-0075	290	109	182
90	3194-0090	3196-0090	371	136	234
110	3194-0110	3196-0110	400	140	249
125	3194-0125	3196-0125	447	150	290
160	3194-0160	3196-0160	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



Reinforced Reducing Tee

PE100 • SDR11 PN16 - SDR17 PN10

SIZE	L	Z	CODE SDR11	CODE SDR17
200 × 110	700	600	6164-2011-16	6166-2011-10
225 × 125	700	600	6164-2212-16	6166-2212-10
250 × 125	700	600	6164-2512-16	6166-2512-10
280 × 125	700	700	6164-2812-16	6166-2812-10
280 × 160	700	700	6164-2816-16	6166-2816-10
315 × 125	700	700	6164-3112-16	6166-3112-10
315 × 160	700	700	6164-3116-16	6166-3116-10
315 × 180	700	700	6164-3118-16	6166-3118-10
355 × 160	700	800	6164-3516-16	6166-3516-10
355 × 180	700	800	6164-3518-16	6166-3518-10
355 × 200	700	800	6164-3520-16	6166-3520-10
400 × 160	800	800	6164-4016-16	6166-4016-10
400 × 180	800	800	6164-4018-16	6166-4018-10
400 × 225	800	800	6164-4022-16	6166-4022-10
450 × 180	900	800	6164-4518-16	6166-4518-10
450 × 225	900	800	6164-4522-16	6166-4522-10
450 × 250	900	800	6164-4525-16	6166-4525-10
500 × 225	1000	900	6164-5022-16	6166-5022-10
500 × 250	1000	900	6164-5025-16	6166-5025-10
500 × 280	1000	900	6164-5028-16	6166-5028-10
560 × 250	1000	900	6164-5625-16	6166-5625-10
560 × 280	1000	900	6164-5628-16	6166-5628-10
560 × 315	1000	900	6164-5631-16	6166-5631-10
630 × 250	1000	1000	6164-6325-16	6166-6325-10
630 × 280	1000	1000	6164-6328-16	6166-6328-10
630 × 315	1100	1000	6164-6331-16	6166-6331-10
630 × 355	1100	1000	6164-6335-16	6166-6335-10



Spigot Reducer

PE100 • SDR11 PN16 - SDR17 PN10

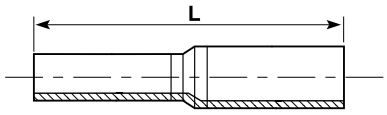
SIZE	CODE SDR11	CODE SDR17	L
40 × 25	3034-4025	-	130
40 × 32	3034-4032	-	130
50 × 25	3034-5025	-	140
50 × 32	3034-5032	-	140
50 × 40	3034-5040	-	140
63 × 32	3034-6332	-	150
63 × 40	3034-6340	-	150
63 × 50	3034-6350	-	150
75 × 50	3034-7550	-	175
75 × 63	3034-7563	-	175
90 × 63	3034-9063	-	196
90 × 75	3034-9075	-	200
110 × 63	3034-1163	-	214
110 × 75	3034-1175	-	216
110 × 90	3034-1190	-	213
125 × 63	3034-1263	-	195
125 × 90	3034-1290	-	222
125 × 110	3034-1211	-	222
160 × 90	3034-1690	3036-1690	245
160 × 110	3034-1611	3036-1611	250
160 × 125	3034-1612	3036-1612	250
160 × 140	3034-1614	3036-1614	245
180 × 125	3034-1812	3036-1812	255
180 × 160	3034-1816	3036-1816	255
200 × 160	3034-2016	3036-2016	270
225 × 160	3034-2216	3036-2216	280
225 × 180	3034-2218	3036-2218	280

Note: other sizes are available.

Spigot Reducer

PE100 • SDR11 PN16 - SDR17 PN10

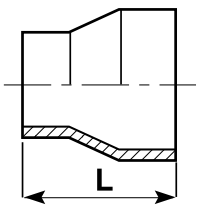
SIZE	CODE SDR11	CODE SDR17	L
250 × 200	3034-2521	3036-2521	310
250 × 225	3034-2522	3036-2522	305
280 × 250	3034-2825	3036-2825	348
315 × 200	3034-3120	3036-3120	330
315 × 225	3034-3122	3036-3122	375
315 × 250	3034-3125	3036-3125	375
315 × 280	3034-3128	3036-3128	355



Butt Weld Reducer

PE100 • SDR11 - SDR26

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



Butt Weld Reducer

PE100 • SDR11 - SDR26

SIZE	CODE SDR11	CODE SDR17	L
400 × 90	4034-4090	4036-4090	125
400 × 110	4034-4011	4036-4011	125
400 × 125	4034-4012	4036-4012	125
400 × 140	4034-4014	4036-4014	125
400 × 160	4034-4016	4036-4016	125
400 × 180	4034-4018	4036-4018	125
400 × 200	4034-4021	4036-4021	125
400 × 225	4034-4022	4036-4022	125
400 × 250	4034-4025	4036-4025	125
400 × 280	4034-4028	4036-4028	125
400 × 315	4034-4031	4036-4031	125
400 × 355	4034-4035	4036-4035	125
450 × 160	4034-4516	4036-4516	125
450 × 180	4034-4518	4036-4518	125
450 × 200	4034-4520	4036-4520	125
450 × 225	4034-4522	4036-4522	125
450 × 250	4034-4525	4036-4525	125
450 × 280	4034-4528	4036-4528	125
450 × 315	4034-4531	4036-4531	125
450 × 355	4034-4535	4036-4535	125
450 × 355	4034-4540	4036-4540	125
500 × 200	4034-5021	4036-5021	125
500 × 225	4034-5022	4036-5022	125
500 × 250	4034-5026	4036-5026	125
500 × 280	4034-5028	4036-5028	125
500 × 315	4034-5031	4036-5031	125
500 × 355	4034-5035	4036-5035	125
500 × 400	4034-5041	4036-5041	125
500 × 450	4034-5045	4036-5045	125
560 × 500	4034-5650	4036-5650	125
630 × 500	4034-6351	4036-6351	125
630 × 560	4034-6356	4036-6356	125

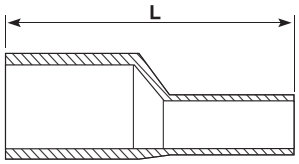
Note: Other sizes up to 1200mm available.

Spigot Eccentric Reducer

PE100 • SDR11 PN16 - SDR17 PN10

SIZE	CODE SDR11	CODE SDR17	L
110 × 90	3044-1190	-	130
125 × 63	3044-1263	-	195
125 × 90	3044-1290	-	222
125 × 110	3044-1211	-	222
160 × 90	3044-1690	3046-1690	245
160 × 110	3044-1611	3046-1611	250
160 × 125	3044-1612	3046-1612	250
160 × 140	3044-1614	3046-1614	245
180 × 125	3044-1812	3046-1812	255
180 × 160	3044-1816	3046-1816	255
200 × 160	3044-2016	3046-2016	270
225 × 160	3044-2216	3046-2216	280
225 × 180	3044-2218	3046-2218	280
250 × 180	3044-2518	3046-2518	294
250 × 200	3044-2521	3046-2521	310
250 × 225	3044-2522	3046-2522	305
280 × 250	3044-2825	3046-2825	348
315 × 200	3044-3120	3046-3120	330
315 × 225	3044-3122	3046-3122	375
315 × 250	3044-3125	3046-3125	375
315 × 280	3044-3128	3046-3128	355

Note: other sizes are available.

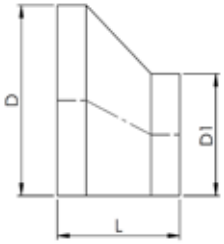


Butt Weld Eccentric Reducer

PE100 • SDR11 - SDR17

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

Note: larger sizes available on request

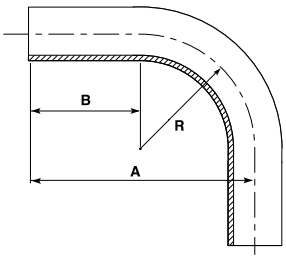


90° Sweep Bend

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 larger size bends made to order.

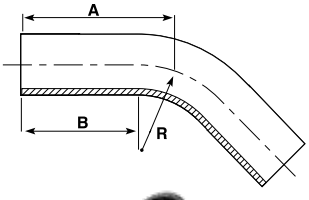


45° Sweep Bend

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 larger size bends made to order.

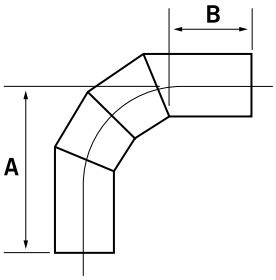


90° Fabricated Bend De-Rated

PE100 • SDR11 - SDR26

SIZE (MM)	CODE PN12.5 SDR11	CODE PN8 SDR17	A (MM)	B (MM)
90	6054-0090	6056-0090	335	220
110	6054-0110	6056-0110	365	220
125	6054-0125	6056-0125	388	220
140	6054-0140	6056-0140	410	220
160	6054-0160	6056-0160	440	220
180	6054-0180	6056-0180	460	220
200	6054-0200	6056-0200	500	220
225	6054-0225	6056-0225	588	220
250	6054-0250	6056-0250	625	250
280	6054-0280	6056-0280	720	250
315	6054-0315	6056-0315	777	250
355	6054-0355	6056-0355	719	350
400	6054-0400	6056-0400	760	400
450	6054-0450	6056-0450	822	450
500	6054-0500	6056-0500	959	480
560	6054-0560	6056-0560	970	480
630	6054-0630	6056-0630	1005	500
710	6054-0710	6056-0710	989	500
800	6054-0800	6056-0800	1034	550
900	6054-0900	6056-0900	1178	550
1000	6054-1000	6056-1000	1302	600
1100	6054-1100	6056-1100	1502	600
1200	6054-1200	6056-1200	1645	600

- End can be machined to suit butt weld installation
- Custom angle bends made to order.

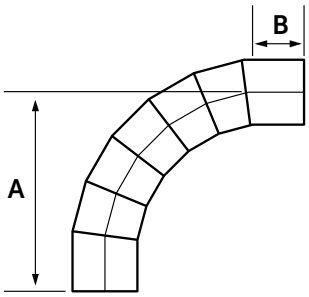


90° Fabricated Bend Full Rated

PE100 • SDR11 - SDR26

SIZE (MM)	CODE PN12.5 SDR11	CODE PN8 SDR17	A (MM)	B (MM)
90	6054-0090-16	6056-0090-10	335	220
110	6054-0110-16	6056-0110-10	365	220
125	6054-0125-16	6056-0125-10	388	220
140	6054-0140-16	6056-0140-10	410	220
160	6054-0160-16	6056-0160-10	440	220
180	6054-0180-16	6056-0180-10	460	220
200	6054-0200-16	6056-0200-10	500	220
225	6054-0225-16	6056-0225-10	588	220
250	6054-0250-16	6056-0250-10	625	250
280	6054-0280-16	6056-0280-10	720	250
315	6054-0315-16	6056-0315-10	777	250
355	6054-0355-16	6056-0355-10	719	350
400	6054-0400-16	6056-0400-10	760	400
450	6054-0450-16	6056-0450-10	822	450
500	6054-0500-16	6056-0500-10	959	480
560	6054-0560-16	6056-0560-10	970	480
630	6054-0630-16	6056-0630-10	1005	500
710	6054-0710-16	6056-0710-10	989	500
800	6054-0800-16	6056-0800-10	1034	550
900	6054-0900-16	6056-0900-10	1178	550
1000	6054-1000-16	6056-1000-10	1302	600
1100	6054-1100-16	6056-1100-10	1502	600
1200	6054-1200-16	6056-1200-10	1645	600

- End can be machined to suit butt weld installation
- Custom angle bends made to order.

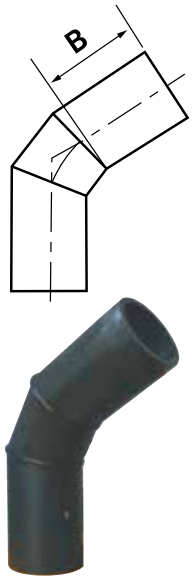


45° Fabricated Bend De-Rated

PE100 • SDR11 - SDR26

SIZE (MM)	CODE PN12.5 SDR11	CODE PN8 SDR17	B (MM)
90	6104-0090	6106-0090	220
110	6104-0110	6106-0110	220
125	6104-0125	6106-0125	220
140	6104-0140	6106-0140	220
160	6104-0160	6106-0160	220
180	6104-0180	6106-0180	220
200	6104-0200	6106-0200	220
225	6104-0225	6106-0225	220
250	6104-0250	6106-0250	250
280	6104-0280	6106-0280	250
315	6104-0315	6106-0315	250
355	6104-0355	6106-0355	350
400	6104-0400	6106-0400	400
450	6104-0450	6106-0450	450
500	6104-0500	6106-0500	480
560	6104-0560	6106-0560	480
630	6104-0630	6106-0630	500
710	6104-0710	6106-0710	500
800	6104-0800	6106-0800	550
900	6104-0900	6106-0900	550
1000	6104-1000	6106-1000	600
1100	6104-1100	6106-1100	600
1200	6054-1200	6106-1200	600

- End can be machined to suit butt weld installation
- Custom angle bends made to order.

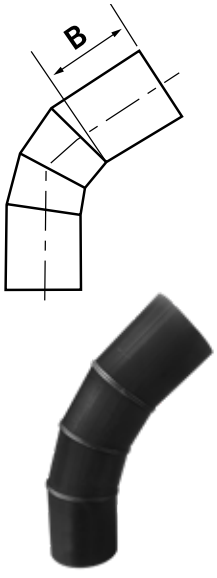


45° Fabricated Bend Full Rated

PE100 • SDR11 - SDR26

SIZE (MM)	CODE PN16 SDR11	CODE PN10 SDR17	B (MM)
90	6104-0090-16	6106-0090-10	220
110	6104-0110-16	6106-0110-10	220
125	6104-0125-16	6106-0125-10	220
140	6104-0140-16	6106-0140-10	220
160	6104-0160-16	6106-0160-10	220
180	6104-0180-16	6106-0180-10	220
200	6104-0200-16	6106-0200-10	220
225	6104-0225-16	6106-0225-10	220
250	6104-0250-16	6106-0250-10	250
280	6104-0280-16	6106-0280-10	250
315	6104-0315-16	6106-0315-10	250
355	6104-0355-16	6106-0355-10	350
400	6104-0400-16	6106-0400-10	400
450	6104-0450-16	6106-0450-10	450
500	6104-0500-16	6106-0500-10	480
560	6104-0560-16	6106-0560-10	480
630	6104-0630-16	6106-0630-10	500
710	6104-0710-16	6106-0710-10	500
800	6104-0800-16	6106-0800-10	550
900	6104-0900-16	6106-0900-10	550
1000	6104-1000-16	6106-1000-10	600
1100	6104-1100-16	6106-1100-10	600
1200	6054-1200-16	6106-1200-10	600

- End can be machined to suit butt weld installation
- Custom angle bends made to order.



22° Fabricated Bend De-Rated

PE100 • SDR11 - SDR26

SIZE (MM)	CODE PN12.5 SDR11	CODE PN8 SDR17	B (MM)
90	6124-0090	6126-0090	220
110	6124-0110	6126-0110	220
125	6124-0125	6126-0125	220
140	6124-0140	6126-0140	220
160	6124-0160	6126-0160	220
180	6124-0180	6126-0180	220
200	6124-0200	6126-0200	220
225	6124-0225	6126-0225	220
250	6124-0250	6126-0250	250
280	6124-0280	6126-0280	250
315	6124-0315	6126-0315	250
355	6124-0355	6126-0355	350
400	6124-0400	6126-0400	400
450	6124-0450	6126-0450	450
500	6124-0500	6126-0500	480
560	6124-0560	6126-0560	480
630	6124-0630	6126-0630	500
710	6124-0710	6126-0710	500
800	6124-0800	6126-0800	550
900	6124-0900	6126-0900	550
1000	6124-1000	6126-1000	600
1100	6124-1100	6126-1100	600
1200	6124-1200	6126-1200	600

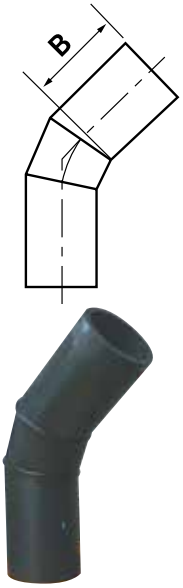
- End can be machined to suit butt weld installation
- Custom angle bends made to order.

22° Fabricated Bend Full Rated

PE100 • SDR11 - SDR26

SIZE (MM)	CODE PN16 SDR11	CODE PN10 SDR17	B (MM)
90	6124-0090-16	6126-0090-10	220
110	6124-0110-16	6126-0110-10	220
125	6124-0125-16	6126-0125-10	220
140	6124-0140-16	6126-0140-10	220
160	6124-0160-16	6126-0160-10	220
180	6124-0180-16	6126-0180-10	220
200	6124-0200-16	6126-0200-10	220
225	6124-0225-16	6126-0225-10	220
250	6124-0250-16	6126-0250-10	250
280	6124-0280-16	6126-0280-10	250
315	6124-0315-16	6126-0315-10	250
355	6124-0355-16	6126-0355-10	350
400	6124-0400-16	6126-0400-10	400
450	6124-0450-16	6126-0450-10	450
500	6124-0500-16	6126-0500-10	480
560	6124-0560-16	6126-0560-10	480
630	6124-0630-16	6126-0630-10	500
710	6124-0710-16	6126-0710-10	500
800	6124-0800-16	6126-0800-10	550
900	6124-0900-16	6126-0900-10	550
1000	6124-1000-16	6126-1000-10	600
1100	6124-1100-16	6126-1100-10	600
1200	6124-1200-16	6126-1200-10	600

- End can be machined to suit butt weld installation
- Custom angle bends made to order.

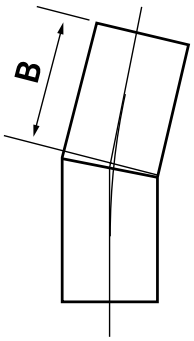


11° Fabricated Bend Full Rated

PE100 • SDR11 - SDR26

SIZE (MM)	CODE PN16 SDR11	CODE PN10 SDR17	B (MM)
90	6134-0090	6136-0090	200
110	6134-0110	6136-0110	200
125	6134-0125	6136-0125	200
140	6134-0140	6136-0140	200
160	6134-0160	6136-0160	200
180	6134-0180	6136-0180	200
200	6134-0200	6136-0200	200
225	6134-0225	6136-0225	250
250	6134-0250	6136-0250	250
280	6134-0280	6136-0280	300
315	6134-0315	6136-0315	300
355	6134-0355	6136-0355	350
400	6134-0400	6136-0400	400
450	6134-0450	6136-0450	450
500	6134-0500	6136-0500	500
560	6134-0560	6136-0560	550
630	6134-0630	6136-0630	600
710	6134-0710	6136-0710	534
800	6134-0800	6136-0800	589
900	6134-0900	6136-0900	593
1000	6134-1000	6136-1000	648
1100	6134-1100	6136-1100	653
1200	6134-1200	6136-1200	658

- End can be machined to suit butt weld installation
- Custom angle bends made to order.

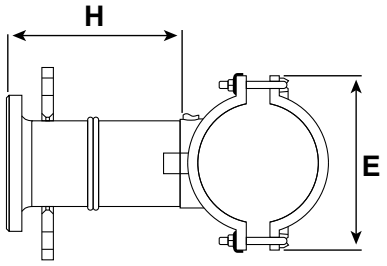


EF Hydrant Saddles - DN90

PE100 • SDR11 • PN12.5 • 3 ½" HYDRANT FLANGE

SIZE (MM)	CODE 3 1/2" HYD FLANGE (89MM Ø)	Z (MM)
125	6224-1290-F	200
160	6224-1690-F	200
180	6224-1890-F	200
200	6224-2090-F	250
225	6224-2290-F	250
250	6224-2590-F	250
280	6224-2890-F	250
315	6224-3190-F	250
355	6224-3590-F	250
400	6224-4090-F	250

- Other sizes and flange sizes available.

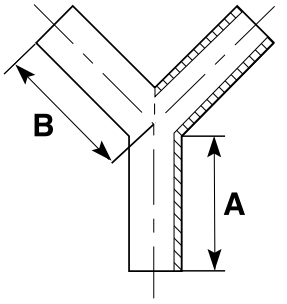


Fabricated True Y Junction

PE100 • SDR11 - SDR26

SIZE (MM)	CODE PN12.5 SDR11	CODE PN8 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 applies - discuss with our sales team

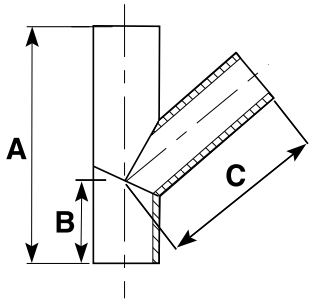


Fabricated 45° Junction

PE100 • SDR11 - SDR26

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)	R (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 applies - discuss with our sales team



Fabricated 45° Reducing Junction

PE100 • SDR11 - SDR17
GRAVITY OR LOW PRESSURE ONLY

110mm Branch

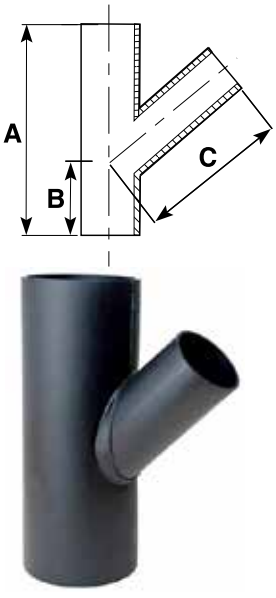
SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)	R (MM)
160	6694-1611	6696-1611	700	350	350
180	6694-1811	6696-1811	700	350	350
200	6694-2011	6696-2011	850	350	350
225	6694-2211	6696-2211	900	350	350
250	6694-2511	6696-2511	900	350	350
280	6694-2811	6696-2811	1000	400	350
315	6694-3111	6696-3111	1000	400	360
355	6694-3511	6696-3511	1200	400	380
400	6694-4011	6696-4011	1200	400	400
450	6694-4511	6696-4511	1300	400	425
500	6694-5011	6696-5011	1300	450	450
560	6694-5611	6696-5611	1400	450	475
630	6694-6311	6696-6311	1400	450	500

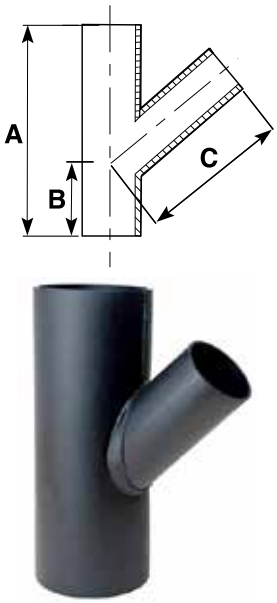
PE100 • SDR11 - SDR17
GRAVITY OR LOW PRESSURE ONLY

160mm Branch

SIZE (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)	R (MM)
180	6694-1816	6696-1816	700	350	350
200	6694-2016	6696-2016	850	350	350
225	6694-2216	6696-2216	900	350	350
250	6694-2516	6696-2516	900	350	350
280	6694-2816	6696-2816	1000	400	350
315	6694-3116	6696-3116	1000	400	360
355	6694-3516	6696-3516	1200	400	380
400	6694-4016	6696-4016	1200	400	400
450	6694-4516	6696-4516	1300	400	425
500	6694-5016	6696-5016	1300	450	450
560	6694-5616	6696-5616	1400	450	475
630	6694-6316	6696-6316	1400	450	500

• Other sizes and pressure ratings available



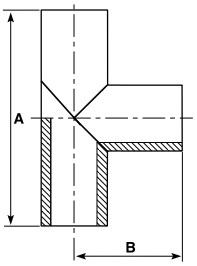


Fabricated Equal Tee

PE100 • SDR11 - SDR17

SIZE (MM)	CODE PN8 SDR11	CODE PN5 SDR17	A (MM)	B (MM)
90	6154-0090	6156-0090	400	220
110	6154-0110	6156-0110	500	220
125	6154-0125	6156-0125	500	220
140	6154-0140	6156-0140	500	220
160	6154-0160	6156-0160	600	220
180	6154-0180	6156-0180	600	220
200	6154-0200	6156-0200	650	220
225	6154-0225	6156-0225	650	220
250	6154-0250	6156-0250	750	250
280	6154-0280	6156-0280	800	250
315	6154-0315	6156-0315	800	250
355	6154-0355	6156-0355	800	350
400	6154-0400	6156-0400	1000	400
450	6154-0450	6156-0450	1000	450
500	6154-0500	6156-0500	1200	480
560	6154-0560	6156-0560	1200	480
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

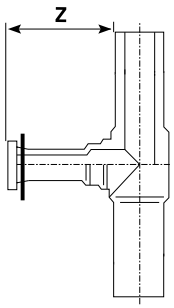


Hydrant Tee

PE100 • SDR11 • PN12.5 • 3 ½" HYDRANT FLANGE OR 4" FLANGE

SIZE (MM)	CODE 3" HYD FLANGE (DN80)	CODE 3 1/2" HYD FLANGE FULL FLOW (89MM Ø)	Z (MM)
125	3165-1280	3165-1290	200
160	3165-1680	3165-1690	200
180	3165-1880	3165-1890	200
200	3165-2080	3165-2090	250
225	3165-2280	3165-2290	250
250	3165-2580	3165-2590	250
280	3165-2880	3165-2890	250
315	3165-3180	3165-3190	250
355	3165-3580	3165-3590	250
400	3165-4080	3165-4090	250
450	3165-4580	3165-4590	250
500	3165-5080	3165-5090	250
560	3165-5680	3165-5690	250
630	3165-6380	3165-6390	250

- Other sizes and flange sizes available.
- Contact us for PN16 options

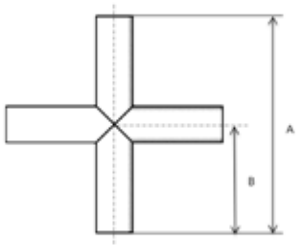


Fabricated Equal Cross

PE100 • SDR11 - SDR26

SIZE (MM)	CODE PN8 SDR11	CODE PN5 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.



PE-PVC Ring Seal Adaptor

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

• Suitable for gravity and non pressure only

Note: PVC DWV pipe pushes into PE Ring Seal Adaptor
PVC pipe must be chamfered on end to ensure correct seal

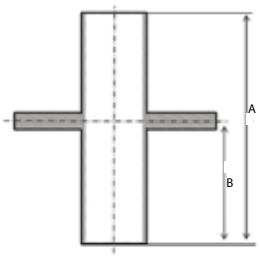
Spigot Puddle Flange

PE100 • SDR11 - SDR17

PIPE SIZE	STANDARD LENGTH 600MM*		
	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
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.

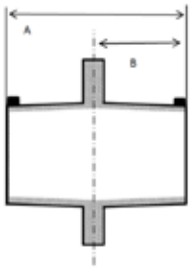


Electrofusion Puddle Coupler

PE100 • SDR11 - SDR17

PIPE SIZE	PUDDLE OD (MM)	CODE SDR11	CODE SDR17	A (MM)	B (MM)
63	143	2424-0063	-	102	51
75	155	2424-0075	-	125	63
90	170	2424-0090	-	122	61
110	190	2424-0110	-	144	72
125	205	2424-0125	-	154	77
140	240	2424-0140	-	181	91
160	260	2424-0160	-	175	88
180	280	2424-0180	-	185	93
200	300	2424-0200	-	186	93
225	325	2424-0225	-	222	111
250	350	2424-0250	2426-0250	220	110
280	380	2424-0280	2426-0280	260	130
315	415	2424-0315	2426-0315	261	131
355	455	2424-0355	2426-0335	260	130
400	500	2424-0400	2426-0400	340	170
450	550	2424-0450	2426-0450	380	190
500	600	2424-0500	2426-0500	400	200
560	660	2424-0560	2426-0560	450	225
630	730	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 (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 • SDR11 - SDR26 • T/E - PN16

SIZE (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.

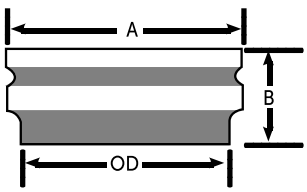
• Standard length is 300mm. Contact our sales team for other requirements.

Victaulic Shoulder - Spigot Leg

PE100 • SDR11 • PN16
SUITABLE FOR ELECTROFUSION

SIZE (MM)	CODE SDR11	A	B
63	3724-0110	68	190
73	3724-0125	97	190
90	3724-0140	97	190
110	3724-0110	122	220
125	3724-0125	176	220
140	3724-0140	176	240
160	3724-0160	176	290
180	3724-0180	176	290
200	3724-0200	235	290
225	3724-0225	235	290
250	3724-0250	287	350
280	3724-0280	338	350
315	3724-0315	338	400
355	3724-0355	370	450
400	3724-0400	420	450
450	3724-0450	472	450
500	3724-0500	522	450

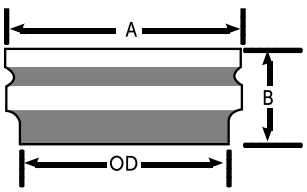
Derating may apply - discuss with our sales team



PE100 • SDR17 • PN10
SUITABLE FOR ELECTROFUSION

SIZE (MM)	CODE SDR11	A	B
63	3726-063	68	190
73	3726-073	97	190
90	3726-090	97	190
110	3726-0110	122	220
125	3726-0125	176	220
140	3726-0140	176	240
160	3726-0160	176	290
180	3726-0180	176	290
200	3726-0200	235	290
225	3726-0225	235	290
250	3726-0250	287	350
280	3726-0280	338	350
315	3726-0315	338	400
355	3726-0355	370	450
400	3726-0400	420	450
450	3726-0450	472	450
500	3726-0500	522	450

Derating may apply - discuss with our sales team

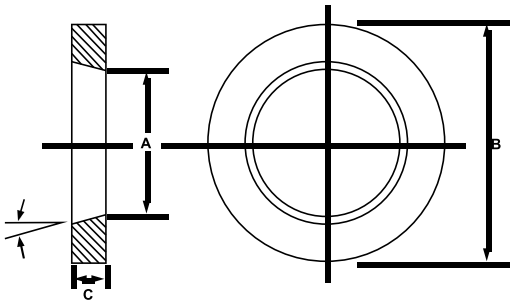


Butterfly Valve Spacer

PE100 • SDR11 • PN16

SIZE (MM)	CODE SDR11	THICKNESS C
110	V110-11	14
125	VS125-11	25
140	VS140-11	25
160	VS160-11	25
200	VS200-11	40
225	VS225-11	25
250	VS250-11	60
280	VS280-11	30
315	VS315-11	60
355	VS355-11	60
400	VS400-11	100
450	VS450-11	100
500	VS500-11	100
630	VS630-11	55

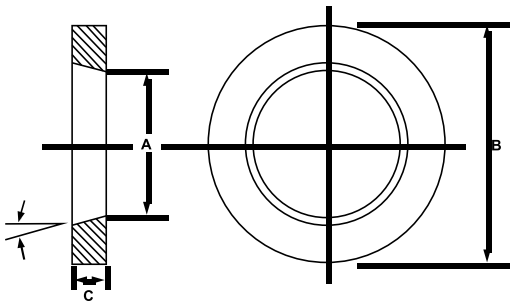
Derating may apply - discuss with our sales team



PE100 • SDR17 • PN10

SIZE (MM)	CODE SDR17	THICKNESS C
125	VS125-17	25
160	VS160-17	25
200	VS200-17	25
250	VS250-17	30
280	VS280-17	30
315	VS315-17	30
355	VS355-17	40
400	VS400-17	40
450	VS450-17	60
500	VS500-17	50
630	VS630-17	50

Derating may apply - discuss with our sales team



Spigot Stub Flange SDR11

PE100 • SDR11 • SUITABLE FOR ELECTROFUSION

SIZE (MM)	CODE SDR11	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	109	120	70	16
90	3414-0090	128	132	79	17
110	3414-0110	158	157	82	18
110	3414-0110V	158	157	82	18
125	3414-0125	158	170	87	25
125	3414-0125V	158	170	87	25
140	3414-0140	188	175	92	25
140	3414-0140V	188	175	92	25
160	3414-0160	212	180	98	25
160	3414-0160V	212	180	98	25
180	3414-0180	212	190	105	31
200	3414-0200	268	200	112	32
200	3414-0200V	268	200	112	32
225	3414-0225	268	200	120	32
225	3414-0225V	268	200	120	32
250	3414-0250	320	205	129	35
250	3414-0250V	320	205	129	35
280	3414-0280	320	215	139	35
280	3414-0280V	320	215	139	35
315	3414-0315	370	220	150	35
315	3414-0315V	370	220	150	35
355	3414-0355	430	410	300	40
355	3414-0355V	430	410	300	40
400	3414-0400	480	410	300	45
450	3414-0450	545	410	300	45
500	3414-0500	585	475	350	60
560	3414-0560	685	475	350	60
630	3414-0630	685	480	350	60

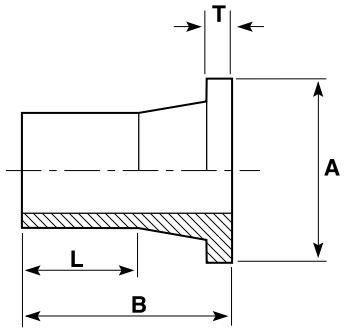
• Please specify if stub is to suit butterfly valves (add “V” to code).

Spigot Stub Flange SDR17

PE100 • SDR17 • SUITABLE FOR ELECTROFUSION

SIZE (MM)	CODE SDR17	A (MM)	B (MM)	L (MM)	T (MM)
90	3416-0090	128	132	79	17
110	3416-0110	158	157	82	18
125	3416-0125	158	170	87	18
140	3416-0140	188	175	92	18
160	3416-0160	212	180	98	18
160	3416-0160V	212	180	98	18
180	3416-0180	212	190	105	20
200	3416-0200	268	200	112	24
200	3416-0200V	268	200	112	24
225	3416-0225	268	200	120	24
250	3416-0250	320	205	129	25
250	3416-0250V	320	205	129	25
280	3416-0280	320	215	139	25
315	3416-0315	370	220	150	25
315	3416-0315V	370	220	150	35
355	3416-0355	430	410	300	40
355	3416-0355V	430	410	300	40
400	3416-0400	480	410	300	45
450	3416-0450	545	410	300	45
500	3416-0500	585	475	350	60
560	3416-0560	685	475	350	60
630	3416-0630	685	480	350	60

• Please specify if stub is to suit butterfly valves (add “V” to code).

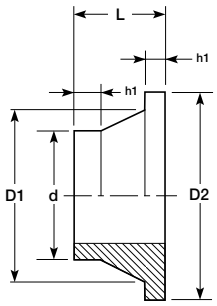


Butt Weld Stub Flange SDR11

PE100 • SDR11

SIZE (MM)	CODE SDR11	D1 (MM)	D2 (MM)	L (MM)	H1 (MM)
200	4414-0200	225	268	95	30
225	4414-0225	230	268	95	30
250	4414-0250	284	320	100	35
280	4414-0280	294	320	100	35
315	4414-0315	335	370	105	40
355	4414-0355	366	430	110	40
400	4414-0400	420	480	110	40
450	4414-0450	470	545	110	60
500	4414-0500	520	585	125	60
560	4414-0560	580	685	125	60
630	4414-0630	650	685	130	60
710	4414-0710	735	800	130	60
800	4414-0800	825	904	130	92
900	4414-0900	940	1000	130	93
1000	4414-1000	1025	1113	130	113
1200	4414-1200	1230	1330	170	113

• Other SDR ratings available or can be fabricated

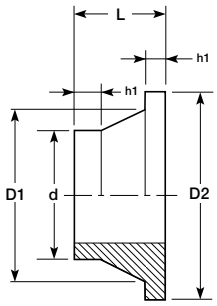


Butt Weld Stub Flange SDR17

PE100 • SDR17

SIZE (MM)	CODE SDR17	D1 (MM)	D2 (MM)	L (MM)	H1 (MM)
180	4416-0180	190	212	80	30
200	4416-0200	225	268	95	30
225	4416-0225	230	268	95	30
250	4416-0250	284	320	100	35
280	4416-0280	294	320	100	35
315	4416-0315	335	370	105	40
355	4416-0355	366	430	110	40
400	4416-0400	420	480	110	40
450	4416-0450	470	545	110	60
500	4416-0500	520	585	125	60
560	4416-0560	580	685	125	60
630	4416-0630	650	685	130	60
710	4416-0710	735	800	130	60
800	4416-0800	825	904	130	92
900	4416-0900	940	1000	130	93
1000	4416-1000	1025	1113	130	113
1200	4416-1200	1230	1330	170	113

fabricated • Other SDR ratings available or can be fabricated



AS 4087 B7
PN16

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
63	50	2”	114	78	150	11	4X18	M16
75	65	2 1/2”	127	92	165	11	4X18	M16
90	80	3.5”	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	238	335	19	8X18	M16
250	250	10”	356	288	405	19	8X22	M20
280	250	10”	356	300	405	19	8X22	M20
315	300	12”	406	338	455	23	12X22	M20
355	350	14”	470	376	525	30	12X26	M24
n/a	375	15”	495	n/a	550	30	12X26	M24
400	400	16”	521	430	580	30	12X26	M24
450	450	18”	584	470	640	30	12X26	M24
500	500	20”	641	533	705	38	16X26	M24
630	600	24”	756	645	825	48	16X30	M27
710	700	28”	845	740	910	56	20X30	M27
n/a	750	30”	927	n/a	995	56	20X33	M30
800	800	32”	984	843	1060	56	20X36	M33
900	900	36”	1092	947	1175	66	24X36	M33
1000	1000	40”	1175	1050	1255	66	24X36	M33
1200	1200	44”	1410	-	1490	76	32X36	M33

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

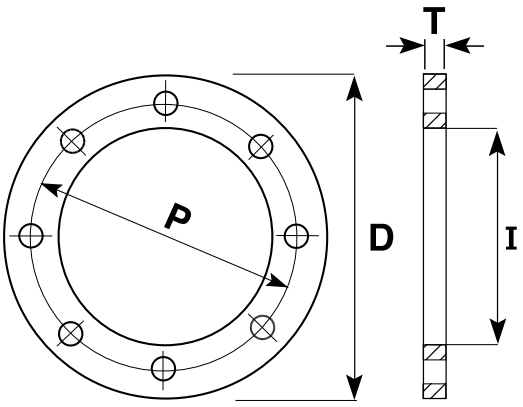


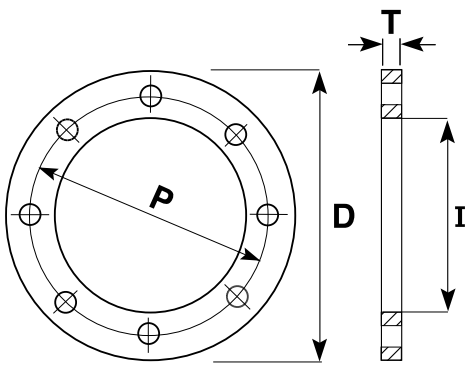
TABLE E
AS 2129

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	28	95	6	4X14	M12
25	20	3/4"	73	34	100	6	4X14	M12
32	25	1"	83	42	115	7	4X14	M12
40	32	1 1/4"	87	51	120	8	4X14	M12
50	40	1 1/2"	98	62	135	9	4X14	M12
63	50	2"	114	78	150	10	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	8×18	M16
125	100	4"	178	135	215	13	8X18	M16
125	125	5"	210	140	255	14	8X18	M16
140	125	5"	210	158	255	14	8X18	M16
160	150	6"	235	178	280	17	8×22	M20
180	150	6"	235	188	280	17	8×22	M20
200	200	8"	292	235	335	19	8×22	M20
225	200	8"	292	238	335	19	8×22	M20
250	250	10"	356	288	405	22	12×22	M20
280	250	10"	356	294	405	22	12×22	M20
315	300	12"	406	338	455	25	12×26	M24
355	Refer to table AS 4087 B7 PN16 for this size (Page 63)							
400	400	16"	521	430	580	32	12X26	M24
450	450	18"	584	470	640	35	16×26	M24
500	500	20"	641	533	705	38	16×26	M24
560	-	22"	699	618	760	44	16X30	M27
630	600	24"	756	645	825	48	16×33	M30
710	700	28"	845	740	910	51	20×33	M30
800	800	32"	984	843	1060	54	20X36	M33
900	900	36"	1092	947	1175	64	24X36	M33
1000	1000	40"	1175	1050	1255	67	24X39	M36

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



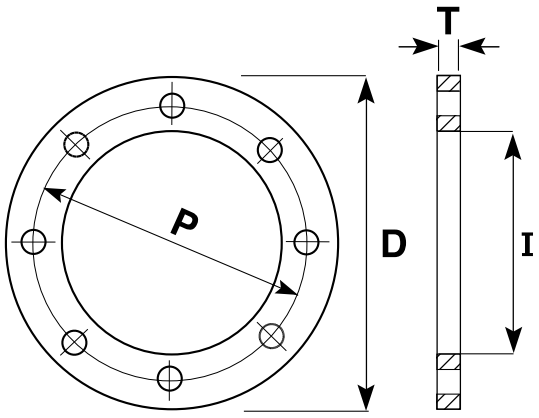
ANSI 150

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	28	90	11.2	4X16	M14
25	20	3/4”	73	34	100	6	4X14	M12
32	25	1”	79.5	42	108	14.2	4X16	M14
40	32	1 1/4”	89	51	117	15.7	4X16	M14
50	40	1 1/2”	98.5	62	127	17.5	4X16	M14
63	50	2”	120.5	78	152	19	4X20	M18
75	65	2 1/2”	139.5	92	178	22.3	4X20	M18
90	80	3”	152	108	191	23.9	4X20	M18
110	100	4”	190.5	128	229	23.9	8X20	M18
125	100	4”	190.5	135	229	23.9	8X20	M18
125	125	5”	216	135	254	23.9	8X22	M20
140	125	5”	216	158	254	23.9	8X22	M20
160	150	6”	241	178	279	25.4	8X22	M20
180	150	6”	241	188	279	25.4	8X22	M20
200	200	8”	298.5	235	343	28.4	8X22	M20
225	200	8”	298.5	238	343	28.4	8X22	M20
250	250	10”	362	288	406	30.2	12X26	M24
280	250	10”	362	294	406	30.2	12X26	M24
315	300	12”	432	338	482	31.8	12X26	M24
355	350	14”	476	376	533	35	12X30	M27
400	400	16”	540	430	600	36.6	16X30	M27
450	450	18”	578	470	635	39.6	16X33	M30
500	500	20”	635	533	700	43	20X33	M30
630	600	24”	750	645	815	47.8	20X36	M33

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



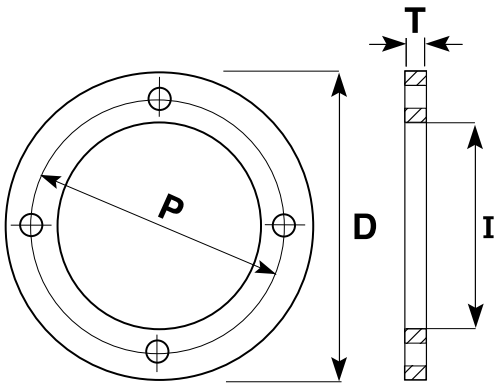
BS EN 1092
PN16

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	4×14	M12
25	20	3/4"	75	37	105	14	4×14	M12
32	25	1"	85	44	115	14	4×14	M12
40	32	1 1/4"	100	52	140	16	4×18	M16
50	40	1 1/2"	110	62	150	18	4×18	M16
63	50	2"	125	74	165	18	4×18	M16
75	65	2 1/2"	145	87	185	18	4×18	M16
90	80	3"	160	103	200	18	8×18	M16
110	100	4"	180	125	220	18	8×18	M16
125	100	4"	180	140	220	18	8×18	M16
125	125	5"	210	140	250	22	8×18	M16
140	125	5"	210	158	250	22	8×18	M16
160	150	6"	240	175	285	22	8×22	M20
180	150	6"	240	185	285	22	8×22	M20
200	200	8"	295	230	340	22	12×22	M20
225	200	8"	295	240	340	22	12×22	M20
250	250	10"	355	290	405	22	12×26	M24
280	250	10"	355	300	405	22	12×26	M24
315	300	12"	410	345	460	22	12×26	M24
355	350	14"	470	373	520	26	16×26	M24
400	400	16"	525	425	580	30	16×30	M27
450	450	18"	585	480	640	40	20×30	M27
500	500	20"	650	533	715	44	20×33	M30
630	600	24"	770	660	840	54	20×36	M33

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

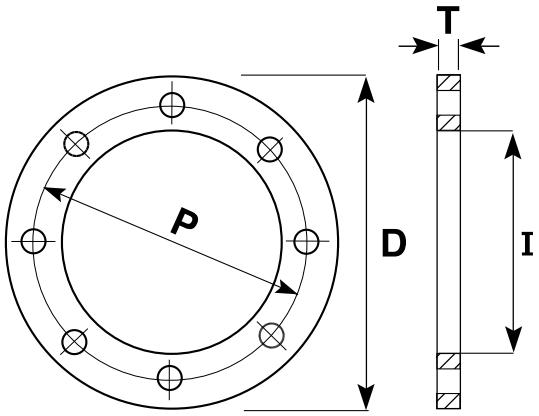


AS 4087 B9
PN35

GALVANISED BACKING RING (5961)
STAINLESS BACKING RING (5962)
NYLON COATED BACKING RING (5964)

SIZE (MM)	NOMINAL FLANGE SIZE	D (MM)	I (MM)	T (MM)	P (MM)	BOLT HOLES NO X DIA	BOLT
63	50	165	78	19	127	4X18	M16
75	65	185	92	19	146	8X18	M16
90	80	205	108	24	165	8X18	M16
110	100	230	128	24	191	8X18	M16
125	100	230	135	24	191	8X18	M16
160	150	305	178	31	260	12X22	M20
180	150	305	185	31	260	12X22	M20
200	200	370	235	31	324	12X22	M20
225	200	370	238	31	324	12X22	M20
250	250	430	288	38	381	12X26	M24
280	250	430	300	38	381	12X26	M24
315	300	490	338	38	438	16X26	M24
355	350	550	376	48	495	16X30	M27
n/a	375	580	n/a	48	521	16X30	M27
400	400	610	430	48	552	20X30	M27
450	450	675	470	58	610	20X33	M30
500	500	735	533	58	673	24X33	M30
630	600	850	645	68	781	24X36	M33
710	700	935	740	78	857	24X36	M33
800	800	1060	843	84	984	28X36	M33
900	900	1185	947	94	1105	32X39	M36
1000	1000	1275	1050	98	1194	36X39	M36
1200	1200	1530	-	108	1441	40X42	M39

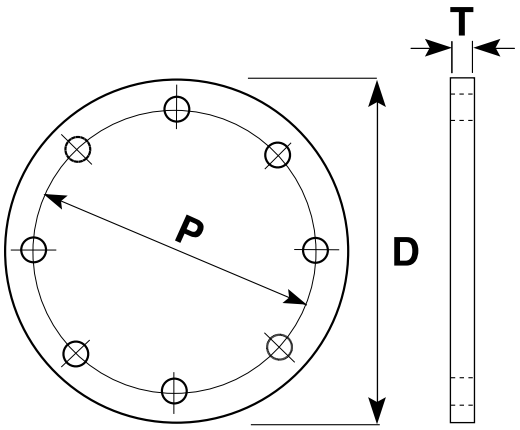
Note: This table has bolting compatability with AS 2129 Table F & H flanges.



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.



Slim Flanges

• UPG Slim Flanges conforming to the AS/NZS 4129:2020 standard.

• Available in Blue Nylon Coated (FBE) or Stainless Steel backing ring options.

• Ensure you get the right pressure rating. We Supply PN12.5 and PN16 to ensure you maximise your flow rates.

• PN12.5 rated Slim Flanges from UPG have the pipe end ready to be butt welded to SDR13.6 pipe, or can be shaved back to SDR11 pipe.

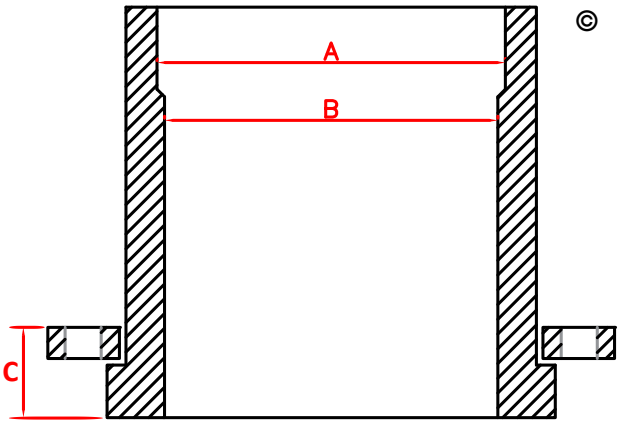
• All rings are rotating so easy to align with valves on site.

Slim Flange - AS4087 Flange — PN12.5 RATED

NYLON COATED (FBE)
SDR11 (PN12.5) WITH AS4087 B7 TABLE D BACKING RING

CODE (NYLON 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	250mm	200mm (8")	PN12.5	SDR11/13.6	203mm	292mm	8×18	54
3444-3125	315mm	250mm (10")	PN12.5	SDR11/13.6	256mm	356mm	8×22	59
3444-3530	355mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12×22	63
3444-4030	400mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12×22	63
3444-4035	400mm	350mm (14")	PN12.5	SDR11/13.6	325mm	470mm	12×26	75
3444-4037	400mm	375mm (15")	PN12.5	SDR11/13.6	325mm	495mm	12×26	75
3444-4537	450mm	375mm (15")	PN12.5	SDR11/13.6	366mm	495mm	12×26	90
3444-4540	450mm	400mm (16")	PN12.5	SDR11/13.6	366mm	521mm	12×26	90
3444-5045	500mm	450mm (18")	PN12.5	SDR11/13.6	406mm	584mm	12×26	90
3444-5650	560mm	500mm (20")	PN12.5	SDR11/13.6	455mm	641mm	16×26	98

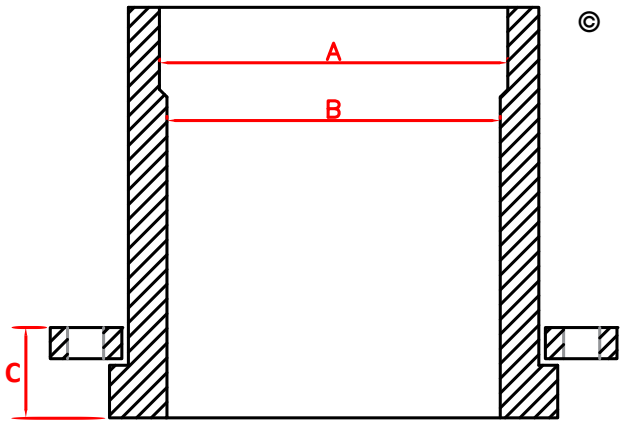
Note: Also available with galvanised backing ring option. EN1092, ANSI and other flange patterns are available on request.



Slim Flange - AS4087 Flange — PN12.5 RATED

STAINLESS STEEL
SDR11 (PN12.5) WITH AS4087 B7 TABLE D BACKING RING

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)
3464-2521	250mm	200mm (8")	PN12.5	SDR11/13.6	203mm	292mm	8×18	54
3464-3125	315mm	250mm (10")	PN12.5	SDR11/13.6	256mm	356mm	8×22	59
3464-3530	355mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12×22	63
3464-4030	400mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12×22	63
3464-4035	400mm	350mm (14")	PN12.5	SDR11/13.6	325mm	470mm	12×26	75
3464-4037	400mm	375mm (15")	PN12.5	SDR11/13.6	325mm	495mm	12×26	75
3464-4537	450mm	375mm (15")	PN12.5	SDR11/13.6	366mm	495mm	12×26	90
3464-4540	450mm	400mm (16")	PN12.5	SDR11/13.6	366mm	521mm	12×26	90
3464-5045	500mm	450mm (18")	PN12.5	SDR11/13.6	406mm	584mm	12×26	90
3464-5650	560mm	500mm (20")	PN12.5	SDR11/13.6	455mm	641mm	16×26	98



Slim Flange - AS4087 Flange PN16 RATED

NYLON COATED (FBE)
SDR11 (PN16) WITH AS4087 B7 TABLE D BACKING RING

CODE (NYLON 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	250mm	200mm (8")	PN16	SDR11	183mm	292mm	8×18	51
3443-3125	315mm	250mm (10")	PN16	SDR11	228mm	356mm	8×22	57
3443-3530	355mm	300mm (12")	PN16	SDR11	256mm	406mm	12×22	63
3443-4030	400mm	300mm (12")	PN16	SDR11	256mm	406mm	12×22	63
3443-4035	400mm	350mm (14")	PN16	SDR11	289mm	470mm	12×26	70
3443-4037	400mm	375mm (15")	PN16	SDR11	325mm	495mm	12×26	75
3443-4537	450mm	375mm (15")	PN16	SDR11	325mm	495mm	12×26	75
3443-4540	450mm	400mm (16")	PN16	SDR11	325mm	521mm	12×26	75
3443-5045	500mm	450mm (18")	PN16	SDR11	366mm	584mm	12×26	90
3443-5650	560mm	500mm (20")	PN16	SDR11	407mm	641mm	16×26	98

Note: All options are available with galvanised backing ring option. EN1092, ANSI and other flange patterns are available on request.

Slim Flange - AS4087 Flange — PN16 RATED

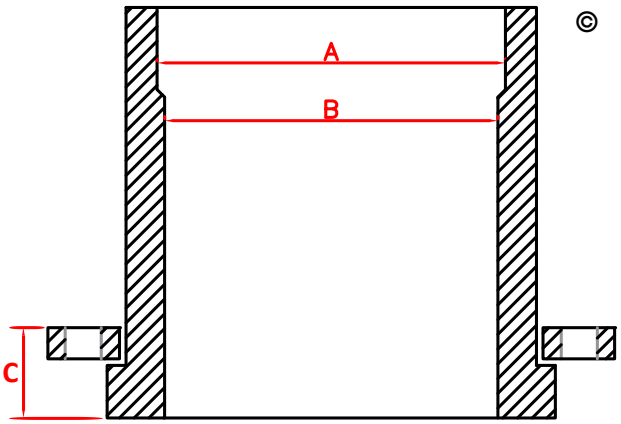
STAINLESS STEEL
SDR11 (PN16) WITH AS4087 B7 TABLE D BACKING RING

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)
3463-2521	250mm	200mm (8")	PN16	SDR11	183mm	292mm	8×18	51
3463-3125	315mm	250mm (10")	PN16	SDR11	228mm	356mm	8×22	57
3463-3530	355mm	300mm (12")	PN16	SDR11	256mm	406mm	12×22	63
3463-4030	400mm	300mm (12")	PN16	SDR11	256mm	406mm	12×22	63
3463-4035	400mm	350mm (14")	PN16	SDR11	289mm	470mm	12×26	70
3463-4037	400mm	375mm (15")	PN16	SDR11	325mm	495mm	12×26	75
3463-4537	450mm	375mm (15")	PN16	SDR11	325mm	495mm	12×26	75
3463-4540	450mm	400mm (16")	PN16	SDR11	325mm	521mm	12×26	75
3463-5045	500mm	450mm (18")	PN16	SDR11	366mm	584mm	12×26	90
3463-5650	560mm	500mm (20")	PN16	SDR11	407mm	641mm	16×26	98

Slim Flange - AS4087 Flange PN10 RATED

NYLON COATED (FBE)
SDR17 (PN16) WITH AS4087 B7 TABLE D BACKING RING

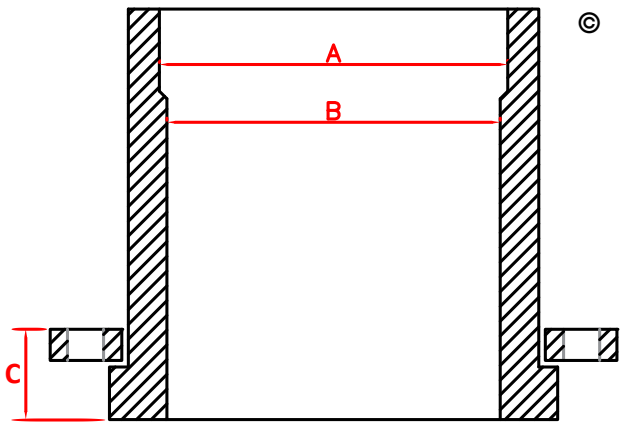
CODE (NYLON FLANGE)	PE END SIZE	FLANGE SIZE	PRESSURE RATING	PIPE END SDR	PIPE ID FLANGE END (B)	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)
3446-2521	250mm	200mm (8")	PN10	SDR17	198mm	292mm	8×18	44
3446-3125	315mm	250mm (10")	PN10	SDR17	246mm	356mm	8×22	44
3446-3530	355mm	300mm (12")	PN10	SDR17	312mm	406mm	12×22	53
3446-4030	400mm	300mm (12")	PN10	SDR17	312mm	406mm	12×22	53
3446-4035	400mm	350mm (14")	PN10	SDR17	352mm	470mm	12×26	63
3446-4037	400mm	375mm (15")	PN10	SDR17	352mm	495mm	12×26	63
3446-4537	450mm	375mm (15")	PN10	SDR17	396mm	495mm	12×26	75
3446-4540	450mm	400mm (16")	PN10	SDR17	396mm	521mm	12×26	75
3446-5045	500mm	450mm (18")	PN10	SDR17	440mm	584mm	12×26	90
3446-5650	560mm	500mm (20")	PN10	SDR17	492mm	641mm	16×26	98



Slim Flange - AS4087 Flange — PN10 RATED

STAINLESS STEEL
SDR17 (PN10) WITH AS4087 B7 TABLE D BACKING RING

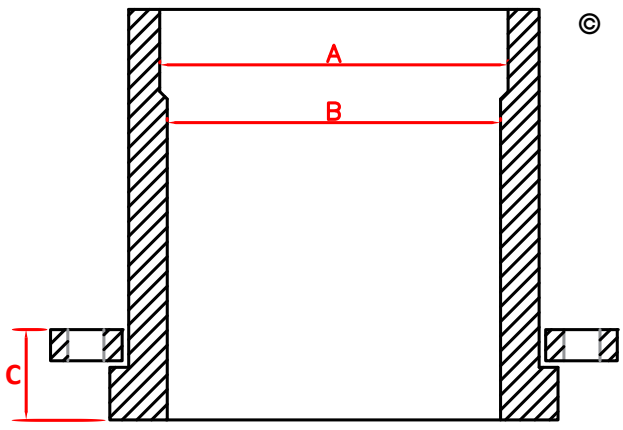
CODE (NYLON FLANGE)	PE END SIZE	FLANGE SIZE	PRESSURE RATING	PIPE END SDR	PIPE ID FLANGE END (B)	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)
3466-2521	250mm	200mm (8")	PN10	SDR17	198mm	292mm	8×18	44
3466-3125	315mm	250mm (10")	PN10	SDR17	246mm	356mm	8×22	44
3466-3530	355mm	300mm (12")	PN10	SDR17	312mm	406mm	12×22	53
3466-4030	400mm	300mm (12")	PN10	SDR17	312mm	406mm	12×22	53
3466-4035	400mm	350mm (14")	PN10	SDR17	352mm	470mm	12×26	63
3466-4037	400mm	375mm (15")	PN10	SDR17	352mm	495mm	12×26	63
3466-4537	450mm	375mm (15")	PN10	SDR17	396mm	495mm	12×26	75
3466-4540	450mm	400mm (16")	PN10	SDR17	396mm	521mm	12×26	75
3466-5045	500mm	450mm (18")	PN10	SDR17	440mm	584mm	12×26	90
3466-5650	560mm	500mm (20")	PN10	SDR17	492mm	641mm	16×26	98



Slim Flange - Table E Flange PN12.5 RATED

NYLON COATED (FBE)
SDR11 (PN12.5) WITH AS2129 TABLE E BACKING RING

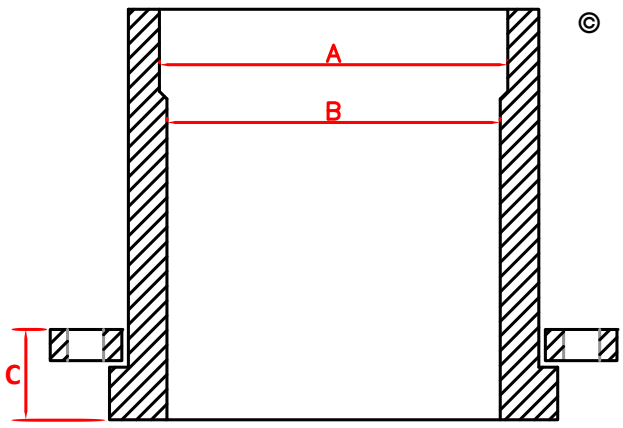
CODE (NYLON FLANGE)	PE END SIZE	FLANGE SIZE	PRESSURE RATING	PIPE END SDR	PIPE ID FLANGE END (B)	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)
3454-9075	90mm	75mm (2 1/2")	PN16	SDR11	73mm	127mm	4×18	28
3454-1190	110mm	90mm (3")	PN16	SDR11	89mm	146mm	4×18	31
3454-1612	160mm	125mm (5")	PN16	SDR11	130mm	210mm	8×18	39
3454-2015	200mm	150mm (6")	PN16	SDR11	146mm	235mm	8×22	49
3454-2521	250mm	200mm (8")	PN12.5	SDR11/13.6	203mm	292mm	8×22	54
3454-3125	315mm	250mm (10")	PN12.5	SDR11/13.6	256mm	356mm	12×22	62
3454-3530	355mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12×26	65
3454-4030	400mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12×26	65
3454-4035	400mm	350mm (14")	PN12.5	SDR11/13.6	325mm	470mm	12×26	75
3454-4540	450mm	400mm (16")	PN12.5	SDR11/13.6	366mm	521mm	12×26	92
3454-5045	500mm	450mm (18")	PN12.5	SDR11/13.6	406mm	584mm	16×26	95
3454-5650	560mm	500mm (20")	PN12.5	SDR11/13.6	455mm	641mm	16×26	98
3454-6356	630mm	560mm (22")	PN12.5	SDR11/13.6	512mm	699mm	16×30	109
3454 -6356	630mm	560mm (22")	PN16	SDR11	456mm	699mm	16×30	104



Slim Flange - Table E Flange — PN12.5 RATED

NYLON COATED (FBE)
SDR11 (PN12.5) WITH AS2129 TABLE E BACKING RING

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)
3474-9075	90mm	75mm (2 1/2")	PN16	SDR11	73mm	127mm	4×18	28
3474-1190	110mm	90mm (3")	PN16	SDR11	89mm	146mm	4×18	31
3474-1612	160mm	125mm (5")	PN16	SDR11	130mm	210mm	8×18	39
3474-2015	200mm	150mm (6")	PN16	SDR11	146mm	235mm	8×22	49
3474-2521	250mm	200mm (8")	PN12.5	SDR11/13.6	203mm	292mm	8×22	54
3474-3125	315mm	250mm (10")	PN12.5	SDR11/13.6	256mm	356mm	12×22	62
3474-3530	355mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12×26	65
3474-4030	400mm	300mm (12")	PN12.5	SDR11/13.6	289mm	406mm	12×26	65
3474-4035	400mm	350mm (14")	PN12.5	SDR11/13.6	325mm	470mm	12×26	75
3474-4540	450mm	400mm (16")	PN12.5	SDR11/13.6	366mm	521mm	12×26	92
3474-5045	500mm	450mm (18")	PN12.5	SDR11/13.6	406mm	584mm	16×26	95
3474-5650	560mm	500mm (20")	PN12.5	SDR11/13.6	455mm	641mm	16×26	98
3474-6356	630mm	560mm (22")	PN12.5	SDR11/13.6	512mm	699mm	16×30	109
3474-6356	630mm	560mm (22")	PN16	SDR11	456mm	699mm	16×30	104

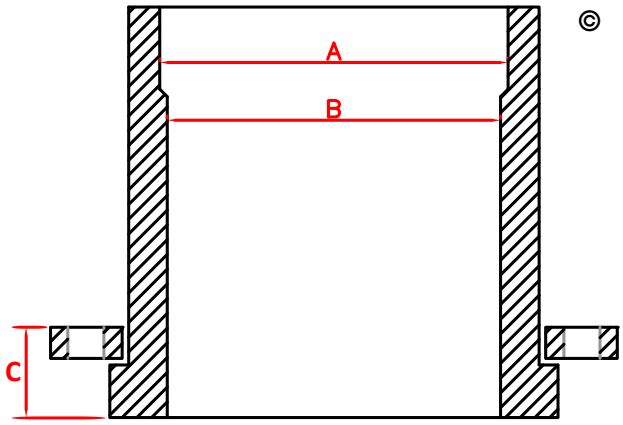


Slim Flange - Table E Flange PN10 RATED

NYLON COATED (FBE)
SDR17 (PN10) WITH AS2129 TABLE E BACKING RING

CODE (NYLON 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	90mm	75mm (2 1/2")	PN10	SDR17	79mm	127mm	4×18	28
3456-1190	110mm	90mm (3")	PN10	SDR17	96mm	146mm	4×18	30
3456-1612	160mm	125mm (5")	PN10	SDR17	141mm	210mm	8×18	32
3456-2015	200mm	150mm (6")	PN10	SDR17	158mm	235mm	8×22	41
3456-2521	250mm	200mm (8")	PN10	SDR17	198mm	292mm	8×22	44
3456-3125	315mm	250mm (10")	PN10	SDR17	246mm	356mm	12×22	47
3456-3530	355mm	300mm (12")	PN10	SDR17	312mm	406mm	12×26	55
3456-4030	400mm	300mm (12")	PN10	SDR17	312mm	406mm	12×26	55
3456-4035	400mm	350mm (14")	PN10	SDR17	352mm	470mm	12×26	63
3456-4540	450mm	400mm (16")	PN10	SDR17	396mm	521mm	12×26	77
3456-5045	500mm	450mm (18")	PN10	SDR17	440mm	584mm	16×26	95
3456-5650	560mm	500mm (20")	PN10	SDR17	492mm	641mm	16×26	98
3456-6356	630mm	560mm (22")	PN10	SDR17	554mm	699mm	16×30	104

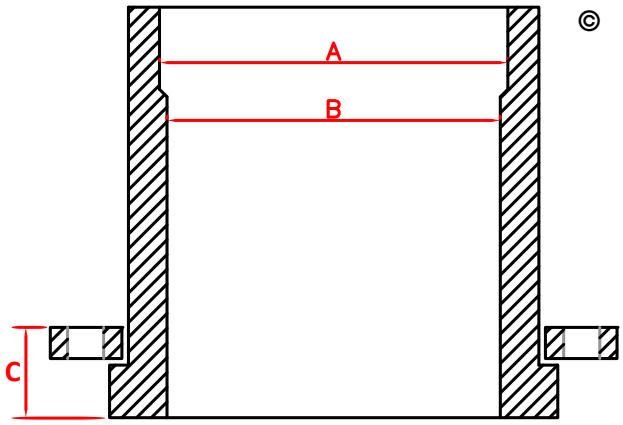
Note: All options are available with galvanised backing ring option. PN16, ANSI and other flange patterns are available on request.



Slim Flange - Table E Flange — PN10 RATED

STAINLESS STEEL
SDR17 (PN10) WITH AS2129 TABLE E BACKING RING

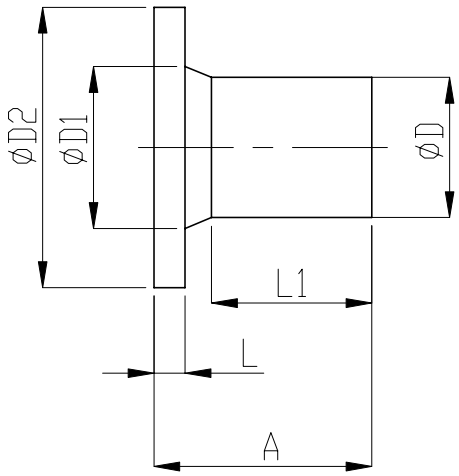
CODE (STAINLESS FLANGE)	PE END SIZE	FLANGE SIZE	PRESSURE RATING	PIPE END SDR	PIPE ID FLANGE END (B)	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)
3476-9075	90mm	75mm (2 1/2")	PN10	SDR17	79mm	127mm	4×18	28
3476-1190	110mm	90mm (3")	PN10	SDR17	96mm	146mm	4×18	30
3476-1612	160mm	125mm (5")	PN10	SDR17	141mm	210mm	8×18	32
3476-2015	200mm	150mm (6")	PN10	SDR17	158mm	235mm	8×22	41
3476-2521	250mm	200mm (8")	PN10	SDR17	198mm	292mm	8×22	44
3476-3125	315mm	250mm (10")	PN10	SDR17	246mm	356mm	12×22	47
3476-3530	355mm	300mm (12")	PN10	SDR17	312mm	406mm	12×26	55
3476-4030	400mm	300mm (12")	PN10	SDR17	312mm	406mm	12×26	55
3476-4035	400mm	350mm (14")	PN10	SDR17	352mm	470mm	12×26	63
3476-4540	450mm	400mm (16")	PN10	SDR17	396mm	521mm	12×26	77
3476-5045	500mm	450mm (18")	PN10	SDR17	440mm	584mm	16×26	95
3476-5650	560mm	500mm (20")	PN10	SDR17	492mm	641mm	16×26	98
3476-6356	630mm	560mm (22")	PN10	SDR17	554mm	699mm	16×30	104

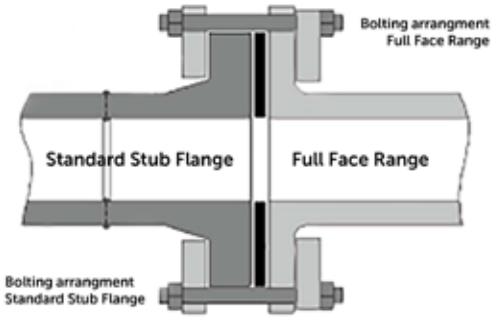


Maxi Stub Flanges - Full Face — PN16 RATED

STAINLESS STEEL
SDR11 (PN16) WITH AS4087 B7 TABLE D BACKING RING

CODE (NYLON FLANGE)	PE END SIZE	FLANGE SIZE	L MM	A MM	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)	PIPE END SDR
3603-9080	90mm	3" DN80	20	140	146mm	4 x Ø18	31	SDR11
3603-1110	110mm	4" DN100	20	155	178mm	4 x Ø18	33	SDR11
3603-1210	125mm	4" DN100	20	165	178mm	4 x Ø18	33	SDR11
3603-1815	180mm	6" DN150	25	190	235mm	8 x Ø22	38	SDR11
3603-2015	200mm	6" DN150	30	190	235mm	8 x Ø22	49	SDR11
3603-2520	250mm	8" DN200	35	197	292mm	8 x Ø22	54	SDR11
3603-3125	315mm	10" DN250	40	230	356mm	8 x Ø22	59	SDR11
3603-3530	355mm	12" DN300	45	241	406mm	12 x Ø26	68	SDR11
3603-4537	450mm	15" DN375	55	285	495mm	12 x Ø26	85	SDR11
3603-4540	450mm	16" DN400)	55	285	521mm	12 x Ø26	85	SDR11



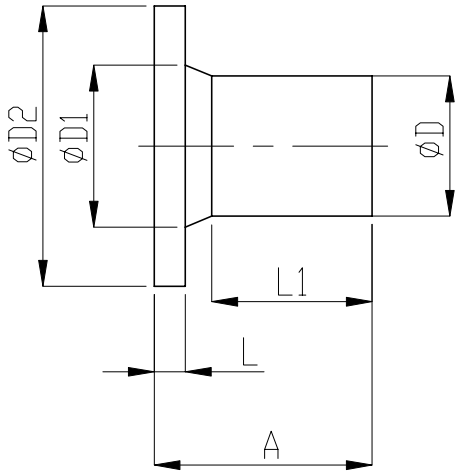


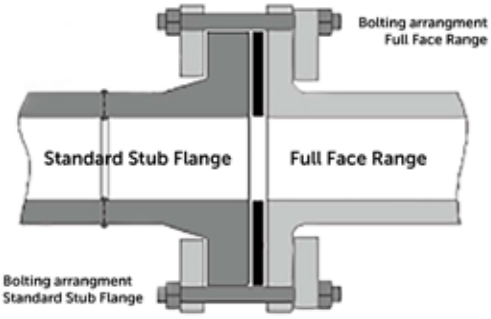
- Long spigot for electrofusion or butt welding
- Ends to SDR11 as standard. We can offer to SDR13.6 if required.
- PN16 rated
- Injection moulded spigot conforms to AS/NZS 4129
- AS4087 Stainless Steel or Nylon Coated as standard - other flange patterns available

Maxi Stub Flanges - Full Face — PN16 RATED

NYLON COATED (FBE)
SDR11 (PN16) WITH AS4087 B7 TABLE D BACKING RING

CODE (NYLON FLANGE)	PE END SIZE	FLANGE SIZE	L MM	A MM	FLANGE PCD	BOLT HOLES NO. X DIA	FLANGE COMBINED THICKNESS (C)	PIPE END SDR
3593-9080	90mm	3" DN80	20	140	146mm	4 x Ø18	31	SDR11
3593-1110	110mm	4" DN100	20	155	178mm	4 x Ø18	33	SDR11
3593-1210	125mm	4" DN100	20	165	178mm	4 x Ø18	33	SDR11
3593-1815	180mm	6" DN150	25	190	235mm	8 x Ø22	38	SDR11
3593-2015	200mm	6" DN150	30	190	235mm	8 x Ø22	49	SDR11
3593-2520	250mm	8" DN200	35	197	292mm	8 x Ø22	54	SDR11
3593-3125	315mm	10" DN250	40	230	356mm	8 x Ø22	59	SDR11
3593-3530	355mm	12" DN300	45	241	406mm	12 x Ø26	68	SDR11
3593-4537	450mm	15" DN375	55	285	495mm	12 x Ø26	85	SDR11
3593-4540	450mm	16" DN400	55	285	521mm	12 x Ø26	85	SDR11





- Long spigot for electrofusion or butt welding
- Ends to SDR11 as standard. We can offer to SDR13.6 if required.
- PN16 rated
- Injection moulded spigot conforms to AS/NZS 4129
- AS4087 Stainless Steel or Nylon Coated as standard - other flange patterns 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 75-79 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

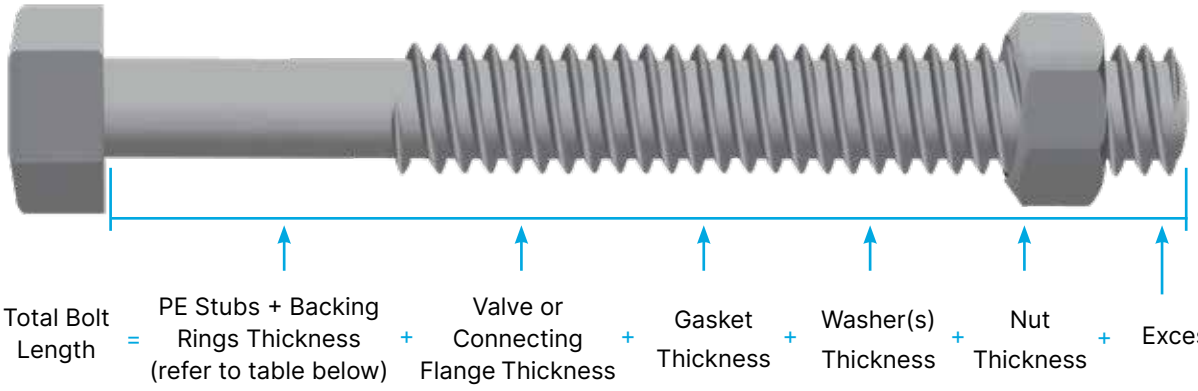
For example, the code for a dress set for 110mm-4" AS2129 Table E with 90mm long M16 galvanised bolts:
DS 100/90 TE

STANDARD FLANGES: BOLT QUANTITY AND SIZE

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

DRESS SETS GALVANISED (DS) STAINLESS (SSDS)

DETERMINE THE REQUIRED LENGTH OF BOLTS



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

PIPE SIZE (MM)	FLANGE SIZE (INCH)	PE Stub Flange + Backing Ring Thickness (mm)	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

EPDM Rubber Gasket

TABLE D • TABLE E • PN16 • ANSI 150

PIPE SIZE (MM)	INCH SIZE	TABLE D CODE	TABLE E CODE	EN1092 CODE	ANSI 150 CODE
20	1/2”	9644-0020	9644-0020	9654-0020	9624-0020
25	3/4”	9644-0025	9644-0025	9654-0025	9624-0025
32	1”	9644-0032	9644-0032	9654-0032	9624-0032
40	1 1/4”	9644-0040	9644-0040	9654-0040	9624-0040
50	1 1/2”	9644-0050	9644-0050	9654-0050	9624-0050
63	2”	9644-0063	9644-0063	9654-0063	9624-0063
75	2 1/2”	9644-0075	9644-0075	9654-0075	9624-0075
90	3”	9644-0090	9644-0090	9654-0090	9624-0090
110	4”	9634-0110	9644-0110	9654-0110	9624-0110
125	4”	9634-0110	9644-0110	9654-0110	9264-0110
125	5”	9634-5125	9644-5125	9654-5125	9624-0125
140	5”	9634-0140	9644-0140	9654-0140	9624-0140
160	6”	9634-0160	9644-0160	9654-0160	9624-0160
180	6”	9634-0160	9644-0160	9654-0160	9624-0160
200	8”	9634-0200	9644-0200	9654-0200	9624-0200
225	8”	9634-0200	9644-0200	9654-0200	9624-0200
250	10”	9634-0250	9644-0250	9654-0250	9624-0250
280	10”	9634-0250	9644-0250	9654-0250	9624-0250
315	12”	9634-0315	9644-0315	9654-0315	9624-0315
355	14”	9634-0355	9644-0355	9654-0355	9624-0355
400	16”	9634-0400	9644-0400	9654-0400	9624-0400
450	18”	9634-0450	9644-0450	9654-0450	9624-0450
500	20”	9634-0500	9644-0500	9654-0500	9624-0500
560	22”	9634-0560	9644-0560	9654-0560	9624-0560
630	24”	9634-0630	9644-0630	9654-0630	9624-0630
710	26”	9634-0710	9644-0710	9654-0710	9624-0710
800	28”	9634-0800	9644-0800	9654-0800	9624-0800

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

Clips

For Stream Pipe

PIPE SIZE (MM)	CODE 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 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 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 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.

Mechanical Tapping Band

FEMALE THREADED OFF-TAKE • SDR11 - 21 • WATER PN16 AT 20°C

SIZE (MM)		OFF-TAKE SIZE INCH	OFF-TAKE SIZE (MM)	CODE
20	x	1/2"	15	7234-2015-HP
25	x	1/2"	15	7234-2515-HP
25	x	3/4"	20	7234-2520-HP
32	x	1/2"	15	7234-3215-HP
32	x	3/4"	20	7234-3220-HP
40	x	1/2"	15	7234-4015-HP
40	x	3/4"	20	7234-4020-HP
40	x	1"	25	7234-4025-HP
50	x	1/2"	15	7234-5015-HP
50	x	3/4"	20	7234-5020-HP
50	x	1"	25	7234-5025-HP
63	x	1/2"	15	7234-6315-HP
63	x	3/4"	20	7234-6320-HP
63	x	1"	25	7234-6325-HP
75	x	3/4"	20	7234-7520-HP
75	x	1"	25	7234-7525-HP
75	x	1 1/2"	40	7234-7540-HP
75	x	2"	50	7234-7550-HP
90	x	3/4"	20	7234-9020-HP
90	x	1"	25	7234-9025-HP
90	x	1 1/2"	40	7234-9040-HP
90	x	2"	50	7234-9050-HP

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

Butterfly Valve

16 BAR WATER

SIZE (NB)	CODE WAFER	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

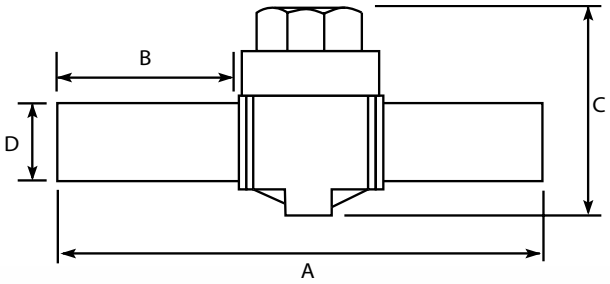
PE Ball Valve - Full Port

PE100 • 16 BAR WATER • PN10 GAS

SIZE (MM)	CODE	A (MM)	B (MM)	C (MM)
20	2962-0020	310	107	136
25	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:

- Valve keys for opening are available separately
- Other sizes available
- Full port opening



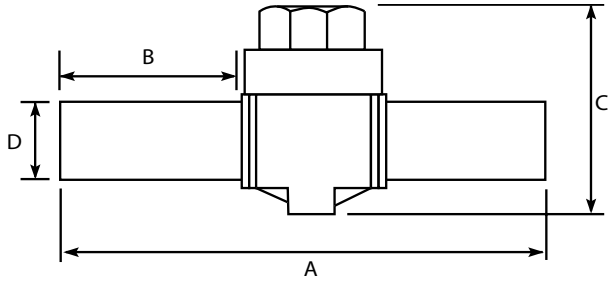
PE Ball Valve - Full Port

PE100 • 16 BAR WATER • PN10 GAS

SIZE	CODE	A	B	C
25	2942-0025	310	84	205
32	2942-0032	320	90	205
40	2942-0040	340	98	220
50	2942-0050	365	111	235
63	2942-0063	440	130	270
90	2942-0090	454	158	320
110	2942-0110	585	165	335
125	2942-0125	595	176	335
160	2942-0160	710	196	405
180	2942-0180	725	210	405

Notes:

- Full port opening
- Comes with lever handle
- Full PE100-RC body and spigot

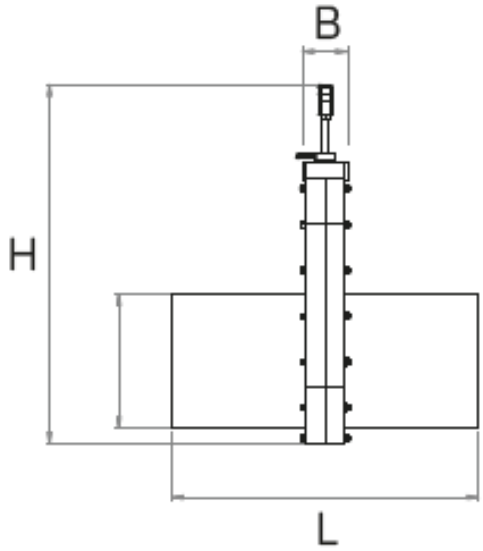


PE Knife Gate Valve

IN-LINE KNIFE GATE VALVE • STORMWATER ONLY

SIZE	CODE	H	L	B
110	0978-0000	355/467	338	58
125	0978-0000	355/467	338	58
160	0978-0000	455/583	338	58
200	0978-0000	539/702	418	58
250	0978-0000	590/794	418	58
315	0978-0000	697/952	458	58

Note: 110/125mm are SDR17 pipe tails. 160-315mm are SDR26 pipe tails. Other SDR pipe ends available on request. 3-4 week lead time may apply.

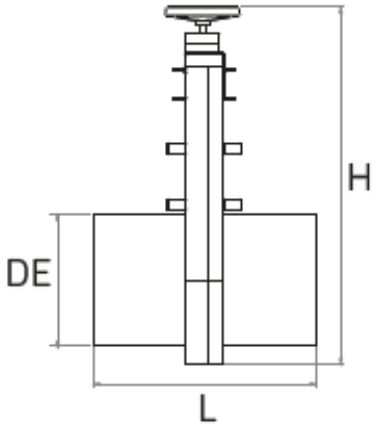


PE Knife Gate Valve With Handwheel

ONE-WAY IN-LINE-MOUNTED KNIFE GATE VALVE
WITH SPINNING WHEEL • STORMWATER ONLY

SIZE	CODE	H	L
110	0998-0110	510	358
125	0998-0125	510	358
160	0998-0160	565	358
200	0998-0200	670	438
250	0998-0250	710	438
315	0998-0315	865	478
355	0998-0355	1050	*
400	0998-0400	1140	*
450	0998-0450	*	*
500	0998-0500	*	*
560	0998-560	*	*
630	0998-0630	*	*

Note: 110/125mm are SDR17 pipe tails. 160-630mm are SDR26 pipe tails. Other SDR pipe ends available on request. Leadtime will apply.

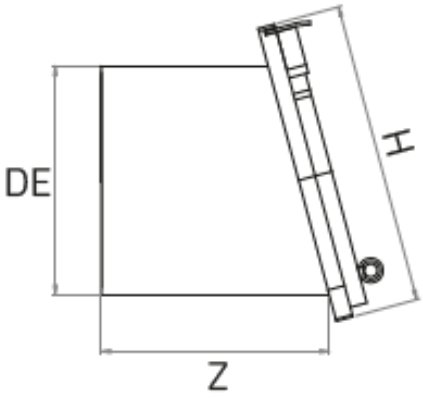


PE Non Return Flap Valve

NON-RETURN FLAP VALVE • STORMWATER ONLY

SIZE	CODE	DN	H	Z
110	0968-0110	100	222	200
125	0968-0125	100	237	200
140	0968-0140	125	283	200
160	0968-0160	150	283	300
180	0968-0180	150	322	300
200	0968-0200	200	322	300
225	0968-0225	200	383	300
250	0968-0250	250	383	400
280	0968-0280	250	448	400
315	0968-0315	300	448	400
355	0968-0355	355	530	400
400	0968-0400	400	530	400
450	0968-0450	450	630	500
500	0968-0500	500	630	500

Note: Other diameters available on request. Leadtime may apply.

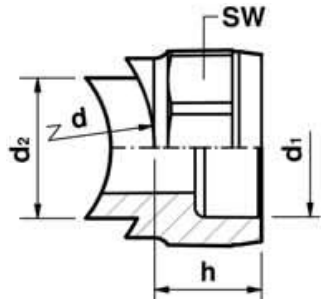


Socket Fusion Weld-In Saddle

SDR11 • WATER PN16

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

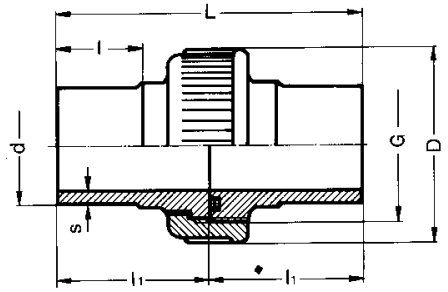
Note: See page 210 for welding mandrels and drill bits



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 join 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 loose 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

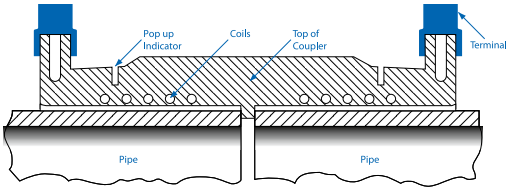
Pipes of similar materials and/or wall thickness can be jointed by butt-fusion or electrofusion. Pipes of similar materials but differing wall thickness can only be jointed through the use of electrofusion. Butt-welding different pipe materials i.e. PE80 to PE100 is not recommended on site.

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.

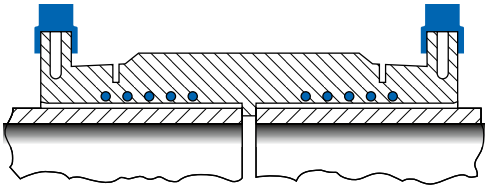
ELECTROFUSION CYCLE

1



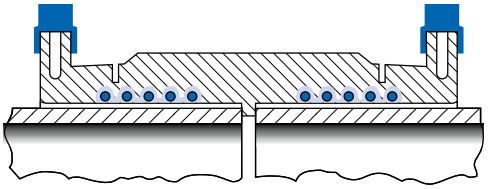
Pipe positioned in coupler prior to energising coil.

2



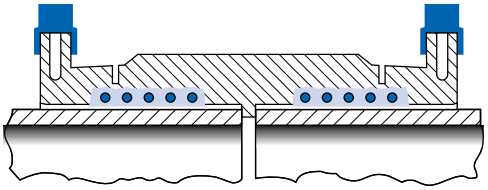
Coil energised.

3



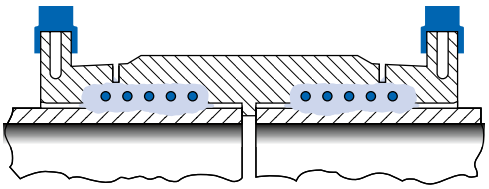
Material surrounding coil starts to melt.

4



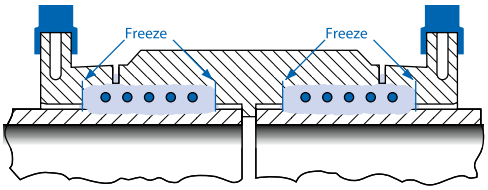
Area of melt extends leading to expansion towards pipe surface.

5



Heat transfers to pipe wall and pipe material starts to melt.

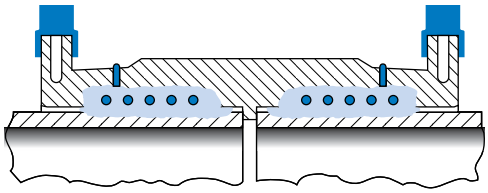
6



Melt solidifies at the start of the cold zones, thereby sealing the melt zone. Further input of energy causes increase in melt pressure.

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 jointing 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 -5ºC to +23ºC.The fittings are designed to work between -10ºC and +45ºC (metric sizes) and -30ºC and +50ºC (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 (σ=4MPa) 1,000 hours 80˚C 9 bar (σ=4.5MPa) 165 hours
PE80 - SDR 9	10 bar gas 16 bar water	80˚C 10 bar (σ=4MPa) 1,000 hours 80˚C 11.25 bar (σ=4.5MPa) 165 hours
PE100 - SDR11	10 bar gas 16 bar water	80˚C 10 bar (σ=5MPa) 1,000 hours 80˚C 10.8 bar (σ=5.4MPa) 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.

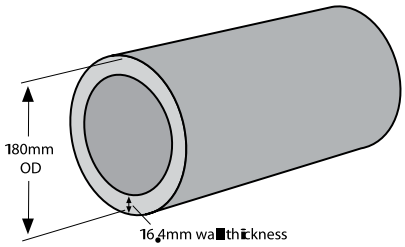
$$PN - 20\frac{\sigma . e}{D - e}$$

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

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



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.

PE Gas

POLYETHYLENE GAS

SDR11 - Lengths PE80

SIZE (IN)	CODE	LENGTH (M)	ID (MM)	OD (MM)
1"	1483-025-2	6	27	33.7
1 1/4"	1483-032-2	6	34	42.4
2"	1483-050-2	6	49	60.5
3"	1483-080-2	6	72	89.2
4"	1483-100-2	6	93	114.7
6"	1483-150-2	6	137	168.9

SIZE IPS (IN)	CODE	LENGTH (M)	ID	OD
2"	1483-050-3	12	49	60.5
3"	1483-080-3	12	72	89.2
4"	1483-100-3	12	93	114.7
6"	1483-150-3	12	137	168.9

SDR11 - Gas Pipe Coils PE80

NOTE: New Zealand's gas reticulation network has 2 different gas pipe sizes depending on if it is a North Island or South Island project. The pipe and fittings listed here are for North Island installations (imperial sizing).
South Island is a separate range (metric sizing) and you will need to contact our team for information.

Contact UPG Technical Team if you have any questions.

SIZE (IN)	CODE	COIL LENGTH (M)	ID (MM)	OD (MM)
1/2"	1483-015-8	150	17	21.7
1"	1483-025-6	50	27	33.7
1"	1483-025-8	150	27	33.7
1 1/4"	1483-032-6	50	34	42.4
1 1/4"	1483-032-8	150	34	42.4
2"	1483-050-6	50	49	60.5
2"	1483-050-7	100	49	60.5
3"	1483-080-6	50	72	89.2
3"	1483-080-7	100	72	89.2
4"	1483-100-7	100	93	114.7

Some coils available- Please contact our sales team for availability.

Electrofusion Gas Coupler

SIZE (IN)	CODE
1/2"	2014-0015Y
1"	2014-0025Y*
1 1/4"	2014-0032Y
2"	2014-0050Y*
3"	2014-0080Y
4"	2014-0100Y
6"	2014-0150Y
8"	2014-0200Y

* 1" and 2" couplers are coloured black

Gas Spigot Elbow 90°

SIZE (IN)	CODE
1"	3054-0025Y
1 1/4"	3054-0032Y
2"	3054-0050Y
3"	3054-0080Y
4"	3054-0100Y
6"	3054-0150Y

Gas Spigot Elbow 45º

SIZE (IN)	CODE
3”	3104-0080Y
4"	3104-0100Y
6"	3104-0150Y

Reducing Gas Spigot

SIZE (IN)	CODE
1 1/4” - 1”	3034-3225Y
1 1/2” - 1”	3034-4025Y
2” - 1”	3034-5025Y
2” - 1 1/4”	3034-5032Y
2” - 1 1/2”	3034-5040Y
3” - 2”	3034-8050Y
4” - 2”	3034-1050Y
4” - 3”	3034-1080Y
6” - 4”	3034-1510Y
8” - 6”	3034-2015Y

Gas Spigot End Cap

SIZE (IN)	CODE
1/2”	3274-0015Y
1”	3274-0025Y
1 1/4"	3274-0032Y
2"	3274-0050Y
3"	3274-0080Y
4"	3274-0100Y
6"	3274-0150Y
8”	3274-0200Y

Gas Spigot Equal Tee

SIZE (IN)	CODE
1/2”	3154-0015Y
1”	3154-0025Y
1 1/4"	3154-0032Y
2"	3154-0050Y
3"	3154-0080Y
4"	3154-0100Y
6"	3154-0150Y

POLYETHYLENE GAS

Electrofusion Gas Reducer

SIZE (IN)	CODE
1" - 1/2"	2034-2515Y

Electrofusion Gas Elbow

SIZE (IN)	CODE	ANGLE
1"	2054-0025Y	90°
1"	2104-0025Y	45°

Gas Spigot Steel Male BSP Threaded Transition

SIZE (IN)	CODE
1"	3554-2525YT
1 1/4"	3554-3232YT
2"	3554-5050YT
3"	3554-8080YT
4"	3554-1010YT
6"	3554-1515YT

Note: Unthreaded transitions also available.

Electrofusion Gas Tapping Saddle Top Loading

MAIN SIZE (IN)	OFFTAKE (IN)	CODE
1 1/4"	1"	2214-3225Y
2"	1"	2214-5025Y
3"	1"	2214-8025Y
4"	1"	2214-1025Y
6"	1"	2214-1525Y
8"	1"	2214-2025Y

Top Loading Saddle tool required for installation.

Gas Spigot Gas Stub Flange

SIZE (IN)	CODE
2”	3414-0050Y
3”	3414-0080Y
4”	3414-0100Y
6”	3414-0150Y

PE Gas Ball Valve Full Port

SIZE (IN)	CODE
1”	0601-0025Y
1 1/4”	0601-0032Y
2"	0601-0050Y
3"	0601-0080Y
4"	0601-0100Y
6"	0601-0150Y
8”	0601-0200Y

Ball Valve Steel Handle available seperately.

Table E Galvanised Backing Ring

SIZE (IN)	CODE
2”	5451-0063
3”	5451-0090
4”	5451-0110
6”	5451-0160

Fibre Gas Gasket Table E

SIZE (IN)	CODE
2”	9641-0050
3”	9641-1090
4”	9641-1110
6”	9641-1160

Stream HDPE Drainage

Pipe Dimension

Ø EXTERNAL	Ø INTERNAL	Ø WALL THICKNESS
50	44	3
56	50	3
63	57	3
75	69	3
90	83	3.5
110	101.4	4.3
125	115.2	4.9
160	147.6	6.2
200	184.5	7.7
250	230.7	9.6
315	290.7	12.1

- Material is PE80B
- Stream HDPE is for gravity drainage pipe systems. It is also suitable for low pressure (below 200kpa) if there are no ring seal sockets used in the pipeline.

Drainage Pipe - 5m Length

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

Drainage EF Coupler

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

Drainage EF Coupler (LARGE)

FITTING SIZE (MM)	NOMINAL BORE	CODE
200	185	HD-2010-0200
250	225	HD-2010-0250
315	300	HD-2010-0315

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

45° Junction

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

45° Fabricated Junction

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

45° Double Junction

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

88.5° Junction

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

88.5° Fabricated Junction

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

88.5° Swept Junction

FITTING SIZE (MM)	NOMINAL BORE	CODE
100 × 100	100 × 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

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

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 × 110	150 × 100	HD-3970-1611
160 × 160	150 × 150	HD-3970-1616

* Pictured below

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

88.5º Junction

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 × 75	80 × 65	HD-6310-9075
110	100	HD-6310-0110
110 × 75	100 × 65	HD-6310-1175
160	150	HD-6310-0160

88.5º Fabricated Junction

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 × 56	100 × 50	HD-6300-1156
110 × 75	100 × 65	HD-6300-1175
110 × 110	100 × 100	HD-6300-1111
160 × 110	150 × 100	HD-6300-1611
160 × 160	150 × 150	HD-6300-1616

S&P Combination Trap

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

Eccentric Reducer

FITTING SIZE (MM)	NOMINAL BORE	CODE
56 × 50	50 × 40	HD-3040-5650
63 × 50	57 × 40	HD-3040-6350
63 × 56	57 × 50	HD-3040-6356
75 × 50	65 × 40	HD-3040-7550
75 × 56	65 × 50	HD-3040-7556
75 × 63	65 × 57	HD-3040-7563
90 × 50	80 × 40	HD-3040-9050
90 × 56	80 × 50	HD-3040-9056
90 × 63	80 × 57	HD-3040-9063
90 × 75	80 × 65	HD-3040-9075
110 × 50	100 × 40	HD-3040-1150
110 × 56	100 × 50	HD-3040-1156
110 × 63	100 × 57	HD-3040-1163
110 × 75	100 × 65	HD-3040-1175
110 × 90	100 × 80	HD-3040-1190
125 × 110	115 × 100	HD-3040-1211
160 × 110	150 × 100	HD-3040-1611
160 × 125	150 × 115	HD-3040-1612
200 × 110*	185 × 100	HD-3040-2011
200 × 160*	185 × 150	HD-3040-2016
250 × 160*	225 × 150	HD-3040-2516
250 × 200*	225 × 185	HD-3040-2520
315 × 200*	300 × 185	HD-3040-3120
315 × 250*	300 × 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 × 50	50 × 40	HD-3030-5650
63 × 50	57 × 40	HD-3030-6350
63 × 56	57 × 50	HD-3030-6356
75 × 50	65 × 40	HD-3030-7550
75 × 56	65 × 50	HD-3030-7556
75 × 63	65 × 57	HD-3030-7563
90 × 50	80 × 40	HD-3030-9050
90 × 56	80 × 50	HD-3030-9056
90 × 63	80 × 57	HD-3030-9063
90 × 75	80 × 65	HD-3030-9075
110 × 50	100 × 40	HD-3030-1150
110 × 56	100 × 50	HD-3030-1156
110 × 63	100 × 57	HD-3030-1163
110 × 75	100 × 65	HD-3030-1175
110 × 90	100 × 80	HD-3030-1190
160 × 110	150 × 100	HD-3030-1611

In-Pipe Adaptor

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

Bucket Trap

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

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 × 63 × 50	80 × 57 × 40	HD-3243-9065
110 × 56 × 50	100 × 50 × 40	HD-3243-1155
110 × 56	100 × 50	HD-3242-1156
110 × 63	100 × 57	HD-3242-1163
110 × 63 × 50	100 × 57 × 40	HD-3243-1165
110 × 75 (3-Way)	100 × 65	HD-3242-1173

DWV To HDPE Adaptor

FITTING SIZE (MM)	NOMINAL BORE	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

Note: HDPE Drain EF Coupling required

PVC Adaptor - HDPE To DWV

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

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

Overflow Gully

FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100	HD-6480-0110
160	150	HD-6480-0160

- Top grate made from Black Polypropylene

PE Male BSP Spigot Adaptor

SIZE (MM)		BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE
40	x	1 1/4"	32	2354-4032
50	x	1 1/2"	40	2354-5040
56	x	2"	50	2354-5650
63	x	2"	50	2354-6350
75	x	2 1/2"	65	2354-7565
90	x	3"	80	2354-9080
110	x	4"	100	2354-1110

PE Female BSP Spigot Adaptor

SIZE (MM)		BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE
40	x	1 1/4"	32	2364-4032
50	x	1 1/2"	40	2364-5040
56	x	2"	50	2364-5650
63	x	2"	50	2364-6350
75	x	2 1/2"	65	2364-7565
90	x	3"	80	2364-9080
110	x	4"	100	2364-1110

Sovent Ventilation Branch

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

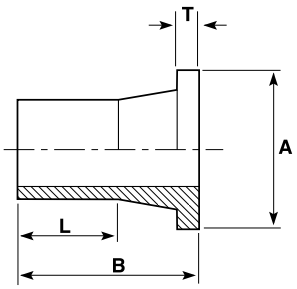
- Fabricated options available - contact UPG

HDPE Drainage Brass Nut & Tail With Gasket Seal

SIZE (MM)		BSP THREAD SIZE INCH	BSP THREAD SIZE (MM)	CODE
50	x	1 1/4"	32	HD-7370-5032
50	x	1 1/2"	40	HD-7370-5040
56	x	1 1/2"	40	HD-7370-5640

Spigot Stub Flange

SIZE (MM)	CODE	A (MM)	A (MM)	A (MM)	A (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.

Combination Swivel Joints

FITTING SIZE (MM)	NOMINAL BORE	CODE
110	100	HD-8070-0110
160	150	HD-8070-0160

- Allows for 40 degrees inclusive swivel movement
- Allows for 61mm maximum expansion
- Compact fitting

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

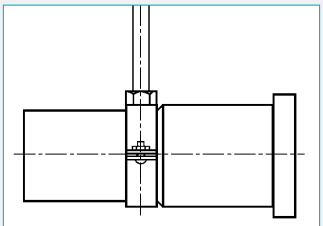
Clipping Methods - Installation Guide

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.

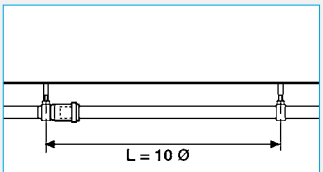
Expansion sockets should be bracketed rigidly to prevent any movement of the expansion socket.In addition, to allow axial movement caused by the effects of expansion and contraction, loose guide brackets are used at no more than 10 pipe diameters apart and from the expansion joint.

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.

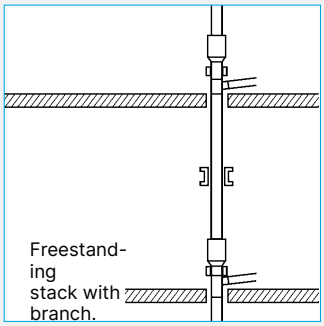
Installers should also refer to the requirements of AS/NZS 3500.2:2003 “Sanitary Plumbing & Drainage.”



Rigid fastening with expansion socket and bracket.



Spacing of guide brackets. Distance is equal to 10 times the pipe diameter.



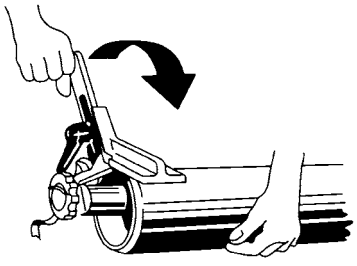
Freestanding stack with branch.

Expansion Socket - Installation Guide

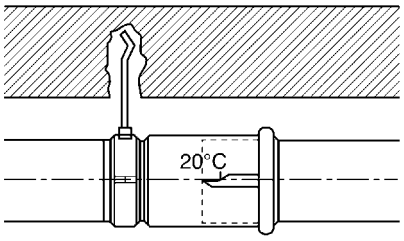
1. Chamfer the pipe end to be inserted to approximately 15 degrees.

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.



Pipe end chamfer using a beveling tool.



Horizontal Assembly (ambient 20°C).

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

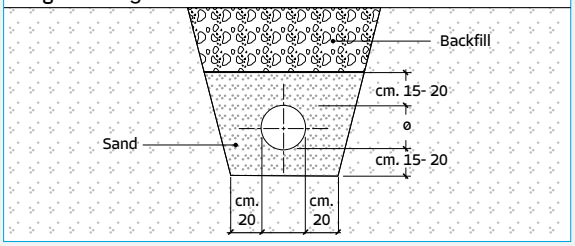


Figure 8 Heavy Traffic

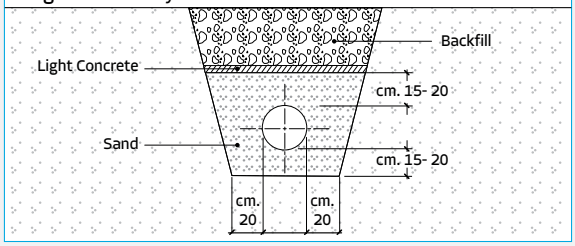
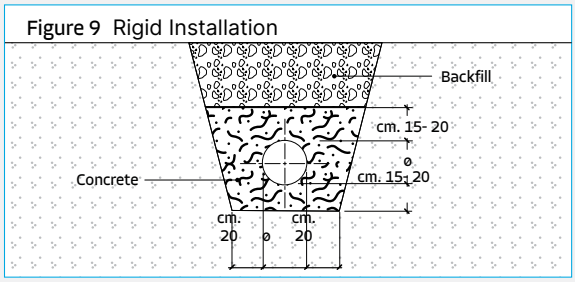


Figure 9 Rigid Installation



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

CERTIFICATO N. / CERTIFICATE N. 9190.COES

COES COMPANY SRL con unico socio

ISO 9001:2008

The Standards Institution of Israel

License No. 66901
to mark a commodity
with the Standards Mark

COES COMPANY S.R.L

ITALY

POLYETHYLENE PIPES AND FITTINGS: WASTE DISCHARGE (LOW AND HIGH TEMPERATURE) INSIDE BUILDINGS-SPECIFICATIONS

LIST OF TYPES IN ANNEX A

This license is valid until 31/12/2018

1 / 1 / 2018

Die ZERTIFIZIERUNGSSTELLE des ÖSTERREICHISCHEN NORMUNGSINSTITUTS (ON)

BESTÄTIGUNG DER NORMKONFORMITÄT

Registrierungsnummer ON-N 2002 25/Blatt 1

die Konformität der

"COESTILEN" Formstücke

Werkstoff: PE-HD

zum Ableiten von Abwasser innerhalb von Gebäuden

Anwendungskennzeichen B, Rohrreihe S 12,5

Bögen, Abzweige und andere Ausführungen

gemäß Auflistung in Anhang A zu diesem Zertifikat

hergestellt von der Firma

CO.E.S. Compagnia Edil Sanitaria s.p.a.
Via Genova, 13, I 20096 PIOLTELLO (MI)

mit den Bestimmungen der ÖNORM EN 1519-1.

CO.E.S. Compagnia Edil Sanitaria s.p.a.
Via Genova, 13, I 20096 PIOLTELLO (MI)

„ÖNORM EN 1519-1 geprüft"

„ EN 1519-1 geprüft"

Die ZERTIFIZIERUNGSSTELLE des ÖSTERREICHISCHEN NORMUNGSINSTITUTS (ON)

BESTÄTIGUNG DER NORMKONFORMITÄT

Registrierungsnummer ON-N 2002 257

die Konformität der

"COESTILEN"-Rohre

Werkstoff: PE-HD

zum Ableiten von Abwasser innerhalb von Gebäuden

Anwendungskennzeichen B, Rohrreihe S 12,5

DN/OD (mm): 32 bis 315

hergestellt von der Firma

CO.E.S. Compagnia Edil Sanitaria s.p.a.
Via Genova, 13, I 20096 PIOLTELLO (MI)

mit den Bestimmungen der ÖNORM EN 1519-1.

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„ÖNORM EN 1519-1 geprüft"

„ EN 1519-1 geprüft"

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 315MM
- 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

Series / Pipe Sizing / Pressure Rating / PE Class / Approved Fluid / Production Batch / Standard

QUALITY 50 YEAR GUARANTEE

Meets Australian and NZ Standards AS/NZS4130 & AS/NZS4131 and made in New Zealand 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 ASNZS4131 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.

maXair
AIR PIPE SYSTEMS

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 kw x 1.35 = HP x 4 =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 138-141)

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.

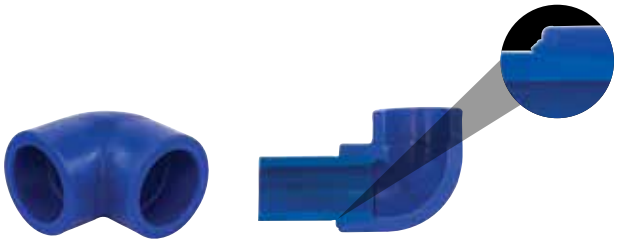


Photo of cutaway weld shows the homogenous weld joint of the pipe and fitting.

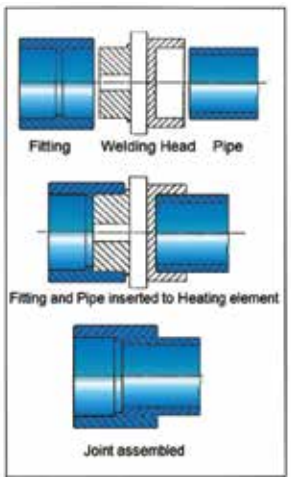
The fittings are very compact, and being the same raw material as the pipe, form a homogenous whole. Designed for sizes 20 mm to 110mm, however they excel in the sizes 20mm to 50mm.

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 31-38)

Electrofusion Fittings are positioned on the pipework by hand and then an electric current is applied via an Electrfusion 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 142-146)

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 150-152) from our ready-to-use outlet options.

Maxair PE100 Compressed Air Pipe — SDR7.4

MANUFACTURED TO AS/NZS 4130 STANDARD.

QUALITY 50 YEAR GUARANTEE

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

Larger sizes are available on request and made to order

MAXAIR PE100 COMPRESSED AIR PIPE COILS — SDR7.4

PRODUCT CODE	WALL THICKNESS	IMPERIAL EQUIVALENT	SIZE (MM)	LENGTH (METRES)
1241-025-6	3.5mm	3/4"	25mm	50m
1241-025-7	3.5mm	3/4"	25mm	100m
1241-032-6	4.4mm	1"	32mm	50m
1241-032-7	4.4mm	1"	32mm	100m

Coils for larger sizes are available on request

Clips

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

For Maxair & 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

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

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

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

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AIR PIPE SYSTEMS

Maxair Blue PE100 Compressed Air Fittings TO DIN 16963 SDR7.4

Couplings

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

Reducing Couplings

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

90° Elbow

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

45° Elbow

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

90° Tee

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

Reducing 90° Tee

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

Threaded 90° Tee

PIPE x THREAD	CODE
20 × 1/2”	WTF2015
25 × 1/2”	WTF2515
32 × 1/2”	WTF3215
40 × 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 × 20	FKA20
25 × 25	FKA25
32 × 32	FKA32
40 × 40	FKA40
50 × 50	FKA50
63 × 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 × 1/2”	FKB20
25 × 3/4”	FKB25
32 × 1“	FKB32
40 × 1 1/4”	FKB40
50 × 1 1/2”	FKB50
63 × 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 × 1/2”	FT20
25 × 3/4”	FT25
32 × 1“	FT32
40 × 1 1/4”	FT40
50 × 1 1/2”	FT50
63 × 2”	FT63
90 × 3”	FT90

Threaded 90° Elbows

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

Female Adaptor

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

Male Adaptor

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

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AIR PIPE SYSTEMS

Maxair Compression Fittings For Compressed Air AS1460

Couplings

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

Reducing Couplings

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

Male Adaptor

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

Female Adaptor

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

90° Elbow

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

90° Elbow With Threaded Female Offtake

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

90° Elbow With Threaded Male Offtake

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

Elbow Female (Lugged)

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

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AIR PIPE SYSTEMS

90° Tee

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

Reducing 90° Tee

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

90° Tee With Threaded Female Offtake

PIPE x THREAD x PIPE	CODE
20 × 1/2" x 20	7174-2015
25 × 3/4" x 25	7174-2520
32 × 1" x 32	7174-3225
40 × 1 1/4" x 40	7174-4032
50 × 1 1/2" x 50	7174-5040
63 × 2" x 63	7174-6350
90 × 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 × 15-22mm	7394-2515
25 × 20-27mm	7394-2520
25 × 27-34mm	7394-2527
32 × 20-27mm	7394-3220
32 × 27-34mm	7394-3227

- Clamps to metal pipe within the size range indicated

Reducing Set

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

Compression Valve

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

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AIR PIPE SYSTEMS

Mechanical Tapping Bands

FEMALE THREADED OFF-TAKE

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

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

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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


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

Socket

NYLON	CODE
1/2”	PS15
3/4”	PS20
1”	PS25
1 1/4”	PS32
1 l/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


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/20/1/¼
CSO/20/2/¼
CSO/20/3/¼
CSO/20/1/⅜ *
CSO/20/2/⅜
CSO/25/1/¼
CSO/25/2/¼
CSO/25/3/¼
CSO/25/1/⅜
CSO/25/2/⅜

Compression System Drain Outlets

CODE
CSD/20/1/¼
CSD/20/2/¼
CSD/20/3/¼
CSD/20/1/⅜
CSD/20/2/⅜
CSD/25/1/¼
CSD/25/2/¼
CSD/25/3/¼
CSD/25/1/⅜
CSD/25/2/⅜ *

Compression System Drip Leg Drain Outlets

CODE
DLD/20/1/¼
DLD/20/2/¼
DLD/20/3/¼
DLD/20/1/⅜
DLD/20/2/⅜
DLD/25/1/¼
DLD/25/2/¼
DLD/25/3/¼
DLD/25/1/⅜
DLD/25/2/⅜ *

* As pictured.

Automatic Drain Filter Outlets

CODE
ADF/20/1/¼
ADF/20/2/¼
ADF/20/3/¼
ADF/20/1/⅜
ADF/20/2/⅜ *
ADF/20/3/⅜
ADF/25/1/¼
ADF/25/2/¼
ADF/25/3/¼
ADF/25/1/⅜
ADF/25/2/⅜
ADF/25/3/⅜

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/20/1/¼
WDLD/20/2/¼
WDLD/20/3/¼
WDLD/20/1/⅜
WDLD/20/2/⅜
WDLD/25/1/¼
WDLD/25/2/¼ *
WDLD/25/3/¼
WDLD/25/1/⅜
WDLD/25/2/⅜

Welded System Drain Outlets

CODE
WSO/20/1/¼
WSO/20/2/¼
WSO/20/3/¼
WSO/20/1/⅜ *
WSO/20/2/⅜

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
2× 1/4” Outlet	AMT-2
3× 1/4” Outlet	AMT-3
4× 1/4” Outlet	AMT-4
5× 1/4” Outlet	AMT-5

Straight Manifold - 1/4” Inlet

SIZE	CODE
2× 1/4” Outlet	AN 2
3× 1/4” Outlet	AN 3
4× 1/4” Outlet	AN 4
5× 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

Ball Valves Male/Female

SIZE	CODE
1/4”	VMF08

Butterfly Valve

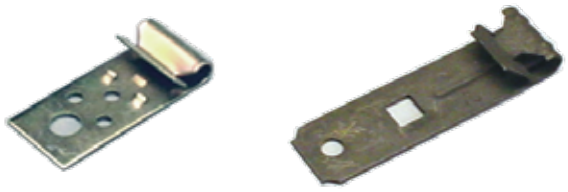
SIZE (NB)	CODE WAFER	CODE TABLE E LUGGED
50	BVFW50	BVFL50
65	BVFW65	BVFL65
80	BVFW80	BVFL80
100	BVFW100	BVFL100
125	BVFW125	BVFL125
150	BVFW150	BVFL150
200	BVFW200	BVFL200
250	BVFW250	BVFL250
300	BVFW300	BVFL300

Notes:

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

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 - ¼" BSPF (a)
A210-14M	Coupler - ¼" BSPM (b)
A210-38M	Coupler - ⅜" BSPM (c)
A210-12M	Coupler - ½" BSPM

(a)

(b)

(c)

To suit:

380 Series Couplings

CODE	DESCRIPTION
A380	Coupler - ⅜" BSPF (a)
A380-14M	Coupler - ¼" BSPM (b)

(a)

(b)

To suit:

400 Series Couplings

CODE	DESCRIPTION
A400	Coupler - ½" BSPF (a)

(a)

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.

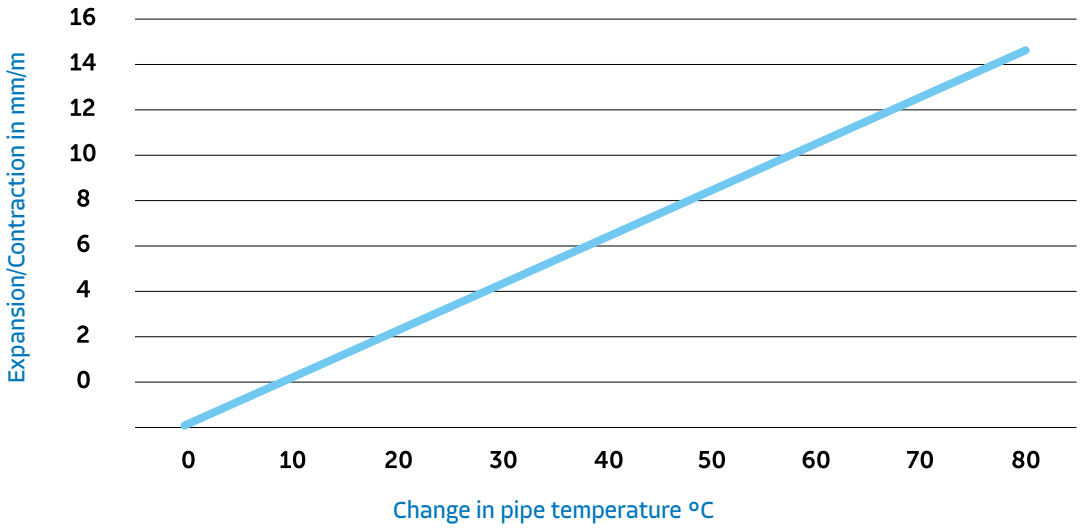
HEAT SOURCES AND EXTERIOR PIPEWORK

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



The coefficient of the thermal expansion and contraction of Maxair® pipe may be taken as 0.18 mm per metre per °C.

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

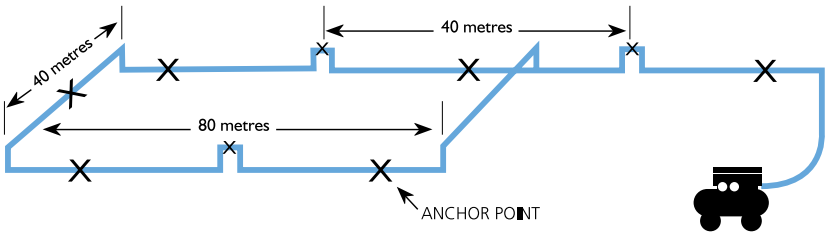
Temperatures quoted relate to constant temperature over a period of 50 years, rather than short term peak temperatures. Maxair® can safely handle short term peaks in compressed air temperature up to 95°C.

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

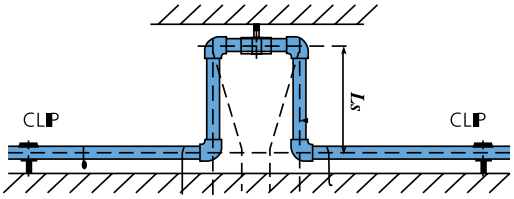
EXPANSION LOOPS

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

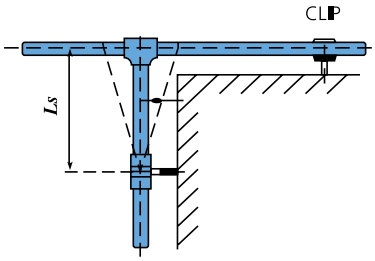
It is general practice for loops up to 63mm to span between purlins. Space constraints may also need to be considered. Please contact our technical department for accurate sizing if required.



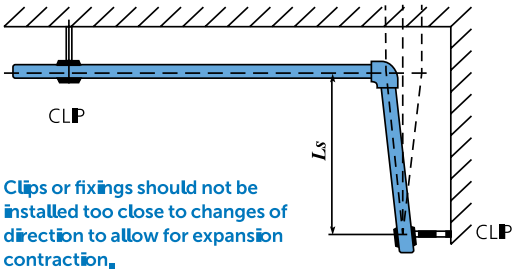
Pipe Diameter	Min Leg *Ls* (metres)
20	0.5
32	0.6
32	0.7
40	0.9
50	1.0
63	1.2
90	1.8
110	2.0



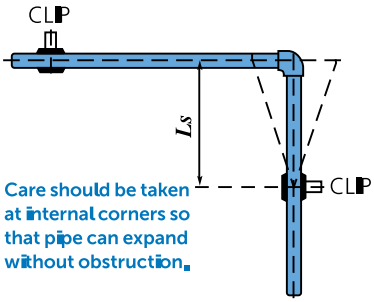
Typical expansion joint. Note fixed anchor point at centre of loop. No clips or fixings on legs. Clips on long run to allow for longitudinal expansion/contraction.



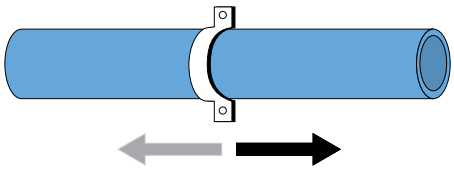
Clip placement for external corner



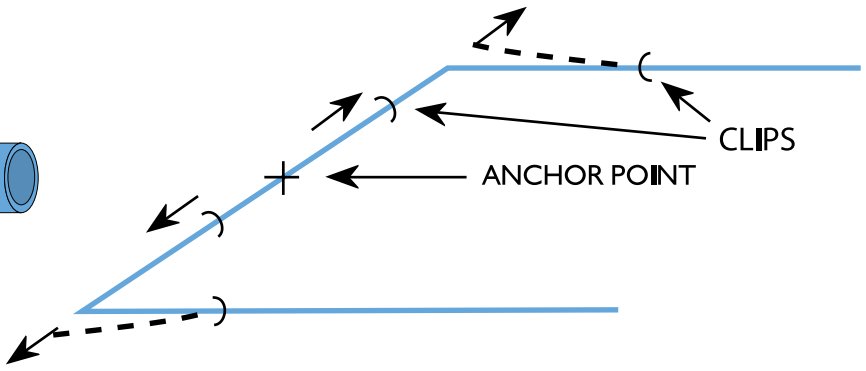
Clips or fixings should not be installed too close to changes of direction to allow for expansion contraction.



Care should be taken at internal corners so that pipe can expand without obstruction.



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.

maXair
AIR PIPE SYSTEMS

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

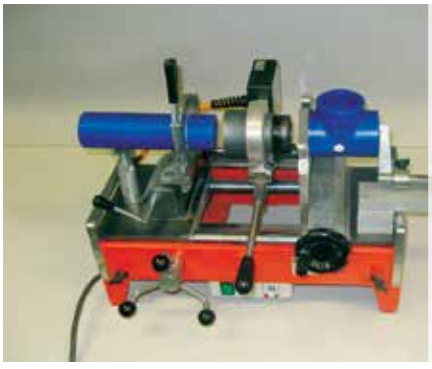
1.Turn on welder. Do not attempt welding unless tool is up to temperature (250°C). The indicator LED will cycle on/off with thermostat control when temp is correct. Cut pipe to length with approved cutters for a square swarf-free finish.

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.

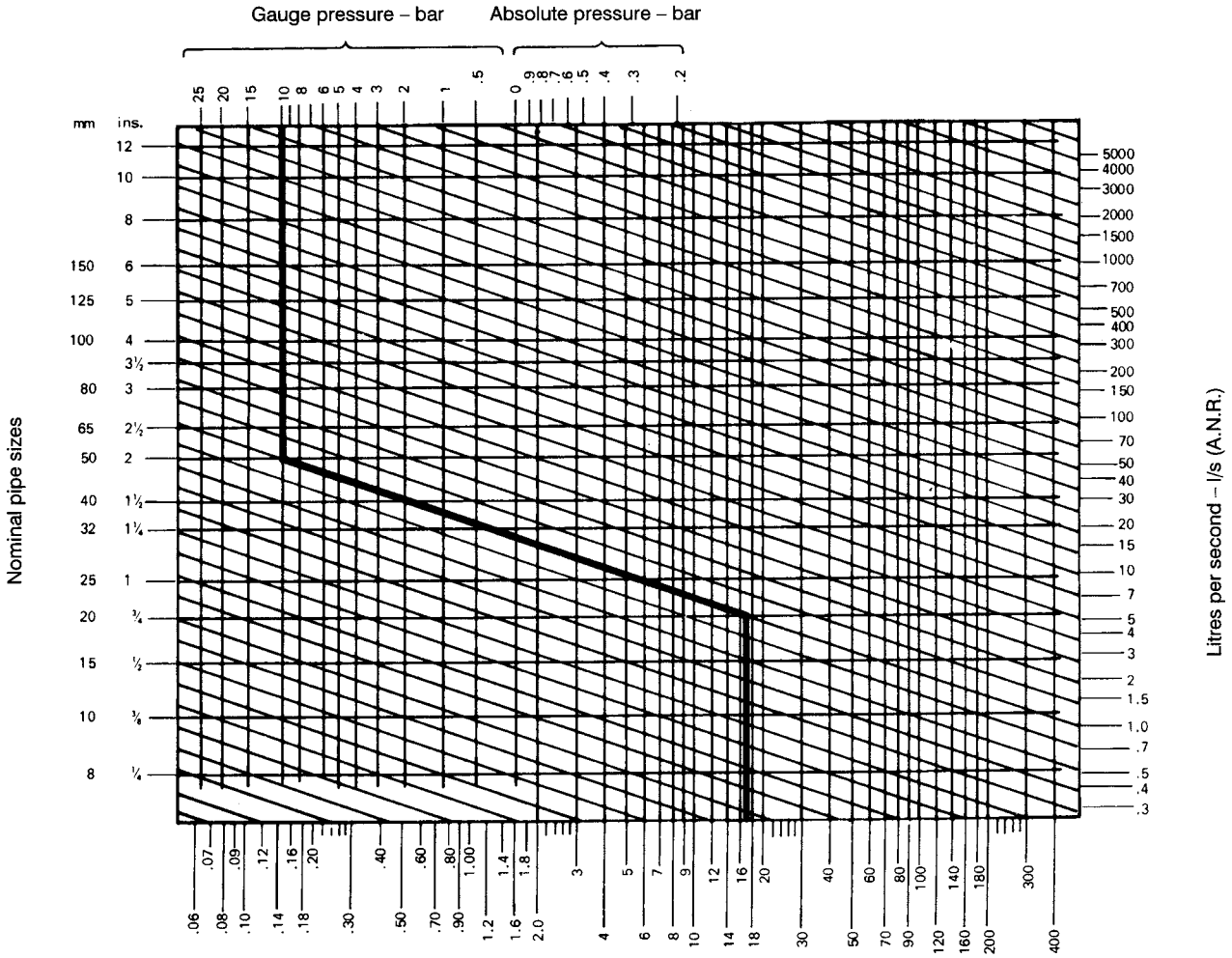
5. Assemble pipe and fitting making sure pipe is fully inserted, check witness mark. Clamps can be used to stabilise joint during welding.

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.

maXair
AIR PIPE SYSTEMS

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 1 5mm pipe sizes. The correct selection herefore, is 1 5mm pipe.

Support Spacing

Horizontal support spacing in mm

Size	Up to 25°C	Up to 50°C
20	700	600
25	900	750
32	1200	900
40	1400	1100
50	1700	1300
63	2000	1550
90	2300	1800
110	2600	2000

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.

Insultherm

DYNATHERM PP-RCT

In a large number of projects, major benefits can be achieved by using the Insultherm pre-insulated pipe system. The insulation, with it's 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

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.

FITTINGS AVAILABLE

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.

TALK TO OUR HELPFUL TEAM TODAY ABOUT YOUR INSULATED PIPE REQUIREMENTS.

P 0800 473 100

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°Ckgs/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 tooptimum 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:

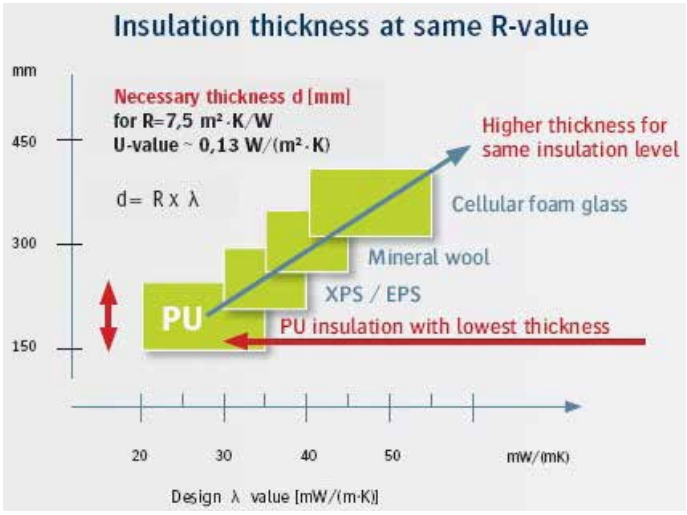
• Increased energy efficiency – leading to immediate savings for the end user.

TYPICAL VALUES OF INSULATING MATERIALS ARE:

MATERIAL	DENSITY (KG/M³)	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.

The following graph shows the thickness of insulation materials needed to get an R-value of 7.5 m² K/W with standard PU foam. As seen, PU offers the best insulation at lowest thickness.



Insultherm™
PRE-INSULATED PIPE SYSTEMS

dynatherm®
PP-RCT PIPE SYSTEMS

TECHNICAL SPECIFICATION FOR DYNATHERM PP-RCT

MATERIAL PROPERTY	UNIT	COMMENTS
Standards	DIN 8077 / 8078	
Density	0.905 g/cm2	
Hoop Stress @ 70°C with 50 year life	5.0 Mpa	Over 50% higher design strength than PP-R material.
Modulus of Elasticity	900 Mpa	
Thermal Expansion Rate	0.035mm/ Meter/10°C	
Thermal Conductivity	0.24 W/Mtr k	
Pipe Friction Factor	0.007	
Pressure Class	16 Bar	see table below

PP-RCT FASER COMPOSITE SDR11 SERIES DIMENSIONS

PIPE NB (MM)	PIPE OD (MM)	PIPE ID (MM)	SDR	HDPE OUTER JACKET	INSULATION THICKNESS
15	20	14.4	7.4	75	24.5
15	20	14.4	7.4	90	31.5
20	25	18.0	7.4	75	22.0
20	25	18.0	7.4	90	29.0
25	32	24.8	9	90	25.5
25	32	24.8	9	110	34.7
32	40	32.6	11	90	21.5
32	40	32.6	11	110	30.7
40	50	40.8	11	110	25.7
40	50	40.8	11	125	32.6
50	63	51.4	11	125	26.1
50	63	51.4	11	160	42.3
65	75	61.4	11	125	20.1
65	75	61.4	11	160	36.3
80	90	73.6	11	160	28.8
80	90	73.6	11	200	48.8
100	125	102.2	11	200	31.3
100	125	102.2	11	250	54.7
125	160	130.8	11	250	37.2
150	160	141.0	17	250	37.2

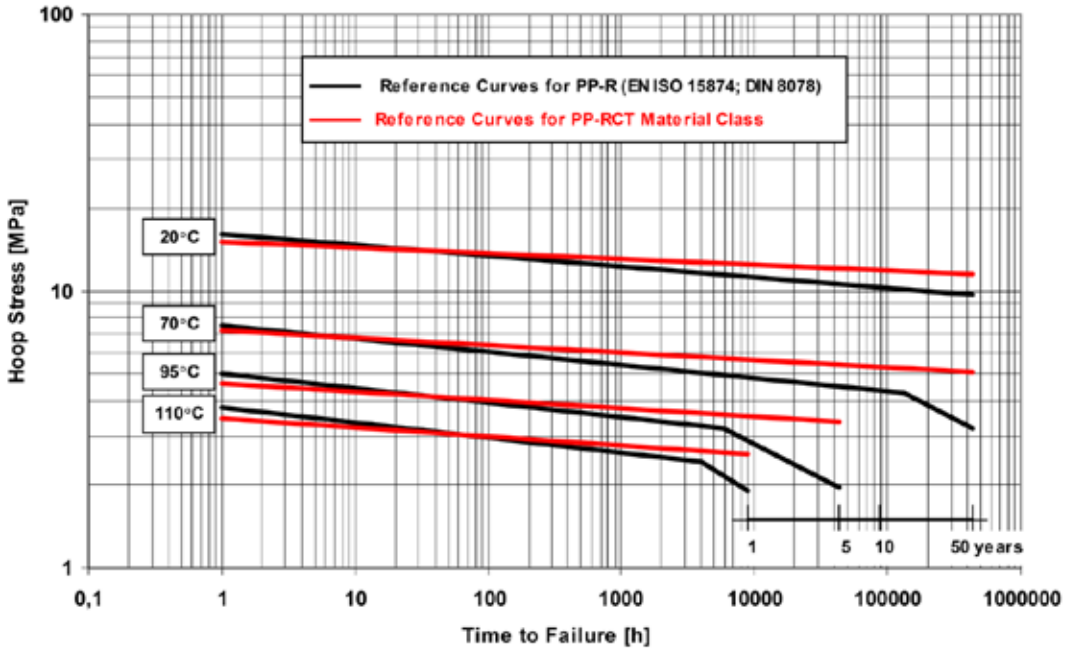
P 0800 473 100

PERMISSIBLE OPERATING PRESSURE RATINGS OF DYNATHERM PP-RCT (REF: DIN 8077:2008-9)

TEMPERATURE (°C)	YEARS OF SERVICE	CLIMATEC SDR11 (BAR)
20	10 20 50	19.0 18.6 18.4
30	10 20 50	16.4 16.1 15.8
40	10 20 50	14.1 13.8 13.6
50	10 20 50	12.0 11.7 11.5
60	10 20 50	10.1 9.9 9.7
70	10 20 50	8.5 8.3 8.1
80	10 20 50	7.0 6.9 5.5

PP-RCT HAS A MUCH HIGHER TEMPERATURE RESISTANCE COMPARED TO PP-R MATERIAL

Comparison of the reference curves of PP-R and PP-RCT. The curves define the required hydrostatic pressure performance of the materials. Brittle failure is shown by a sharp decline of the reference curve. Note the PP-R80 brittle failure, even at 70°C



The bed of the trench where the pipe is to be laid must be completely flat and should be free from stones >20mm 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.
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 ensure the required compaction and support of the side support material is achieved.
This space should be filled with sand and compacted on both sides at the same time.

For calculation the following indications in Figures 1 to 3, the official guidelines, standards and regulations should be observed.
Standard cover including sand and backfill should be minimal 450mm (Figure 1).
In trafficable areas, this should be increased to 800mm (Figure 1).
In trafficable areas where the total cover is less than 800mm but more than 450mm it is recommended to cover the layer of sand with light concrete casting in order to evenly distribute the ground pressure (Figure 2).
In trafficable areas where the total cover is less than 450mm, encase the pipe in concrete (Figure 3).
Here the behaviour of the pipeline will be rigid and will not undergo deformations; whereas Figures 1 and 2 represent flexible installations.

Figure 1 Light Traffic

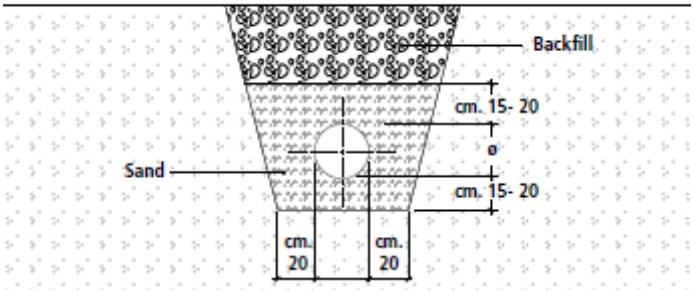


Figure 2 Heavy Traffic

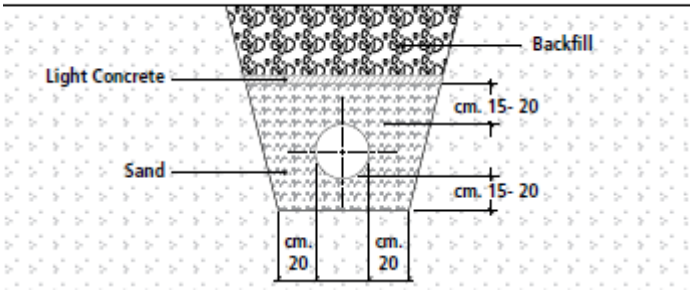
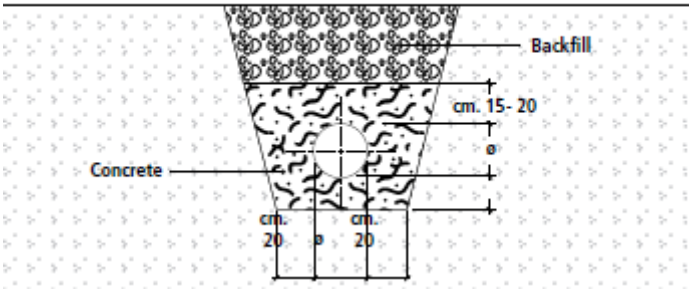
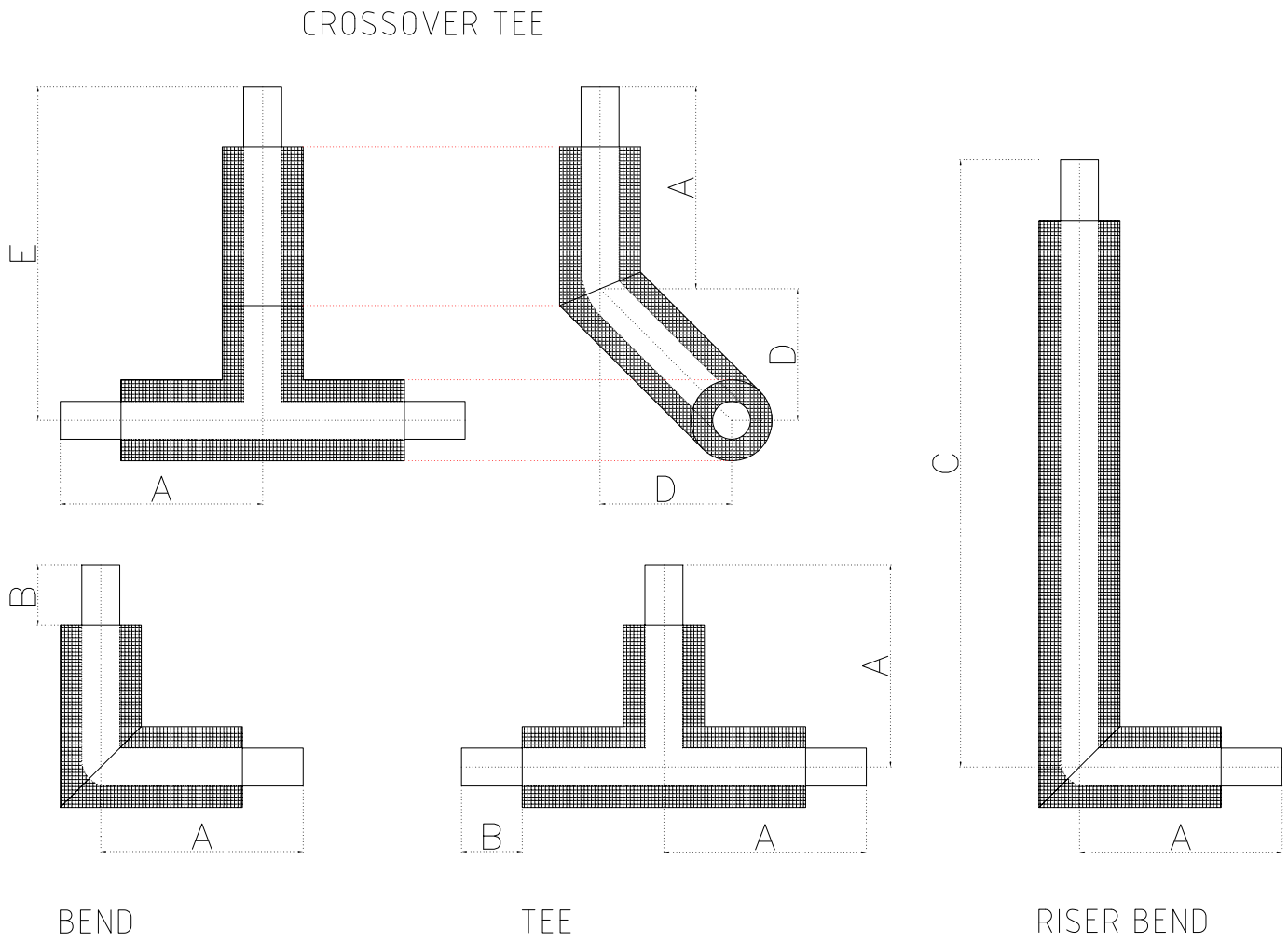


Figure 3 Rigid Installation



EXPANSION CONTROL

Where the air temperature is hotter or colder than the ground temperature, pipe lengths will contract or expand in length on adjustment to ground temperature. Keep the pipes covered from sunlight to help reduce contraction.The rate of expansion / contraction is about 0.1mm / Mtr / °C.
Once the pipework is stabilised, the compacted ground restricts any pipe movement. The pipework is further stabilised by the insulation and HDPE jacket and any expansion/contraction through temperature changes of the fluid is taken up through the wall of the pipe expanding/contracting inwards rather than linear.



DIMENSIONS		
	A	2x Jacket OD + B
	B	120mm
	C	1200mm
	D	Jacket OD +100mm
	E	A + D

*Measurements are customisable.

STREAM PE100

In a large number of projects, major benefits can be achieved by using the Insultherm pre-insulated pipe system. The insulation, with it's 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
- Condensate
- Chemicals
- Gases
- Air heating/cooling

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.

FITTINGS AVAILABLE

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.

TALK TO OUR HELPFUL TEAM TODAY ABOUT YOUR INSULATED PIPE REQUIREMENTS.

P 0800 473 100

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°Ckgs/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 tooptimum 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:

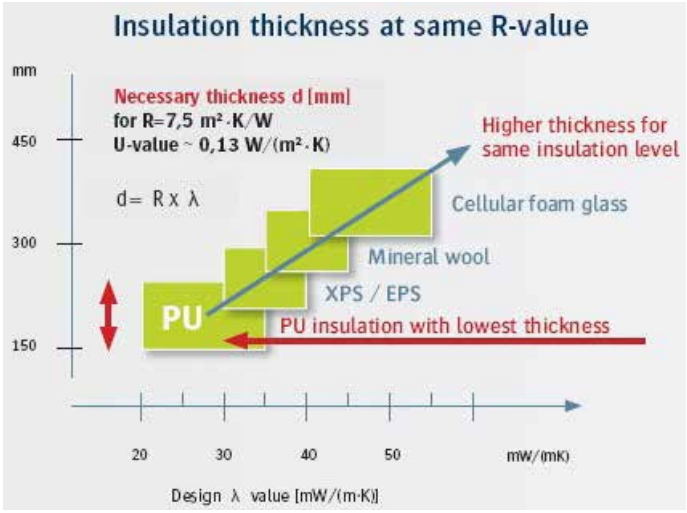
• Increased energy efficiency – leading to immediate savings for the end user.

TYPICAL VALUES OF INSULATING MATERIALS ARE:

MATERIAL	DENSITY (KG/M³)	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.

The following graph shows the thickness of insulation materials needed to get an R-value of 7.5 m² K/W with standard PU foam. As seen, PU offers the best insulation at lowest thickness.



TECHNICAL SPECIFICATION FOR STREAM PE100

MATERIAL PROPERTY	UNIT	COMMENTS
Standards	NZS 4130 / NZS 4129	
Density	0.951 – 0.957 g/cm3	
Tensile Strength	25 Mpa	
Modulus of Elasticity	1100 Mpa	
Thermal Conductivity	0.4 W/Mtr k	
Pipe Friction Factor	0.007	
Pressure Class	16 or 10 Bar	See below table

PERMISSIBLE OPERATING PRESSURE RATINGS OF STREAM PE100

TEMPERATURE (°C)	SDR 11 WITH 50 YEAR OPERATING LIFE (BAR)	SDR 17 WITH 50 YEAR OPERATING LIFE (BAR)
0	25.60	16.00
5	22.40	14.00
10	20.80	13.00
15	18.40	11.50
20	16.00	10.00
25	16.00	10.00
30	15.00	9.40
35	14.30	8.90
40	13.50	8.40
45	12.70	8.00
50	10.05	7.20
55	9.60	6.00
60	8.00	5.00

PE100 SDR11 & SDR17 DIMENSIONS

PIPE NB (MM)	PIPE OD (MM)	PIPE ID (MM)	SDR	HDPE OUTER JACKET	INSULATION THICKNESS
15	20	14.2	7.4	75	24.5
20	25	20.2	11	75	22.0
25	32	26.0	11	90	25.5
32	40	32.3	11	90	21.5
40	50	40.4	11	110	25.7
50	63	50.9	11	125	26.1
65	75	60.9	11	160	36.3
80	90	72.9	11	160	28.8
80	90	78.8	17	160	28.8
80	110	89.3	11	200	38.8
100	125	101.4	11	200	31.3
125	160	129.9	11	250	37.2
125	160	129.9	11	315	67.7
150	160	140.6	17	250	37.2
150	180	146.2	11	250	27.2
150	180	158.2	17	280	41.4
150	180	158.2	17	315	57.7
200	250	203.2	11	355	41.7
200	225	197.6	17	315	35.2
200	225	197.6	17	355	54.2
250	315	256.1	11	400	30.2
250	280	246.2	17	400	47.7
300	355	288.7	11	450	36.3
300	355	288.7	11	500	57.2
300	355	312.0	17	450	36.3
300	355	312.0	17	500	57.2

JOINTING METHOD

The inner pipe is to be fused together with UPG's Insulfusion coupler. The ends of the pipes are simply inserted into the coupler which is then electrofused using an electrofusion welder unit.
The outer jacket matches the material and OD of the pipe and you simply just have to heat shrink the joint as is normally carried out to waterproof the joint.
Fittings are to be short pre-insulated spigot fittings and jointed with InsulFusion couplers each side.

The bed of the trench where the pipe is to be laid must be completely flat and should be free from stones >20mm 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.
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Figure 1 Light Traffic

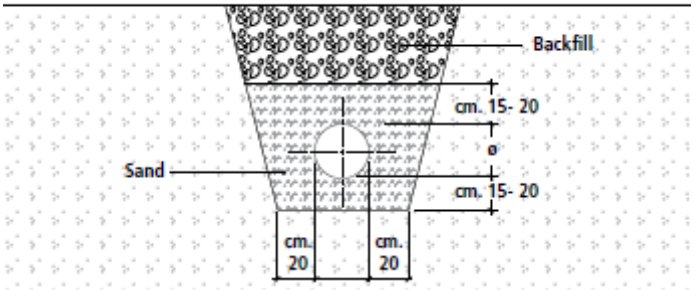


Figure 2 Heavy Traffic

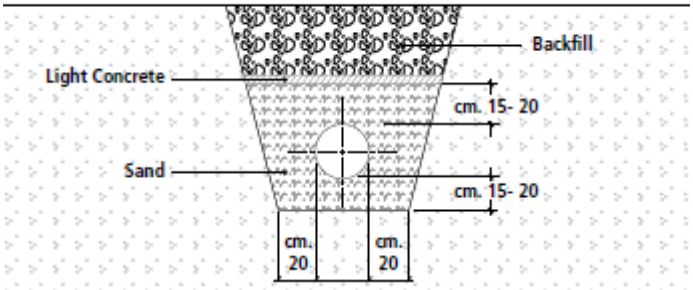
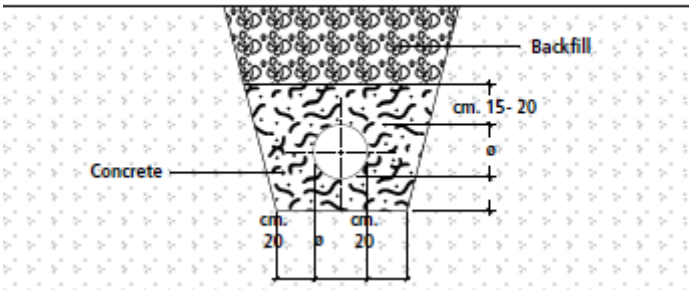


Figure 3 Rigid Installation



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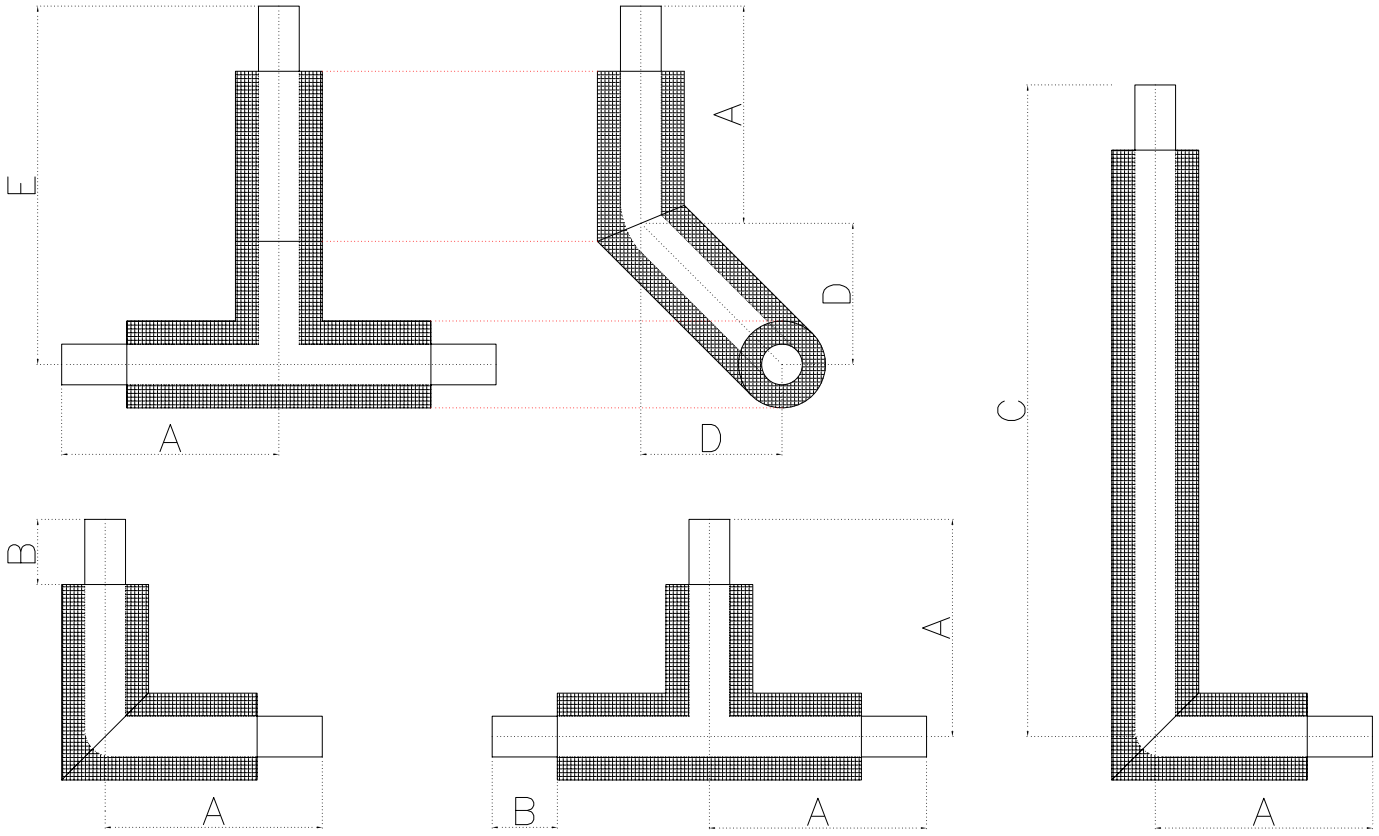
CROSSOVER TEE



BEND TEE RISER BEND

DIMENSIONS

A	2x Jacket OD + B
B	120mm
C	1200mm
D	Jacket OD +100mm
E	A + D

*Measurements are customisable.

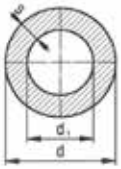
Dynatherm PP-RCT

PP-RCT Solid Wall Pipe - PN16

Code	OD	DN	s	d1	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	90	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: PN16
Identification	Green
Standard	DIN 8077/8078
Length	4 Mtr
Application	Cold Water, Potable Water, Mechanical Systems, Cold Reticulation



PP-RCT 'Climatec' Faser Pipe - PN16

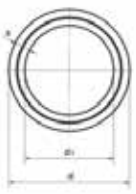
Code	OD	DN	s	d1	kg/m	SDR
D111-020	20	15	2.8	14.4	0.151	7.4
D111-025	25	20	3.5	18.0	0.232	7.4
D111-032	32	25	3.6	24.8	0.293	9
D111-040	40	32	3.7	32.6	0.439	11
D111-050	50	40	4.6	40.8	0.678	11
D111-063	63	50	5.8	51.4	0.996	11
D111-075	75	-	6.8	61.4	1.419	11
D111-090	90	65	8.2	73.6	2.039	11
D111-110	110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

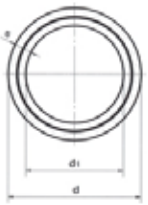
Code	OD	DN	s	d1	kg/m	SDR
D101-020	20	15	2.8	14.4	0.151	7.4
D101-025	25	20	3.5	18.0	0.232	7.4
D101-032	32	25	3.6	24.8	0.340	9
D101-040	40	32	4.5	31.0	0.513	9
D101-050	50	40	5.6	38.4	0.746	9
D101-063	63	50	7.1	48.8	1.244	9
D101-075	75	-	8.4	58.2	1.700	9
D101-090	90	65	10.1	69.8	2.450	9
D101-110	110	80	12.3	85.4	3.647	9
D101-125	125	100	14	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 Mechancial 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

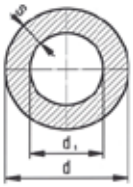
Description	
Material	PP-RCT
Type	PP-RCT with Faser Composite
Pressure Rating	PN 16
Identification	Green with 4 grey stripes
Standard	DIN 8077/8078
Length	4 Mtr
Application	Potable Water Hot and Cold Water Services Mechanical services, Hot and Cold, Clean Compressed Air



PP-RCT Lilac Faser Pipe - PN16

Code	OD	DN	s	d1	kg/m	SDR
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 20
	SDR11: PN16
Identification	Lilac Coloured
Standard	DIN 8077/8078
Length	4 Mtr
Application	Recycled Water Systems



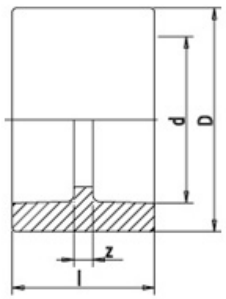
PP-RCT Black Uv Faser Pipe - PN16

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

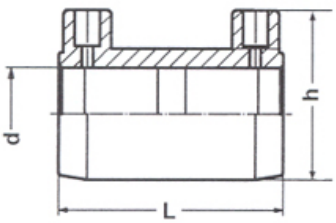
Code	d	D	l	z
D201-0016	16	23	31	5
DCT201-0020	20	29	34	5
DCT201-0025	25	34	37	5
DCT201-0032	32	43	41	5
DCT201-0040	40	52	46	5
DCT201-0050	50	65	52	5
DCT201-0063	63	84	60	5
DCT201-0075	75	99	65	5
DCT201-0090	90	120	76	10
DCT201-0110	110	148	80	6
DCT201-0125	125	165	90	10



Electrofusion Coupler

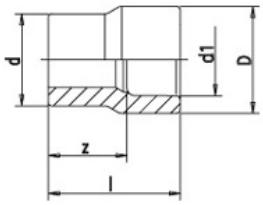
Code	d	h	L
DCT202-0020	20	52	70
DCT202-0025	25	57	70
DCT202-0032	32	65	70
DCT202-0040	40	75	85
DCT202-0050	50	86	87
DCT202-0063	63	100	97
DCT202-0075	75	114	120
DCT202-0090	90	130	147
DCT202-0110	110	144	157
DCT202-0125	125	167	165

Code	d	h	L
DCT203-0160	20	52	70
DCT203-0200	25	57	70
DCT203-0250	32	65	70
DCT203-0315	40	75	85
DCT203-0355	50	86	87
DCT203-0400	63	100	97
DCT203-0450	75	114	120
DCT203-0500	90	130	147



Reducer

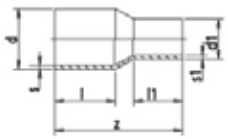
Code	d	d1	D	l	z
D206-002016	20	16	23	33	20
D206-002516	25	16	23	32	19
DCT206-002520	25	20	29	36	22
DCT206-003220	32	20	29	37	23
DCT206-003225	32	25	34	39	23
DCT206-004020	40	20	34	43	28
DCT206-004025	40	25	34	43	27
DCT206-004032	40	32	43	45	27
DCT206-005020	50	20	43	51	36
DCT206-005025	50	25	43	51	35
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

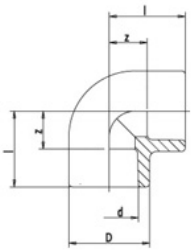
Code	d	d1	s	s1	l	l1	z	SDR
DCT207-125110	125	110	14	12.3	100	85	225	9
DCT207-160110	160	110	14.6	10	110	93	255	11
DCT207-160125	160	125	14.6	11.4	113	95	260	11
DCT207-200160	200	160	18.2	14.6	142	117	303	11
DCT207-250160	250	160	22.7	14.6	138	111	339	11
DCT207-315250	315	250	28.6	22.7	160	145	400	11

Larger sizes available on request



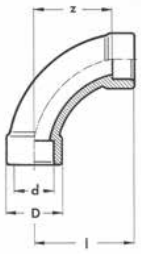
90° Elbow

Code	d	d1	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



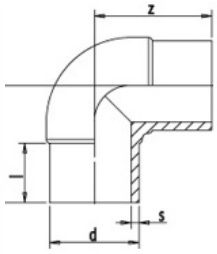
90° Long Radius Bend

Code	d	d1	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



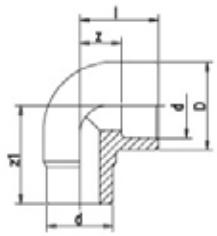
90° Spigot Elbow

Code	d	d1	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



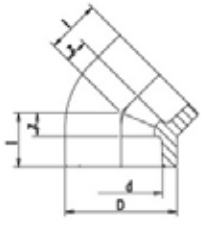
90° M/F Elbow

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



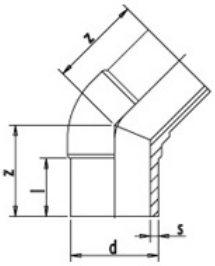
45° Elbow

Code	d	d1	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



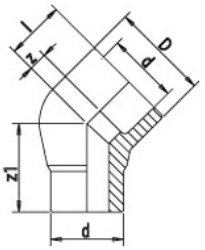
45° Spigot Elbow

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
DCT212-0500	500	45.4	222	562



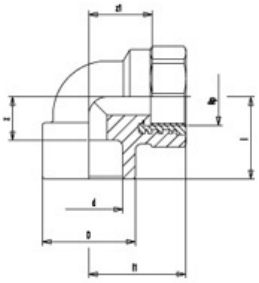
45° M/F Elbow

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



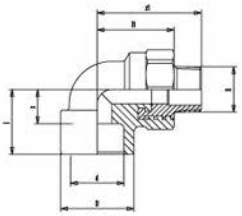
90° Female Thread Elbow

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

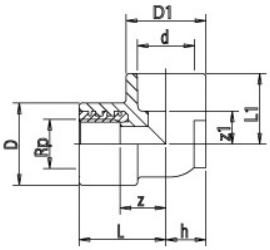
Code	d – R	D	l	l1	z	z1	SW
DCT224-2015	20–1/2	29	28	34	14	49	36
DCT224-2515	25–1/2	34	32	36	16	53	36



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

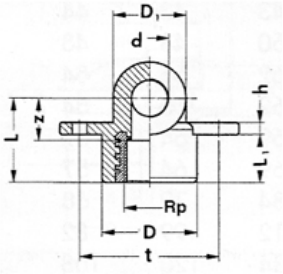
t* = Distance of mounting holes



90° Female Elbow For Hollow Wall

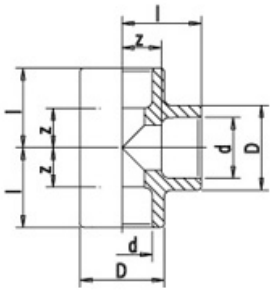
Code	d - Rp	D	D1	z	L1	L1	t*	h
DCT226-2015	20–1/2	35	29	21	35	11	59	5

t* = Distance of mounting holes



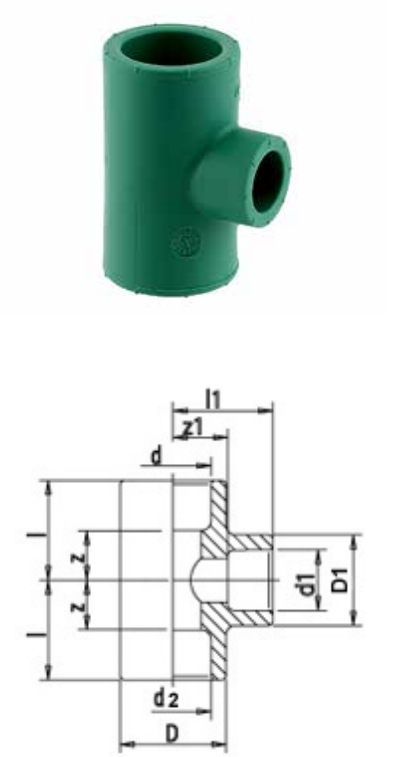
Equal Tee

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



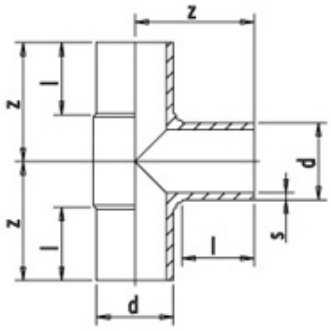
Reducing Tee

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



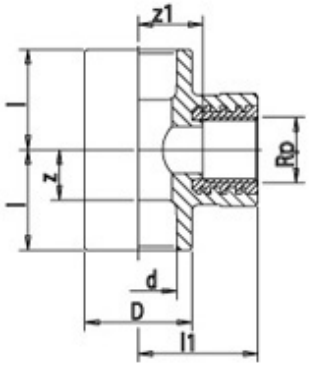
Spigot Reducing Tee

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	222	93	212	197

Larger sizes available on request

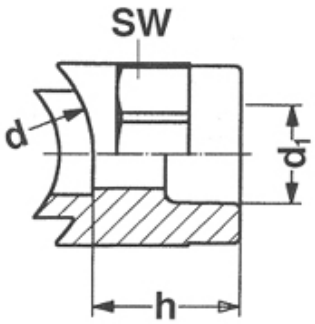
Female Thread Tee

Code	d – R	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



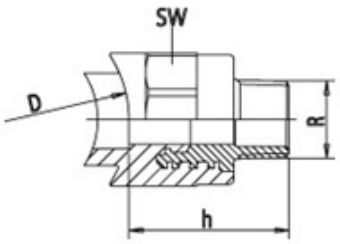
Weld-In Saddle

Code	D/Pipe x d	D2	di	H	SW
DCT250-1150	110/125-50mm	50	40	45	85
DCT250-1163	110/125-63mm	63	40	45	85
DCT250-1263	120/125-63mm	63	40	45	85
DCT250-1620	160/250-20mm	25	15	29	39
DCT250-1625	160/250-25mm	25	15	29	39
DCT250-1632	160/250-32mm	32	20.5	35	51
DCT250-1640	160/250-40mm	40	20.5	38	63
DCT250-1650	160/250-50mm	50	32	39	70
DCT250-1663	160/250-63mm	63	40	45	85
DCT250-3632	315/630-32mm	32	20.5	35	51
DCT250-3640	315/630-40mm	40	20.5	39	63
DCT250-3650	315/630-50mm	50	32	39	70
DCT250-3663	315/630-63mm	63	40	45	85
DCT250-4520	40/50-20mm	25	15	29	38
DCT250-4525	40/50-25mm	25	15	29	38
DCT250-6120	63/125-20mm	25	15	29	38
DCT250-6125	63/125-25mm	25	15	29	38
DCT250-6132	63/125-32mm	32	20.5	35	51
DCT250-7120	75/125-20mm	25	20.5	39	63
DCT250-7125	75/125-25mm	25	20.5	39	63
DCT250-7132	75/125-32mm	32	20.5	39	63
DCT250-7140	75/125-40mm	40	20.5	39	63
DCT250-9150	90/125-50mm	50	32	39	70



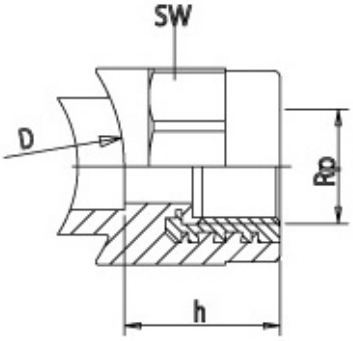
Weld-In Saddle With Male Thread

Code	D/Pipe x R	D2	di	H	SW
DCT254-1140	110/125mm-1"	63	40	68	85
DCT254-1150	110-125-2"	63	40	68	85
DCT254-1615	160/250-1/2"	25	15	42	38
DCT254-1620	160/250-3/4"	32	20,5	49	51
DCT254-1625	160/250-1"	40	25,5	54	63
DCT254-1632	160/250-1 1/4"	50	32	59	70
DCT254-1640	160/250-1 1/2"	50	34	59	70
DCT254-1650	160/250-2"	63	40	68	85
DCT254-3620	315/630-3/4"	32	20,5	49	51
DCT254-3625	315/630-1"	40	20,5	54	63
DCT254-3632	315/630-1 1/4"	50	32	59	70
DCT254-3650	315/630-2"	63	40	68	85
DCT254-4515	40/63-1/2"	25	15	42	38
DCT254-6115	63/125-1/2"	25	15	42	38
DCT254-6120	63/125-3/4"	32	20,5	49	51
DCT254-7125	75/125-1"	40	20,5	54	63
DCT254-9132	90/125-1 1/4"	50	32	59	70
DCT254-9140	90/125-1 1/2"	50	34	59	70



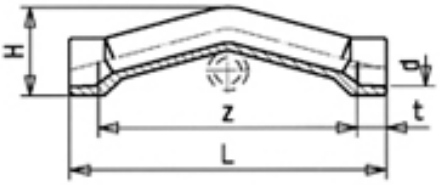
Brass Female Thread Adaptor

Code	D/Pipe x R	D2	di	H	SW
DCT257-1150	110-125mm-2"	63	40	45	85
DCT257-1615	160/250-1/2"	25	15	29	38
DCT257-1620	160/250-3/4"	32	20.5	36	51
DCT257-1625	160/250mm-1"	40	25.5	38	63
DCT257-1632	160/250mm-1 1/4"	50	32	39	70
DCT257-1640	160/250mm-1 1/2"	50	34	39	70
DCT257-1650	160/250mm-2"	63	34	35	85
DCT257-3620	315/630mm-3/4"	32	40	38	51
DCT257-3625	315/630mm-1"	40	20.5	39	63
DCT257-3632	315/630mm-1 1/4"	50	25.5	32	70
DCT257-3640	315/630mm-1 1/2"	50	34	34	70
DCT257-3650	315/630mm-2"	63	40	45	85
DCT257-4515	40/50mm-1/2"	25	15	29	38
DCT257-4520	40/50mm-3/4"	25	15	29	38
DCT257-4525	40/50mm-1"	25	15	29	38
DCT257-4620	40/63mm-3/4"	25	15	29	38
DCT257-6115	63/125mm-1/2"	25	15	29	38
DCT257-6120	63/125mm-3/4"	32	20.5	35	51
DCT257-7125	75/125mm-1"	40	20.5	38	63
DCT257-7132	90/125mm-1 1/4"	50	32	39	70
DCT257-7140	75/125mm-1 1/2"	50	34	39	70



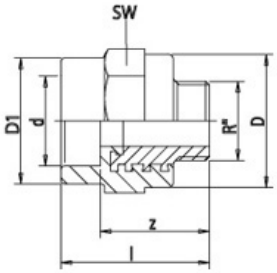
Crossover Connection

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



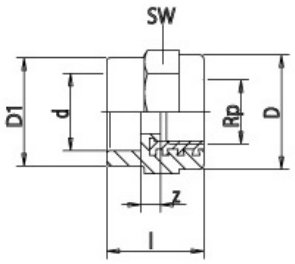
Plastic Male Thread

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**

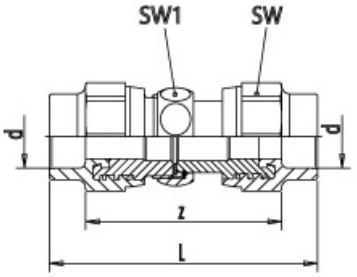
Brass Female Thread Adaptor

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



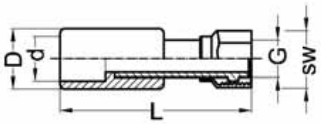
Union Complete (PP-R)

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



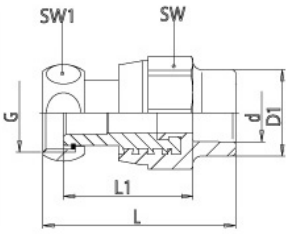
Crox Fitting (PP-R)

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



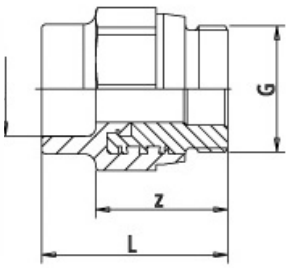
Female Union Adaptor (PP-R)

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 11/4	43	80	53	51	46
D281-4032	40–1 1/4	G 11/4	55	86	56	63	46
D281-4040	40–1 1/2	G 11/2	52	90	58	63	52



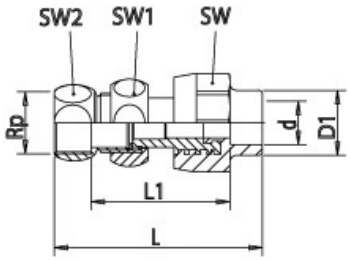
Male Union Adaptor (PP-R)

Code	d	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



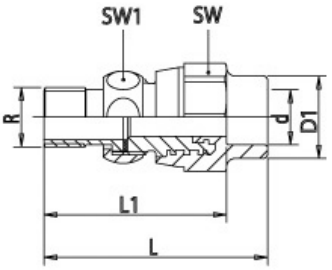
Union To Female Thread Adaptor

Code	d – Rp	Nut Thread	D1	L	L1	SW	SW1	SW2
D283-1615	16–1/2	G ¾	29	85	58	36	30	27
DCT283-2015	20–1/2	G ¾	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 ¾	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 ¼	43	103	67	51	46	44
DCT283-4032	40–1 1/4	G 1 ½	52	115	77	63	52	50
DCT283-5040	50–1 1/2	G 1 ¾	64	126	85	70	59	55
DCT283-6350	63–2	G 2 ⅜	79	142	91	85	74	70
DCT283-7565	75–2 1/2	G 2 ¾	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	G¾	29	79	66	36	30
DCT284-2015	20–1/2	G¾	29	79	65	36	30
DCT284-2020	20–3/4	G 1	29	86	72	44	37
DCT284-2515	25–1/2	G ¾	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 ¼	43	98	80	51	46
DCT284-4032	40–1 1/4	G 1 ½	52	113	92	63	52
DCT284-5040	50–1 1/2	G 1 ¾	64	119	96	70	59
DCT284-6350	63–2	G 2 ⅜	79	137	109	85	74
DCT284-7565	75–2 1/2	G 2 ¾	99	175	145	113	90



S/S Male Union Adaptor

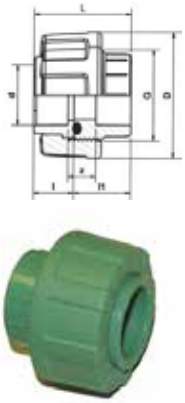
Code	d – R	DN	G	L	l	l1	z	SW	SW1
DCT285-2015	20–1/2	15	1	68	21	43	52	38	27
DCT285-2520	25–3/4	20	1 1/4	73	21	49	58	47	27
DCT285-3225	32–1	25	1 1/2	79	23	53	61	52	34
DCT285-4032	40–1 1/4	32	2	87	26	58	82	66	43
DCT285-5040	50–1 1/2	40	2 1/4	94	29	62	89	72	50
DCT285-6350	63–2	50	2 3/4	107	33	71	102	87	61

S/S Female Union Adaptor

Code	d – R	DN	G	L	l	l1	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

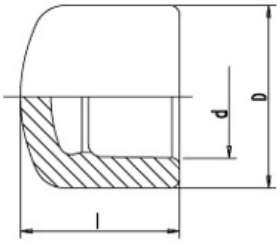
PP-RCT PN10 Socket Fusion Mac Union (Cold Water Only)

Code	d	DN	G	L	l	l1	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



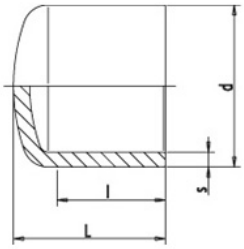
End Cap

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



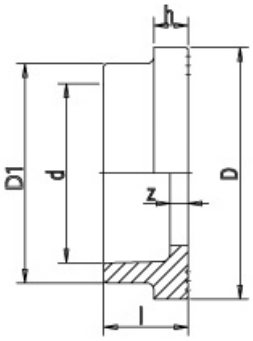
Spigot End Cap

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



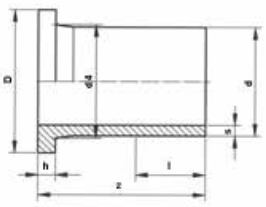
Stub Flange Adaptor

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



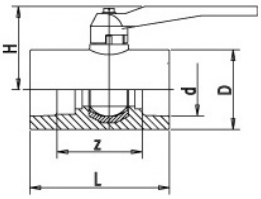
Spigot Stub Flange Adaptor

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



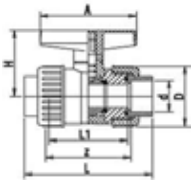
Ball Valve

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



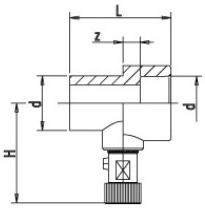
Union Ball Valve

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



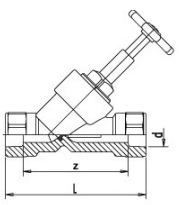
Drain Valve (PP-R)

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



Dynatherm Pipe Clips

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

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°C
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	Heating Time			Weld Together	
mm	@ 20°C amb.	> +5°C amb.	Weld in Saddles	Time	Cooling Time
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

Equipment & Tooling

Why buy from UPG?

- Technical assistance offered before sale and after sale.

- Free onsite team training with any butt welder puchase once machine is delivered.

- Stock of all critical components as spares in NZ.

- Servicing of all machines done here in NZ in our workshop. No requirement to send your machine offshore.

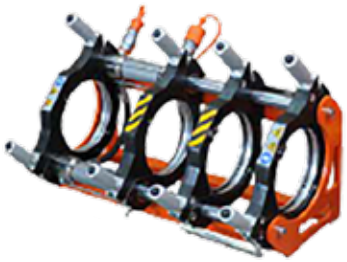
- Common stock items held in NZ.

Ritmo
PLASTIC WELDING TECHNOLOGY

ELECTROFUSION WELDERS

SOCKET FUSION WELDERS

BUTT WELDERS



PIPE ROLLERS

PIPE SCRAPERS

TURBO SCRAPERS

PIPE CUTTERS

RE-ROUNDERS

PIPE POSITIONING CLAMPS

SQUEEZE OFF TOOLS

DEBEADERS

ACCESSORIES

Consumables

Code	Description
9991-0001	Isopropyl Alcohol - 1 Litre
	Sold in packs of 6

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.

Pipe Cutters

UPG stocks a range of pipe shears to suit pipes up to 75mm.
The ratchet mechanism tensions to cut the PE wall gradually, giving a clean cut ready for electrofusion welding.

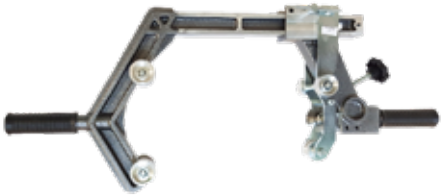
Code	Working range
9980-PC40	20-40mm

9980-PC75	25-75mm

Pipe Cutters

UPG stocks a range of pipe cutters to suit pipes from 25mm to 315mm.
Simple to use, the cutting bade is tensioned to slice the PE wall gradually as the tool is rotated around the pipe.

STANDARD COMPOSITION
- Pipe cutter with blade

Code	Working range	
9980-QRC50	Ø 6mm - 50mm	
9980-QRC63	Ø 25mm - 63mm	
9980-QRC110	Ø 50mm - 110mm	
9980-QRC160	Ø 110mm-160mm	
9980-98180000	Ø 180mm-315mm	

Electrofusion Pressure Welders

- The Ritmo Elektra range of welders are durable, lightweight machines incorporating a new air cooled power source which reduces weight and allows operators to perform multiple welds without overheating.
- Can weld all brands of fittings and comes with a laser barcode scanner and adaptor pins that can connect onto both 4mm and 4.7mm fitting pins. Doesn't only weld 1 brand like some units.
- "Defender" protection system against dust and rain complete with removable filter.
- In-built memory of 4000 welds. Downloadable weld reports via USB in PDF, CSV, BIN format.
- 2,4" LCD Graphic display.
- 90° universal connectors 4.0-4.7mm, no need for separate adapters pins.
- Laser scanner in order to read the EF fitting barcode and automatically set the welding parameters.
- In-built GPS device (on request).
- Carry case included.
- Very Lightweight due to the unique inverter technology! All units are under 9.5kg!

Elektra Light	Code: 9940-ELEKTRA LIGHT
Working range	20mm - 160mm
Barcode scanner (ISO 13950)	√
Memory	325 cycles
Connectors	√ 90° universal adapters 4.0 - 4.7mm
Power Supply	110 V or 230 V
Suggested Generator	3.5 - 4 kVA
Display	Single line LCD
Machine body dimensions	200 × 250 × 210mm
Weight machine + cables	~ 7 kg

Elektra M	Code: 9940-ELEKTRA M
Working range	20mm - 315mm
Barcode scanner (ISO 13950)	√
Memory	4000 cycles
Connectors	√ 90° universal adapters 4.0 - 4.7mm
Power Supply	110 V or 230 V
Suggested Generator	5.5 - 6 kVA
Display	Graphic LCD 2.4"
Machine body dimensions	246 × 390 × 240mm
Carrying case dimensions	290 × 445 × 295mm
Weight machine + cables	9.2 kg

Electrofusion Pressure Welders

Elektra XL	Code: 9940-ELEKTRA XL
Working range	20mm - 1600mm
Barcode scanner (ISO 13950)	√
Memory	4000 cycles
Connectors	√ 90° universal adapters 4.0 - 4.7mm
Power Supply	230 V
Suggested Generator	6.5 - 7 kVA
Display	Graphic LCD 2,4”
Machine body dimensions	246 × 390 × 240mm
Carrying case dimensions	290 × 445 × 295mm
Weight machine + cables	9.2 kg

Adaptor Pins

Code	Working range
01-01-199	Terminal Adaptor Pins 4.7mm Male x 4.0mm Female (Pair) - suits fittings with 4.0mm pins
01-01-116	Terminal Adaptor Pins 4.0mm Male x 4.7mm Female (Pair) - suits fittings with 4.7mm pins
01-01-179	Right Angle Terminal Adaptor 4.0-4.0mm (Pair) - suits fittings with 4.0mm pins

* Adaptor pins not required for Ritmo branded electrofusion welders

Standard Composition for all Elektra Welders

90° Universal connectors 4.0-4.7mm

Laser Scanner

Manual scraper

Carrying case

HDPE Drainage - Electrofusion Welders

This HDPE Drainge electrofusion machine is suitable for welding electrofusion fittings in HDPE from Ø 32 to Ø 160 mm (1" IPS - 5" IPS, for low pressure conduits (Vulcathene-Eurofusion, Akatherm-Eurofusion, Geberit, Valsir, Coes, Waviduo). MUSTANG 160 V2 automatically detects connection to the fitting to be welded and compensates current supplied according to ambient temperature. It is also capable of detecting any malfunction that could occur before or during welding procedures. MUSTANG 160 V2 is made in compliance with the current safety standards and Directives, and the structure is light weight which makes it extremely easy to carry around.

Mustang 160	Code: 9940-MUSTANG-160
Working range	32mm - 160mm
Connectors	√ 90° universal adapters
Power Supply	230 V
Machine body dimensions	65 × 185 × 46mm
Weight machine	1 kg
Weight machine + case	3.5 kg

HDPE Drainage - Butt Welders

HDPE Drainage Butt Welder 40-160mm

VR 160 JOYT is portable butt fusion welder for drainage pipes up to Ø 160 mm. This machine is characterized by the extractable heating plate, the safety microswitches on the milling cutter to avoid accidental starting, the articulated lateral supports. The VR 160 JOYT has steel box that can used either as a work bench or as a protection for transportation.

Available in two versions: one with a fixed mechanical thermostat (TF) and one with an adjustable electronic thermoregulator (TE).

VR 160	Code: 9990-VR160
Working range	40mm - 160mm
Materials	HDPE, PP, PB, PVDF
Max absorbed Powera	1950 W (110 V) 2250 W (230 V)
Power Supply	110 V Single Phase 50/60 Hz 230 V Single Phase 50/60 Hz
Machine body dimensions	1055 × 925 × 1235 mm
Weight	95 kg

HDPE Drainage Butt Welder 75-250mm

A professional welding machine ideal for medium sized pipes and sewers up to Ø 250 mm. It consists of a machine body with a pressure regulating device, a pair of clamps, two lateral supports, an electrically controlled milling cutter for levelling the ends of the pipe and/or fitting with a safety microswitch, an extractable heating plate with automatic device to control the temperature, a sliding support and a steel case that acts as a work bench and cover when transporting the machine. The VR 250 can weld fittings such as bends and tees. Branches can also be welded thanks to the upper extractable jaws (on request) called SUPRA.

VR 250	Code: 9990-VR250
Working range	75mm - 250mm
Materials	HDPE, PP, PB, PVDF
Max absorbed Powera	2200 W
Power Supply	230 V Single Phase 50/60 Hz
Machine body dimensions	835 × 1240 × 1530 mm
Weight	123 kg

Socket Fusion Welders

Manual socket fusion welders feature an aluminum heating plate and a practical, heat-insulated plastic handle.

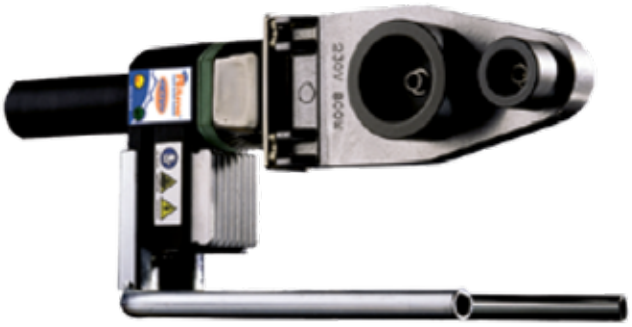
Supplied with:

- Carry case, fork support & allen key.
- The 20-63mm welder comes with all male/female mandrels to suit that size range.
- The 20-125mm welder supplied as the heating paddle only. The mandrels are purchased separately.

Spare or replacement mandrels from 20-125mm can be purchased separately.

Socket Fusion Welder up to 125mm with case	Code: 9930-10125/TFA
Working range	up to Ø 125mm
Power Supply	230 V - 10amp plug
Machine body dimensions	175 × 50 × 395mm
Weight	3.82 kg

Socket Fusion Welder up to 63mm with case	Code: 9930-1045/TFA
Working range	up to Ø 63mm
Power Supply	230 V - 10amp plug
Machine body dimensions	175 × 50 × 360mm
Weight	3.16 kg



Socket Fusion - Bench Welders

63-125mm PRISMA Socket Fusion Welder portable

The PRISMA JIG is a compact socket welding machine for HDPE, PP and PP-R, PVDF, PB OD 20* - 125 mm (standard composition steel clamps from Ø 63 to 125 mm; on request clamps from Ø 20 to 63 mm). The machine displays a steel frame that can be used as a support to the aligning body; the unit distinguishes itself by being able to work in tight spaces, after a swift releasing manoeuvre of the frame. Includes SF Welder.

63-125mm PRISMA Socket Fusion Welder	Code: 9930-6312 PRISMA
Working range	63mm - 125mm standard
Materials	HDPE, PP, PP-R, PB, PVDF
Total absorbed power	1400 W
Power Supply	110 V Single Phase 50/60 Hz 230 V Single Phase 50/60 Hz
Machine body and frame dimensions	400 × 337 × 382mm
Machine body weight	9.55 kg
Frame weight	2.5 kg
Socket welder weight	3.16 kg

25-125mm PRISMA Socket Fusion Welder with stand

This workshop/construction site welding machine is suitable for the socket fusion of pipes and fittings up to an OD of 125 mm, in accordance with the standards in force. The PRISMA 125 is composed of a machine body featuring a selector for the welding depths of the different diameters, four self-centering steel clamps for locking pipes and fittings (different brands), a self-centring socket welder with electronic temperature control, a device for the maximum heating depth, a sliding trolley, a tripod to support the pipe, a set of sockets and spigots for socket fusion from 63 to 125mm with steel case.

63-125mm PRISMA Socket Fusion Welder	Code: 9930-2512 PRISMA
Working range	63mm - 125mm standard
Materials	HDPE, PP, PP-R, PB, PVDF
Total absorbed power	1400 W
Power Supply	110 V Single Phase 50/60 Hz 230 V Single Phase 50/60 Hz
Dimensions machine working	1080 × 840 × 580 mm
Weight Prisma 125 only	100 kg

Socket Fusion Mandrels

Code	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

Code	SADDLE WELD IN MANDREL MAIN SIZE X OFFTAKE SIZE
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

Code	DRILL BIT FOR WELD IN SADDLES
D954-0025	20mm/25mm
D954-0032	32mm
D954-0040	40mm
D954-0050	50mm
D954-0063	63mm

Easy Life Automatic Butt Welders

EASYLIFE Automatic Butt Welders by Ritmo are world recognised for their ease of use and reliability suitable for welding pressure pipes for water, gas and other fluids. See the following pages for more information on the Easy Life operating system.

Features

- Machine body built with a supporting frame, four clamps and two hydraulic cylinders with fast non-drip coupling connections. It comes with the fast-locking-adapters system SMARTLocK patented by Ritmo.
- A Teflon-coated (PTFE) heating plate with a built-in independent thermometer to check the working temperature.
- An extractable electric milling cutter to face the heads of the pipes and/or fittings. It includes a safety micro-switch and a thermal circuit breaker.
- An electro-hydraulic gearcase protected from crashes and atmospheric corrosion by a plastic box. The electronic system guarantees the continuous repeat of the welding cycles and automatic control of the preset parameters, therefore the operator needs only to validate the welding phases.
- Easy Life is Wi-Fi ready and works together with the SET & GO PRO app. The user-friendly graphic display allows quick setting of desired parameters. The EASY LIFE system can store up to 4000 welding cycles and sum them up into a PDF file. This report can be transferred to a PC/laptop through a USB port and data-management software.

75 - 250mm Easylife Butt Welder	Code: 9900-0250E
Working range	75mm - 250mm
Memory	4000 cycles
Power Supply	230 V Single Phase 50/60 Hz Generator: 7 kva
Machine body dimensions	850 × 470 × 400mm
Machine body weight	63 kg

Standard Composition

Machine body | Detach device for heater | Gearcase | Heating plate | Milling cutter | Support

90 - 315mm Easylife Butt Welder	Code: 9900-0315E
Working range	90mm - 315mm
Memory	4000 cycles
Power Supply	230 V Single Phase 50/60 Hz Generator: 8.5kva
Machine body dimensions	981× 586 × 520mm
Machine body weight	86 kg

Standard Composition

Machine body | Detach device for heater | Gearcase | Heating plate | Milling cutter | Support

Easy Life Automatic Butt Welders

125-355mm Easylife Butt Welder	Code: 9900-0355E
Working range	125mm - 355mm
Memory	4000 cycles
Power Supply	230 V Single Phase 50/60 Hz Generator: 8.5kva
Machine body dimensions	1077 × 510 × 715mm
Machine body weight	100 kg

Standard Composition

Machine body | Detach device for heater | Gearcase | Heating plate | Milling cutter | Support

200-500mm Easylife Butt Welder	Code: 9900-0500E
Working range	200mm - 500mm
Memory	4000 cycles
Power Supply	230 V Single Phase 50/60 Hz Generator: 12kva
Machine body dimensions	1265 × 790 × 780mm
Machine body weight	230 kg

Standard Composition

Machine body | Detach device for heater | Gearcase | Heating plate | Milling cutter | Support

280-630mm Easylife Butt Welder	Code: 9900-0630E
Working range	280mm - 630mm
Memory	4000 cycles
Power Supply	230 V Three Phase 50/60 Hz Generator: 18kva
Machine body dimensions	1550 × 1010 × 1000mm
Machine body weight	415 kg

Standard Composition

Machine body | Detach device for heater | Gearcase | Heating plate | Milling cutter | Support

Additional Attachments/Tools

Tool for flange necks | Trolley for machine body | App "Set & Go Pro" | Electrical crane

Basic Butt Welder Range

Self-aligning manual operation hydraulic butt fusion machine range, suitable for welding under-pressure pipes for water, gas and other fluids for sizes from 40mm to 1600mm. Built according to the International standards (UNI 10565, ISO 12176-1)

40-160mm Basic Butt Welder	Code: 9900-0160B
Working range	40mm - 160mm
Materials	HDPE, PP, PP-R, PVDF
Power Supply	110 V Single Phase 50/60 Hz 230 V Single Phase 50/60 Hz
Machine body dimensions	606 × 365 × 375 mm
Machine body weight	32 Kg

Standard Composition

Machine body | Gearcase | Milling cutter | Support | Heating plate

75-250mm Basic Butt Welder	Code: 9900-0250B
Working range	75mm - 250mm
Materials	HDPE, PP, PP-R, PVDF
Power Supply	110 V Single Phase 50/60 Hz 230 V Single Phase 50/60 Hz
Machine body dimensions	850 × 470 × 400 mm
Machine body weight	63 Kg

Standard Composition

Machine body | Gearcase | Milling cutter | Support | Heating plate | Detach device for heater

90-315mm Basic Butt Welder	Code: 9900-0315B
Working range	90mm - 315mm
Materials	HDPE, PP, PP-R, PVDF
Power Supply	110 V Single Phase 50/60 Hz 230 V Single Phase 50/60 Hz
Machine body dimensions	981 × 586 × 520 mm
Machine body weight	86 Kg

Standard Composition

Machine body | Gearcase | Milling cutter | Support | Heating plate | Detach device for heater

Basic/Delta Butt Welder Range

125-355mm Basic Butt Welder	Code: 9900-0355B
Working range	125mm - 355mm
Materials	HDPE, PP, PP-R, PVDF
Power Supply	230V Single Phase 50/60 Hz
Machine body dimensions	1077 × 510 × 715 mm
Machine body weight	100 kg

Standard Composition


Machine body


Gearcase


Milling cutter


Support


Heating plate

200-500mm Delta Butt Welder	Code: 9900-0500D
Working range	200mm - 500mm
Materials	HDPE, PP, PP-R, PVDF
Power Supply	230V Single Phase 50/60 Hz 400V Three Phase 50/60 Hz
Machine body dimensions	1265 × 790 × 780 mm
Machine body weight	230 kg

Standard Composition


Machine body


Gearcase


Milling cutter


Support


Heating plate


Detach device for heater

280-630mm Delta Butt Welder	Code: 9900-0630D
Working range	280mm - 630mm
Materials	HDPE, PP, PP-R, PVDF
Power Supply	230V three phase 50/60 Hz 400V three phase 50/60 Hz
Machine body dimensions	1550 × 1010 × 1000 mm
Machine body weight	415 kg

Standard Composition


Machine body


Gearcase


Milling cutter


Support


Heating plate


Detach device for heater

Delta Butt Welder Range

500-800mm Delta Butt Welder	Code: 9900-0800D
Working range	500mm - 800mm
Materials	HDPE, PP, PVDF
Power Supply	400 V 3F+N+PE 50/60 Hz
Machine body dimensions	2100 × 1350 × 1300 mm
Machine body weight	821 kg

630-1000mm Delta Butt Welder	Code: 9900-1000D
Working range	630mm - 1000mm
Materials	HDPE, PP
Power Supply	400 V 3F+N+PE 50/60 Hz
Machine body dimensions	2386 × 1746 × 1711 mm
Machine body weight	2090 kg

710-1200mm Delta Butt Welder	Code: 9900-1200D
Working range	710mm - 1200mm
Materials	HDPE, PP
Power Supply	400V 3F+N+PE 50/60 Hz
Machine body dimensions	2465 × 1870 × 1900 mm
Machine body weight	2500 kg

Additional attachments


Rollers


Trolley for machine body (Available only in 630)


Trolley (Available only in 160, 250 & 315)


The INSPECTOR Data-logging


Tool for flange necks

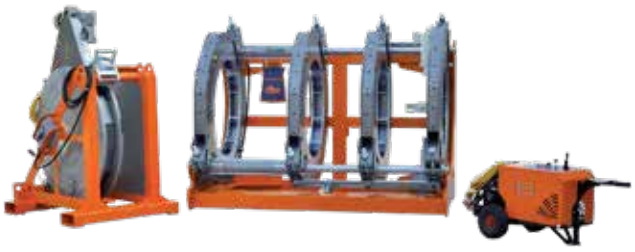

Top Clamp Short Elbows/Tee


Trolley


Electrical crane (Available only in 630)

Butt Welders

800-1600mm Delta Butt Welder	Code: 9900-1600D
Working range	800mm - 1600mm
Materials	HDPE, PP
Power Supply	400V 3F+N+PE 50/60 Hz
Machine body dimensions	3534 × 2236 × 2226 mm
Machine body weight	4100 kg



Want to look at a tracked unit or trailer machine? Contact UPG for more information

DELTA 500 ALL TERRAIN is powered by a low vibration diesel engine and equipped with front steering wheels and rear traction. The machine is suitable for welding pressure pipes (HDPE, PP) for the transportation of water, gas and other fluids up to Ø 500 mm (20 "IPS). Built according to the International standards ISO 21307 HIGH PRESSURE and ASTM F2620.

Delta 500 All Terrain	
Working range	200mm - 500mm
Materials	HDPE, PP
Power Supply	Self contained - diesel engine 230V Three Phase 50/60 Hz
Machine body dimensions	1822 × 1152 × 990 mm
Machine body weight	1350 kg

REMEDY 500 FA is an on-site welding machine equipped with a low-vibration diesel engine and tracks. The machine is suitable for welding pressure pipes (HDPE, PP) for the transportation of water, gas and other fluids up to Ø 500 mm. Built according to International Standards.

Remedy 500 FA	
Working range	250mm - 500mm
Materials	HDPE, PP
Power Supply	Self contained / independent Diesel - Kubota
Machine body dimensions	2818 × 2060 × 1349 mm
Machine body weight	2200 kg

Easy Life Concept By Ritmo

EASY LIKE PUSHING A BUTTON

This is the concept that developed the EASY LIFE welding system: “to simplify the work on the jobsite avoiding human mistakes”; this is the philosophy that it holds in its name “Style and Technology” by Ritmo. Easy Life is “Wi-Fi” ready and works together with the App “SET & GO - PRO”.

HOW DOES IT WORK

Hardware and software have been developed to interact to each other sharing data during the entire workflow. Once the welding parameters up, the system guarantees the repetition of the welding cycle, avoiding errors. The operator only has to confirm the work phases on the gear case when asked to, just pushing a button. Besides, during the “welding phase”, where sometimes some pressure adjustments are needed, the electronic system automatically solves this specific problem.

QUALITY IN WELDING

The Easy Life system incorporates a data-logging that saves the data in an internal hard-drive capable to store up to 4000 welds. Possibility to pre-set 50 customized welding cycles. Available through PDF reports, downloadable in a USB pen drive.

EXTREME RELIABILITY

Born in 2002, the EASY LIFE system is now on its fourth evolution.

HIGH QUALITY BUTT FUSION WELDING

"SET & GO PRO" a Professional application for smartphones and tablets(Android) that changes forever the way to work with the Ritmo Easy Life butt fusion machines.

"SET & GO PRO" Put together the ease of use, innovation and quality, in a system with the advantages of a CNC welding system, but reducing significantly the costs of it.

ADVANTAGES

It eliminates the expensive hardware of a data-logging and offers the highest quality at the lowest cost.

Google play

Download on the App Store

From APP STORE you can use only SET & GO

SET & GO PRO isn't available.

‘’SET & GO PRO’’ App

PLUS

EASY SETTING
WI-FI READY

GEOLOCATION
MAP

DATA-LOGGING
REPORT PDF

watch the video

HOW DOES IT WORK?

Set-up the easy life welding machine through your smart-phone/tablet with few and easy steps: choose the international welding standards (ISO, DVS, UNI, ASTM, etc.), pipe diameter and SDR.

With the GPS and smartphone scanner you can collect, transfer, and store information by project name. You can record the exact location of each pipe weld as well as the construction site, you can scan pipe and fitting barcodes, scan operator badge, and take a photo before and after the installation.

With a detailed report at the end of each weld you have all the technical data with exact graphs and parameters to compare against international welding standards and geolocation map. You can quickly share the welding reports in pdf format via email and whatsapp or save them to your phone or on a cloud archive.

Choose “SET & GO PRO” because safety and quality are part of your job!

Report by EASY LIFE

Report by
EASY LIFE + “SET & GO! PRO”

Rollers

UPG supplies a range of pipe rollers to support and guide PE pipe when butt-welding. All units are made from quality steel with durable roller assemblies. All components are galvanised to ensure long life out on site in all conditions.

400mm Pipe Roller	Code: 9950-UPR400G
Working range	63mm-400mm
Dimensions	360 × 220 × 200 mm
Weight	8 kg
Description	Can support pipes up to 400mm. Easy to use and light enough to move around on-site

1000mm Pipe Roller	Code: 9950-UPR1000G
Working range	315mm-1000mm
Dimensions	1040 × 600 × 320 mm
Weight	27 kg
Description	Can support pipes from up to 1000 mm. The structure is heavy duty and rollers are galvanised for long-life. Working range from 315 to 1000 mm.

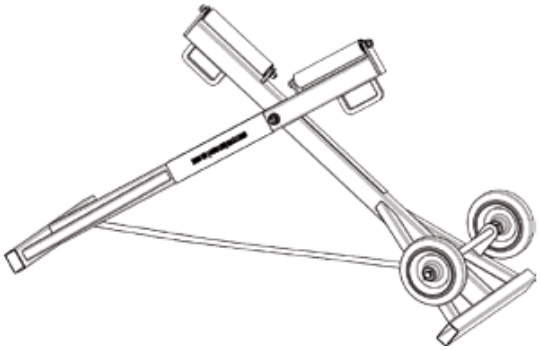
High Stand Rollers

High stand rollers are ideal for supporting the pipes while they are being butt welded, especially when welding in a trailer or elevated platform area. The rollers minimise pipe friction and drag force no matter the construction site conditions.

250mm High Stand Roller	Code: 9950-87568600
Working range	Up to 250mm
Dimensions	1150 × 500 × 756 mm
Weight	26 kg
Weight Capacity	500 Kg

355mm High Stand Roller	Code: 9950-87568601
Working range	Up to 355mm
Dimensions	1421 × 600 × 818 mm
Weight	33 kg
Weight Capacity	1000 Kg

630mm High Stand Roller	Code: 9950-87568602
Working range	Up to 630mm
Dimensions	1766 × 800 × 982 mm
Weight	55 kg
Weight Capacity	2000 Kg



1000mm High Stand Roller	Code: 9950-87568603
Working range	Up to 1000mm
Weight	140 kg
Weight Capacity	3000 Kg

Turbo Scrapers - Drill Operated

Turbo Scrapers are patented by Ritmo for pipes and fittings ranging from Ø 20 to 125mm and from ½" CTS to 2" IPS". Simple and easy to use, these pipe scrapers can work in confined spaces substantially reducing working times, especially during repair operations. The rotating tool allows fast and precise scraping, without defects.

20-63mm scrapers are made from aluminium and have a facing blade to square pipe ends which have been roughly cut. The body of 75-125mm scrapers are made from plastic to reduce weight.

Fifteen different sizes of the Turbo Scrapers are available, according to the pipe size (metric or inch). Turbo Scrapers can be used with any drill.

Metric Model

CODE	SIZE	FACING
9970-0020 T	20 mm	Y
9970-0025 T	25 mm	Y
9970-0032 T	32 mm	Y
9970-0040 T	40 mm	Y
9970-0050 T	50 mm	Y
9970-0063 T	63 mm	Y
9970-0075 T	75 mm	N
9970-0090 T	90 mm	N
9970-0110 T	110 mm	N
9970-0125 T	125 mm	N

Inch Model - Gas Pipe

CODE	SIZE (Inch)	FACING
9970-0015 IPS	½"	Y
9970-0025 IPS	1"	Y
9970-0032 IPS	1 ¼"	Y
9970-0050 IPS	2"	Y

original

step 1 - facing

step 2 - scraping

Watch the video

Transport box available

P 0800 473 100

Rotary Pipe Scrapers

The RTC 315 will scrape PE pipe and fittings ranging from 75mm-315mm. The unique adjustable centering mechanism means that the rotation is central to the pipe, ensuring a consistent scrape depth. Inserts suit pipes with internal diameters of 58mm-300mm.

Supplied with:

- Inserts to accommodate all pipe sizes from 75mm-315mm.
- Spare blade.
- Aluminium carry case.

RTC 315 Scraper	Code: 9970-0315R
Working range	75mm-315mm
Max scraping length	137mm
Max Dimensions	510 × 310 × 410mm
Weight	5.5 kg

The RTC 500 will scrape PE pipe and fittings ranging from 180mm-500mm. Featuring a MAXI scrape depth of 465mm, the RTC500 can scrape the pipe to allow for slip coupler applications. Suits pipe fittings with internal diameters of 110mm-485mm.

Supplied with:

- Inserts to accommodate all pipe sizes from 180mm-500mm.
- Spare blade.
- Aluminium carry case.

RTC 500 Scraper	Code: 9970-0500R
Working range	180mm-500mm
Max scraping length	465mm
Max Dimensions	595 × 272 × 190mm
Weight	14 kg

Rotary Pipe Scrapers

The RTC 710 will scrape PE pipe and fittings ranging from 355mm-710mm. The main chuck has four extendable arms that clamps directly to the inside diameter of the pipe. Can scrape pipes with internal diameters of 290mm-675mm.

RTC 710 Scraper	Code: 9970-0710R
Working range	355mm-710mm
Max scraping length	530mm
Max Dimensions	825 × 805 × 695mm
Weight	16 kg

The PS range of scrapers feature expanding arms which hold the scraper central to the pipe ensuring a smooth and consistent removal of the oxidised PE layer. Doesn't require inserts.

PS 180 Scraper	Code: 9970-0180PS
Working range	75mm-200mm
Max scraping length	129mm
Max Dimensions	595 × 272 × 190mm
Weight	2.8 kg

PS 400 Scraper	Code: 9970-0400PS
Working range	160mm-400mm
Max Dimensions	790 × 400 × 400mm
Weight	5.5 kg

Saddle Scrapers

The PatchMaster Mono scrapers are an easy solution for removing the outer oxidised layer of PE pipe to prepare for welding on an electrofusion tapping or branch saddle. The scraper is hinged and once locked onto the pipe, the tool rotates around the circumference on bearings.

PatchMaster Mono are size specific. The low profile & lightweight composition makes them ideal for use in tight spaces.

All units have long-life blades.

Code	Description
9970-0063	63mm PatchMaster Saddle Scraper with case
9970-0075	75mm PatchMaster Saddl e Scraper with case
9970-0090	90mm PatchMaster Saddle Scraper with case
9970-0110	110mm PatchMaster Saddle Scraper with case
9970-0125	125mm PatchMaster Saddle Scraper with case
9970-0160	160mm PatchMaster Saddle Scraper with case
9970-0180	180mm PatchMaster Saddle Scraper with case
9970-0200	200mm PatchMaster Saddle Scraper with case
9970-0225	225mm PatchMaster Saddle Scraper with case
9970-0250	250mm PatchMaster Saddle Scraper with case
9970-0280	280mm PatchMaster Saddle Scraper with case
9970-0315	315mm PatchMaster Saddle Scraper with case

Chain Scraper

The roatary chain scraper offers an easy solution for removing the outer oxidised layer of large bore PE pipe to prepare for welding on an electrofusion tapping or branch saddle.

With multiple chain links able to be added for larger pipe, the tool rotates around the circumference on bearings.

Code	Description
9970-2580	250-800mm Rotary Chain Link Scraper with case and spare blades

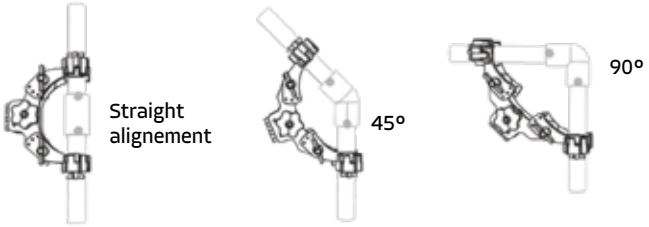
Pipe Positioning Clamps

Kela is a universal and compact aligner suitable for plastic pipes, fittings and electrofusion saddles. Thanks to its particular clamp design, it is possible to align pipes and fittings in a straight position or at 45° and 90°.

Kela is equipped with two plates: a wide and a narrow one, to be used according to the application. The wide plates are used for the straight alignment and give a better grip and positioning, while the narrow plates are designed to make Kela more compact and therefore easier to use in the 45° and 90° application, as well as in narrow working conditions or electrofusion saddles welding. Comes with carry case.

Kela Positioning Clamp	Code: 9960-1663R
Working range	Metrical: 16mm - 63 mm
Type of alignment	Straight, 45°, 90°
Max Dimensions	298 × 126 × 153mm
Weight	1.4 kg

Working combinations



The Aligner Eco will align and support pipes from 63-180mm to facilitate welding of electrofusion couplers, 45° and 90° bends.

Made of steel and featuring a central adjustable pivot, the joint can be set in 4 different positions to allow welding at preset angles. The supports are 'V' shaped keeping the pipes aligned in the centre via the fastening belts.

3 axis version available if required for welding tees.

Comes with carry case.

Aligner Eco Positioning Clamp	Code: 9960-6318R
Working range	63mm - 180mm
Type of alignment	Couplers, 45°, 90° Bends.
Max Dimensions	915 × 140 × 130mm
Weight	7.5 kg

Pipe Positioning Clamps

63mm Positioning Clamp	Code: 9960-2063
Working range	20mm - 63mm
Max Dimensions	600 × 160 × 116mm
Weight	3.9 kg

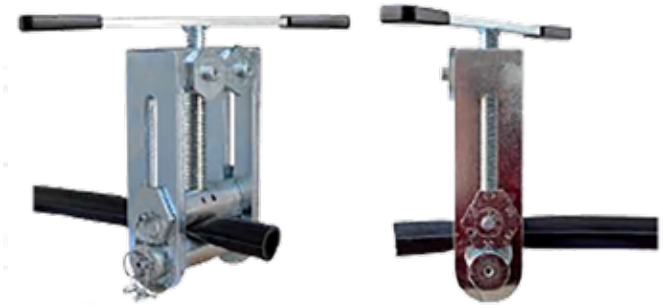
63mm Positioning Clamp	Code: 9960-0063
Working range	20mm - 63mm
Max Dimensions	640 × 120 × 83mm
Weight	3 kg

500mm Positioning Clamp	Code: 9960-0500
Working range	125mm - 500mm
Max Dimensions	2 axes 15 × 140 × 130mm 3 axes 915 × 575 × 130mm
Weight	2 axes 7.5 Kg 3 axes 10 Kg

Squeeze Off Tools

The 63mm squeeze off tool can be used on SDR11-17 PE ranging from 20-63mm. Once the pipe is inserted, the bottom bar is fixed in position by a shackle and the depth set on the top bar to ensure pipe is not 'oversqueezed'.

63mm Squeeze Off Tool	Code: 9974-1663R
Working range	20mm - 63mm
Operation	Manual
Dimensions	325 × 70 × 330mm
Weight	5.3 kg

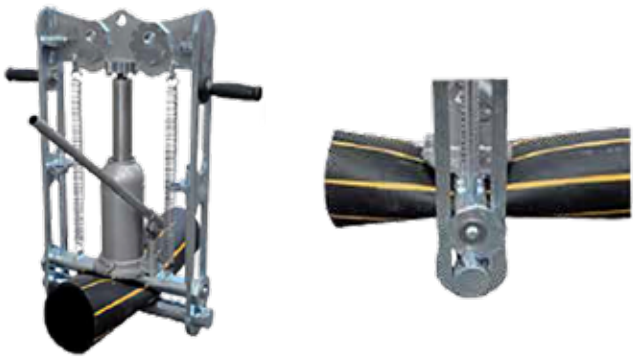


The 63-200mm squeeze off tool is used to stop the flow of gas or water through HDPE pipelines from 63-200 mm, SDR11 - SDR17. Operated via a hydraulic pump and lever.

Easy to transport thanks to two handles and its steel frame. It is equipped with two metallic rods for safety protection in case of pressure losses or accidental impacts. The standard configuration of the

This tool includes the stoppers for SDR11 and SDR17 to set according to the pipes diameter.

200mm Squeeze Off Tool	Code: 9974-6320R
Working range	63mm - 200mm
Operation	Hydraulic
Dimensions	476 × 165 × 722mm
Weight	45 kg



Pipe Re-rounding Clamps

Manual clamps for re-rounding oval PE pipe to facilitate electrofusion welding. Simple and durable design, made from coated steel with heavy duty threaded rods/nuts.

Each re-rounding set supplied with a steel transport box.

For model 450 - 560 and 630 - 800 steel case, these have wheels on the case for easy transport.

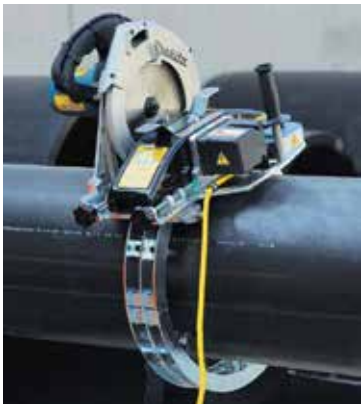
400mm Rerounding Clamps	Code: 9962-REROUND/250-400
Working range	250mm - 400mm
Dimensions	610 × 255 × 120mm
Weight	27 kg

560mm Rerounding Clamps	Code: 9962-REROUND/450-560
Working range	450mm - 560mm
Dimensions	980 × 495 × 200mm
Weight	41 kg

800mm Rerounding Clamps	Code: 9962-REROUND/630-800
Working range	630mm - 800mm
Dimensions	1240 × 555 × 200mm
Weight	60 kg

Top Gear 630 Electric Cutter

FAST, PRODUCTIVITY!



TOPGEAR 630 is the perfect solution to jobsite plastic pipe cutting difficulties, where while safety remains one of the most important points, the cutting time is a key factor for productivity. With the aim of combining these two aspects Ritmo developed an innovative portable pipe saw for jobsite pipe cutting. Whatever the job-site conditions are and wherever the pipe is located, TOPGEAR 630 can be set up for the cutting process and operated in an easy and quick way, ensuring a significative reduction of both preparation and cutting time. Thanks to its clamps which are fastened around the pipe and on which the band-saw moves in a stable and safe way, the cut results accurate and straight even on ovalized pipes. TOPGEAR 630 is available in 115 V at 50 or 60 Hz and in 230V at 50 Hz. According to the chosen clamp configuration, it is possible to cut pipes with a diameter from 250 to 630 mm; IPS pipes from Ø 10" to 24" and DIPS ones from Ø 8" to 20". Wherever a pipe has to be cut, TOPGEAR saw is ready!

CUT PRECISION

SAFETY CONDITIONS

USER FRIENDLY

OVALISED PIPE CUTTING

CUTTING CAPACITY
(PIPE WALL THICKNESS UP TO 80 mm)

PRECISION, SAVE TIME

The saw orbital automatic movement is managed at a distance by the operator thanks to a joystick.

Intuitive and easy working range adjustment.
The cutting process is performed directly at the jobsite after mounting the needed clamps according to the pipe diameter.

TOPGEAR 630 ADVANTAGES
- Butt welding: facing time reduction; less milling cutter blade wearing
- Electrofusion welding: immediately ready for welding, no need of additional cutting. significative time saving
- Ovalized pipes: TOPGEAR cuts within and beyond the tolerance established by the Reference Standard

CUTTING SPEED TEST

PE Pipe PE *
Ø 630 mm - Time: 2'35"
Ø 500 mm - Time: 2'20"
Ø 400 mm - Time: 1'45"
Ø 315 mm - Time: 1'30"
Ø 250 mm - Time: 1'12"
* SDR doesn't affect the cutting speed

TECHNICAL FEATURES

Minimum recommended generator power 6 Kw The given data is a minimum suggested power. The pipe saw good functioning depends on the sinusoidal wave stability, which may vary according to the generator brand and its technical characteristics

Metric - IPS – DIPS Clamps

Transportation case

Easy and light to carry (saw only)

Working range	250 - 630 mm; 10" - 24" IPS; 8" - 20" DIPS
Materials	PE, PP For other materials contact us
Maximum cut thickness	80 mm (3.15") - 230 V; 75 mm (2.95") - 115 V
Available Power temsions	230 V - 50 Hz; 115 V - 50 Hz; 115 V - 60 Hz
Nominal Power	2100 W
IP class	II

Blade diameter	270 mm (10.6") - 230 V; 260 mm (10.2") - 115 V
Blade speed (without pipe)	3800 rpm
Overall saw dimensions	380 × 577 × 569 mm; 15" x 22.7" x 22.4"
Saw weight	20 Kg (44 lb)
Transportation case dimensions	700 × 700 × 400 mm; 27.5" x 27.5" x 16"
Case weight	14,3 Kg (31.5 lb)

Debeaders

Code	Internal Debeading Kit
9985-01-07-530	Internal Debeading Kit 90-500mm with 6× 2m aluminium poles
9985-DEBEAD-110	Internal Debeader Cutting Shoe for 90-110mm
9985-DEBEAD-160	Internal Debeader Cutting Shoe for 125-160mm
9985-DEBEAD-200	Internal Debeader Cutting Shoe for 160-200mm
9985-DEBEAD-315	Internal Debeader Cutting Shoe for 225-315mm
9985-DEBEAD-500	Internal Debeader Cutting Shoe for 355-500mm

Note: larger head kits and replacement blades are available.

	External Debeader
9985-0520 E	63-125mm External Debeader
9985-0454 E	90-400mm External Debeader
9985-0504 E	355-630mm External Debeader
9985-0525 E	500-900mm External Debeader

Saddle Tools

Code	Description
9960-6350	Top Loading Clamp Strap Type 63-630mm For Tapping Saddles

9960-6312	Top Loading Clamp Adaptor Foot for 63/90/125mmBranch Saddle Offtakes

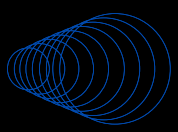
CUTKEY-12	12mm Tapping Key for Fusion EF Tapping Saddle
CS0007	Tapping Tee Key / Cutting Lever for GF Gas

Holesaws suitable for cutting the pipe after installing electrofusion branch saddles.
Enquire for other sizes or extended hole saws.

Accessories

Code	Description
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

PI TAPE	Pipe OD Measuring Tape (Pi) - 2metre



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