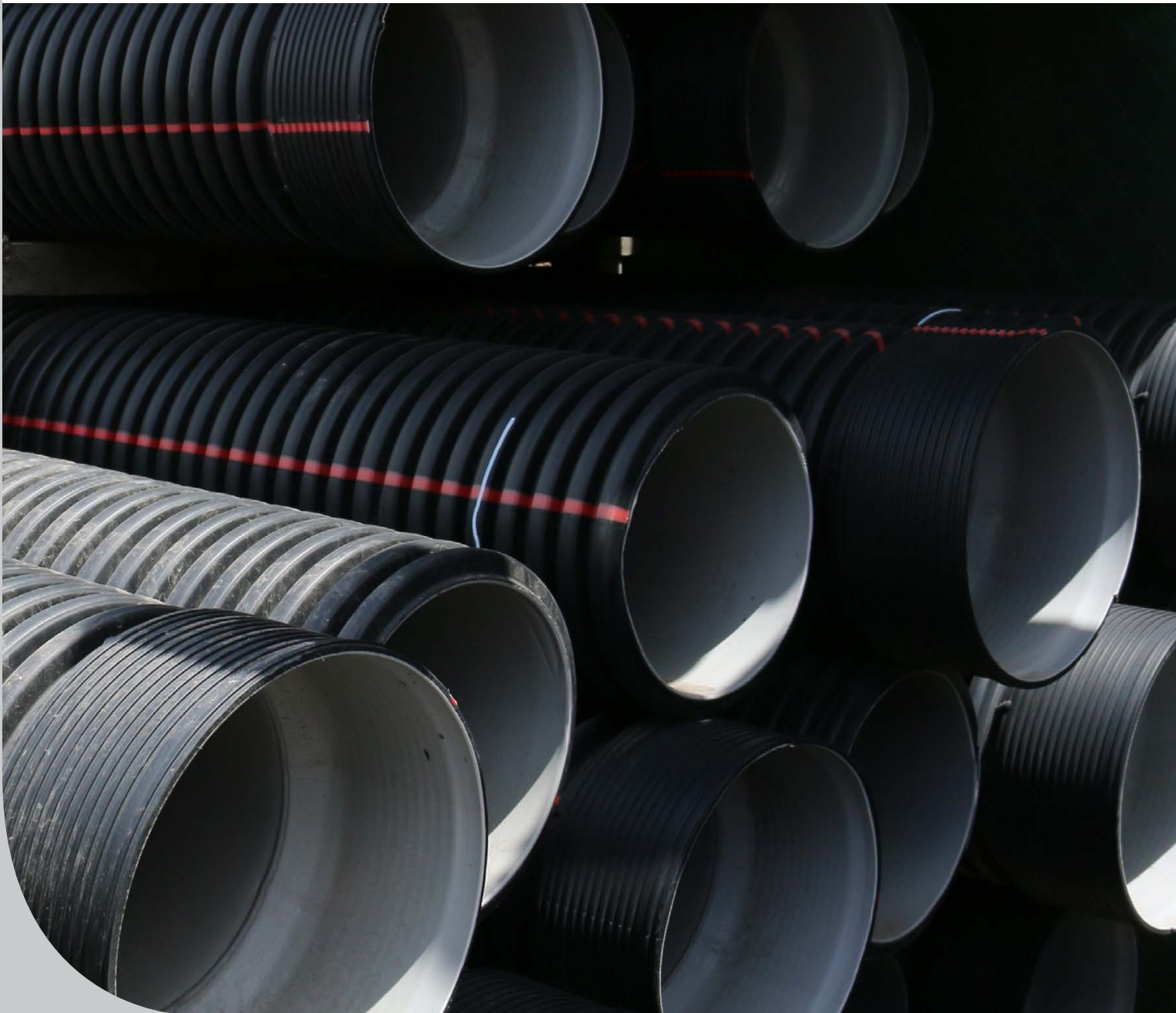


Storm & Waste Water

DRAINAGE PIPE

PRODUCT CATALOGUE

Issue: May 2017



www.watersandfarr.co.nz

0800 923 7473





ABOUT WATERS & FARR

Established in 1954, Waters & Farr is a leading manufacturer of polyethylene and polypropylene pipes for infrastructure and rural application.

Overview

Manufacturing plants in Whanganui and Rangiora supported by distribution centres in Auckland, Whanganui and Christchurch supply our merchant and utilities customers with product throughout New Zealand. Over three hundred merchant stockists ensure stock is readily available for contractors, farmers and other end users.

Waters & Farr is always looking to the future. Plant upgrades have seen modern extrusion lines installed with higher outputs, jacket and stripe capability, and a range extension to 1200 mm diameter.

Commitment to quality

- Waters & Farr maintain quality management system certification to ISO9001 standard.
- 'S' mark certification to AS/NZS 4130 and AS/NZS 5065 is maintained with a third party.
- Pipe Test NZ, a division of Waters & Farr, was established as an independent testing laboratory. It is accredited by IANZ to conduct tensile, pressure, reversion and joint testing for Waters & Farr, and third party pipe, electrofusion and butt weld testing.
- Waters & Farr follow founding policies that underpin commitment and performance outcomes to achieve our vision & values.

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DEFINITIONS

SDR

Standard Dimension Ratio - a nominal ratio of the plain wall pipe outside diameter to its wall thickness.

SN

Nominal Pipe Stiffness expressed in kN/m/m.

PN

Nominal working internal pressure at 20°C for a water conveying pipe expressed in bar.

PE

PE 80B and PE 100 compounds to AS/NZS 4131, and base resins used for their manufacture.

PP for CIVILBOSS

PP-B - block copolymer.

PRODUCT ATTRIBUTES

OF CORRECTLY DESIGNED AND INSTALLED POLYETHYLENE PIPE SYSTEMS USING WATERS & FARR PRODUCTS INCLUDE:

- Inert, corrosion free pipe material
- Low specific weight
- Low installation and maintenance costs
- Leak free welded construction
- Good resistance to impacts, ground movement
- High strength, durability and abrasion resistance
- Flexibility
- Long design life
- "Polyethylene pipe is widely recognized as having good seismically resilient properties, which is supported by its performance in the 2010/2011 Canterbury earthquakes and earthquakes around the world."

Source: Seismic performance of plastic pipe systems in 2010/11 Canterbury earthquakes by Bill Noell, Water Services Infrastructures Lead, Pattle Delamore Partners.

DIMENSIONS

OF POLYETHYLENE PLAIN WALL PIPES TO AS/NZS 5065

Nominal outside diameter (DN)	Mean outside diameter		Maximum out of roundness	SDR 26		SDR 21				SDR 17					
				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.
25	25.0	25.3	1.2	-	-	-	-	-	-	-	-	1.6	1.9	21.2	22.1
32	32.0	32.3	1.3	-	-	-	-	1.6	1.9	28.2	29.1	1.9	2.2	27.6	28.5
40	40.0	40.4	1.4	-	-	-	-	1.9	2.2	35.6	36.6	2.4	2.8	34.4	35.6
50	50.0	50.5	1.4	-	-	-	-	2.4	2.8	44.4	45.7	3.0	3.4	43.2	44.5
63	63.0	63.6	1.5	2.4	2.8	57.4	58.8	3.0	3.4	56.2	57.6	3.8	4.3	54.4	56.0
75	75.0	75.7	1.6	2.9	3.3	68.4	69.9	3.6	4.1	66.8	68.5	4.5	5.1	64.8	66.7
90	90.0	90.9	1.8	3.5	4.0	82.0	83.9	4.3	4.9	80.2	82.3	5.4	6.1	77.8	80.1
110	110.0	111.0	2.2	4.3	4.9	100.2	102.4	5.3	6.0	98.0	100.4	6.6	7.4	95.2	97.8
125	125.0	126.2	2.5	4.8	5.4	114.2	116.6	6.0	6.7	111.6	114.2	7.4	8.3	108.4	111.4
140	140.0	141.3	2.8	5.4	6.1	127.8	130.5	6.7	7.5	125.0	127.9	8.3	9.3	121.4	124.7
160	160.0	161.5	3.2	6.2	7.0	146.0	149.1	7.7	8.6	142.8	146.1	9.5	10.6	138.8	142.5
180	180.0	181.7	3.6	6.9	7.7	164.6	167.9	8.6	9.6	160.8	165.4	10.7	11.9	156.2	160.3
200	200.0	201.8	4.0	7.7	8.6	182.8	186.4	9.6	10.7	178.6	182.6	11.9	13.2	173.6	178.0
225	225.0	227.1	4.5	8.6	9.6	205.8	209.9	10.8	12.0	201.0	205.5	13.4	14.9	195.2	200.3
250	250.0	252.3	5.0	9.6	10.7	228.6	233.1	11.9	13.2	223.6	228.5	14.8	16.4	217.2	222.7
280	280.0	282.6	5.8	10.7	11.9	256.2	261.2	13.4	14.9	250.2	255.8	16.6	18.4	243.2	249.4
315	315.0	317.9	6.6	12.1	13.5	288.0	293.7	15.0	16.6	281.8	287.9	18.7	20.7	273.6	279.5
355	355.0	358.2	7.5	13.6	15.1	324.8	331.0	16.9	18.7	317.6	324.4	21.1	23.4	308.2	316.0
400	400.0	403.6	8.4	15.3	17.0	366.0	373.0	19.1	21.2	357.6	365.4	23.7	26.2	347.6	356.2
450	450.0	454.1	9.3	17.2	19.1	411.8	419.7	21.5	23.8	402.4	411.1	26.7	29.5	391.0	400.7
500	500.0	504.5	10.2	19.1	21.2	457.6	466.3	23.9	26.4	447.2	456.7	29.6	32.7	434.6	445.3
560	560.0	565.0	11.1	21.4	23.7	512.6	522.3	26.7	29.5	501.0	511.7	33.2	36.7	486.6	498.7
630	630.0	635.7	12.0	24.1	26.7	576.6	587.5	30.0	33.1	563.8	575.7	37.3	41.2	547.6	561.1
710	710.0	716.4	13.0	27.2	30.1	649.8	662.0	33.9	37.4	635.2	648.6	42.1	46.5	617.0	632.2
800	800.0	807.2	14.0	30.6	33.8	732.4	746.0	38.1	42.1	715.8	731.0	47.4	52.3	695.4	712.4
900	900.0	908.1	15.0	34.4	38.0	824.0	839.3	42.9	47.3	805.4	822.3	53.5	59.0	782.2	801.1
1000	1000.0	1009.0	16.0	38.2	42.2	915.6	932.6	47.7	52.6	894.8	913.6	59.3	65.4	869.2	890.4
1200	1200.0	1210.0	17.0	45.9	50.6	1098.8	1118.2	57.2	63.1	1073.8	1095.6	67.9	74.8	1050.4	1075.0

Note: dimensions are in mm

PIPES - DRAINAGE

BLACK PIPE LENGTHS/COILS - PN10 SDR17 PE100 TO AS/NZS 4130 (SN16)

- ▶ Drainage pipe is produced to standards AS/NZS 4130 or AS/NZS 5065 as appropriate
- ▶ Coloured Stripes and Jackets on request
- ▶ Plain wall and twin wall pipes to AS/NZS 4130 and AS/NZS 5065 are NZTA approved for culvert use
- ▶ Pipe is available as cut lengths, coils and on drums according to size and wall thickness
- ▶ Other pipe length on request

Item Code	Nom Size DN/OD (mm)	Min. Wall Thickness (mm)	Nom Bore (ID) (mm)	Length (m)
SH90.17	90	5.4	79.2	12,6
SH110.17	110	6.6	96.8	12,6
SH125.17	125	7.4	110.2	12,6
SH140.17	140	8.3	123.4	12,6
SH160.17	160	9.5	141.0	12,6
SH180.17	180	10.7	158.6	12,6
SH200.17	200	11.9	176.2	12,6
SH225.17	225	13.4	198.2	12,6
SH250.17	250	14.8	220.4	12,6
SH280.17	280	16.6	246.8	12,6
SH315.17	315	18.7	277.6	12
SH355.17	355	21.1	312.8	12
SH400.17	400	23.7	352.6	12
SH450.17	450	26.7	396.6	12
SH500.17	500	29.6	440.8	12
SH560.17	560	33.2	493.6	12
SH630.17	630	37.3	555.4	12
SH710.17	710	42.1	625.8	12
SH800.17	800	47.4	705.2	12
SH900.17	900	53.5	793.0	12
SH1000.17	1000	59.3	881.4	12
SH1200.17	1200	67.9	1064.2	12



Note: Full code includes pipe length. Example: SH160.17 pipe in 12 m length - code "SH160.17.12".

BLACK PIPE LENGTHS – PN8 SDR21 PE100 TO AS/NZS 4130 (SN8)

▶ Drainage pipe is produced to standards AS/NZS 4130 or AS/NZS 5065 as appropriate

▶ Plain wall and twin wall pipes to AS/NZS 4130 and AS/NZS 5065 are NZTA approved for culvert use

▶ Coloured Stripes and Jackets on request
▶ 6m and other pipe length on request

Item Code	Nom Size DN/OD (mm)	Min. Wall Thickness (mm)	Nom Bore (ID) (mm)	Length (m)
SH90.21	90	4.3	81.4	12
SH110.21	110	5.3	99.4	12
SH125.21	125	6.0	113.0	12
SH140.21	140	6.7	126.6	12
SH160.21	160	7.7	144.6	12
SH180.21	180	8.6	162.8	12
SH200.21	200	9.6	180.8	12
SH225.21	225	10.8	203.4	12
SH250.21	250	11.9	226.2	12
SH280.21	280	13.4	253.2	12
SH315.21	315	15.0	285.0	12
SH355.21	355	16.9	321.2	12
SH400.21	400	19.1	361.8	12
SH450.21	450	21.5	407.0	12
SH500.21	500	23.9	452.2	12
SH560.21	560	26.7	506.6	12
SH630.21	630	30.0	570.0	12
SH710.21	710	33.9	642.2	12
SH800.21	800	38.1	723.8	12
SH900.21	900	42.9	814.2	12
SH1000.21	1000	47.7	904.6	12
SH1200.21	1200	57.2	1085.6	12



Note: Full code includes pipe length. Example: SH160.21 pipe in 12 m length - code "SH160.21.12".

TERRACOTTA-BLACK JACKET PIPE LENGTHS – “VISION” SN16 SDR17 TO AS/NZS 5065

- ▶ Main layer - the base resin used to produce a PE100 compound conforming to AS/NZS4131, to which colour masterbatch is added; jacket - a PE100 black compound conforming to AS/NZS4131
- ▶ 6m and other pipe length on request
- ▶ Main layer of a different colour - on request
- ▶ Vision SN8 SDR21 pipe on request
- ▶ Plain wall and twin wall pipes to AS/NZS 5065 are NZTA approved for culvert use

Item Code	Nom Size DN/OD (mm)	Min. Wall Thickness (mm)	Nom Bore (ID) (mm)	Length (m)
VP110.17	110	6.6	96.8	12
VP125.17	125	7.4	110.2	12
VP140.17	140	8.3	123.0	12
VP160.17	160	9.5	140.6	12
VP180.17	180	10.7	158.2	12
VP200.17	200	11.9	175.8	12
VP250.17	250	14.8	219.9	12

Note: Full code includes pipe length. Example: VP160.17 pipe in 12 m length - code "VP160.17.12".



CIVILBOSS TWIN WALL PP PIPE TO AS/NZS 5065 - CIVIL SN16

- ▶ *A rubber ring is included with each pipe. Additional rings available on request

Item Code	Description	Weight (kg)
CIV225.16.6	225mm x 6m CIVILBOSS SN16 PP RED/GREY	21
CIV300.16.6	300mm x 6m CIVILBOSS SN16 PP RED/GREY	39
CIV375.16.6	375mm x 6m CIVILBOSS SN16 PP RED/GREY	60
CIV450.16.6	450mm x 6m CIVILBOSS SN16 PP RED/GREY	82



FARMBOSS TWIN WALL PE/PP PIPE TO AS/NZS 5065 - RURAL SN6

- ▶ Rubber sealing rings are not included with Farmboss pipe.
- ▶ Sealing Rings are available on request.

Item Code	Description	Pack Quantity
BP225RB	225(ID) x 6M	8
BP300RB	300(ID) x 6M	6
BP375RB	375(ID) x 6M	2
BP450RB	450(ID) x 6M	2















TRUCK CAPACITY PE100 PIPE FTL

Pipe Outside Diameter	Unit	kg / m (PN10)	Unit Weight (PN10)	Qty	Weight kg
*15	100m	0.076	7.6	250 coils	1,900
*20	100m	0.1119	11.19	250 coils	2,798
25	100m	0.124	12.4	250 coils	3,100
32	100m	0.186	18.6	250 coils	4,650
40	100m	0.295	29.5	125 coils	3,688
50	100m	0.454	45.4	125 coils	5,675
63	100m	0.724	72.4	125 coils	9,050
75	100m	1.021	102.1	20 coils	2,042
90	100m	1.469	146.9	20 coils	2,938
110	100m	2.185	218.5	20 coils	4,370
125	100m	2.788	278.8	20 coils	5,576
140	100m	3.499	349.9	20 coils	6,998
110	14m	2.185	30.6	324	9,911
125	14m	2.788	39.0	256	9,992
140	14m	3.499	49.0	196	9,601
160	14m	4.5677	63.9	144	9,208
180	14m	5.7783	80.9	121	9,788
200	14m	7.129	99.8	100	9,981
225	14m	9.0429	126.6	81	10,255
250	14m	11.0823	155.2	64	9,930
280	14m	13.923	194.9	56	10,916
315	14m	17.631	246.8	36	8,886
355	14m	22.4364	314.1	25	7,853
400	14m	28.357	397.0	25	9,925
450	14m	35.9287	503.0	16	8,048
500	14m	44.258	619.6	16	9,914
560	14m	55.6126	778.6	9	7,007
630	14m	70.2675	983.7	9	8,854
710	14m	89.3688	1251.2	4	5,005
800	14m	113.3218	1586.5	4	6,346
900	14m	143.8259	2013.6	4	8,054
1000	14m	177.1649	2480.3	4	9,921
1200	14m	243.9462	3415.2	1	3,415

Note:

* Weights for ND 15-20 are based on PN16. PN12

table is based on FTL with timber dunnage, adjustments may be required for Ferry, Curtainside trucks, where shipment height can exceed 2.2m or on private roads

Colour	Common Use
	Potable Water
	Electrical Conduit
	Gas PE100
	Gas PE 80
	Rural/Raw Water
	Reclaimed Water
	Pressure Sewer
	Communication
	Communication
	Fibre optic

This table is guide, refer AS/NZS 4130 as to correct RAL colour codes and stripe/jacket format for pressure pipes.

Waters and Farr is able to supply pipe either solid colour, or with a colour jacket or striped as per standard.

	kPa	m	bar	psi
SDR 41 - PN 4	400	40	4	58.0
SDR 33 - PN 5	500	50	5	72.5
SDR 26 - PN 6.3	630	63	6.3	91.4
SDR 21 - PN 8	800	80	8	116.0
SDR 18.78 - PN 9	900	90	9	130.5
SDR 17 - PN 10	1000	100	10	145.0
SDR 14.33 - PN 12	1200	120	12	174.0
SDR 13.6 - PN 12.5	1250	125	12.5	181.3
SDR 11 - PN 16	1600	160	16	232.0
SDR 9.89 - PN 18	1800	180	18	261.0
SDR 9 - PN 20	2000	200	20	290.0
SDR 7.4 - PN 25	2500	250	25	362.5

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