

HDPE Water Line

Model: SD-PEPW

SHIELD HDPE pipes and fittings are manufactured as per ISO Standards. Products are required to pass strict quality control procedures and are rigorously monitored throughout the production process, from the inspection of raw materials to the storage of the finished products, to ensure their compliance with relevant quality standards. Review of existing facilities and continual improvements is always a priority, parallel to the consistent production process.



Product Specifications:

Available Size	16mm - 2000mm
Material	High Density Polyethylene, Medium Density Polyethylene
Standard	ISO 4427, EN 12201
Application	Irrigation, Potable Water, Drainage, Horizontal Directional Drilling, Dewater
Approvals/Listings	 

HDPE Water Line

Product Dimensions:

HDPE SD-PEPW (PE100)

Pipe Sizes & Corresponding Wall Thickness at Different SDRs is as follows:

SDR	Outside Diameter		SDR 41		SDR 33		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9		SDR 7.4	
PN for PE 100			PN4		PN5		PN6		PN8		PN10		PN12.5		PN16		PN20		PN25	
Nominal Size L			Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness	
mm	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
16	16	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	2.3	2.3	2.7
20	20	20.3	-	-	-	-	-	-	-	-	-	-	-	-	2.0	2.3	2.3	2.7	3.0	3.4
25	25	25.3	-	-	-	-	-	-	-	-	-	-	2.0	2.3	2.3	2.7	3.0	3.4	3.5	4.0
32	32	32.3	-	-	-	-	-	-	-	-	2.0	2.3	2.4	2.8	3.0	3.4	3.6	4.1	4.4	5.0
40	40	40.4	-	-	-	-	-	-	2.0	2.3	2.4	2.8	3.0	3.5	3.7	4.2	4.5	5.1	5.5	6.2
50	50	50.4	-	-	-	-	2.0	2.3	2.4	2.8	3.0	3.4	3.7	4.2	4.6	5.2	5.6	6.3	6.9	7.7
63	63	63.4	-	-	-	-	2.5	2.9	3.0	3.4	3.8	4.3	4.7	5.3	5.8	6.5	7.1	8.0	8.6	9.6
75	75	75.5	-	-	-	-	2.9	3.3	3.6	4.1	4.5	5.1	5.6	6.3	6.8	7.6	8.4	9.4	10.3	11.5
90	90	90.6	-	-	-	-	3.5	4.0	4.3	4.9	5.4	6.1	6.7	7.5	8.2	9.2	10.1	11.3	12.3	13.7
110	110	110.7	-	-	-	-	4.2	4.8	5.3	6.0	6.6	7.4	8.1	9.1	10.0	11.1	12.3	13.7	15.1	16.8
125	125	125.8	-	-	-	-	4.8	5.4	6.0	6.7	7.4	8.3	9.2	10.3	11.4	12.7	14.0	15.6	17.1	19.0
140	140	140.9	-	-	-	-	5.4	6.1	6.7	7.5	8.3	9.3	10.3	11.5	12.7	14.1	15.7	17.4	19.2	21.3
160	160	161.0	-	-	-	-	6.2	7.0	7.7	8.6	9.5	10.6	11.8	13.1	14.6	16.2	17.9	19.8	21.9	24.2
180	180	181.1	-	-	-	-	6.9	7.7	8.6	9.6	10.7	11.9	13.3	14.8	16.4	18.2	20.1	22.3	24.6	27.2
200	200	201.2	-	-	-	-	7.7	8.6	9.6	10.7	11.9	13.2	14.7	16.3	18.2	20.2	22.4	24.8	27.4	30.3
225	225	226.4	-	-	-	-	8.6	9.6	10.8	12.0	13.4	14.9	16.6	18.4	20.5	22.7	25.2	27.9	30.8	34.0
250	250	251.5	-	-	-	-	9.6	10.7	11.9	13.2	14.8	16.4	18.4	20.4	22.7	25.1	27.9	30.8	34.2	37.8
280	280	281.7	-	-	-	-	10.7	11.9	13.4	14.9	16.6	18.4	20.6	22.8	25.4	28.1	31.3	34.6	38.3	42.3
315	315	316.9	7.7	8.6	9.7	10.8	12.1	13.5	15.0	16.6	18.7	20.7	23.2	25.7	28.6	31.6	35.2	38.9	43.1	47.6
355	355	357.2	8.7	9.7	10.9	12.1	13.6	15.1	16.9	18.7	21.1	23.4	26.1	28.9	32.2	35.6	39.7	43.8	48.5	53.5
400	400	402.4	9.8	10.9	12.3	13.7	15.3	17.0	19.1	21.2	23.7	26.2	29.4	32.5	36.3	40.1	44.7	49.3	54.7	60.3
450	450	452.7	11.0	12.2	13.8	15.3	17.2	19.1	21.5	23.8	26.7	29.5	33.1	36.6	40.9	45.1	50.3	55.5	61.5	67.8
500	500	503.0	12.3	13.7	15.3	17	19.1	21.2	23.9	26.4	29.7	32.8	36.8	40.6	45.4	50.1	55.8	61.5	68.2	75.4
560	560	563.4	13.7	15.2	17.2	19.1	21.4	23.7	26.7	29.5	34.3	37.8	41.2	46.1	50.8	56.0	62.5	68.9	-	-
630	630	633.8	15.4	17.1	19.3	21.4	24.1	26.7	30.0	33.1	37.4	41.3	46.3	51.1	57.2	63.1	70.3	77.5	-	-
710	710	716.4	17.4	19.3	21.8	24.1	27.2	30.1	33.9	37.4	42.1	46.5	52.2	57.6	64.5	71.1	79.3	87.4	-	-
800	800	807.2	19.6	21.7	24.5	27.1	30.6	33.8	38.1	42.1	47.4	52.3	58.8	64.8	72.6	80.0	89.3	98.4	-	-
900	900	908.1	22.0	24.3	27.6	30.5	34.4	38.3	42.9	47.3	53.3	58.8	66.2	73.0	81.7	90.0	-	-	-	-
1000	1000	1009.0	24.5	27.1	30.6	33.5	38.2	42.2	47.7	52.6	59.3	65.4	72.5	79.9	90.2	99.4	-	-	-	-
1200	1200	1210.8	29.4	32.5	36.7	40.5	45.9	50.6	57.2	63.1	67.9	74.8	88.2	97.2	-	-	-	-	-	-
1400	1400	1412.6	34.3	37.9	42.9	47.3	53.5	59.0	66.7	73.5	82.4	90.8	102.9	113.3	-	-	-	-	-	-
1600	1600	1614.4	39.2	43.3	49	54	61.2	67.5	76.2	84.0	94.1	103.7	117.6	129.5	-	-	-	-	-	-
1800	1800	1816.2	43.8	48.3	54.5	60.1	69.1	76.2	85.7	94.4	105.9	116.6	-	-	-	-	-	-	-	-
2000	2000	2018.0	48.8	53.8	60.6	66.8	76.9	84.7	95.2	104.9	117.6	129.5	-	-	-	-	-	-	-	-

NOTE:

- ▶ PN values are based on C=1.25.
- ▶ Tolerances in accordance with grade V of ISO 1:1997-11922.
- ▶ The calculated value of e-min (ISO 4085:1998) is rounded up to the nearest value of either 2.3, 2.0 or 3.0. This is to satisfy certain national requirements.
- ▶ For practical reasons a wall thickness of 3.00 mm is recommended for Electro-Fusion jointing and lining applications.
- ▶ Up to 110mm Shield pipes are also available in coils.

NOTE: Refer to UL/FM/WRAS certificates for more details.

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HDPE Water Line

Product Dimensions:

MDPE SD-PEPW (PE80)

Pipe Sizes & Corresponding Wall Thickness at Different SDRs is as follows:

SDR	Outside Diameter		SDR 41		SDR 33		SDR 26		SDR 21		SDR 17		SDR 13.6		SDR 11		SDR 9		SDR 7.4	
PN for PE 80			PN 3.2		PN 4		PN 5		PN6		PN 8		PN 10		PN 12.5		PN 16		PN 20	
Nominal Size L			Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness		Wall Thickness	
mm	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
16	16	16.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.0	2.3	2.3	2.7
20	20	20.3	-	-	-	-	-	-	-	-	-	-	-	-	2.0	2.3	2.3	2.7	3.0	3.4
25	25	25.3	-	-	-	-	-	-	-	-	-	-	2.0	2.3	2.3	2.7	3.0	3.4	2.5	4.0
32	32	32.3	-	-	-	-	-	-	-	-	2.0	2.3	2.4	2.8	3.0	3.4	3.6	4.1	4.4	5.0
40	40	40.4	-	-	-	-	-	-	2.0	2.3	2.4	2.8	3.0	3.5	3.7	4.2	4.5	5.1	5.5	6.2
50	50	50.4	-	-	-	-	2.0	2.3	2.4	2.8	3.0	3.4	3.7	4.2	4.6	5.2	5.6	6.3	6.9	7.7
63	63	63.4	-	-	-	-	2.5	2.9	3.0	3.4	3.8	4.3	4.7	5.3	5.8	6.5	7.1	8.0	8.6	9.6
75	75	75.5	-	-	-	-	2.9	3.3	3.6	4.1	4.5	5.1	5.6	6.3	6.8	7.6	8.4	9.4	10.3	11.5
90	90	90.6	-	-	-	-	3.5	4.0	3.5	4.0	5.4	6.1	6.7	7.5	8.2	9.2	10.1	11.3	12.3	13.7
110	110	110.7	-	-	-	-	4.2	4.8	5.3	6.0	6.6	7.4	8.1	9.1	10.0	11.1	12.3	13.7	15.1	16.8
125	125	125.8	-	-	-	-	4.8	5.4	6.0	6.7	7.4	8.3	9.2	10.3	11.4	12.7	14.0	15.6	17.1	19.0
140	140	140.9	-	-	-	-	5.4	6.1	6.7	7.5	8.3	9.3	10.3	11.5	12.7	14.1	15.7	17.4	19.2	21.3
160	160	161.0	-	-	-	-	6.2	7.0	7.7	8.6	9.5	10.6	11.8	13.1	14.6	16.2	17.9	19.8	21.9	24.2
180	180	181.1	-	-	-	-	6.9	7.7	8.6	9.6	10.7	11.9	13.3	14.8	16.4	18.2	20.1	22.3	24.6	27.2
200	200	201.2	-	-	-	-	7.7	8.6	9.6	10.7	11.9	13.2	14.7	16.3	18.2	20.2	22.4	24.8	27.4	30.3
225	225	226.4	-	-	-	-	8.6	9.6	10.8	12.0	13.4	14.9	16.6	18.4	20.5	22.7	25.2	27.9	30.8	34.0
250	250	251.5	-	-	-	-	9.6	10.7	11.9	13.2	14.8	16.4	18.4	20.4	22.7	25.1	27.9	30.8	34.2	37.8
280	280	281.7	-	-	-	-	10.7	11.9	13.4	14.9	16.6	18.4	20.6	22.8	25.4	28.1	31.3	34.6	38.3	42.3
315	315	316.9	7.7	8.6	9.7	10.8	12.1	13.5	15.0	16.6	18.7	20.7	23.2	25.7	28.6	31.6	35.2	38.9	43.1	47.6
355	355	357.2	8.7	9.7	10.9	12.1	13.6	15.1	16.9	18.7	21.1	23.4	26.1	28.9	32.2	35.6	39.7	43.8	48.5	53.5
400	400	402.4	9.8	10.9	12.3	13.7	15.3	17.0	19.1	21.2	23.7	26.2	29.4	32.5	36.3	40.1	44.7	49.3	54.7	60.3
450	450	452.7	11.0	12.2	13.8	15.3	17.2	19.1	21.5	23.8	26.7	29.5	33.1	36.6	40.9	45.1	50.3	55.5	61.5	67.8
500	500	503.0	12.3	13.7	15.3	17.0	19.1	21.2	23.9	26.4	29.7	32.8	36.8	40.6	45.4	50.1	55.8	61.5	68.2	75.4
560	560	563.4	13.7	15.2	17.2	19.1	21.4	23.7	26.7	29.5	33.2	36.7	41.2	45.5	50.8	56.0	62.5	68.9	-	-
630	630	633.8	15.4	17.1	19.3	21.4	24.1	26.7	30.0	33.1	37.4	41.3	46.3	51.1	57.2	63.1	70.3	77.5	-	-
710	710	716.4	17.4	19.3	21.8	24.1	27.2	30.1	33.9	37.4	42.1	46.5	52.2	57.6	64.5	71.1	79.3	87.4	-	-
800	800	807.2	19.6	21.7	24.5	27.1	30.6	33.8	38.1	42.1	47.4	52.3	58.8	64.8	72.6	80.0	89.3	98.4	-	-
900	900	908.1	22.0	24.3	27.6	30.5	34.4	38.3	42.9	47.3	53.3	58.8	66.2	73.0	81.7	90.0	-	-	-	-
1000	1000	1009.0	24.5	27.1	30.6	33.5	38.2	42.2	47.7	52.6	59.3	65.4	72.5	79.9	90.2	99.4	-	-	-	-
1200	1200	1210.8	29.4	32.5	36.7	40.5	45.9	50.6	57.2	63.1	67.9	74.8	88.2	97.2	-	-	-	-	-	-
1400	1400	1412.6	34.3	37.9	42.9	47.3	53.5	59.0	66.7	73.5	82.4	90.8	102.9	113.3	-	-	-	-	-	-
1600	1600	1614.4	39.2	43.3	49.0	54.0	61.2	67.5	76.2	84.0	94.1	103.7	117.6	129.5	-	-	-	-	-	-
1800	1800	1816.2	43.8	48.3	54.5	60.1	69.1	76.2	85.7	94.4	105.9	116.6	-	-	-	-	-	-	-	-
2000	2000	2018.0	48.8	53.8	60.6	66.8	76.9	84.7	95.2	104.9	117.6	129.5	-	-	-	-	-	-	-	-

NOTE:

- ▶ PN values are based on C=1.25.
- ▶ Tolerances in accordance with grade V of ISO 1:1997-11922.
- ▶ The calculated value of e-min (ISO 4085:1998) is rounded up to the nearest value of either 2.3, 2.0 or 3.0. This is to satisfy certain national requirements.
- ▶ For practical reasons a wall thickness of 3.00 mm is recommended for Electro-Fusion jointing and lining applications.
- ▶ Up to 110mm Shield pipes are also available in coils.

NOTE: Refer to UL/FM/WRAS certificates for more details.

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HDPE Water Line

Product Dimensions:

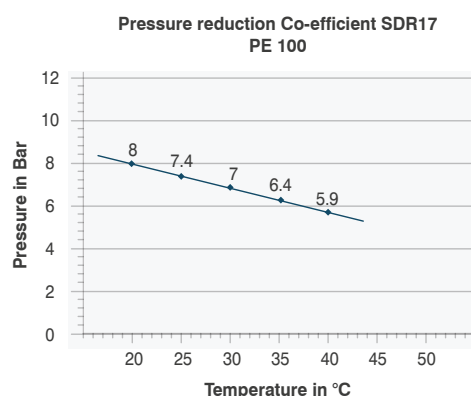
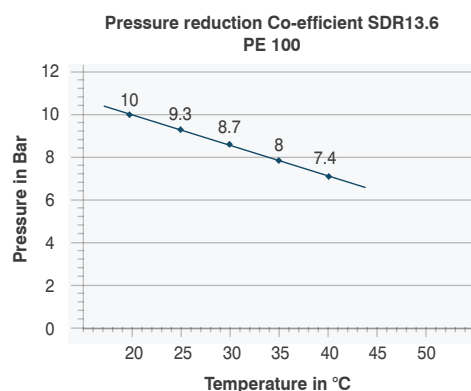
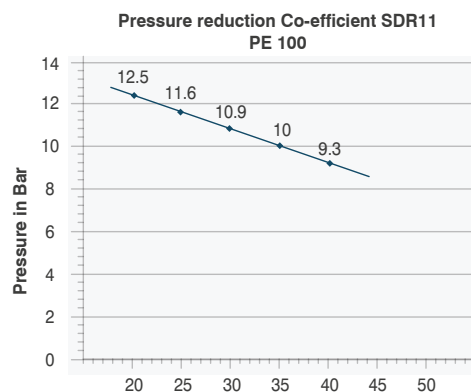
Pipe Selection of Bore Size (PE 80)

Design engineers choose pipe selection of bore size Shield PE80 is as follows:

Nominal Size mm	PE 80		
	SDR13.6 PN10	SDR9 PN16	SDR7 PN20
50	42.6	38.8	36.2
63	53.6	48.8	45.8
75	63.8	58.2	54.4
90	76.6	69.8	65.4
110	93.8	85.4	79.8
125	106.6	97	90.8
140	119.4	108.6	101.6
160	136.4	124.2	116.2
180	153.4	139.8	130.8
200	170.6	155.2	145.2
225	191.8	174.6	163.4
250	213.2	194.2	181.6
280	238.8	217.4	203.4
315	268.6	244.6	228.8

Pressure reduction co-efficient for PE80 as per **ISO 2007 :4427**

PE80					
Temp (Deg C)	20	25	30	35	40
Pressure Reduction Co-efficient	1	0.93	0.87	0.8	0.74
SDR	Pressure in Bar				
6	25	23.3	21.8	20	18.5
7.4	20	18.6	17.4	16	14.8
9	16	14.9	13.9	12.8	11.8
11	12.5	11.6	10.9	10	9.3
13.6	10	9.3	8.7	8	7.4
17	8	7.4	7	6.4	5.9
21	6	5.6	5.2	4.8	4.4
26	5	4.7	4.4	4	3.7
33	4	3.7	3.5	3.2	3
41	3.2	3	2.8	2.6	2.4



HDPE Water Line

Product Dimensions:

Pipe Selection of Bore Size (PE 100)
 Design Engineers choose SHIELD PE 100 piping system, as the system provides larger bore size because of its lower wall thickness. Moreover, at the same working pressure, designers can opt for lower SDR level pipe than in PE 80 piping system.

Pipe Size	ISO 4427 - PE 100			
	SDR 17 PN10	SDR 11 PN16	SDR 9 PN20	SDR 7.4 PN25
mm	mm	mm	mm	mm
50	44.0	40.8	38.8	36.2
63	55.4	51.4	48.8	45.8
75	66.0	61.4	58.2	54.4
90	79.2	73.6	69.8	65.4
110	96.8	90.0	85.4	79.8
125	110.2	102.2	97.0	90.8
140	123.4	114.6	108.6	101.6
160	141.0	130.8	124.2	116.2
180	158.6	147.2	139.8	130.8
200	176.2	163.6	155.2	145.2
225	198.2	184.0	174.6	163.4
250	220.4	204.6	194.2	181.6
280	246.8	229.2	217.4	203.4
315	277.6	257.8	244.6	228.8

NOTE: For installation instructions please refer to our technical guidelines.

HDPE Water Line

Miscellaneous Data:

1. Ordering Information

Example: SD-PEPW-1-50-40

- SD-PEPW is the part number
- (1) ISO 4427
- (1) HDPE PE100 (2) MDPE PE80
- (50) Bore Size
- (40) Size

2. Contact Information

For further information on any aspect of the SHIELD HDPE products please contact below:

MIDDLE EAST & AFRICA	UNITED KINGDOM
Jebel Ali Free Zone, Dubai, UAE P.O Box: 61199 Tel.: +971 4 881 2070 Fax: +971 4 881 2198 Email: shieldme@shielglobal.com	Unit 3, Endeavor Drive, Basildon-Essex, SS3 14WF Tel.: +44 1708 377731 Fax: +44 1708347637 Email: shielduk@shielglobal.com