

DATA SHEET

SOLFLO MAX

PRODUCT DESCRIPTION: Rigid dual wall pipe, with smooth interior and corrugated exterior walls for roadway use

FUNCTION: Non-perforated pipe: Gravity flow of water in networks and water course piping
Perforated pipe: Used to collect surface runoff and control the ground water level

MANUFACTURING STANDARD: CSA B182.8, BNQ 3624-120 or AASHTO M294

RAW MATERIALS: Made from high-density polyethylene (HDPE) complies with properties classification of ASTM D3350 standard

TECHNICAL DATA: Diameter: 100 mm (4 in) to 1500 mm (60 in)
Length: 3.30 m (10.8 ft), 4 m (13.1 ft), 6 m (19.7 ft), 9 m (29.5 ft)
Category: see technical data table
Structural strength: CAN/CSA - S6 - 02 (CL-625), AASHTO (H-25 and HS-25) and AREMA Cooper (E-80)
Manning: 0.010 to 0.012
Filter: Needle punched nonwoven geotextile Routex IV with 110-micron openings



Non-perforated SOLFLO MAX

AVAILABLE COUPLERS: Watertight and soil tight: see pipes lengths table according to the available fittings.

TECHNICAL DATA TABLE

Diameters						Manning n	Category		Weight				Minimum backfill				Maximum backfill			
Nominal		Interior		External			Class A	Class B	kg/m		lb/ft		CL-625		E-80		CL-625		E-80	
mm	in	mm	in	mm	in				kg/m	lb/ft	m	ft	m	ft	m	ft	m	ft	m	ft
100	4	101	4.0	120	4.7	0.010	R320	1.0	0.7	0.3	1.0	0.6	2.0	20.0	65.6			8.5	27.9	
150	6	150	5.9	176	6.9	0.010	R320	1.6	1.1	0.3	1.0	0.6	2.0	19.0	62.3			8.5	27.9	
200	8	205	8.1	236	9.3	0.010	R320	2.8	1.9	0.3	1.0	0.6	2.0	18.0	59.1			7.9	25.9	
250	10	251	9.9	297	11.7	0.010	R320	4.5	3.0	0.3	1.0	0.6	2.0	18.0	59.1			7.9	25.9	
300	12	303	11.9	363	14.3	0.010	R320	R210	6.0	4.0	0.3	1.0	0.6	2.0	17.0	55.8	16.0	52.5	8.5	27.9
375	15	381	15.0	449	17.7	0.010	R320	R210	9.0	6.0	0.3	1.0	0.6	2.0	17.0	55.8	17.0	55.8	8.8	28.9
450	18	457	18.0	544	21.4	0.010	R320	R210	13.0	8.7	0.3	1.0	0.6	2.0	17.0	55.8	17.0	55.8	7.9	25.9
525	21	535	21.1	640	25.2	0.012	R320	R210	18.0	12.1	0.3	1.0	0.6	2.0	16.0	52.5	16.0	52.5	7.6	24.9
600	24	603	23.7	741	29.2	0.012	R320	R210	20.0	13.4	0.3	1.0	0.6	2.0	15.0	49.2	15.0	49.2	7.3	24.0
750	30	756	29.8	890	35.0	0.012	R320	R210	36.0	24.2	0.3	1.0	0.6	2.0	15.0	49.2	13.0	42.7	6.1	20.0
900	36	912	35.9	1046	41.2	0.012	R320	R210	55.0	37.0	0.3	1.0	0.9	3.0	15.0	49.2	13.0	42.7	6.7	22.0
1050	42	1067	42.0	1224	48.2	0.012	R140		45.0	30.2	0.3	1.0	1.2	3.9	13.0	42.7			6.7	22.0
1200	48	1220	48.0	1377	54.2	0.012	R125		60.0	40.3	0.3	1.0	1.2	3.9	13.0	42.7			5.8	19.0
1500	60	1512	59.5	1677	66.0	0.012	R95 ³			47.0	0.5	1.6	1.2	3.9	11.0	36.1			6.4	21.0

Note 1: For reference, a R320 category (Class A) pipe will have a minimum compression stiffness of 320 kPa at 5% deformation.

Note 2: 100 mm (4 in) to 1200 mm (48 in) pipes are certified BNQ 3624-120 and CSA B182.8 standards while the 1500 mm (60 in) pipe is certified AASHTO M294 (105 kPa) and complies with BNQ 3624-120 and CSA B182.8 (Class A, R95) standards.

Note 3: R95 refers to the categorization of BNQ 3624-120 and CSA B182.8 standards.

Note 4: 100 mm (4 in) to 1200 mm (48 in) AASHTO M294 certified pipes are available upon request. Please contact your Soleno representative for more information.

NOTE: Values in the tables are approximate and may change without notice.

DATA SHEET

SOLFLO MAX (CONT'D)

LENGTHS TABLE - CLASS A ACCORDING TO AVAILABLE FITTINGS

Nominal diameter		No connector		Soil tight connectors						Watertight connectors					
		PE		BC		DBS		SC		BIGC		BG		DBIG	
mm	in	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft
100	4	6	19.7			6	19.7	6	19.7					4/6	13.1/19.7
150	6	6	19.7			6	19.7	6	19.7					4/6	13.1/19.7
200	8	6	19.7			6	19.7	6	19.7					4/6	13.1/19.7
250	10	6	19.7			6	19.7	6	19.7					4/6	13.1/19.7
300	12	6/9	19.7/29.5	6	19.7			6/9	19.7/29.5	4/6	13.1/19.7				
375	15	6/9	19.7/29.5	6	19.7			6/9	19.7/29.5	4/6	13.1/19.7				
450	18	6/9	19.7/29.5	6	19.7			6/9	19.7/29.5	4/6	13.1/19.7				
525	21	6/9	19.7/29.5	6	19.7			6/9	19.7/29.5	4/6	13.1/19.7				
600	24	6/9	19.7/29.5	6	19.7			6/9	19.7/29.5	4/6	13.1/19.7				
750	30	6/9	19.7/29.5	6	19.7			6/9	19.7/29.5	4/6	13.1/19.7				
900	36	6/9	19.7/29.5	6	19.7			6/9	19.7/29.5	4/6	13.1/19.7				
1 050	42	6	19.7					6	19.7			3.3	10.8		
1 200	48	6/9	19.7/29.5	6	19.7			6/9	19.7/29.5	4/6	13.1/19.7				
1 500	60	6	19.7					6	19.7			6	19.7		

Note 1 : BIGC and DBIG connectors are available for non-perforated pipe only.

LENGTHS TABLE - CLASS B ACCORDING TO AVAILABLE FITTINGS

Nominal diameter		No connector		Soil tight connectors			
		PE		BC		SC	
mm	in	m	ft	m	ft	m	ft
300	12	6/9	19.7/29.5	6	19.7	6/9	19.7/29.5
375	15	6/9	19.7/29.5	6	19.7	6/9	19.7/29.5
450	18	6/9	19.7/29.5	6	19.7	6/9	19.7/29.5
525	21	6/9	19.7/29.5	6	19.7	6/9	19.7/29.5
600	24	6/9	19.7/29.5	6	19.7	6/9	19.7/29.5
750	30	6/9	19.7/29.5	6	19.7	6/9	19.7/29.5
900	36	6/9	19.7/29.5	6	19.7	6/9	19.7/29.5

LEGEND

PE: plain end
 BC: bell with clips
 DBS: double bell snap
 SC: split coupler
 BIGC: bell with integrated gasket with clips
 BG: O-ring bell gasket
 DBIG: double bell with integrated gasket

APPLICATIONS: *NON-PERFORATED PIPE*

Driveway culvert
 HDPE culvert
 Storm water sewer
 Beaver Barrier
 Ventilation
 Ditch piping
 Roadway drainage
 Drainage collector and outlet
 Detention system

PERFORATED OR PERFORATED AND FILTERED PIPE

Trench drain
 Roadway drainage
 Turf and recreation drainage
 Leachate collection
 Ditch piping
 Aerial and subsurface ventilation pipes
 Retention system

OPTIONS: Special lengths are available upon request

Beveled cut
 Service entrance/catch basin connection
 Fish weir

ACCESSORIES: Consult the Solflo and Solflo Max Couplers and Accessories section in our technical catalog to obtain more information about our complete line of Solflo Max accessories.

INSTALLATION: Visit our website at www.soleno.com for the installation guide located in the 'Resource Center'.

NOTE 1: Values in the table are approximate and may change without notice.

NOTE 2: Lengths in the table have a tolerance between -1 % to 3 %.

SPECIFICATIONS

WATERTIGHT SOLFLO MAX

SCOPE

These specifications apply to all 100 mm (4 in) to 1500 mm (60 in) diameter Solflo Max pipes used for drainage, water course piping and gravity flow storm water sewers.

PIPE REQUIREMENTS

Pipes shall be Solflo Max, manufactured with smooth interior and corrugated exterior walls.

- 100 mm (4 in) to 1200 mm (48 in) diameter pipes shall be certified as per standards BNQ 3624-120 and CSA B182.8 (Class A). They shall have minimum stiffness of 320 kPa and be 4 m (13.1 ft) long minimum.
- 1050 mm (42 in) pipes will be 3.3 m (10.8 ft) long minimum.
- 1500 mm (60 in) diameter pipes shall be certified as per standard AASHTO M294 (105 kPa), will comply with BNQ 3624-120 and CSA B182.8 (Class A, R95) standards and be 6 m (19.7 ft) long.

RAW MATERIALS

Pipes shall be made from a polyethylene resin that complies with properties classification as defined by ASTM D3350 standard:

- Class A : PE 435400
- Class B : PE 424420

JOINT PERFORMANCE

- 100 mm (4 in) to 250 mm (10 in): double bell with integrated gasket (DBIG). Double bells shall be certified as per standard CSA B182.8, Type 1 (watertight at 10.8 psi). The gasket shall be co-injected into the bell and shall overlap two corrugations.
- 300 mm (12 in) to 900 mm (36 in) and 1200 mm (48 in): bell with integrated gasket with clips (BIGC) welded to the pipe to ensure proper pipe insertion. The gasket shall be co-injected into the bell and shall overlap two corrugations. The assembly will comply with BNQ 3624-120 watertight requirements.
- 1050 mm (42 in) and 1500 mm (60 in): bell with O-Ring gasket (BG) installed by the manufacturer onto the male end, covered by a protective film for shipping. The assembly shall be certified as per standard AASHTO M294.
- O-ring gaskets shall comply with standards ASTM F477 and BNQ 3624-120. Fused and/or glued gaskets will not be permitted.

ACCESSORIES

- 100 mm (4 in) to 1200 mm (48 in): accessories will be manufactured according to specified requirements in the standards BNQ 3624-120 and CSA B182.8.
- 1500 mm (60 in): accessories will be manufactured according to specified requirements in the standards AASHTO M294.
- **Service connections for PVC pipes:**
Service connections for 100 mm (4 in) to 200 mm (8 in) diameter PVC pipes shall be monolithic (factory welded), as required by standard BNQ 1809-300, and equipped with an integrated O-ring gasket.
- **Solflo Max connections to a concrete structure:**
Every connection to a concrete structure shall be made with a monolithic HDPE adapter whose end to be connected to the structure will be provided with a smooth exterior wall and at the other end with an o-ring bell gasket (BG) for 100 mm (4 in) to 250 mm (10 in) connections, a bell with integrated gasket (BIGC) for 300 mm (12 in) to 1500 mm (60 in) connections and 1200 mm (48 in) connections, or with an o-ring bell gasket (BG) for 1050 mm (42 in) and 250 mm (10 in) connections, as required by standard BNQ 1809-300. PVC and urethane adapters will not be permitted.
- Accessories shall be factory welded, both outside and inside, when this side is accessible.

DIMENSIONS AND QUANTITIES

Dimensions and quantities shall comply with tender documents and drawings.

INSTALLATION

Installation shall be carried out in compliance with standard BNQ 1809-300, and following Soleno's recommendations. Contact the Soleno representative in your region or visit our website at www.soleno.com for installation recommendations.

SPECIFICATIONS

SOIL TIGHT SOLFLO MAX

SCOPE

These specifications apply to all 100 mm (4 in) to 1500 mm (60 in) diameter Solflo Max pipes used for drainage and water course piping.

PIPE REQUIREMENTS

Pipes shall be Solflo Max, manufactured with smooth interior and corrugated exterior walls.

- 100 mm (4 in) to 1200 mm (48 in) diameter pipes shall be certified as per standards BNQ 3624-120 and CSA B182.8 (Class A) and shall be 6 m (19.68 ft) long minimum.
- 1050 mm (42 in) pipes will be 3.3 m (10.8 ft) long minimum.
- 1500 mm (60 in) diameter pipes shall be certified as per standard AASHTO M294 (105 kPa), will comply with BNQ 3624-120 and CSA B182.8 (Class A, R95) standards and be 6 m (19.7 ft) long.

RAW MATERIALS

Pipes shall be made from a polyethylene resin that complies with properties classification as defined by ASTM D3350 standard:

- Class A : PE 435400
- Class B : PE 424420

JOINT PERFORMANCE

- 100 mm (4 in) to 250 mm (10 in): double bell snap (DBS) (safety catch) to ensure proper positioning on pipes.
- 300 mm (12 in) to 1200 mm (48 in): double bell with clips (DBC) to ensure proper pipe insertion.
- 1050 mm (42 in) and 1500 mm (60 in): bell with O-Ring gasket (BG) installed by the manufacturer onto the male end, covered by a protective film for shipping. The assembly shall be certified as per standard AASHTO M294.

ACCESSORIES

- Accessories from 100 mm (4 in) to 1200 mm (48 in) will be manufactured according to specified requirements in the standards BNQ 3624-120 and CSA B182.8.
- Accessories from 1500 mm (60 in) will be manufactured according to specified requirements in the standards AASHTO M294.
- **Service connections for PVC pipes:**
Service connections for 100 mm (4 in) to 200 mm (8 in) diameter PVC pipes shall be monolithic (factory welded), as required by standard BNQ 1809-300, and equipped with an integrated O-ring gasket.
- **Solflo Max connections to a concrete structure:**
Every connection to a concrete structure shall be made with a monolithic HDPE adapter whose end to be connected to the structure will be provided with a smooth exterior wall and at the other end with a bell with clips (BC), as required by standard BNQ 1809-300. PVC and urethane adapters will not be permitted.
- Accessories shall be factory welded, both outside and inside, when this side is accessible.

DIMENSIONS AND QUANTITIES

Dimensions and quantities shall comply with tender documents and drawings.

INSTALLATION

Installation shall be carried out in compliance with standard BNQ 1809-300, and following Soleno's recommendations. Contact the Soleno representative in your region or visit our website at www.soleno.com for installation recommendations.