

N-12[®] HDPE WT IB Pipe

(CSA B182.8 or BNQ 3624-120)

N-12 WT IB pipe is a gravity-flow, watertight pipe, which is available in a range of diameters from 100-1500 mm (4"-60"). The pipe is third-party verified to meet 74 kPa (10.8 psi) laboratory pressure and vacuum testing requirements. N-12 WT IB pipe is certified to meet CSA B182.8 or BNQ 3624-120 requirements.

N-12 WT IB pipe incorporates patented technology to provide a watertight joint and increases its sealing forces as intermittent internal or external hydrostatic pressure occurs. These advanced joint design features reduce infiltration and exfiltration, resulting in outstanding long-term performance.

Applications

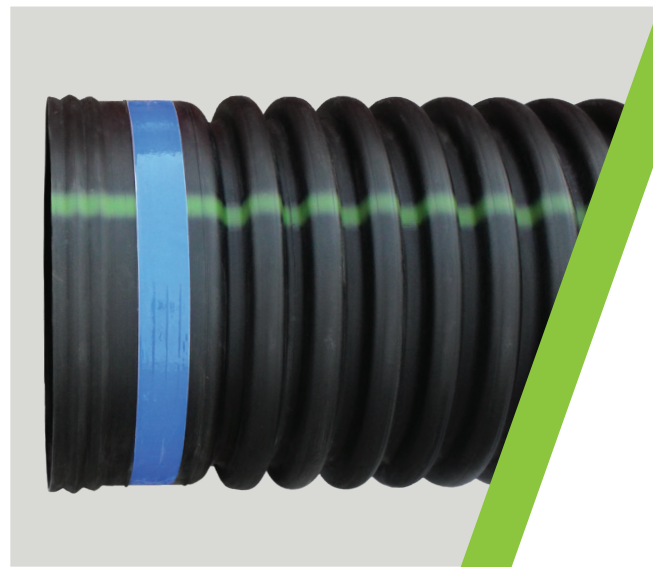
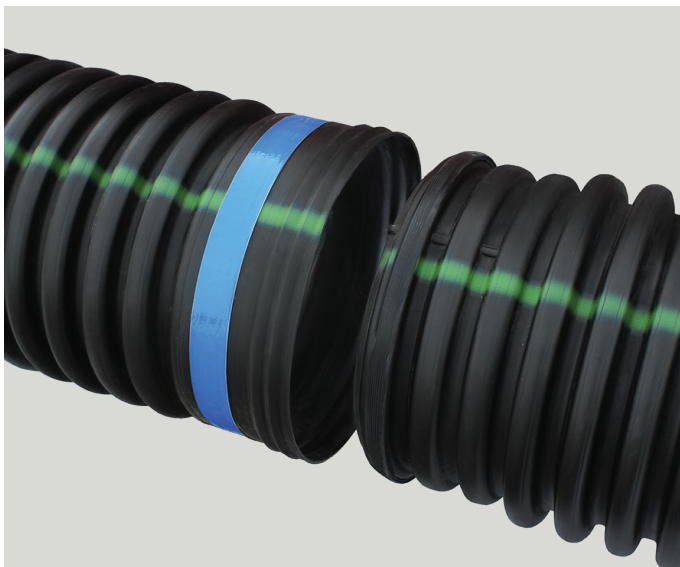
- Storm sewers
- Retention & detention systems
- Ditch enclosures
- Culverts & cross drains
- Slope & edge drains
- Mining, forestry & industrial

Features

- 100-1500 mm (4"-6") diameters available
- Certified to meet the 74 kPa (10.8 psi) watertight joint performance requirements in accordance with the CSA B182.8 or BNQ 3624-120 standards
- Pipe manufactured in 6.1 m (20') standard lay lengths, resulting in fewer joints. Custom 4 m (13') lay lengths are available upon request
- Structurally designed to withstand HS-25, HL-93 and CL-625 highway traffic loads with a minimum cover:
 - 100-1200 mm (4"-48") minimum cover 0.3 m (1')
 - 1500 mm (60") minimum cover 0.6 m (2')

Benefits

- Fast bell-and-spigot join assembly with unsurpassed structural integrity
- Superior hydraulics - smooth interior will ensure no debris or sediment build-up
- Prevents contamination of soil and local waters from construction runoff sediment, lawn care products or automobile emissions
- Avoids possible infiltration of sands and fines resulting in sinkholes and differential settlement to adjacent structures



N-12 HDPE WT IB Pipe (CSA B182.8 or BNQ 3624-120) Specification

Scope

This specification describes 100 to 1500 mm (4"-60") ADS Canada N-12 WT IB pipe for use in gravity-flow drainage applications.

Pipe Requirements

N-12 WT IB pipe shall have a smooth interior and annular exterior corrugations.

- 100 to 1500 mm (4"-60") shall be certified by an accredited certification body to meet CSA B182.8 or BNQ 3624-120
- 100 to 900 mm (4"-36") shall meet a minimum pipe stiffness of 320 kPa (46.4 psi) when tested in accordance with ASTM D2412
- 1050 to 1500 mm (42"-60") shall meet a pipe stiffness requirement that is variable based on the diameter when tested in accordance with ASTM D2412. Minimum requirements are provided within CSA B182.8 or BNQ 3624-120
- Manning's "n" value for use in design shall be 0.012

Joint Performance

Pipe shall be joined with a bell & spigot joint meeting the watertight Type 1 requirements of CSA B182.8 or the watertight joining requirements of BNQ 3624-120.

100 to 1500 mm (4"-60") shall be watertight according to the requirements of ASTM D3212. Gaskets shall be made of polyisoprene meeting the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly. 300 to 1500 mm (12"-60") diameters shall have a reinforced bell with a polymer composite installed by the manufacturer.

Field Pipe and Joint Performance

To assure watertightness, field performance verification may be accomplished by testing in accordance with ASTM F2487. Appropriate safety precautions must be used when field testing any pipe material. Contact the manufacturer for recommended leakage rates.

Material Properties

Material for pipe production shall be high-density polyethylene conforming with the minimum requirements of cell classification 424400C for 100-250 mm (4"-10") and 435400C for 300 to 1500 mm (12"-60") diameters, as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. Virgin pipe material shall comply with the notched constant ligament stress (NCLS) test as described in clause 8.5 of CSA B182.8 or clause 7.3.7 of BNQ 3624-120. The average failure time of the five test specimens shall exceed 24 hours with no single test specimen's failure time less than 17 hours. Recycled pipe material shall comply with the un-notched constant ligament stress (UCLS) test as clause 8.7 of CSA B182.8 or clause 7.3.8 of BNQ 3624-120. The average failure time for five specimens shall be greater than or equal to the minimum average failure time based on a weighted design tensile stress of 3.4 MPa at a service temperature of 23° C. None of these five specimens shall have an average failure time below 18 hours and the average failure time of these specimens shall exceed 34 hours.

Installation

Installation shall be in accordance with CSA B182.11 or BNQ 1809-300, and ADS published installation guidelines with the exception that minimum cover in trafficked areas for 100 to 1200 mm (4-48 inch) diameters shall be 0.3 m (1 ft.) and for 1500 mm (60 inch) diameter shall be 0.6 m (2 ft) in single run applications. Backfill for minimum cover situations shall consist of Class I, Class II (minimum 90% SPD) or Class III (minimum 95% SPD) material. Maximum fill heights depend upon embedment material and compaction level; please refer to Technical Note 2.01C or Technical Note 2.01Q. Contact your local ADS representative or visit our website www.adspipe.ca for a copy of the latest installation guidelines.

Pipe Dimensions*

Pipe I.D. mm (in)	100 (4)	150 (6)	200 (8)	250 (10)	300 (12)	375 (15)	450 (18)	600 (24)	750 (30)	900 (36)	1050 (42)	1200 (48)	1500 (60)
Pipe O.D. mm (in)	122 (4.8)	175 (6.9)	231 (9.1)	290 (11.4)	368 (14.5)	457 (18.0)	559 (22.0)	711 (28.0)	914 (36.0)	1067 (42.0)	1219 (48.0)	1372 (54.0)	1702 (67.0)
Minimum Pipe Stiffness kPa (psi)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	320 (46.4)	140 (20)	125 (18)	95 (14)

*Check with sales representative for availability by region. **Pipe O.D. values are provided for reference purposes only, values stated for 12- through 60-inch are ±1 inch. Contact a sales representative for exact values.

