A division of **WGI Westman Group Inc.**

armtec Big 'O'®

MADE IN CANADA

Building Trades Solutions

A drainage system that will safeguard the homeowner's investment for years to come.

armtec.com

armtec Big 'O'®

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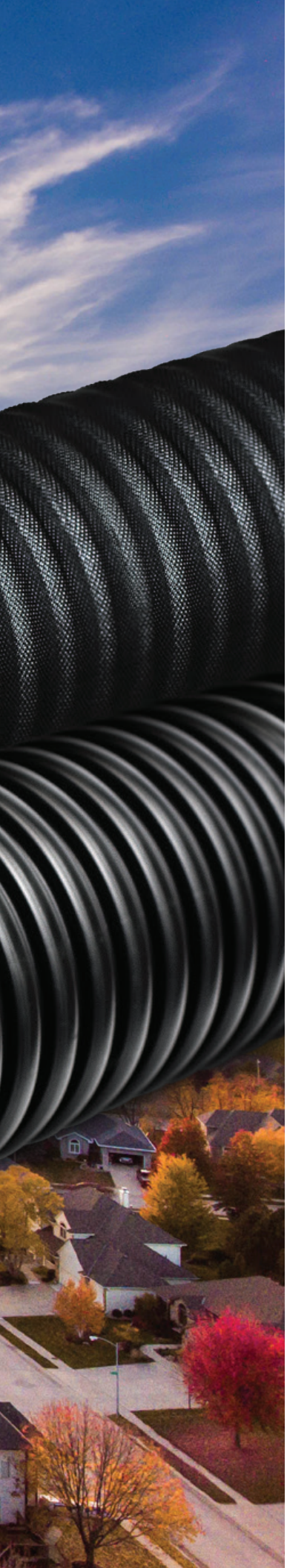
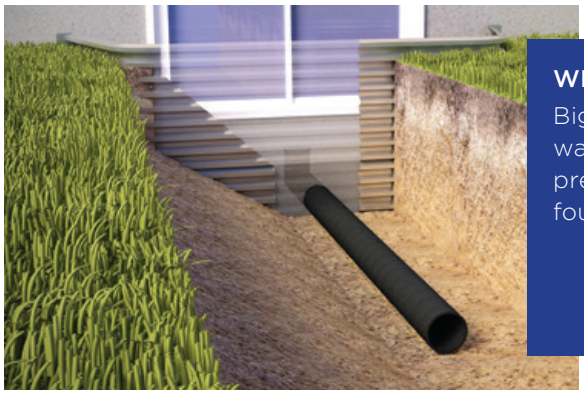
Big 'O'® High Density Polyethylene (HDPE) perforated tubing is an excellent choice for foundation drainage and other groundwater applications. Water is absorbed through spaced slits and diverted to a safe disposal area. For areas where the surrounding soil is fine and requires filtration, Big 'O' perforated tubing is available with a polyester filter sock.

Solid (non-perforated) Big 'O' tubing is designed for applications where water is diverted from one point to another, such as window wells and downspouts. Water cannot escape until it is discharged from the end of the tube to a safe location.

Big 'O' tubing is DURABLE, LIGHTWEIGHT and EASY TO INSTALL!

It is available in a wide range of sizes with a variety of fittings. A Big 'O' drainage system will safe-guard the homeowner's investment for years to come!



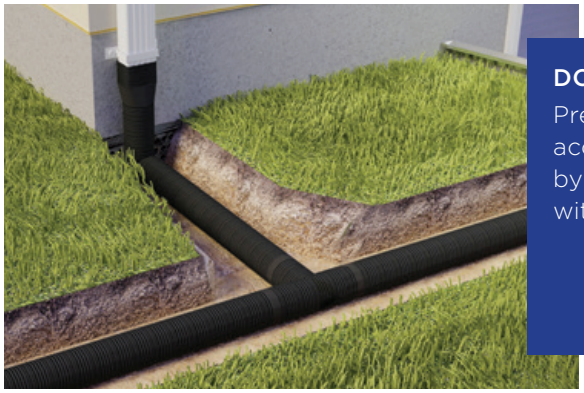


WINDOW WELLS

Big ‘O’ solid tubing quickly diverts water from basement window wells preventing damage to the home’s foundation.

LOW SPOTS

For wet spots in the lawn or garden Big ‘O’ perforated tubing installed in gravel will pick up excess water and divert it to a catch basin, storm drain or other safe disposal area.



DOWNSPOUT RUN-OFF

Prevent downspout run-off from accumulating in unwanted areas by diverting it away from the home with Big ‘O’ solid tubing.

FOUNDATION DRAINS

Big ‘O’ perforated tubing combines with Platon wrap for a full foundation drainage solution. Installed in a gravel envelope around your home it quickly drains water away from foundation walls keeping basements comfortable and dry.

Nominal Sizes Available

Product and Applications	TUBING DIAMETER							
	50mm 2″	75mm 3″	100mm 4″	150mm 6″	200mm 8″	250mm 10″	300mm 12″	375mm 15″
Perforated For foundation drains and other sub-surface infiltration applications	●	●	●	●	●	●	●	●
Solid (non-perforated) Suitable for point to point drainage	●	●	●	●	●	●	●	●
REDLINE* (with pull string) Solid wall red coex pipe used as a conduit for electrical wires or water lines			●					
Perforated with geotextile filter sock All drainage applications in fine grained soils; prevents clogging	●	●	●	●	●	●	●	●

NOTE:
In Quebec **50mm** and **375mm** tubing diameters are unavailable and perforated tubing is available in black only (except 100mm which is also available in coex). *REDLINE is unavailable in Quebec.

Easy to Use Big ‘O’ Fittings


Split Coupler


45° Wye


Tap Tee


Reducing Tee

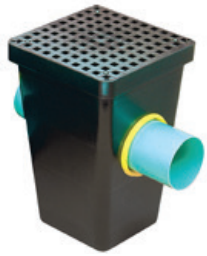

Sump Liner and Lid - 22 gal
(sealed unit)


Insert Coupler


90° Elbow


Snap Tee


Insert Tee


HDPE
Drain Sumps


Insert End Cap


Downspout Adapter


Snap Adapter

	TUBING DIAMETER							
Fittings	**50mm 2″**	**75mm 3″**	**100mm 4″**	**150mm 6″**	**200mm 8″**	**250mm 10″**	**300mm 12″**	**375mm 15″**
Split Coupler	●				●	●	●	●
Insert Coupler		●	●	●	●			
45° Wye			●	●				
90° Elbow			●	●				
Tap Tee	●	●	●					
Snap Tee		3 x 3 x 3	4 x 4 x 4	6 x 6 x 4	8 x 8 x (8-6) 8 x 8 x (6-4)	10 x 10 x (10-4)	12 x 12 x (12-4)	
Reducing Tee				6 x 6 x (6-4)	8 x 8 x (8-6)	10 x 10 x (10-8)	12 x 12 x (12-10)	
Blind Tee			4 x 4 x 4	6 x 6 x 6				
Insert Tee			4 x 4 x 4					
Downspout Adapter		● Rectangle	● Rectangle Square					
Snap Adapter		●	●	●	●			
Split Adapter						●	●	
Insert End Cap	●	●	●	●	●			
Split End Cap						●	●	
22 gal. Sump Liner and Lid - Includes accessories for a completely sealed unit to meet Building Code specifications								
HDPE Drain Sumps - Injection molded, 2 hole drain sump with grate and 3 snap-in watertight fittings								

NOTE:
In Quebec **50mm** and **375mm** fittings are unavailable.

FOUNDATION DRAINAGE INSTALLATION

General Guidelines for Installation:

By carefully following these installation guidelines, you will achieve an easy-to-install, safe, permanent and efficient Big 'O' drainage system. Some restrictions may apply. Check with local authorities.

1. Bedding

Tubing should be bedded in gravel or crushed stone however, selected soil backfill material may also be used with satisfactory results. The top and sides of the drain pipe or tile shall be covered with not less than 150mm of crushed stone or other coarse clean granular material. When selected soil bedding material from the trench excavation is used, choose small loose particles of soil that will flow around the tubing and minimize soil settling. Avoid large rocks that may damage the tubing or large clods of soil that cause voids and subsequent excessive settling.

2. Depth of cover

If vehicular traffic is expected over the tubing, there should be a minimum of 30cm (12") of cover over the tubing if gravel bedding material is used and 61cm (24") of cover if selected soil bedding material is used. Typical recommended gravel materials are pea gravel, granular A stone or pit run course sand and gravel mixes.

3. Proper grade

The grade, or fall, on which the tubing is laid is important in that reversals in grade will reduce the effectiveness of the system. Best drainage results are achieved with a continuous downhill fall, or grade, over the entire length of the drain line. A fall of 5cm (2") per 30m (100') of length is generally considered adequate. Greater fall will promote more rapid drainage.

4. Proper backfill selection

Choose your materials according to the application. If absorption and drainage are required, perforated tubing should be used. If tubing serves only to move water away from an area (such as a downspout run-off), non-perforated tubing is best because it won't dissipate water into the surrounding area. Non-perforated tubing should also be used if the line runs close to trees where root penetration may be a problem. If the soil being drained is sandy or silty, then a filter sock should be used to prevent fine particles from entering and blocking the drainage line.

5. Care during installation

Care should be taken to prevent damage to the tubing during the backfilling operation. Avoid dropping large soil clods or rocks directly on the tubing. Heavy loads of all types should be avoided until the soil around the installation area is properly settled.

Working with Big 'O' Tubing WITHOUT a filter sock

i. Dig a trench or series of trenches depending on how large the area is that you are draining.
ii. Line the trench with a landscape fabric. Make sure that your fabric is wide enough to cover the gravel and pipe installation – 91cm (36") wide should be adequate in most installations.
iii. Add 2.5cm to 5cm (1" to 2") of gravel (crushed stone between 1cm to 2.5cm (2/5" to 1") in size, not pea gravel).
iv. Once the gravel is in place, position the pipe in the trench and add more gravel until the pipe is covered by approximately 5cm (2") of gravel.
v. Fold the fabric over the gravel and pipe to keep the dirt out. Once the fabric is closed, you may begin covering it with the excavated dirt.

Working with Big 'O' tubing WITH a filter sock

The instructions are generally the same as they are when working with a pipe without a filter sock except you do not have to line the trench with landscape fabric. Please refer to the instructions above.

Downspout run-off

To carry rainwater away from the house and avoid water seeping down basement walls and creating wet basement problems, use Big 'O' non-perforated tubing from the downspout to a storm drain inlet, street curb or other disposal area.

Place a Big 'O' downspout adapter on the end of the downspout, snap the Big 'O' non-perforated tubing into the snap coupling end of the adapter and run the tubing to the disposal area. If a shallow line is needed from the downspout, a Big 'O' 90° elbow can be used. Big 'O' Tees, Ys and other fittings are available for connecting two or more downspouts to the same line.

Window wells

Basement window wells should be drained to prevent water from seeping down to the foundation wall and entering the basement. The window well can be easily drained by running a line of Big 'O' non-perforated tubing from a drain in the bottom of the well to a disposal area. The flexibility of Big 'O' tubing will be helpful in making grade changes and curves away from the well. Big 'O' 90° elbows are available for extremely sharp curves.

Low spots

For wet spots in lawns or other areas, use Big 'O' perforated tubing installed in gravel to pick up the water and carry it to a catch basin or other disposal area. In heavy clay soils, several lines of Big 'O' perforated tubing may be needed to speed drainage.

Specification

Corrugated High Density Polyethylene Tubing for Subdrainage Applications

1. Scope

This specification covers the requirements of corrugated high density polyethylene tubing used in sub-drainage applications. Nominal sizes include 50, 75, 100, 150, 200, 250, 300 and 375mm diameters. Each size is available in solid, perforated or perforated with polyester filter sock.

2. Materials

Pipe shall be manufactured from good quality high density polyethylene resin.

3. Tube Dimensions

The nominal size of the tube is based on the nominal inside diameter of the tube. The tolerance on the specified inside diameter shall be + 3% / - 1.5%.

4. Joints

The pipes shall be joined with external 'insert' or 'split' couplers.

5. Tube Stiffness

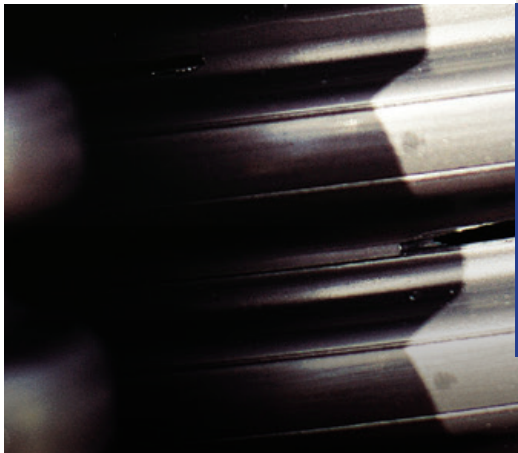
The tube has a minimum stiffness of 210 kPa at 5% deflection. Tests shall be conducted in accordance with ASTM D2412.

6. Retest and Rejection

If failure to conform to these specifications occurs, the pipe or fittings may be retested to establish conformity in accordance with an agreement between the purchaser and the seller.

Nominal Diameter (mm)	50, 75, 100, 150, 200, 250, 300, 375
Outside Diameter (mm)	63, 90, 120, 180, 240, 305, 375, 440
Recommended Drainage Depths (mm)	• 600mm minimum cover • 2,000mm maximum cover

NOTE:
50mm and **375mm** tubing diameters are unavailable in Quebec.



APPLICABLE STANDARDS

- AASHTO M252
- AASHTO M294
- ASTM F667
- BNQ 3624-115

Armtec is environmentally conscious
by supporting limited paper usage.

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the Plastics Pipe Institute

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