



Big 'O'[®]

 **MADE IN CANADA**



Agricultural Drainage Solutions

Big 'O' HDPE corrugated tubing for agricultural drainage.



armtec Big 'O'[®]



Armtec is Canada's leading producer of subdrainage tubing. **For years our Big 'O' High Density Polyethylene (HDPE) tubing has provided superior performance and durability in the agricultural sectors.** It is the most dependable, cost effective material for subdrainage applications providing both low initial cost and ease of installation.

Using state-of-the-art manufacturing equipment, Armtec produces a full product line of solid and perforated tubing with optional polyester filter sock. The wide range of sizes, coil lengths and multiple fitting options make Big 'O' HDPE tubing your number one choice for subdrainage projects.

The most trusted brand in agricultural drainage.



Canadian Owned and
Operated Since 1908





Durable

- Highly chemical and corrosion resistant
- Not affected by freeze and thaw cycles



Improved Profitability

- Significant installation savings with 4 inch rolls available up to 3,500 feet
- Increase crop yields
- Reduce future maintenance costs



Variety of Options

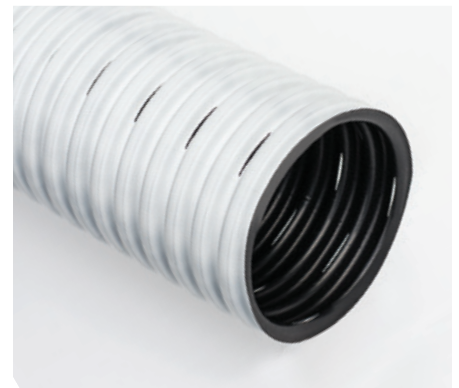
- Wide range of sizes and fittings
- Additional perforation patterns available
- Tubing available in black and coex

NON-PERFORATED TUBING



Tubing for point to point drainage

PERFORATED TUBING



Tubing for sub-surface drainage



20 - 3,500 ft

Coil lengths available.



2 - 15 in

Tubing diameters available.

PERFORATED TUBING WITH FILTER SOCK



Polyester sleeve-wrapped tubing used in light soils to reduce sediment entry

SPECIALTY AND ACCESSORY ITEMS



Special perforations (high-capacity and fine-cut) and a wide range of fittings available

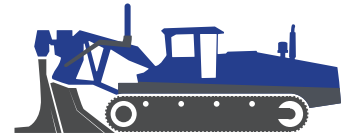
Big 'O' HDPE Tubing For Agricultural Drainage

Water logged fields can be a big problem for farmers, ruining crops and delaying production. Armtec's Big 'O' tubing provides a big solution. Installation of a Big 'O' drainage system ensures excess water is removed quickly and efficiently. Soil erosion and compaction is reduced, and wear and tear on equipment is minimized. Crops thrive with healthy root systems while planting and harvesting seasons are extended. With increased land values and improved productivity, investing in agricultural drainage will pay for itself many times over.

Removing excess water quickly will reduce the potential for crop damage.



Big 'O' Leads To Bigger Benefits



Increased Crop Yields

Healthy root systems are established in well drained, aerated soil improving plant quality and crop yield.

Lower Production Costs

Planting and harvesting times are reduced, decreasing fuel consumption and labour costs.

Increased Land Value

Investing in subsurface drainage increases land value providing a great return on investment.

Extended Growing Season

Spring and autumn flooding is reduced so fields are accessible earlier and later in the season.

Environmental Protection

Elimination of surface water prevents soil, fertilizers and chemicals from contaminating waterways and harming the environment.

Reduced Wear and Tear on Equipment

Improved surface conditions allow easier access for farm equipment and less soil compaction.

Increase crop yields by up to

30%



Lower overall cost of production.



Earlier spring planting with lower water tables and warmer soil temperatures reduces the risk of delayed harvesting.



Decrease wear and tear on equipment.

Perforation Dimensions

4 Holes Per Corrugation

Diameter	Type	Perforation Length	Perforation Width	Perforation per Metre	Open Area
(mm)/(in)		(mm)	(mm)	(m)	(cm ² /m)
100/4	Slots	12	1.3	236	37
150/6	Slots	12	1.3	236	37
200/8	Slots	27	2.5	112	76

NOTE:

In addition to these generic perforation details, there are many different configurations of perforations available. Please contact an Armtec representative for more information.

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 All drainage requirements	●	●	●	●	●	●	●	●
Solid (non-perforated) Suitable for all applications that do not require collection through infiltration	●	●	●	●	●	●	●	●
Redline* (with fish tape) Solid wall 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).

*Meets ONTARIO HYDRO ONE Standards

*Redline are unavailable in Quebec.

Coil Lengths Available

Single Wall Tubing Diameter	Lengths Available
mm (in)	m (ft)
50mm (2")	152.40m (500'), 2133.60m (7000')
75mm (3")	30.48m (100'), 121.92m (400'), 670.56m (2200'), 1584.96m (5200')
100mm (4")	15.24m (50'), 30.48m (100'), 45.72m (150'), 76.20m (250'), 1066.80m (3500')
150mm (6")	30.48m (100'), 152.40m (500'), 304.80m (1000'), 518.16m (1700')
200mm (8")	6.10m (20'), 30.48m (100'), 121.92m (400'), 182.88m (600')
250mm (10")	6.10m (20'), 30.48m (100'), 121.92m (400')
300mm (12")	6.10m (20'), 30.48m (100'), 76.20m (250')
375mm (15")	6.10m (20'), 64.01m (210')

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).



Easy to Use Big 'O' Fittings



Split Coupler



45° Wye



Tap Tee



Reducing Tee



Downspout Adapter



Insert End Cap



Insert Coupler



90° Elbow



Snap Tee



Insert Tee



Snap Adapter



Sump Liner and Lid - 22 gal (sealed unit)

Fittings	TUBING DIAMETER							
	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						•	•	

Sump Liner and Lid - 22 gal

(Includes accessories for a completely sealed unit to meet Building Code specifications.)

NOTE:

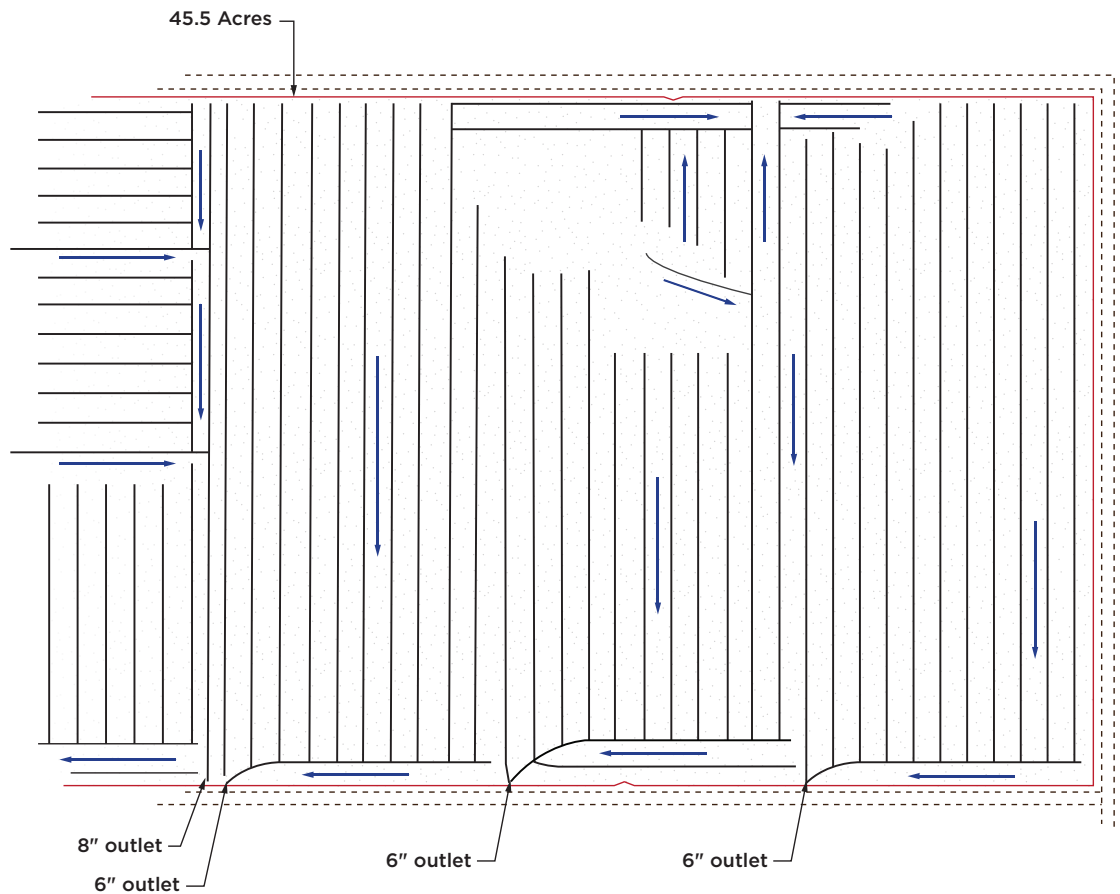
In Quebec **50mm** and **375mm** fittings are unavailable.

AGRICULTURAL DRAINAGE INSTALLATION

General Guidelines for Installation:

Agricultural drainage systems are custom designed for each location, taking into account a variety of parameters such as topography and soil composition. Design and installation should be performed by a qualified contractor. Please contact an Armtec Sales Representative for guidance.

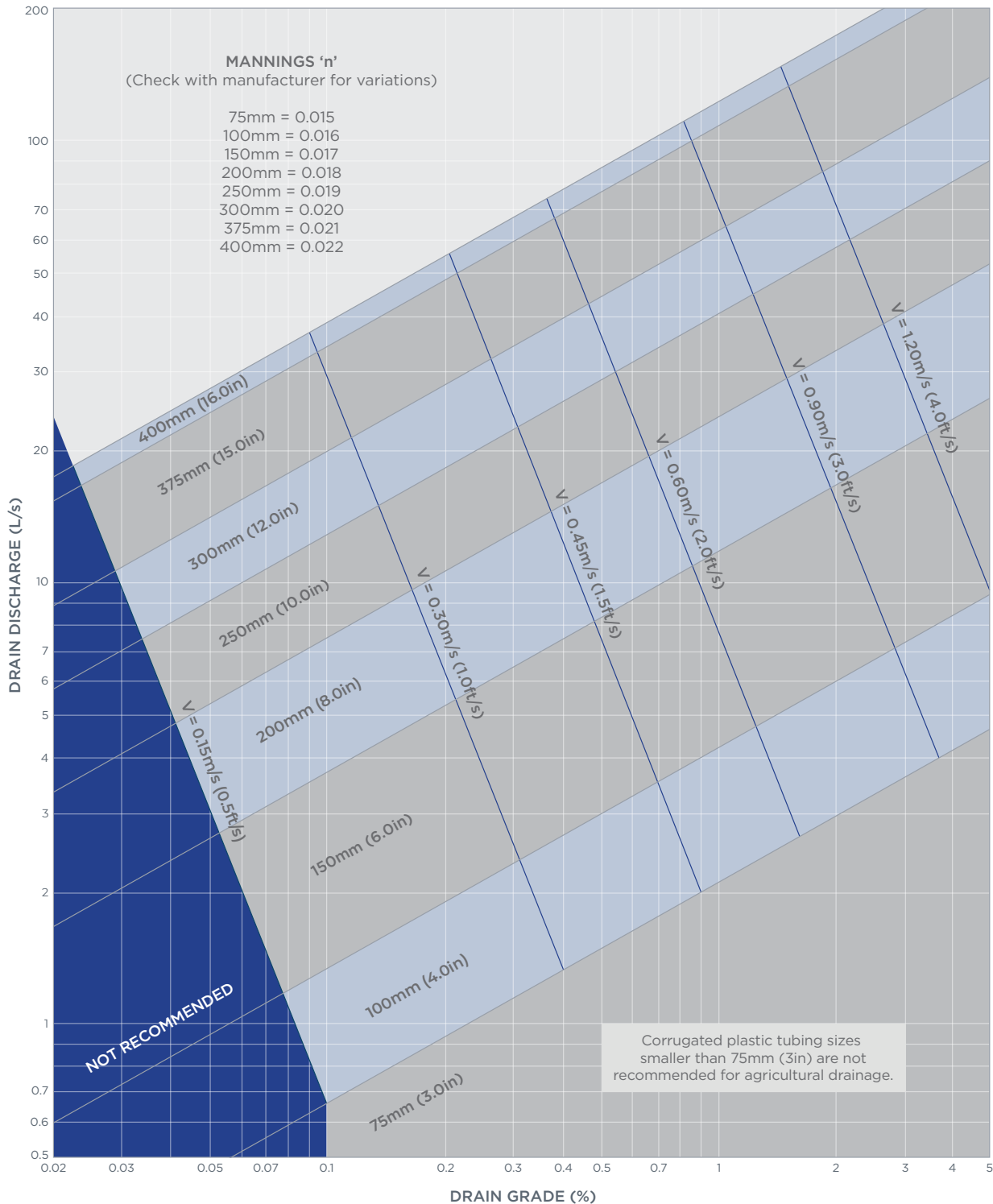
A typical agricultural drainage layout indicating flow direction.



Specialized agricultural tiling equipment uses GPS Technology to ensure accurate installation.

Big 'O' Sizing Chart

Use the chart below to select the correct tubing size for your site conditions. For a given drain grade (%), discharge flow rates (L/s) and outlet velocities are plotted for various tubing sizes. The larger the tubing diameter the higher the discharge flow rate and velocity. Manning's 'n' numbers are included below. Corrugated tubing sizes below 75mm (3in) are not recommended for agricultural drainage.



Specification

Corrugated High Density Polyethylene Tubing for Subdrainage Applications

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. 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
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Outside Diameter (mm)	63, 90, 120, 180, 240, 305, 375, 440
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Recommended Drainage Depths (mm)	<ul style="list-style-type: none">• 600mm minimum cover• 2,000mm maximum cover
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NOTE:

50mm and 375mm tubing diameters are unavailable in Quebec.

APPLICABLE STANDARDS

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



Armtec is a member of
the Plastics Pipe Institute



Armtec is a member of The Land Improvement
Contractors of Ontario (LICO)

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Contact us today to learn more about Big 'O'® and other
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