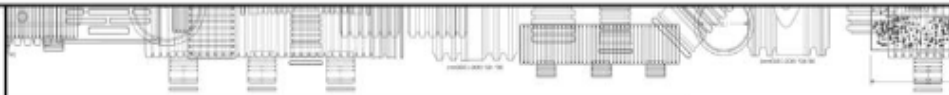


Turf Drain: A Better Collector of Seepage Water



Turf Drain Open Area Calculation





TECHNICAL NOTE

Dual Wall HDPE Perforation Patterns

TN 1.01
April 2007

Standard Perforation Patterns

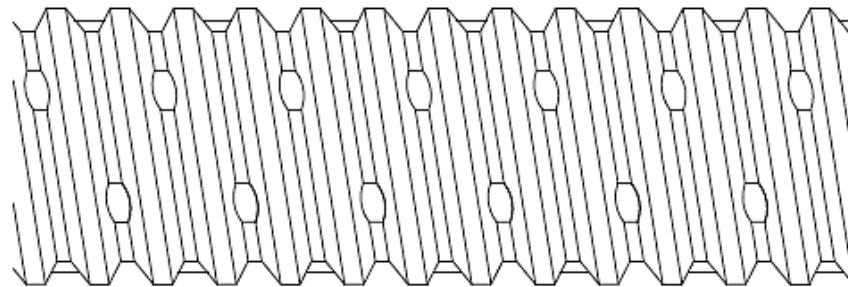
AASHTO Class II Perforation

The following terminology for perforations is derived from the applicable AASHTO specification. Differences between the specifications are covered in Table I. The perforations shall be circular and/or slotted. The perforations shall be located in the outside valleys of the corrugations. The water inlet area shall be no less than 0.945 in²/ft (20 cm²/m) for pipe diameters 4- through 10-inch (100 - 250mm), 1.42 in²/ft (30 cm²/m) for pipe diameters 12- through 18-inch (300 - 450 mm) and 1.89 in²/ft (40 cm²/m) for pipe diameters larger than and equal to 24 inches (450 mm). Table 1 and figure A below represent ADS standard perforation patterns for AASHTO Class II. Patterns indicated with an asterisk are a made to order product and should allow for additional lead-time when ordering.

Nominal I.D.		Perforation Type	Maximum Slot Length or Diameter		Maximum Slot Width		Minimum Inlet Area		Number of Perforations
in	mm		in	mm	in	mm	in ² /ft	cm ² /m	
*4	100	Slot	0.875		0.125		1.0	21	54
*6	150	Slot	0.875		0.125		1.0	21	45
*8	200	Slot	1.18		0.125		1.0	21	36
*10	250	Slot	1.18		0.125		1.0	21	27
12	300	Circular	0.313	8	-	-	1.5	32	36
15	375	Circular	0.313	8	-	-	1.5	32	24
18	450	Circular	0.313	8	-	-	1.5	32	24
24	600	Circular	0.313	8	-	-	2.0	42	32
30	750	Circular	0.375		-	-	2.0	42	32
36	900	Circular	0.375		-	-	2.0	42	32
42	1050	Circular	0.375		-	-	2.0	42	32
48	1200	Circular	0.375		-	-	2.0	42	32
54	1350	Circular			-	-	2.0	42	
60	1500	Circular	0.375		-	-	2.0	42	32

* Denotes perforation pattern made to order

ADS Turf-Flow Pipe Specifications



Perforations

Perforation Type	Narrow Slots	Wide Slots
Slot Length (Avg), in. (mm)	0.5 (13)	0.5 (13)
Slot Width (Avg), in. (mm)	0.01 (.25)	0.125 (3.2)
Water Inlet Area (Min), in ² /ft (cm ² /m) *	0.11 (2.3)	1.34 (28.3)

* Minimum value recommended for design purposes. Actual perforation inlet area may be greater

Comparative Open Area

Comparative Open Area				
Product	Minimum inlet area/ in ²	Maximum inlet area/ in ²	Average inlet area/ in ²	
ADS Turf-Flow 2" Perforated	0.11	Not given	Not given	Turf Drain has 1390 x the average opening area of 2" Turf Flow
ADS Turf-Flow 4" Perforated	1.0	5.90	3.45	Turf Drain has 45x the average opening area of 4" ADS
Turf Drain	153	153	153	

