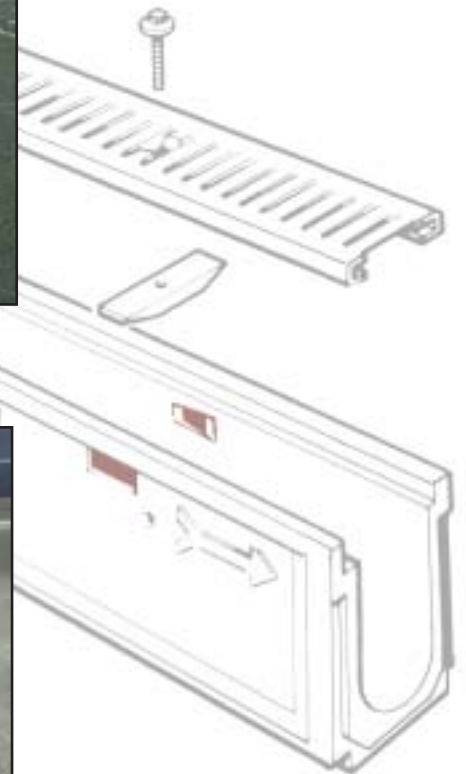
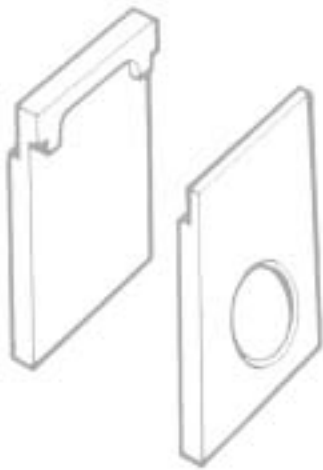


SportsEdge® PolyDrain®

Pre-Sloped Drain System



www.sportsedge.com

Quality. Safety. Versatility. Aesthetics.





ABT, Inc. manufactures PolyDrain trench drains; the standard for pre-engineered trench drains. Over the years the PolyDrain name has become synonymous with trench drain design. Architects and engineers, recognizing

the benefits of pre-engineered polymer concrete trench drains, specify PolyDrain for a wide variety of applications. Included among these applications are food processing plants, airports, highways, loading docks, garden centers and athletic facilities. PolyDrain polymer concrete trench drain assures the specifier of the precision and accuracy required to satisfy hydraulic or chemical resistant demands. PolyDrain offers design flexibility, as well as ease of installation. In addition, expensive labor and material costs associated with hand-forming methods are eliminated.

PolyDrain channels are a nominal meter (39.19 in., 3.27 ft.) long. Standard channels have a 0.6% built in slope. The 30 standard channels are positioned sequentially in numerical order from 010 to 300, creating a continuously sloped channel run. Channel runs can be designed with intersections or miters and fabricated onsite utilizing commercial grade cutting tools. With PolyDrain, runs of almost any length are possible by varying outlet placements, integrating non-sloping channels and using PolyWall Sidewall Extensions for increased depth.

Polymer Concrete vs. Conventional Concrete

	Polymer Concrete	Portland Cement Concrete
Minimum Compressive Strength ASTM-C579	17,250 PSI (118.9 MPA)	3,000 PSI (20 MPA)
Minimum Tensile Strength ASTM-C307	2,310 PSI (15.9 MPA)	200 PSI (1.4 MPA)
Minimum Bending Strength ASTM-C580	4,016 PSI (27.7 MPA)	650 PSI (4.5 MPA)
Maximum Moisture Absorption ASTM-C140	0.2%	5%
Freeze-Thaw ASTM-C666	1,600 Cycles – No Weight Loss	750 Cycles – 25% Weight Loss

PolyDrain Formulations

PolyDrain channels offer superior strength and durability as well as marked cost advantages over alternative materials.

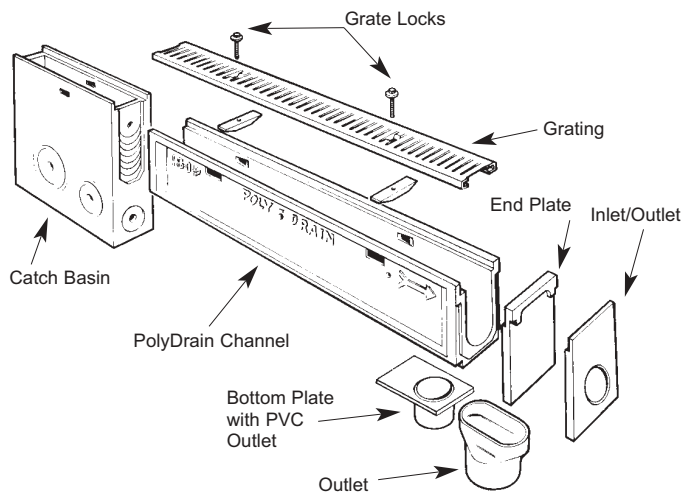
Standard PolyDrain channels are manufactured from **PolyDyn®**, an advanced formulation of selected quartz aggregates and inert mineral fillers bonded together in a high-grade polyester resin. This formulation is suitable for use in both exterior and interior applications.



Polymer Concrete is resistant to salt, oil, gas, sewage, most acids and many alkalis. This makes it excellent for chemical transport, washdown and food processing, as well as many other applications.

Portland Cement Concrete is subject to deterioration of varying degrees under any of these conditions.

Typical PolyDrain System

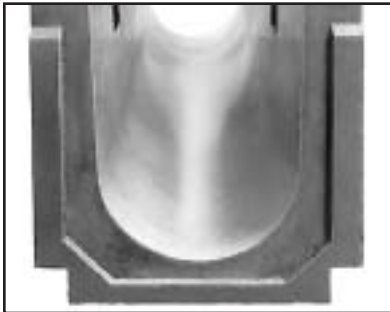


Interlocking Joints

PolyDrain channels have interlocking tongue-and-groove joints that serve two important functions. First they aid in maintaining proper channel alignment during the pour. Second, they assist in securing channel connections to prevent fluid migration out of the system. ABT maintains a line of sealants that can be applied to channels when a sealed system is required.

Pre-Sloped Radius Channels

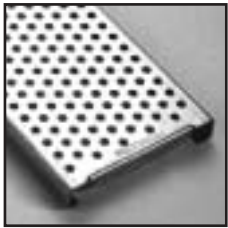
Standard PolyDrain channels have a built-in 0.6% slope with a smooth radius bottom and a narrow cross section. These features provide excellent hydraulic efficiency. Without any site slope, a 3.5 feet per second velocity is obtained when the channels are flowing full.



Anchoring Ribs

PolyDrain channels are formed with full-length anchoring ribs on each side of the channel at the base of the side wall. These anchoring ribs provide a positive mechanical lock with surrounding concrete.





2410



2420



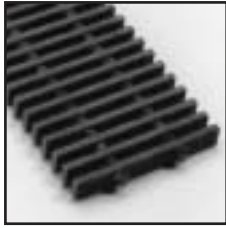
2422



2336



2720



2722



2504



2506

2400 Series Stamped Grates

Perforated Heel-Proof Grates

Part No.	Material	Proof Load PSI	Length in (m)	Weight lb (kg)	Locking Device
♿ 2410	Galvanized steel	15	39.19 (1.0)	6 (2.7)	2810A
♿ 2452	18-8 Stainless steel	15	39.19 (1.0)	6 (2.7)	2840A
♿ 2486	Brass	15	39.19 (1.0)	8 (3.6)	2892A

Reinforced Perforated Heel-Proof Grates

Part No.	Material	Proof Load PSI	Length in (m)	Weight lb (kg)	Locking Device
♿ 2412	Galvanized steel	150	39.19 (1.0)	8 (3.6)	2810A
♿ 2454	Stainless steel	150	39.19 (1.0)	8 (3.6)	2840A

Perforated grating for 300 psi proof load available on special order basis.

Slotted Steel Grates

Part No.	Material	Proof Load PSI	Length in (m)	Weight lb (kg)	Locking Device
2420	Galvanized steel	150	39.19 (1.0)	6 (2.7)	2811A
2440	Stainless steel	150	39.19 (1.0)	6 (2.7)	2841A

Reinforced Slotted Steel Grates

Part No.	Material	Proof Load PSI	Length in (m)	Weight lb (kg)	Locking Device
2422	Galvanized steel	300	39.19 (1.0)	8 (3.6)	2811A
2442	Stainless steel	300	39.19 (1.0)	8 (3.6)	2841A
2442.19	Stainless steel	300	39.19 (1.0)	8 (3.6)	2841A

2300 & 2700 Series Non-Metal Grates

Part No.	Material	Proof Load PSI	Length in (m)	Weight lb (kg)	Locking Device
♿ 2336	Thermoplastic Heel-proof	15	19.60 (0.5)	1.1 (.50)	2840.25A
2720	Vinylester FRP(bars on 1" centers)	150	39.19 (1.0)	4 (1.8)	2887
2722	Vinylester FRP(bars on 0.6" centers)	300	39.19 (1.0)	6 (2.7)	2887

2500 Series Cast Grates

Longitudinally Slotted Grates

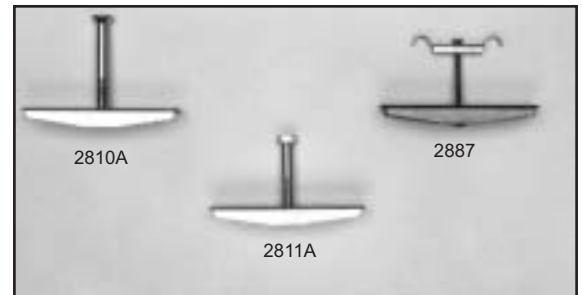
Part No.	Material*	Proof Load PSI	Length in (m)	Weight lb (kg)	Locking Device
♿ 2504	Ductile iron	600	19.60 (0.5)	10 (4.5)	2811B

Ornamental ADA Ductile Iron Grates

Part No.	Material*	Proof Load PSI	Length in (m)	Weight lb (kg)	Locking Device
Call ABT Inc. for additional Ornamental Options 1-800-438-6057					
♿ 2506	Ductile iron	300	19.60 (0.5)	7 (3.2)	2810A

Key to special compliance grades

- ♿ Meets Americans with Disabilities Act (ADA) Requirements. All ADA rated grates are also heelproof (excluding 2504).



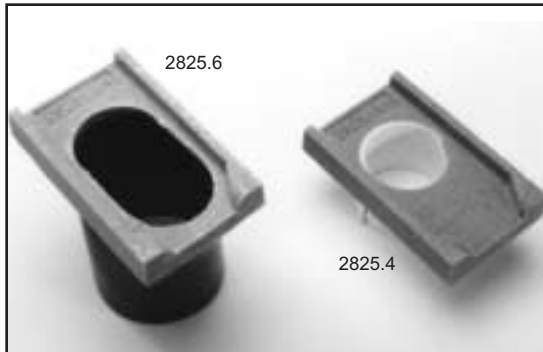
Locking Devices

Grate locking devices are recommended for all applications involving vehicular traffic, or where vandalism may be a problem. Locking devices are provided in zinc-plated, stainless steel and brass. The bolt is threaded into the lock toggle through the hole provided in the grate prior to grate installation. As the bolt is tightened, the toggle cams into place for hands-free installation.



Inlets and Outlets

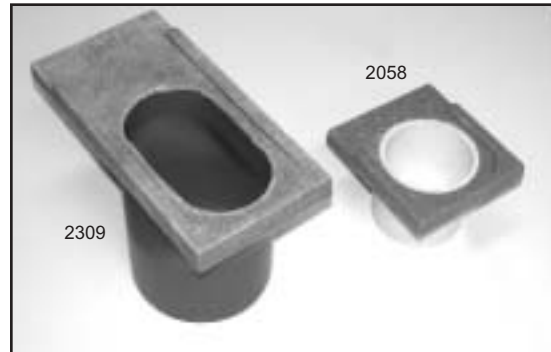
All 4 in. (100 mm) horizontal plates have inlet or outlet capability. As outlets, they fit the downstream end of every fifth channel, or as inlets, the upstream end of the following channel. All 4 in. (100 mm) plates are made with a PVC sleeve to accept either SCH40 or SDR35 pipe. 6 in. (150 mm) outlet plates are made with a special adapter flume. Vertical outlet plates fit over the cutouts on each of the outlet channels. 8 in. and 12 in. outlets are also available.



Vertical Outlet Plates



8" Outlet (12" Outlet Available)



Horizontal End Plates



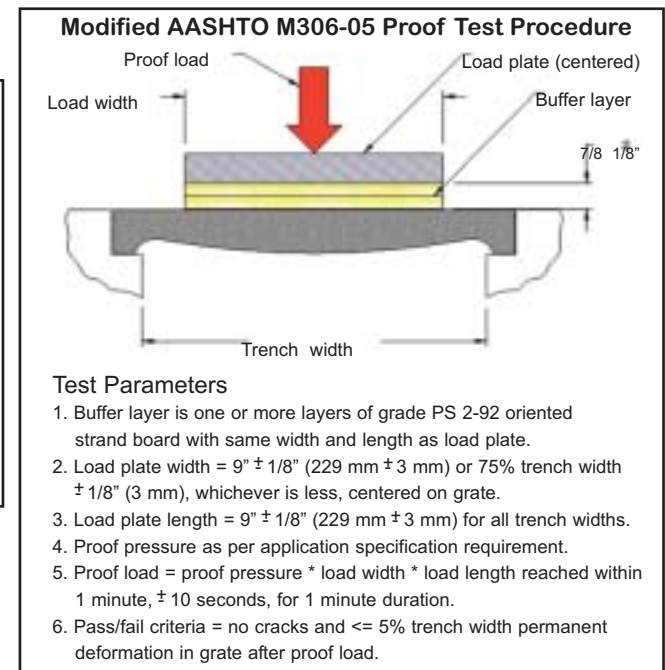
Shovel Head

Designed to conform to the PolyDrain channel bottom.

4 in. (100 mm) Strainer

The zinc-plated strainer is designed to intercept leaves and similar type trash to prevent it from entering the sewer system. Fits all 4 in. (100 mm) vertical channel outlets. Also available in stainless.

GRATE APPLICATION TABLE									
Application Load Pressures									
Applications	0 psi	10 psi	25 psi	40 psi	100 psi	250 psi	400 psi	600 psi	1000 psi
Highways & Non-Motorized Traffic									
Residential & Non-Dynamic Traffic									
Industrial, Private Aircraft, & Roadway									
Commercial/Military Aircraft & Ports									
Proof Load Equivalent Pressures:									
1. AIST Pedestrian Proof Pressure (75 psi)									
2. AASHTO H-20 (100 psi)									
3. AIST Automotive Proof Pressure - No Dynamic Loading - (150 psi)									
4. AIST Industrial & Roadway Proof Pressure (300 psi)									
Notes:									
The above table shows the range of loads for applications common in a category. For pneumatic tire applications, load pressure is approximately inflation pressure. Dynamic forces are also created by traffic braking, accelerating, or turning while contacting the grate and are not reflected in the table above. Where and/or if an application falls within one of the ranges and any special conditions is the sole responsibility of the Buyer or their Professional Representative.									



Channel Specifications

Use this chart to estimate flow capacities and invert elevations. Add a minimum of 4" to overall depths to estimate necessary excavation or as recommended by Structural Engineer. Actual depth of excavation is governed by slab or pavement thickness.

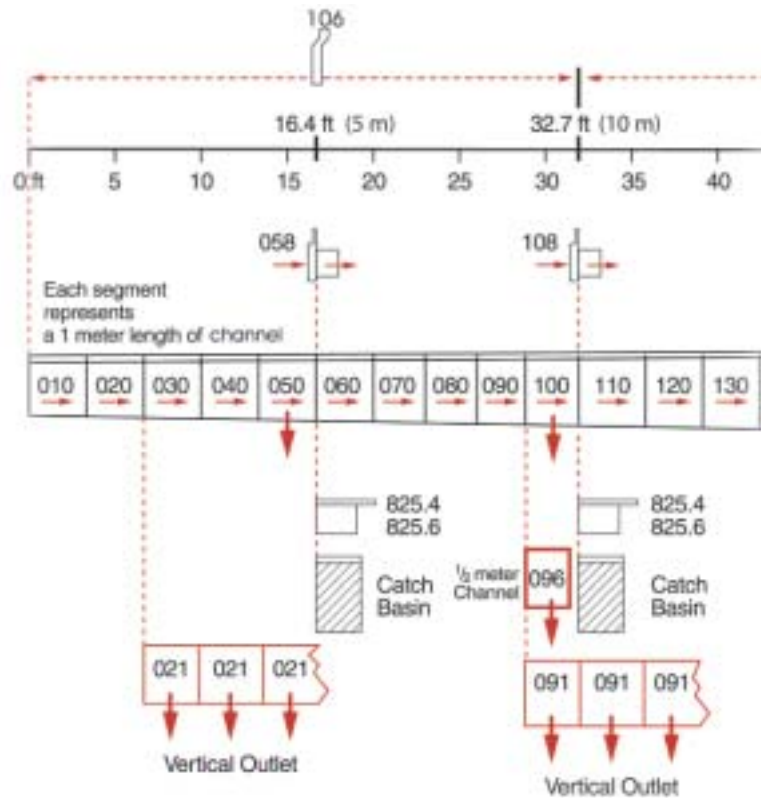
NOTES:

Subtract 1 in. (25 mm) from minimum and maximum depths shown to obtain invert elevations.

Red part numbers indicate non-sloping channels.

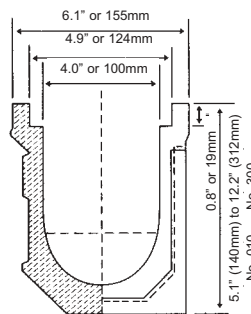
Hydraulic data does not have a grate locking device in flow area.

n=0.010				
Part No.	Channel Only			
	Overall Channel Depth in. (cm)		Maximum Flow Rate gpm (lpm)	Weight lbs (kg)
	Minimum	Maximum		
010	5.1 (12.9)	5.3 (13.5)	106.7 (403.8)	31.1 (14.1)
020	5.3 (13.5)	5.6 (14.1)	115.8 (438.3)	32.8 (14.9)
021	5.6 (14.1)	5.6 (14.1)	—	32.0 (14.5)
030	5.6 (14.1)	5.8 (14.7)	125.0 (473.1)	33.6 (15.2)
040	5.8 (14.7)	6.0 (15.3)	134.2 (508.0)	34.3 (15.5)
050	6.0 (15.3)	6.3 (15.9)	143.5 (543.0)	33.8 (15.3)
060	6.3 (15.9)	6.5 (16.5)	152.7 (578.2)	35.2 (16.0)
070	6.5 (16.5)	6.7 (17.1)	162.1 (613.5)	36.2 (16.4)
080	6.7 (17.1)	7.0 (17.7)	171.4 (648.9)	37.0 (16.8)
090	7.0 (17.7)	7.2 (18.3)	180.8 (684.3)	38.0 (17.2)
091	7.2 (18.3)	7.2 (18.3)	—	37.4 (17.0)
096	7.2 (18.3)	7.2 (18.3)	—	20.1 (9.1)
100	7.2 (18.3)	7.4 (18.9)	190.2 (719.9)	37.6 (17.1)
110	7.4 (18.9)	7.7 (19.5)	199.6 (755.5)	39.8 (18.1)
120	7.7 (19.5)	7.9 (20.1)	209.0 (791.2)	40.6 (18.4)
130	7.9 (20.1)	8.2 (20.7)	218.5 (826.9)	42.4 (19.2)
140	8.2 (20.7)	8.4 (21.3)	227.9 (862.7)	42.8 (19.4)
150	8.4 (21.3)	8.6 (21.9)	237.4 (898.6)	42.6 (19.3)
160	8.6 (21.9)	8.9 (22.5)	246.9 (934.4)	44.2 (20.0)
170	8.9 (22.5)	9.1 (23.1)	256.3 (970.4)	45.1 (20.5)
180	9.1 (23.1)	9.3 (23.7)	265.8 (1006.3)	46.1 (20.9)
190	9.3 (23.7)	9.6 (24.3)	275.4 (1042.3)	46.8 (21.2)
191	9.6 (24.3)	9.6 (24.3)	—	46.6 (21.1)
200	9.6 (24.3)	9.8 (24.9)	284.9 (1078.3)	46.9 (21.3)
210	9.8 (24.9)	10.0 (25.5)	294.4 (1114.4)	48.6 (22.0)
220	10.0 (25.5)	10.3 (26.1)	303.9 (1150.5)	49.8 (22.6)
230	10.3 (26.1)	10.5 (26.7)	313.5 (1186.6)	50.0 (22.7)
240	10.5 (26.7)	10.7 (27.3)	323.0 (1222.7)	51.5 (23.4)
250	10.7 (27.3)	11.0 (27.9)	332.6 (1258.9)	50.5 (22.9)
260	11.0 (27.9)	11.2 (28.5)	342.1 (1295.0)	52.4 (23.7)
270	11.2 (28.5)	11.5 (29.1)	351.7 (1331.2)	53.0 (24.0)
280	11.5 (29.1)	11.7 (29.7)	361.2 (1367.4)	54.5 (24.7)
290	11.7 (29.7)	11.9 (30.3)	370.8 (1403.6)	54.9 (24.9)
291	11.9 (30.3)	11.9 (30.3)	—	53.4 (24.2)
300	11.9 (30.3)	12.2 (30.9)	380.4 (1439.9)	55.6 (25.3)



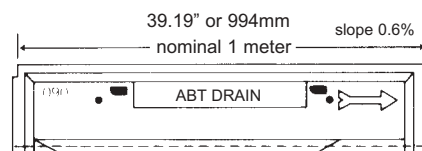
The **PolyDrain Trench Drain System** consists of 30 interlocking sloped channels and 4 non-sloped channels. Special non-sloping channels can be inserted at specified intervals in order to extend channel runs. Catch basins, horizontal outlet plates, closed end plates and vertical outlet plate adapters can be installed at designated locations. Closed end plates terminate channel runs. To determine number of channels required simply divide footage by 3.27.

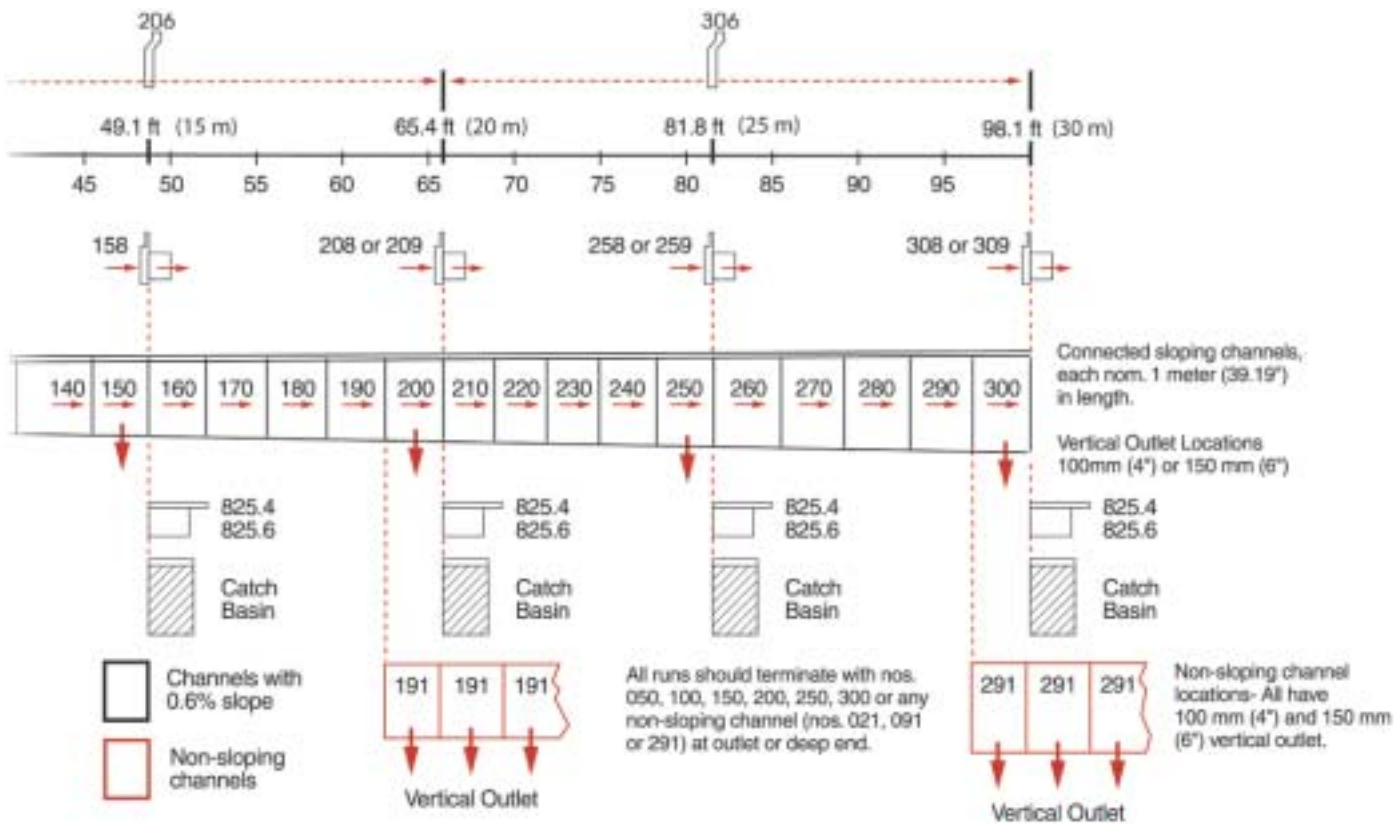
NOTE: Always begin at the appropriate outlet channel, working towards the shallow end.



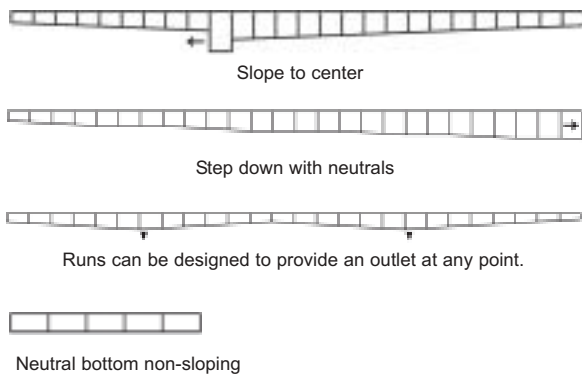
Minimum overall depth (No. 010)	5.1 in. (128 mm)
Maximum overall depth (No. 300)	12.2 in. (309 mm)
Inside top width (all channels)	4.0 in. (100 mm)
Maximum cross section flow area	39.9 sq. in. (25,400 mm ²)
Length of slope system	98.1 feet (30 m)
Channel bottom thickness	1.0 in. (nom.) (20 mm)

PolyDrain systems can be extended to greater lengths by insertion of any number of non-slope channels (No. 021, 091, 096, 191, and 291) at the appropriate locations, or by the addition of PolyWall sidewall extensions.





Run Variations



DISCLAIMER

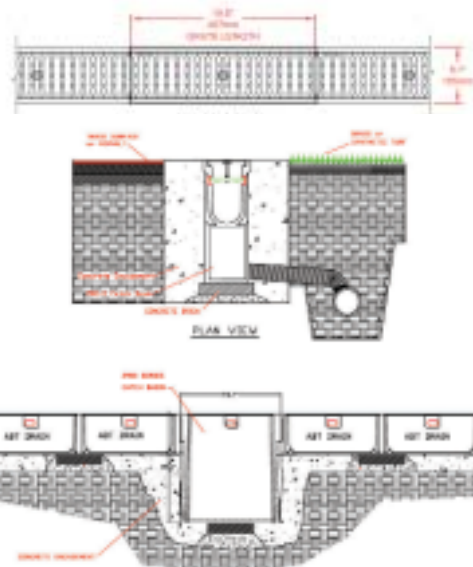
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2900 Series Small Catch Basins

PolyDrain's 2900 Series Catch Basins have the same outside dimensions as standard PolyDrain channels. Designed to accept sidewall extensions, they can be positioned any place in a channel run. The 2900 Series Catch Basins are available with easy-to-remove stainless or galvanized steel trash buckets and can accept the full range of lockable inlay or frame-and-grate systems. Available with foul air traps when required.



2610-2611 Large Catch Basins

PolyDrain's 2610 and 2611 Large Catch Basins are designed to accept large volumes of fluids. Removable stainless or galvanized steel trash buckets are available and a cast iron grate and frame is included. Catch basins are 19.6" long and 12.8" wide and have pre-formed cutouts for insertion of channels and 6 in. (150 mm) outlets on all four sides of the basin, although other pipe sizes can be fitted to the catch basin as required. PolyDrain Large Catch Basins have a stackable design which allows for installation to any required depth.



2600 Series Grates

Slotted Grates for 2600 Series Catch Basins

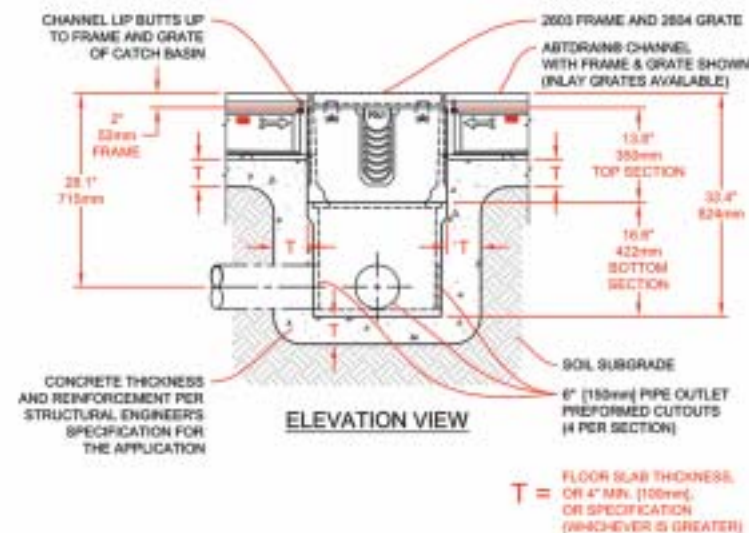
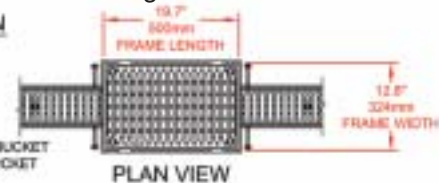
Part No.	Material	Proof Load PSI	Length in (m)	Weight lb (kg)	Locking Device
H20 2604	Ductile iron (class 30)	600	18.87 (0.48)	55 (24.9)	2828



2610 Large Catch Basin

2610 CATCH BASIN

INCLUDES:
2600 - TOP SECTION
2602 - BOTTOM SECTION
2603 - CAST IRON FRAME
2604 - CAST IRON GRATE
OPTIONAL:
2605 - GALVANIZED TRASH BUCKET
2606 - STAINLESS TRASH BUCKET
2610 - STEEL SOLID COVER



SportsEdge®

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