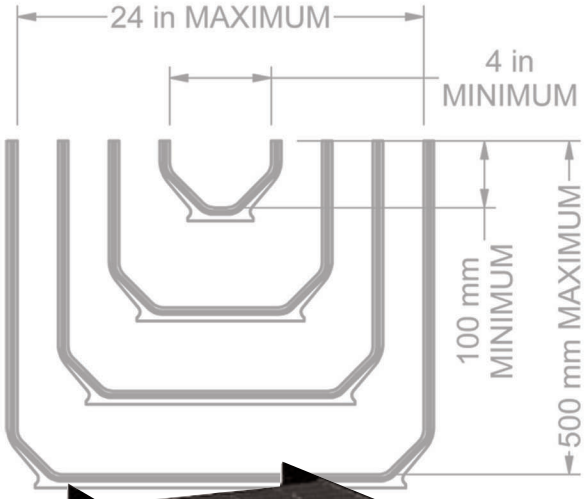
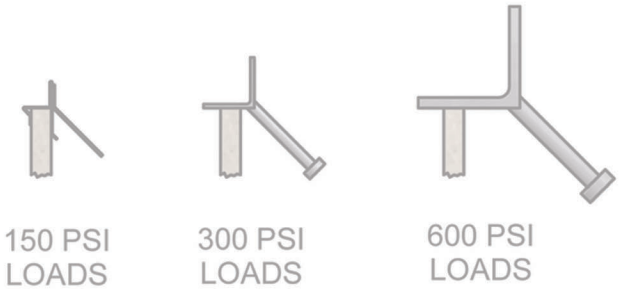
PolyDrain® PDX

Versatile Modular Polymeric Surface Drainage Channel System





RAILS

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Today's Hydraulic Solutions

PolyDrain PDX

PDX is the first and only versatile chemical resistant modular polymeric surface drainage channel system. The PDX system allows the designer or customer to select a modular trench drain by trench width, depth, and slope as hydraulically required, and not from a limited product selection.

Product Features:

Channels - Manufactured from UL /ULC certified polymeric materials, the channels feature a high precision tongue and groove joint for positive alignment and a superior configuration for sealant application. Visit www.abtdrains.com for polymer concrete physical properties.

Grate Options - A wide range of grate options exist for pedestrian to airport applications. Select grates with the right strength, style, and corrosion resistance for the application.

Frame Options - Steel, painted steel, galvanized steel, or FRP styles are available. Select the best rail material for your application. All rails are independently anchored into the surrounding concrete so that the encapsulation concrete receives the horizontal loads, not the channel walls.

Variable Grate Retention Systems - For applications with substantial horizontal loads, pin locks are available and recommended. Toggle locks can be used when horizontal loads are low. No grate lock is an option where horizontal loads and grate retention are not a consideration. ABT can assist you in making a suitable selection.

Ease of Installation - The system can be installed using the suspension method, installation device, or no-float legs as the application requires.

Eliminates Sub-Slab Barrier Penetration - Geo-membrane penetrations during trench drain installation and monolithic pours are eliminated using no-float legs and anchor slab.

Design Chart Instructions:

Utility Trench - Select from the table below the trench cross section area or width and depth sufficient to contain the application's wire or pipes for each run. Select materials and the style of cover desired.

Containment or Storage Trench - Lay out the length of trench for the site. Determine the maximum storage volume required for this trench run. Divide volume storage by trench length. In "Trench Storage Capacity" below, find which trench widths and depths provide sufficient storage and select the one that is best for the application.

Drainage Trench - Simple drainage systems can be determined if the application's run length and hydraulic load are known. In the "Run Length vs. Slope" table, select a slope which equals or exceeds the required run length. Add or subtract any site slope to the channel slope. Determine what trench width is required for this hydraulic load using the "Flat Site Flow" table below. Additional technical information is available in the "Hydraulic Design Guide" at www.abtdrains.com. For more complex hydraulic applications, contact ABT for assistance.

Run Length vs. Slope

Channel Slope	Run Length		Channel Slope	Run Length	
	Ch.or M	Feet		Ch. Or M	Feet
0.0%	∞	∞	**4.0%**	10	32.8
0.5%	80	262.5	**5.0%**	8	26.2
1.0%	40	131.2	**8.0%**	5	16.4
1.5%	27	87.6	**10%**	4	13.1
2.0%	20	65.6	**20%**	2	6.6
2.5%	16	52.5	**40%**	1	3.3

Note: Intermediate slopes in 0.5% increments between those shown above are possible with decreased run lengths. Non-sloped trenches are available in 10 mm depth increments. Contact ABT for availability and additional information.

RELATED PERFORMANCE STANDARDS

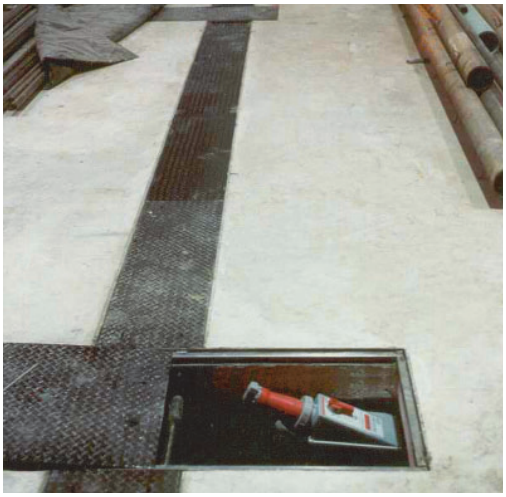
a. Chemically Activated 2 part Polyester
b. UL 723 Flame Spread 5 Smoke Development 95 & or other ULC S102.2 Related Flame Spread Smoke Development 50
c. Compressive Strength: 17,000 PSI as per ASTM C579
d. Tensile Strength: 2,300 PSI as per ASTM C307
e. Bending Strength: 4,000 PSI as per ASTM C580
f. Moisture Absorption: 0.2% as per ASTM C140
g. Freeze Thaw: 1,600 cycles no weight loss as per ASTM C666
h. Chemical Resistance: Automotive fluids/Cleaning agents ASTM C267
i. Mold Growth: Aero Rating per ASTM G21-96 Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi

Trench Storage Capacity and Cross Section Area

Trench Depth		4 Inch		6 Inch		8 Inch		10 Inch		12 Inch		15 Inch		18 Inch		21 Inch		24 Inch	
mm	Inch	Gal/Ft	Sq In	Gal/Ft	Sq In	Gal/Ft	Sq In	Gal/Ft	Sq In	Gal/Ft	Sq In	Gal/Ft	Sq In	Gal/Ft	Sq In	Gal/Ft	Sq In	Gal/Ft	Sq In
100	**3.94**	0.67	12.9	1.08	20.7	1.49	28.6	1.90	36.5	2.30	44.4	2.92	56.2	3.53	68.0	4.15	79.8	4.76	91.6
150	**5.91**	1.1	20.7	1.7	32.6	2.3	44.4	2.9	56.2	3.5	68.0	4.5	85.7	5.4	103.4	6.3	121.1	7.2	138.9
200	**7.87**	1.5	28.7	2.3	44.4	3.1	60.2	3.9	75.9	4.8	91.7	6.0	115.3	7.2	138.9	8.4	162.5	9.7	186.2
250	**9.84**	1.9	36.7	2.9	56.4	4.0	76.1	5.0	95.7	6.0	115.4	7.5	145.0	9.1	174.5	10.6	204.0	12.1	233.5
300	**11.81**	2.3	44.7	3.6	68.4	4.8	92.0	6.0	115.6	7.2	139.2	9.1	174.7	10.9	210.1	12.8	245.5	14.6	281.0
350	**13.78**	2.7	52.9	4.2	80.4	5.6	108.0	7.0	135.5	8.5	163.1	10.6	204.4	12.8	245.8	14.9	287.1	17.1	328.5
400	**15.75**	3.2	61.1	4.8	92.5	6.4	124.0	8.1	155.5	9.7	187.0	12.2	234.3	14.6	281.5	17.1	328.8	19.5	376.0
450	**17.72**	3.6	69.3	5.4	104.7	7.3	140.2	9.1	175.6	11.0	211.0	13.7	264.2	16.5	317.3	19.2	370.5	22.0	423.6
500	**19.69**	4.0	77.6	6.1	117.0	8.1	156.3	10.2	195.7	12.2	235.1	15.3	294.1	18.3	353.2	21.4	412.3	24.5	471.3








Flat Site Flow Capacity for 19.69 Inch [500 mm] Deep Channel

Invert Slope	4 Inch			6 Inch			8 Inch			10 Inch			12 Inch		
	GPM	CFS	FPS	GPM	CFS	FPS	GPM	CFS	FPS	GPM	CFS	FPS	GPM	CFS	FPS
0.5%	741	1.65	3.1	1,468	3.27	4.0	2,380	5.30	4.9	3,461	7.71	5.7	4,698	10.5	6.4
1.0%	1,048	2.33	4.3	2,076	4.62	5.7	3,366	7.50	6.9	4,895	10.9	8.0	6,643	14.8	9.1
1.5%	1,283	2.86	5.3	2,542	5.66	7.0	4,123	9.19	8.5	5,995	13.4	9.8	8,137	18.1	11.1
2.0%	1,481	3.30	6.1	2,936	6.54	8.1	4,761	10.6	9.8	6,922	15.4	11.3	9,395	20.9	12.8
2.5%	1,656	3.69	6.8	3,282	7.31	9.0	5,323	11.9	10.9	7,739	17.2	12.7	10,504	23.4	14.3
4.0%	2,095	4.67	8.7	4,152	9.25	11.4	6,733	15.0	13.8	9,789	21.8	16.0	13,287	29.6	18.1
5.0%	2,342	5.22	9.7	4,642	10.3	12.7	7,527	16.8	15.4	10,945	24.4	17.9	14,855	33.1	20.3
8.0%	2,963	6.60	12.2	5,871	13.1	16.1	9,521	21.2	19.5	13,844	30.8	22.7	18,790	41.9	25.6
10%	3,313	7.38	13.7	6,564	14.6	18.0	10,645	23.7	21.8	15,478	34.5	25.4	21,008	46.8	28.7
20%	4,685	10.4	19.4	9,283	20.7	25.5	15,055	33.5	30.9	21,890	48.8	35.9	29,710	66.2	40.5
40%	6,625	14.8	27.4	13,128	29.2	36.0	21,291	47.4	43.7	30,957	69.0	50.7	42,017	93.6	57.3

Invert Slope	15 Inch			18 Inch			21 Inch			24 Inch		
	GPM	CFS	FPS	GPM	CFS	FPS	GPM	CFS	FPS	GPM	CFS	FPS
0.5%	6,825	15.2	7.4	9,258	20.6	8.4	11,979	26.7	9.3	14,974	33.4	10.2
1.0%	9,652	21.5	10.5	13,093	29.2	11.9	16,941	37.7	13.2	21,176	47.2	14.4
1.5%	11,821	26.3	12.9	16,036	35.7	14.6	20,749	46.2	16.1	25,936	57.8	17.7
2.0%	13,650	30.4	14.9	18,516	41.3	16.8	23,959	53.4	18.6	29,948	66.7	20.4
2.5%	15,261	34.0	16.6	20,702	46.1	18.8	26,787	59.7	20.8	33,483	74.6	22.8
4.0%	19,304	43.0	21.1	26,186	58.3	23.8	33,883	75.5	26.4	42,353	94.4	28.8
5.0%	21,582	48.1	23.5	29,277	65.2	26.6	37,882	84.4	29.5	47,352	105.5	32.2
8.0%	27,299	60.8	29.8	37,033	82.5	33.6	47,918	106.8	37.3	59,896	133.4	40.8
10%	30,522	68.0	33.3	41,404	92.2	37.6	53,573	119.4	41.7	66,966	149.2	45.6
20%	43,164	96.2	47.1	58,554	130.5	53.2	75,764	169	59.0	94,704	211	64.5
40%	61,043	136	66.6	82,808	184	75.2	107,147	239	83.4	133,931	298	91.2

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