

## HYDRODUCT® COIL 600

Unique dual-profile drainage composite engineered to replace traditional perimeter drain systems

### Description

Hydroduct® Coil 600 consists of a combination low and high profile drainage core, a high performance geotextile and high strength backing film. The drainage core profile is 0.44 in. (11 mm) at the top to tie into the drainage composite system and 1 in. (25 mm) on the bottom to provide a high-flow section to transport water to the drainage exits. The geotextile serves to retain soil while allowing water to pass from the soil to the core. It is securely bonded to the core to prevent intrusion of the fabric into the core during service. The backing film ensures compatibility with the waterproofing membrane system.

The flow capacity of the low profile sections is 16 gals./min./ft (200 L/min./m ASTM D4716). The flow capacity of the high profile section is 100 gals./min./ft (1250 L/min./m ASTM D4716).

### Advantages

- **Simple drainage system**—collects ground water around sub-structures and transports to drainage exits
- **High flow capacity**—drains 100 gals./min./ft (1250 L/min./m)
- **Durable**—unaffected by permanent immersion in water, bacteria, dilute acids, alkalis and hydrocarbons

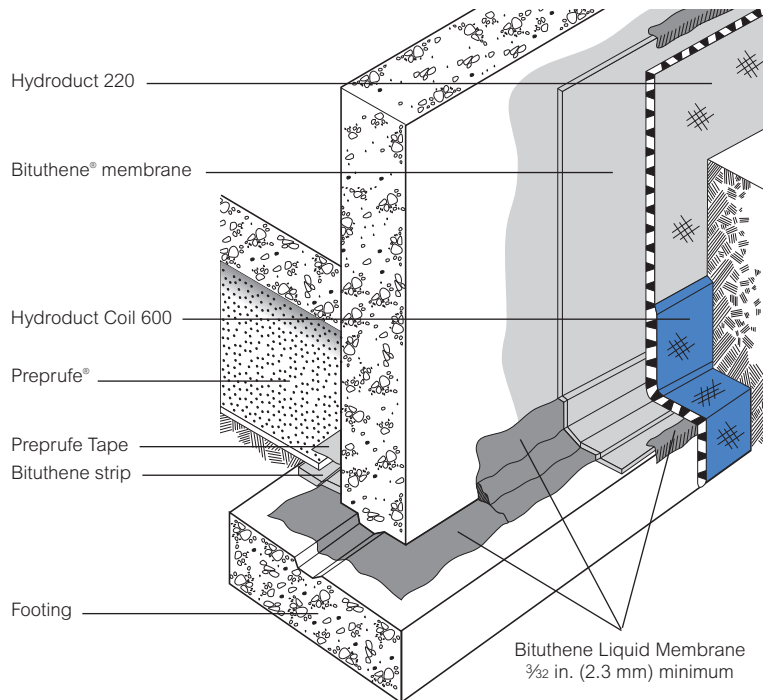
- **Economical**—light weight, easy to use; replaces expensive, imported aggregate drainage layers, pipes and geotextiles
- **Geotextile fabric filter**—allows ground water to pass into the drain core while restricting the movement of soil particles
- **High crushing strength**—withstands pressures from backfilling and compaction with no loss of flow area
- **Puncture and tear resistant**—fabric has high strength to prevent damage during installation and operating conditions

### Use

Hydroduct Coil 600 Perimeter Drain is used in place of traditional perimeter aggregate drain tile systems to provide an effective transport system to evacuate water from the drainage composite system and surrounding soil to the drainage exits. It is used at the base of foundation walls, retaining walls, bridge abutments, tunnels, around earth sheltered structures and under slabs.

### Product Advantages

- Simple drainage system
- High flow capacity
- Durable
- Economical
- Geotextile fabric filter
- High crushing strength
- Puncture and tear resistant



Drawings are for illustration purposes only. Please refer to [www.graceconstruction.com](http://www.graceconstruction.com) for specific application details.

## Installation

The first row of drain to be installed is the Hydroduct Coil 600 at the bottom of the wall.

If not using Hydroduct 220 for full wall coverage, close the top end of the drain to prevent soil intrusion by folding the fabric behind the drain. Close the high profile section with 3 in. (75 mm) underground tape (see Figure 1).

Attach the next roll of Hydroduct Coil 600 drain by cutting one row of low profile dimples from each end of the two sections to be joined. Do not cut fabric. Interlock one row of the high profile section and secure connection. Overlap fabric and apply 3 in. (75 mm) wide underground tape from the top to the bottom of the joint to prevent soil intrusion (see Figure 2).

### Going Around Corners

Bend drain to make inside corners. For outside corners, cut the low profile core flush with corner and tape edges. Slit fabric on high profile section, bend around corner, and place corner guard with fabric over slit of high profile drain. Secure with underground tape (see Figure 3).

### Vertical Wall

When the Hydroduct 220 is installed, the flange should be facing the direction opposite of the Hydroduct Coil 600 water flow. When the Hydroduct 220 is installed horizontally, the edge of the core with the flange should be at the top. This flange position, similar to roof shingle applications, minimizes seepage of water behind the drain. Fold back the fabric at the top of the Hydroduct Coil 600 and place the Hydroduct 220 on top of the Hydroduct Coil 600 core flange. Fold fabric from sheet drain section down over the Hydroduct Coil 600 section and secure with 3 in. (75 mm) tape.

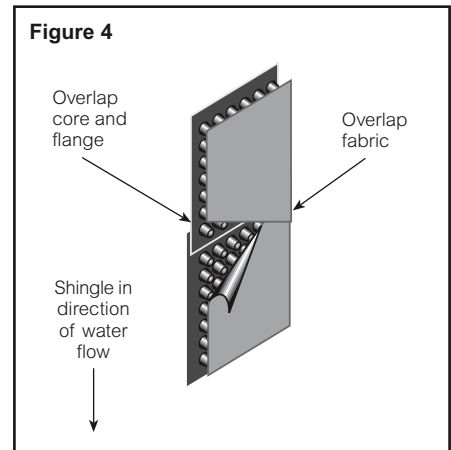
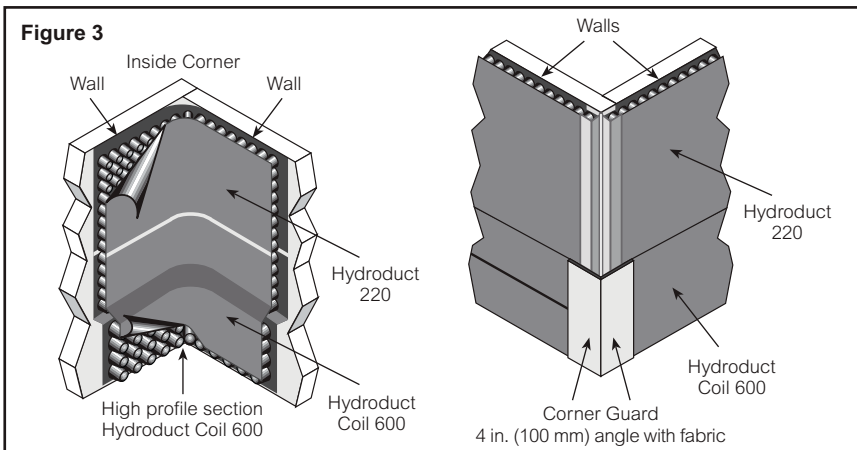
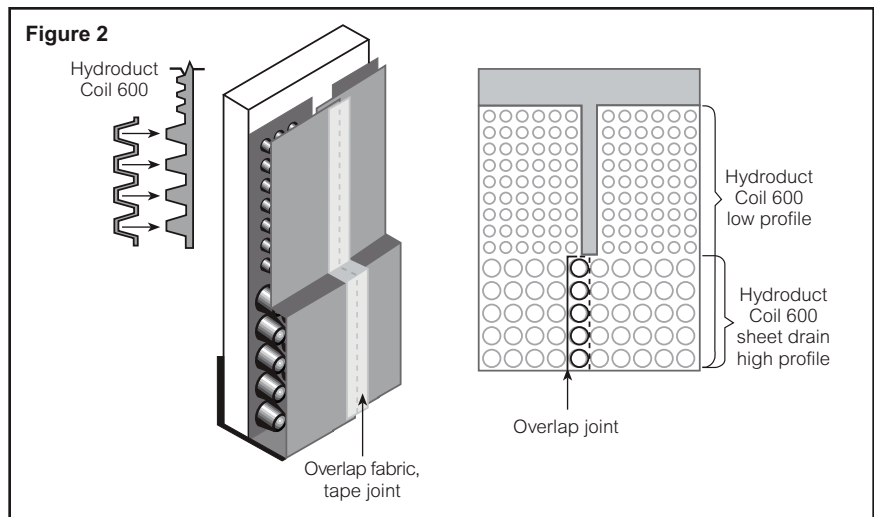
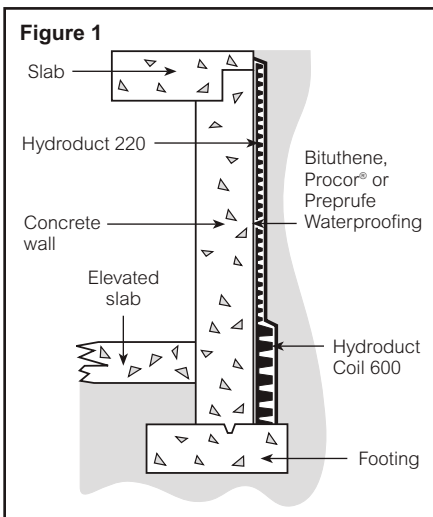
### Attaching the Next Roll of Hydroduct 220

Fold back edge of fabric on lower (or downstream) drain. Do not detach from dimples. Place cones of upper (upstream) drain over flange of lower drain. Overlap fabric of upper drain over lower drain. Seal seam with 3 in. (75 mm) tape.

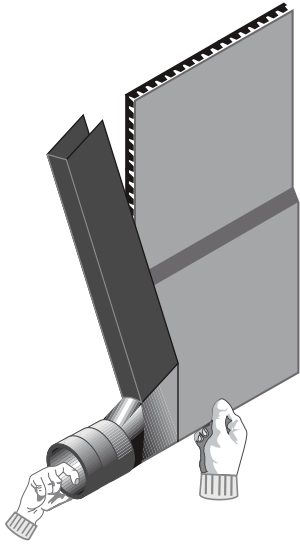
Overlap fabric in direction of water flow. Use tape or spray adhesive, if necessary, to keep fabric at joint in place prior to backfilling. All edges of drain should have extra fabric tucked behind core edge to prevent soil from entering core (see Figure 4).

### Sealing Edges

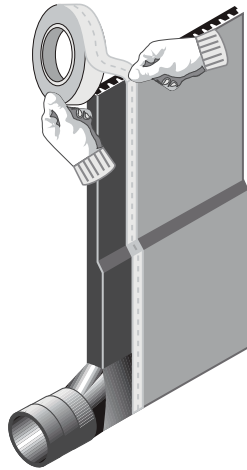
All edges of drain should have extra fabric tucked behind core edge seal to prevent soil from entering core.



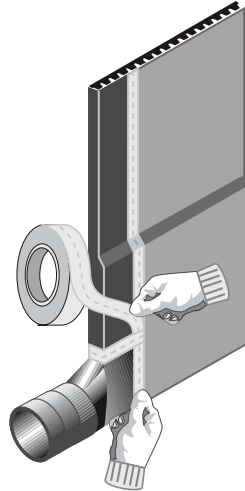
## Universal™ Outlet



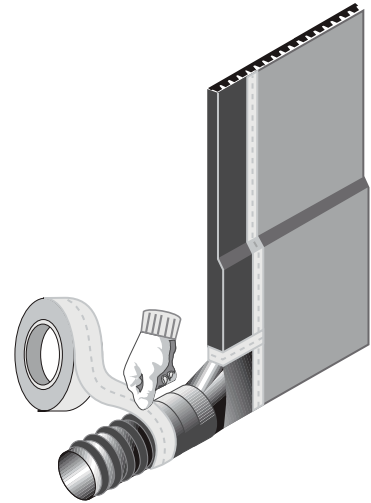
**Step 1**  
Place end outlet over bottom corner of Hydroduct Coil 600 with fabric up.



**Step 2**  
Fold fabric around exposed edge of core and tape with 3 in. (75 mm) underground tape.

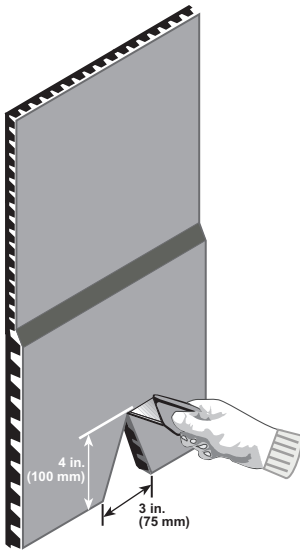


**Step 3**  
Secure all edges with 3 in. (75 mm) tape to prevent soil intrusion.

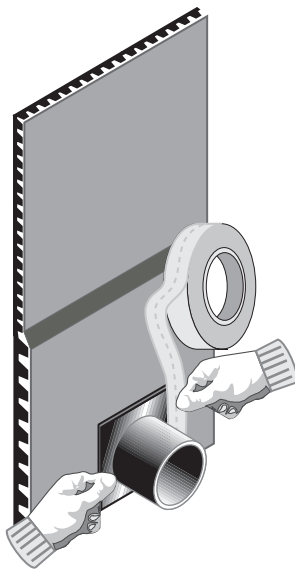


**Step 4**  
Insert 4 in. (100 mm) pipe into end of outlet and secure connection with 3 in. (75 mm) tape.

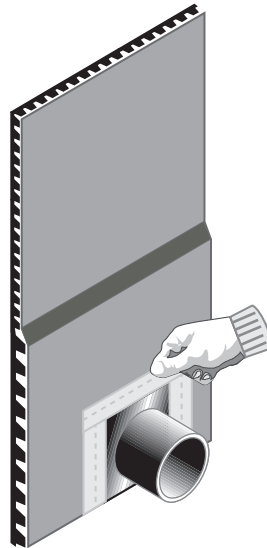
## Connector Tee



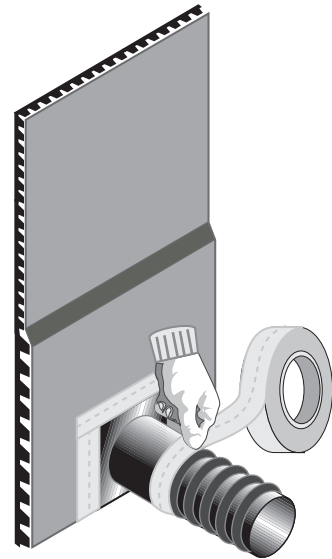
**Step 1**  
Use a razor knife and cut a "V" notch in the bottom portion of the Hydroduct Coil 600 approximately 3 in. (75 mm) wide at the bottom and 4 in. (100 mm) high and discard.



**Step 2**  
Insert fitting over notch and tape bottom of the Hydroduct Coil 600.



**Step 3**  
Make sure all edges of fitting are covered with tape.



**Step 4**  
Insert pipe into fitting and secure with tape.

## Supply

<b>Hydroduct Coil 600</b>	
Roll size	2 ft x 50 ft (0.6 m x 15.2 m) roll
Packaging	8 rolls/pallet
Weight	30 lbs (14 kg)/roll
<b>Ancillary Products</b>	
Outlet Pipe Connector	12/box
Connector Tee	12/box
Corner Guard	12/box
Hydroduct Tape	1 in. x 200 ft (25 mm x 61 m) rolls

## Physical Properties

Property	Typical Value	Test Method
<b>Drainage Core</b>		
Polymer	High impact polystyrene	
Thickness	0.44–1.0 in. (11–25 mm) nominal	ASTM C366 method B
Compressive strength	9,500 lbs/ft <sup>2</sup> (464 kPa)	ASTM D1621
Flow rate (gradient 1.0, load 172 kPa)	16–100 gal/min./ft (200–1250 L/min./m)	ASTM D4716
<b>Geotextile</b>		
Type	Nonwoven	
Polymer	Polypropylene	
Tensile strength	110 lbs (485 N)	ASTM D4632
Apparent opening size	100 U.S. sieve (150 mm)	ASTM D4751
Permittivity flow rate	150 gal/min./ft <sup>2</sup> (6095 L/min./m <sup>2</sup> )	ASTM D4491
Mullen burst	215 lbs/in. <sup>2</sup> (1430 kPa)	ASTM D3786
Puncture strength	65 lbs (285 N)	ASTM D4833

## Backfilling

Soil should be placed and compacted directly against the drain. Use care during backfill operation to avoid damage to the waterproofing system. Follow generally accepted practices for backfilling and compaction. Backfill should be added and compacted in 6 in. to 12 in. (150 mm to 300 mm)

lifts to avoid stresses on the waterproofing system. Direct compactor exhaust away from the drain to prevent damage. Backfill to a minimum of 6 in. (150 mm) above drain to allow for coverage after settlement.

## For Horizontal Plazas

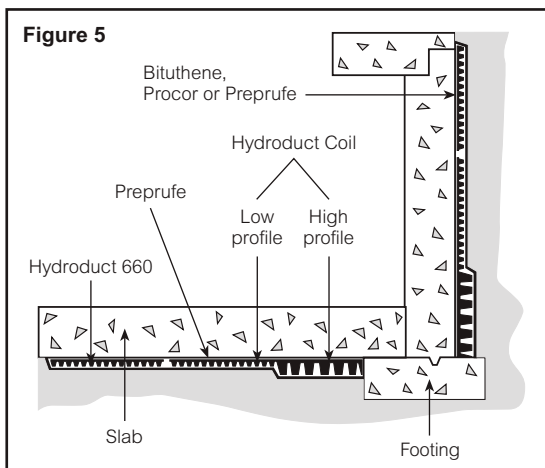
Place drain with fabric side up. Cut core and fabric to fit tightly around floor drain.

## Installation Under Slabs

For under floor slab installation, position Hydroduct Coil 600 sheet drain as shown with geotextile to soil side (see Figure 5).

## Safety, Storage and Handling Information

All construction products must be handled properly. Material Safety Data Sheets (MSDS) are available at [www.graceconstruction.com](http://www.graceconstruction.com) and users should acquaint themselves with this information. Carefully read detailed precaution statements on product labels and the MSDS before use.



[www.graceconstruction.com](http://www.graceconstruction.com)

For technical assistance call toll free at 866-333-3SBM (3726)

Bituthene, Preprufe and Hydroduct are registered trademarks of W. R. Grace & Co.–Conn.

We hope the information here will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for the users' consideration, investigation and verification, but we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our conditions of sale, which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would infringe any patent or copyright. W. R. Grace & Co.–Conn., 62 Whittemore Avenue, Cambridge, MA 02140. In Canada, Grace Canada, Inc., 294 Clements Road, West, Ajax, Ontario, Canada L1S 3C6.

This product may be covered by patents or patents pending.  
HYD-050G Printed in U.S.A. 4/07

Copyright 2007. W. R. Grace & Co.–Conn.  
FA/LI/1M

**GRACE**