

AQUADRAIN® 100BD

HIGH-FLOW BASE DRAINAGE COMPOSITE

DESCRIPTION

AQUADRAIN 100BD is a high-flow strip drainage composite designed for collection and transport of water to discharge pipes at the base of a below-grade foundation wall. Used in conjunction with AQUADRAIN sheet drainage composites, AQUADRAIN 100BD provides an uninterrupted drainage flow path.

AQUADRAIN 100BD is a two-part prefabricated drainage composite consisting of a 300 mm (12") high by 25 mm (1") thick, 3-dimensional polystyrene core which is wrapped with a heavy 6-oz. non-woven polypropylene filter fabric. The 3-dimensional, dimple core provides compressive strength and allows water to flow to drainage discharge pipes. The filter fabric allows water, or other liquids to pass into the drainage core while restricting the passage of soil particles. The fabric is bonded to the core to minimize fabric intrusion into the core resulting from backfill pressure. AQUADRAIN 100BD replaces aggregate drainage providing a consistent drainage flow within a thin layer.

APPLICATIONS

AQUADRAIN 100BD is designed for use in conjunction with AQUADRAIN sheet drainage composites to provide an uninterrupted drainage flow path to discharge pipes at the base of foundation walls, tunnels and retaining walls. It replaces costly conventional perforated pipe/aggregate collection systems at the base of the walls.

PACKAGING

AQUADRAIN 100BD is available in 10.6 m rolls (35'); packaged 2 rolls per bag. Roll weight: 8.1 Kg (18 lbs.). Total bag Weight: 16.8 Kg (37 lbs.).

Pallet Packaging consists of 8 bags, for a total of 16 rolls — 560 linear feet (170 m) per pallet.

INSTALLATION

Backfilled Foundation Walls: At the base of a foundation wall, install AQUADRAIN 100BD with the open core side up and the 50mm (2") flap of filter fabric side against the wall. Secure the base drain to the foundation wall over CETCO waterproofing with washer-head fasteners placed through the 50mm (2") flap of filter fabric. When placed over self-adhering sheet applied or fluid applied waterproofing membranes, use a general construction adhesive, such as Liquid Nails, to secure AQUADRAIN 100BD into position over the waterproofing membrane. Install a continuous strip of AQUADRAIN 100BD along the base of the wall. Use couplers and corner fittings as required to form a continuous installation. Install discharge outlet fittings (Corner OutLet, End Outlet, and Side Outlet) to discharge pipes as required for the project. All the outlet fittings are designed to fit standard 100mm (4") PVC sewer pipe.

After completing the AQUADRAIN 100BD installation, place AQUADRAIN sheet drainage, such as AQUADRAIN 15X, with the bottom core edge overlapping the top flap filter fabric to the core edge of AQUADRAIN 100BD (See "Backfill" Detail on back page). Position filter fabric flap from bottom of AQUADRAIN sheet over the front of AQUADRAIN 100BD to cover the open top edge of the AQUADRAIN 100BD. Secure the overlapping filter fabric flap with duct tape or a general construction caulk adhesive. Install subsequent rolls of AQUADRAIN sheet drainage to finished grade or as shown on the drawings. Interlock the core cones of adjoining sheet drainage rolls. Secure excess filter fabric flap over roll lap joints with construction adhesive or duct tape. Cut as required to fit around penetrations and other details.

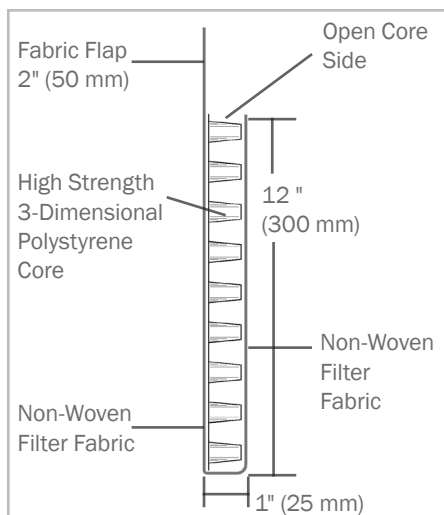
Property Line Walls: At the base of a foundation wall, install the bottom course of AQUADRAIN sheet drainage (ie, AQUADRAIN 15X) horizontally at 300 mm (12") high on the retaining wall. Fasten the extra fabric flap on the bottom of the sheet drainage with washer-head fasteners to the retaining wall. Install AQUADRAIN 100BD under the bottom edge of the installed sheet drainage with the open core side up and the 50mm (2") flap of filter fabric side away from the retaining wall (See "Property Line" Detail on back page). The top edge of AQUADRAIN 100BD should overlap the fabric flap of the sheet drainage so that the soil can not get into the drain composite.

Position the 50mm (2") fabric flap from top of AQUADRAIN 100BD over the bottom edge of the AQUADRAIN sheet drainage core and secure the overlapping filter fabric flap with duct tape or general construction caulk adhesive. This will enclose the open top edge of the AQUADRAIN 100BD.

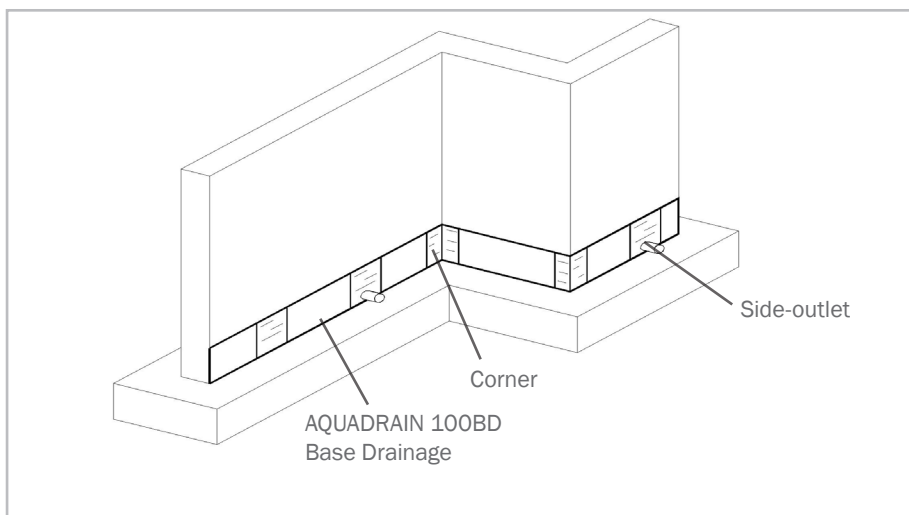
Use In-Line Couplers, RT-Angle Corner and Outlet fittings as required to form a continuous installation. Install discharge outlet fittings (Corner Outlet, End Outlet, and Side Outlet) to discharge pipes as required for the project. All the outlet fittings are designed to fit standard 100mm (4") PVC sewer pipe.

Install subsequent rolls of AQUADRAIN sheet drainage to finished grade or as shown on the drawings. Interlock the core cones of adjoining sheet drainage rolls. Secure excess filter fabric flap over roll lap joints with construction adhesive or duct tape. Cut as required to fit around penetrations and other details.

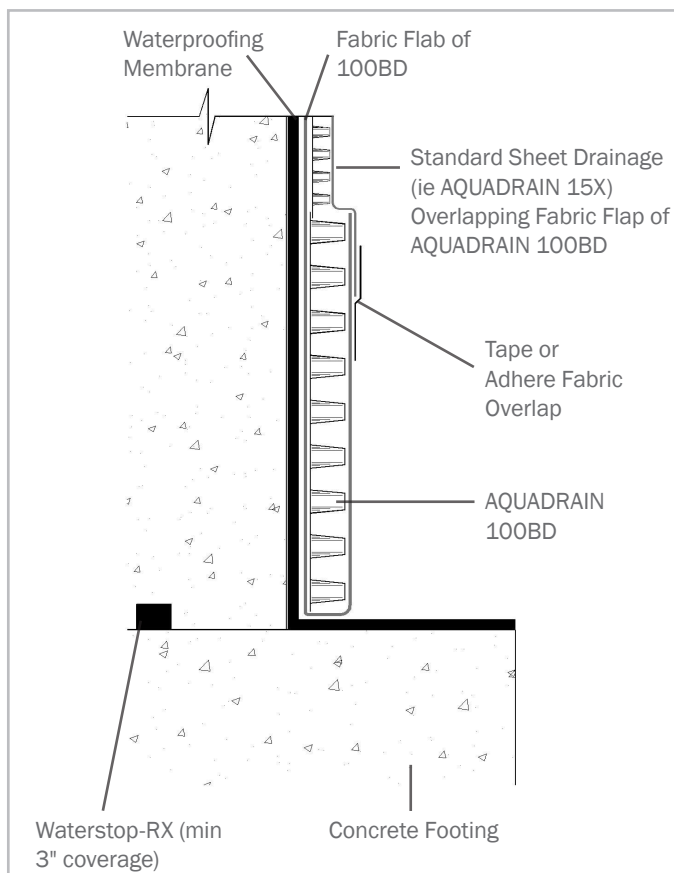
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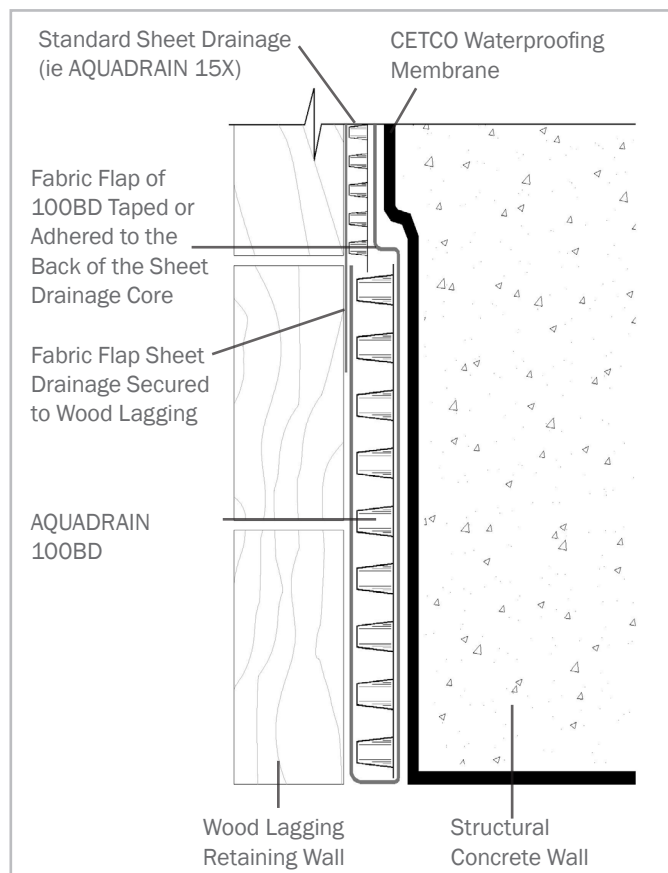
Product Cross-Section



AQUADRAIN 100BD Drainage System Illustration

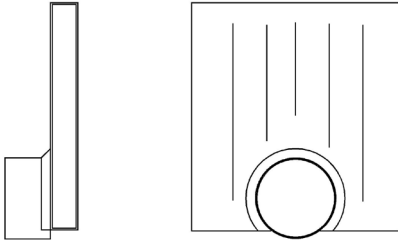

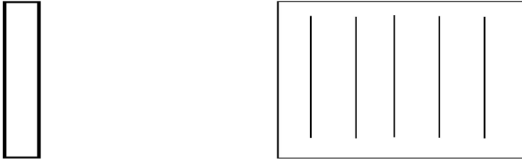


Backfilled Foundation Wall - On backfilled walls, install AQUADRAIN 100BD prior to installing the sheet drain composite.



On property line walls, install bottom course of sheet drainage onto lagging wall prior to AQUADRAIN 100BD.

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FITTINGS SCHEDULE	
<p>SIDE OUTLET: Side Outlet is used to connect 100BD to a standard 4" PVC sewer discharge pipe for intermediate collection of water along footing. Also designed for property line applications.</p>	
<p>CORNER: Corner is used to connect two strips of 100BD at an inside or outside corner.</p>	
<p>IN-LINE COUPLER: In-Line Coupler is used to connect two strips of 100BD to form a continuous base drain.</p>	

TECHNICAL DATA		
PROPERTY	TEST METHOD	TYPICAL VALUE
Flow Capacity of Composite	ASTM D4716	97 gpm/ft width (1,197 l/m width)
Compressive Strength, Composite	ASTM D1621 (mod.)	10,000 lbs/ft² (457 kPa)
Fabric Weight	ASTM D3776	6 oz/y² (203 g/m²)
Grab Tinsile Strength of Fabric	ASTM D4632	160 lbs (700 N)
Puncture Resistance of Fabric	ASTM D3787	90 lbs (400 N)
Apparent Opening Size of Fabric	ASTM D4751	70-100 US Sieve (0.15-0.21 mm)
Burst Strength of Fabric	ASTM D3786	350 psi (2,410 kPa)
Trapezoidal Tear of Fabric	ASTM D4533	65 lbs (280 N)
Flow Rate of Fabric	ASTM D4491	110 gpm/ft² (4,470 l/min/m²)
Elogation of Fabric	ASTM D4632	50%

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UPDATED: MARCH 2025 (Supersedes all previous versions)

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