Roof Drains and Scuppers for new construction

Parapet / Scupper Drain

PVC Roof Drain with Plus Pack

Cast Roof Drain

Prefabricated Roof Accessories for All Roof Systems
**DOME STRAINER***
Portals Plus Dome Strainer is molded polyethylene that is ultraviolet stabilized for longevity. The Dome Strainer bolts securely to clamping collar (Dome Strainer also available in epoxy coated cast aluminum).

**CLAMPING COLLAR/GRAVEL GUARD***
Portals Plus cast aluminum epoxy coated Gravel Guard and Clamping Collar is grooved for positive drainage and insures a maximum hold on roofing materials.

**DRAIN BOWL***
Portals Plus injection molded PVC Drain Bowl is ultraviolet stabilized for long life and is available in 3", 4" and 6" sizes (also available in cast iron or cast aluminum).

**UNDERDECK CLAMP**
Portals Plus cast aluminum underdeck clamp holds the drain bowl securely to the deck

**EXTENSION**
Portals Plus Extension is a 6" length of schedule 40 pipe that extends the drain bowl down below the deck, to accommodate the expansion coupling.

**EXPANSION COUPLING**
Portals Plus flexible Expansion Coupling allows for expansion and contraction that enables the installer to connect the drain to various types of piping (two stainless steel clamps included).
EXTENSION PAN

for installing a roof drain flush with the top surface of roof deck insulation. Creates an overflow drain when used in conjunction with an adjacent roof drain installed in a bearing pan at the deck surface. Allows insulation to surround the drain and pipe above the deck to prevent condensation. Simple topside installation of the heavy 18 gauge spun steel Extension Pan and roof drain. Accepts all Portals Plus Roof Drains and all insulations from 1/4" to 5 1/4" thick (thicker insulation on special order).

BEARING PAN

for installing a roof drain flush with the top surface of an un-insulated roof deck, such as plywood or poured decks. Made of heavy 18 gauge spun steel for easy topside installation. Allows structural poured decks to proceed ahead of the plumber-only a standard core hole is required. Accepts all Portals Plus Roof Drains and all roof decks.

SIDE OUTLET

for installing a roof drain into a roof deck with a confined attic space below, such as wood frame construction. Available for all 3" and 4" Portals Plus Roof Drains.
SPECIFICATION

Furnish and install the Portals Plus, Inc. Roof Drain with Plus Pack and Overflow Clamping Ring, as manufactured by Portals Plus, Inc., Bensenville, IL, at all overflow drain openings as specified on drawings.

Drain shall consist of a molded ultraviolet stabilized polyethylene or cast aluminum dome strainer, a cast aluminum epoxy coated overflow clamping ring, a drain body of (choose one: a cast iron drain body; or a cast aluminum drain body; an injection molded ultraviolet stabilized PVC drain body with a 6" long schedule 40 drain body extension; or an injection molded ultraviolet stabilized ABS drain body with a 6" long schedule 40 drain body extension), a cast aluminum underdeck clamp, and a flexible EPDM connector with stainless steel clamps. Attachment and installation shall be done in accordance with Portals Plus' instructions and the roofing membrane manufacturer's recommendations. (Available in 3", 4" and 6").
Furnish and install the Portals Plus, Inc. Roof Drain with Plus Pack, as manufactured by Portals Plus, Inc., Bensenville, IL, at all drain openings as specified on drawings.

Drain shall consist of a molded ultraviolet stabilized polyethylene or cast aluminum dome strainer, a cast aluminum epoxy coated gravel guard and clamping ring, a cast iron or cast aluminum drain body, a cast aluminum underdeck clamp, and a flexible EPDM connector with stainless steel clamps. Attachment and installation shall be done in accordance with Portals Plus' instructions and the roofing membrane manufacturer's recommendations. (Available in 3", 4" and 6").
**Installation Instructions**

**STEP 1**  
ENSURE DRAINS ON JOBSITE ARE THEAPPROPRIATE SIZE

**STEP 2**  
INSTALL BEARING PAN (If necessary or required)  
The bearing pan permits the roof drain to be installed level with the top of the roof deck eliminating strain on the membrane around the roof drain flange.

**STEP 3**  
INSTALL UNDERDECK CLAMP  
The Underdeck Clamp securely fastens the drain body to the roof deck. The four threaded rods fasten to the down side of the drain body. The Underdeck Clamp fastens to the bottom of the threaded rods.

**STEP 4**  
INSTALL EPDM CONNECTOR  
The Expansion coupling easily connects the new drain to the plumbing line, utilizing two stainless steel band clamps.

**STEP 5**  
INSTALL CLAMPING COLLAR  
Depending on the roof system and application, the clamping collar/Gravel Guard clamps and secures the roof membrane in place. Utilize a water block per Roof Manufacturer recommendations.

**STEP 6**  
INSTALL DOME STRAINER  
Attach Dome strainer to Gravel Guard using the three bolts.
**STEP 1**
Ensure drains on jobsite are the appropriate size.

**STEP 2**
Invert roof drain on a solid surface, invert bearing pan and lay over roof drain flange.

**STEP 3**
INSTALL BEARING PAN
Position four drain securement clips over raised bosses and onto bearing pan. Install four hex head bolts and tighten.

**STEP 4**
INSTALL IN DECK
Return the completed assembly to upright and normal position. Position assembly into precut deck opening so that flange of bearing pan is flush on deck surface. Tack weld or use button head screws (not supplied) to secure completed assembly to deck.

**STEP 5**
INSTALL CLAMPING COLLAR
Depending on the roof system and application, the clamping collar/Gravel Guard clamps and secures the roof membrane in place. Utilize a water block per Roof Manufacturer recommendations.

**STEP 6**
INSTALL DOME STRAINER
Attach Dome strainer to Gravel Guard using the three bolts.
Extension Pan Installation Instructions

**STEP 1**
Ensure drains on jobsite are the appropriate size.

**STEP 2**
Invert roof drain on a solid surface. Install four threaded rods. Install one nut and washer onto each threaded rod and position to accommodate insulation thickness.

**STEP 3**
Install Extension Pan. Invert Extension Pan and position onto threaded rods. Install one washer and one nut onto each threaded rod and tighten.

**STEP 4**
INSTALL IN DECK
Return the completed assembly to upright and normal position. Position assembly into precut deck opening so that flange of extension pan is flush on deck surface. Tack weld or use fastener (not supplied) to secure completed assembly to deck. Verify drain flange is at correct height to accommodate insulation thickness. Adjust nuts if required and tighten.

**STEP 5**
INSTALL CLAMPING COLLAR
Trim top of insulation to accommodate drain flange and butt insulation to drain body. Top of insulation should be flush with top of drain flange. Install all membrane and flashings in accordance with roof membrane manufacturer's requirements. Install threaded rods, clamping ring, washers, and nuts to securely compress the completed membrane and flashing.

**STEP 6**
INSTALL DOME STRAINER
Attach Dome strainer to Gravel Guard / Clamping Ring with the three bolts.
The factors which affect proper roof drainage are deck slope, drain flashing, size and placement of drains.

The full-flow capacity of a drain is not realized until the water reaches approximately 2.5 inches above the inlet in a four-inch drain and 3.5 inches in a six-inch drain.

The sizing of roof drains must be large enough to quickly carry away all water entering the roof drains. Any blockage or restrictions in this system may result in water backing onto the roof membrane. You must check horizontal pipe capacity. For example: a six-inch drain attached to a six-inch horizontal pipe with 1/4-inch slope will only carry 315 gallons per minute (gpm) instead of 563 gpm in the six-inch vertical drain pipe.

When placing roof drains it is good design practice not to locate the drains more than 50 feet from the roof perimeter or more than 100 feet apart.

The primary considerations in designing a roof drainage system are:

- The amount of rainfall landing on the roof membrane,
- How long it rains,
- The speed at which the rain collects at the drain.

The rainfall reference chart gives the maximum amount of rainfall in inches per hour of the hypothetical "worst storm in the past 100 years" and which has a two percent chance of occurring in any given year.

### DRAIN REFERENCE CHART

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<th>DIAMETER OF DRAIN</th>
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PORTALS PLUS, INC. 639 Thomas Drive, Bensenville, IL 60106  TEL: (630) 766-5240  FAX: (630) 595-7868

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All information is subject to change without notice. Dimensions and specifications shown are within manufacturing tolerances.
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SPECIFICATION

Furnish and install the Portals Plus Scupper Drain as manufactured by Portals Plus, Inc., Bensenville, IL, at all drain openings as shown on drawings. Scupper Drain consists of a removable epoxy coated cast aluminum integral flashing clamp with angled grate, with a free area of not less than 17.60 sq.in. A drain sump body 6" tall by 11" wide of epoxy coated cast aluminum alloy. All scupper drains shall include a removable cast aluminum alloy no hub outlet connector extension. Attachment and installation shall be done in accordance with Portals Plus’ instructions and the roofing membrane manufacturer’s recommendations.
(Available in 2", 3" and 4").

Outlet hub may be used at 45 or 90° by removing two bolts and changing outlet position one half rotation.
Parapet/Scupper Drain
Technical Product Information

Installation Instructions

PORTALS PLUS, INC.
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Parapet/Wall
PORTALS PLUS
SCUPPER DRAIN
RUBBER
NO HUB
CONNECTOR
INSULATION

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