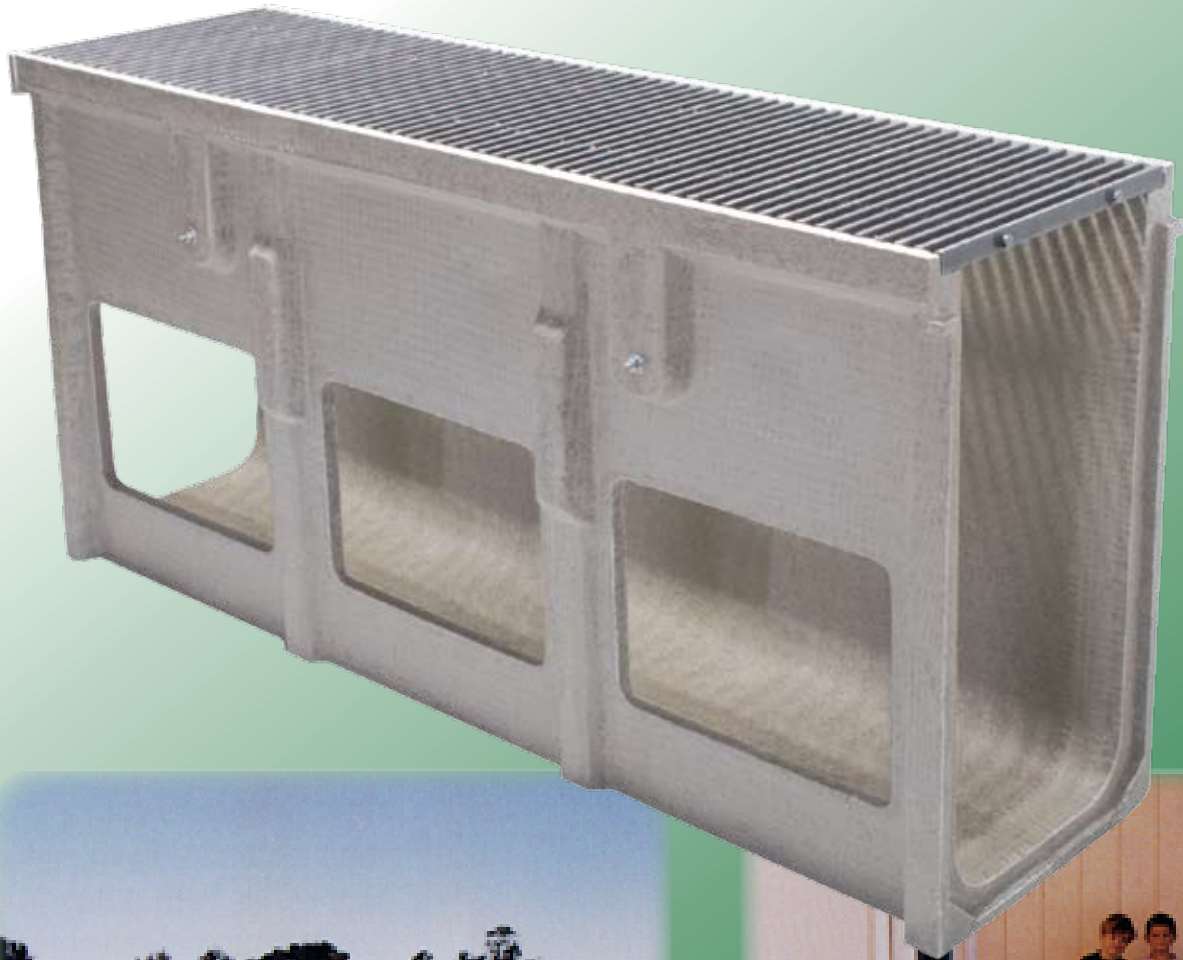


# **POLYVENT<sup>®</sup>**

## **FOUNDATION VENTILATION SYSTEM FOR MODULAR BUILDINGS**



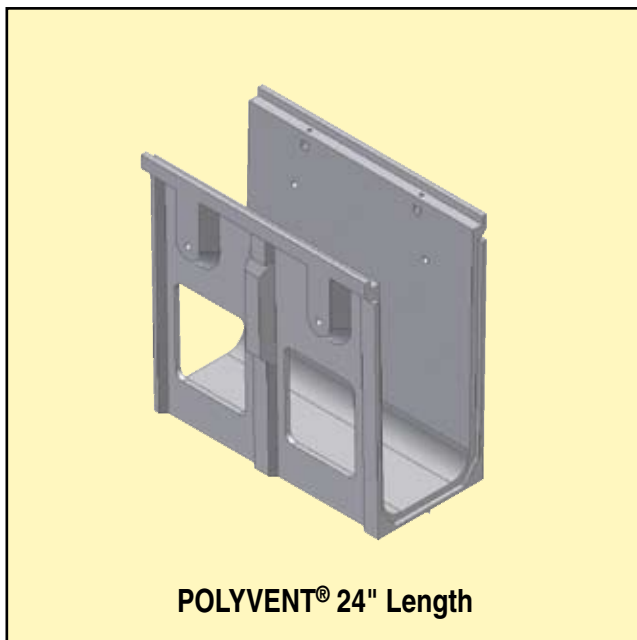
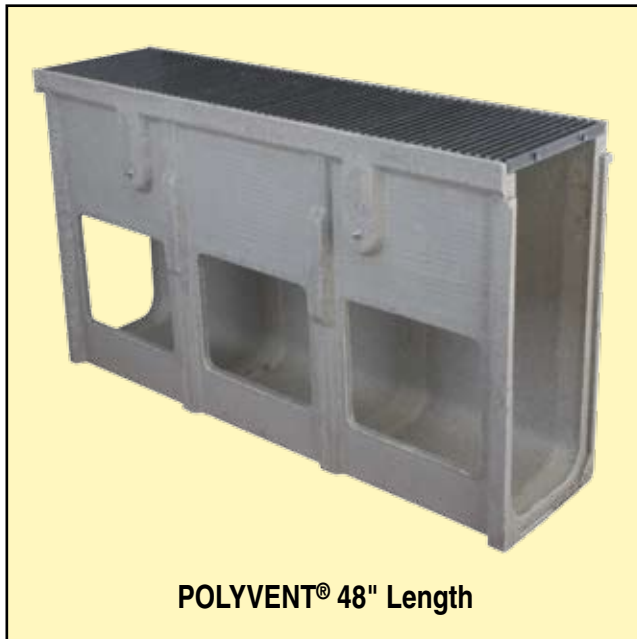
**POLYVENT<sup>®</sup>**

[www.polycastdrain.com](http://www.polycastdrain.com)  
[www.hubbelpowersystems.com](http://www.hubbelpowersystems.com)



# POLYVENT®

## Introduction



On Cover:

One of the advantages of the POLYVENT® Ventilation System is its effectiveness as a circulating air system to help prevent floor dry rot in modular buildings that are set to grade level. Modular buildings set to grade level have the pleasing appearance of a built-in-place structure. The modular school campus shown on the cover is an example of this concept.

POLYVENT® is a passive air ventilation system designed to provide "Free Convective" cross-flow ventilation for the under floor crawl space of modular buildings set to grade. The POLYVENT® system meets state and uniform building code (UBC) requirements for preventing dry rot and termite damage caused by trapped moisture. Manufactured of fiberglass reinforced polyester polymer concrete, POLYVENT® systems are durable, easy to install and virtually maintenance free.

### Advantages of POLYVENT® System:

- Quick and Easy Installation
- Cost-effective
- Eliminates hand formed air vents
- Reusable
- Collection for roof drains
- Vandal-resistant grates
- Easy installation
- Complies with UBC and CA Title 24 Ventilation and ADA Requirements

### Sizes and Availability

Each vent section is designed for use on modular buildings constructed with 7" through 12" structural floor members and is available in 24" and 48" long sections. Each section can be used by itself, or in a series with other sections, to provide continuous "Free Convective" cross ventilation. POLYVENT® provides a passage way allowing air to gravity flow below grade and into the crawl space. Side openings in each vent section allow air to flow through the vent and through contractor supplied blockouts in the foundation footings.

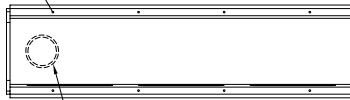
POLYVENT®'s universal design allows it to be easily attached to most modular buildings set at grade. Hand railings, ramps and steps are eliminated, as well as hand-formed concrete trenches used in previous construction methods. As a result, setup time and overall construction costs are substantially reduced. Roof rainwater can be diverted through POLYVENT® by using the built-in drain channel incorporated into the bottom of each POLYVENT® section.



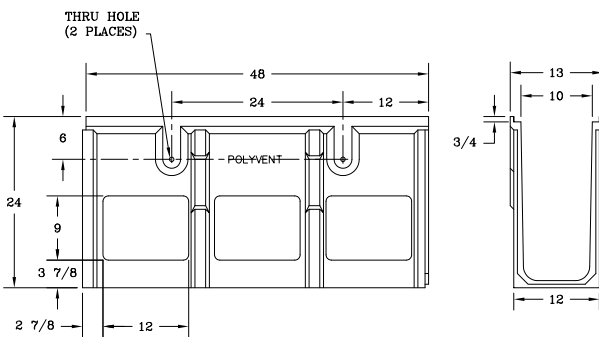
## Detail

### PV-1

1/4-20 UNC S.S.  
INSERT (4 PLACES)



4" KNOCKOUT FOR  
SCH 40 PVC

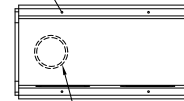


#### PN #DP1310

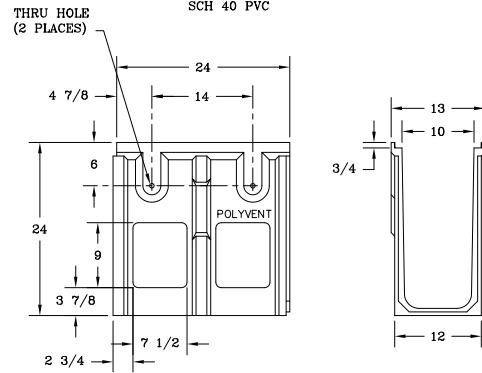
Free air (with grating installed) 2.25 sq. ft. total  
Wt. 140#  
Load Rating – Light Wheel Loads and Pedestrians

### PV-2

1/4-20 UNC S.S.  
INSERT (4 PLACES)



4" KNOCKOUT FOR  
SCH 40 PVC



#### PN #DP1310H

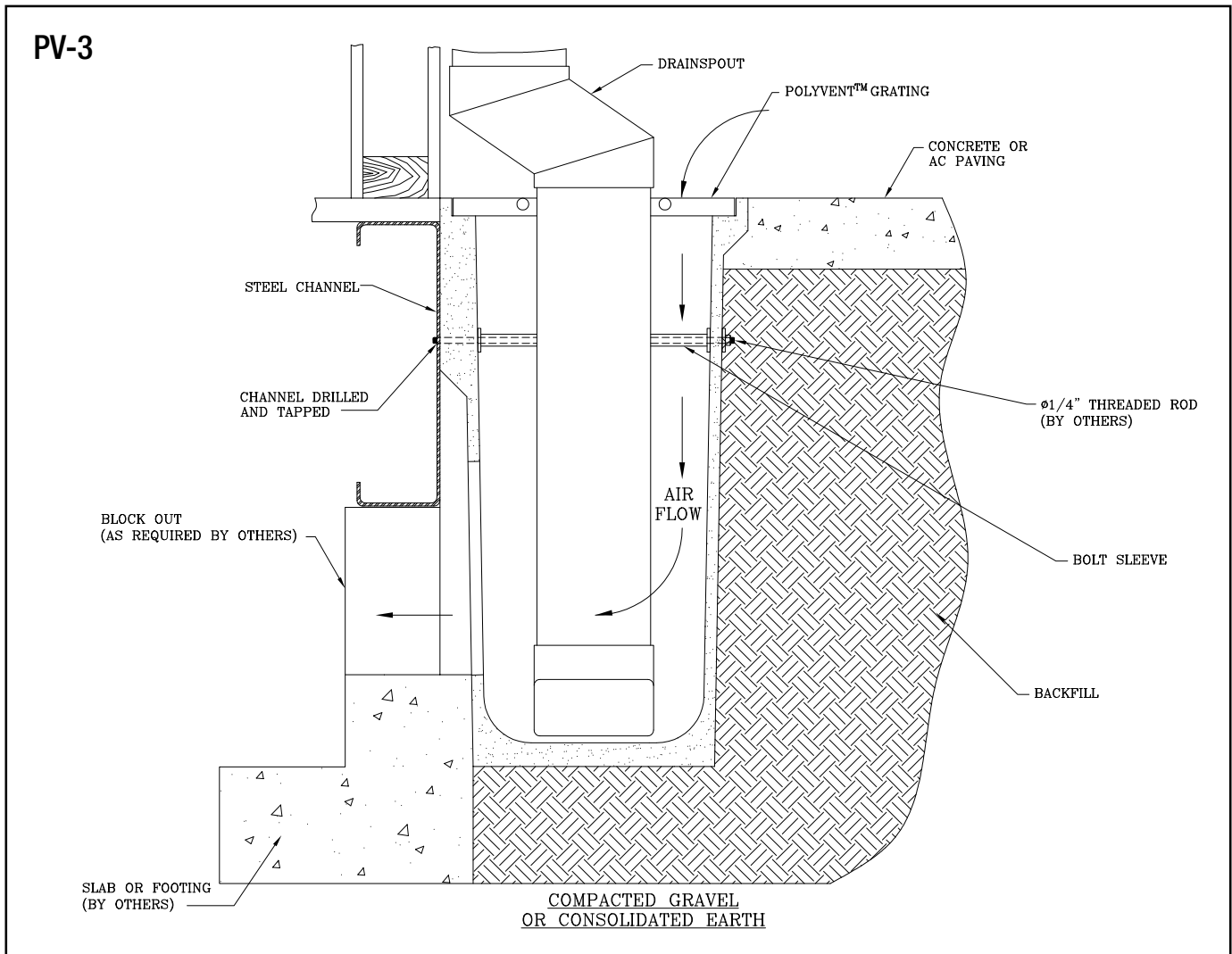
Free air (with grating installed) 0.94 sq. ft. total  
Wt. 70#  
Load Rating – Light Wheel Loads and Pedestrians

A 4" bottom drain knockout is located in each POLYVENT® section, allowing a soil pipe connection to POLYVENT® for water evacuation. Drain end caps are also available for end evacuation.

# POLYVENT®

## Detail

### 12" Floor Beam Typical



### Rainwater Management

Each POLYVENT® section has a 3<sup>3</sup>/<sub>8</sub>" deep by 10" wide drain channel built in for below grade "rainwater" management. By extending rain gutter down spouts to the bottom of the applicable POLYVENT® section, roof rainwater can be collected below grade at the perimeter of the building.

## Accessories

Accessories available include attaching hardware, pedestrian and bicycle safe grates, female and male drain end plates which fit their respective male and female POLYVENT® ends, and a reversible closed end plate.

**Closed End Plate (F/M) PN #DP1300C**  
Wt. 24# (Reversible)

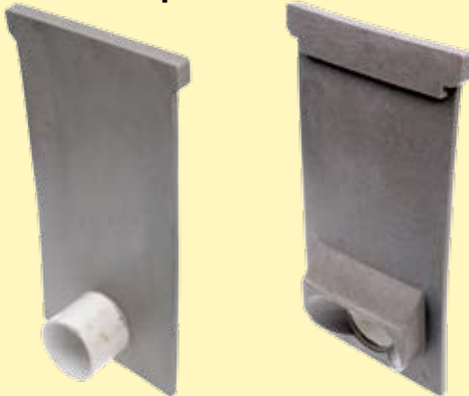


**Material Composition** - Fiberglass Reinforced Polyester Polymer Concrete

### Functional Description

The closed end plate is designed to prevent entrance of back fill or concrete. It incorporates a unique **reversible** design which allows it to be used on either the male or female ends.

**Drain End Plate PN #DP1300DM**  
Wt. 23# Pipe Size - 4" Sch. 40 PVC



**Material Composition** - Fiberglass Reinforced Polyester Polymer Concrete

### Functional Description

Drain end plate fits the female end of the vent body. This drain end plate provides a plumbing connection enabling the contractor to link two (2) or more POLYVENT® sections together, or to be used as an evacuation point for rainwater, when using POLYVENT® as a rainwater management system.\*

**Drain End Plate PN #DP1300D**  
Wt. 22# Pipe Size - 4" Sch. 40 PVC



**Material Composition** - Fiberglass Reinforced Polyester Polymer Concrete

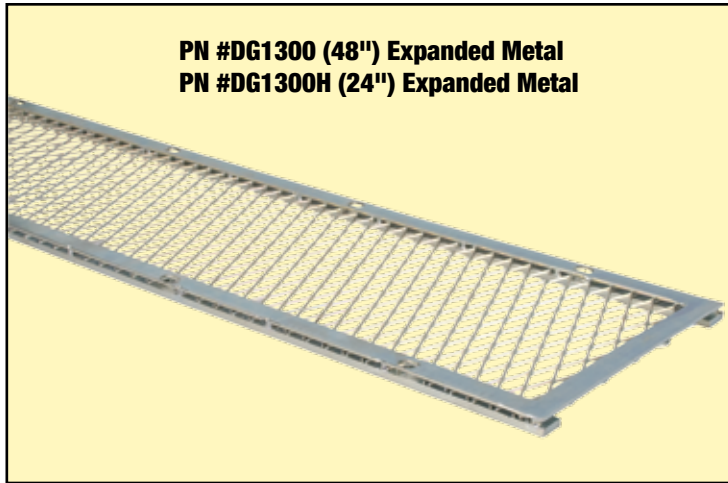
### Functional Description

Drain end plate fits the male end of the vent body. This drain end plate provides a plumbing connection enabling the contractor to link two (2) or more POLYVENT® sections together, or to be used as an evacuation point for rainwater, when using POLYVENT® as a rainwater management system.\*

\*The special anti-clogging design of this end plate minimizes the possibility of drain blockage due to debris build up.

# POLYVENT®

## Gratings



**PN #DG1300 (48") Expanded Metal**  
**PN #DG1300H (24") Expanded Metal**

PN #DG1300 and #DG1300H

Notes:

1. Material ASTM A-36 hot-dipped galvanized steel.
2. This grate has 60% (343 in.<sup>2</sup>) open area.
3. Grating shown furnished with (8) 1/4-20 UNC tamper-resistant screws.
4. Load rating: 400 p.s.f. (rating determined over 10" x 10" area).



**PN #DG1301 (48") Bar Grating**  
**PN #DG1301H (24") Bar Grating**

**PN #DG1302H (24") Bar Grating (shown)**

PN #DG1301 and DG1301H

Notes: (not shown)

1. 1/8" x 3/4" bearing bars on 1<sup>3</sup>/<sub>16</sub>" centers
2. This grate has 86% open area.
3. Furnished with (4) hold down clips and (4) 1/4-20 UNC tamper-proof screws.
4. Load rating: 1700 p.s.f.

PN #DG1302H

Notes:

1. 1/8" x 3/4" bearing bars on 5/8" centers
2. This grate has 76% (182 in.<sup>2</sup>) open area.
3. Furnished with (4) hold down clips and (4) 1/4-20 UNC tamper-proof screws.
4. Load rating: 2696 p.s.f.

Note: All three gratings are trim banded and are a pressure-locking design. Material is ASTM A-36 hot-dipped galvanized steel.



**PN #DG1303 (48") Fiberglass Bar Grating**  
**PN #DG1303H (24") Fiberglass Bar Grating**

PN #DG1303 and DG1303H

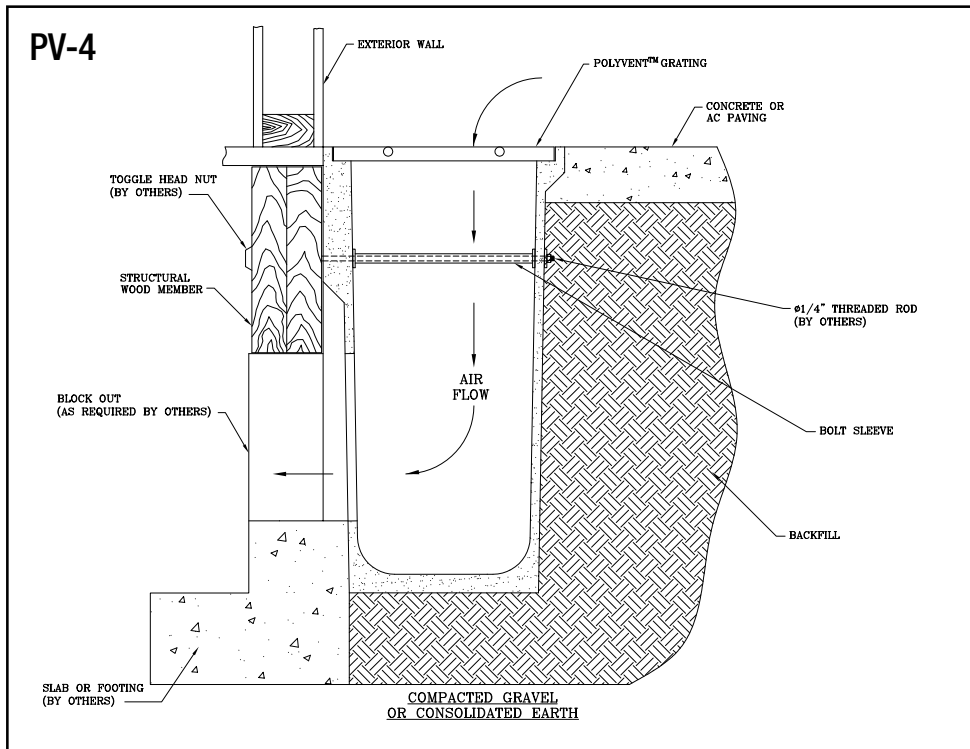
Notes:

1. 1/4" x 3/4" bearing bars on 3/4" centers. Non-skid surface.
2. Material: pultruded vinyl ester resin.
3. This grate has 61% (145 in.<sup>2</sup>) open area.
4. Furnished with (4) hold down clips and (4) 1/4-20 UNC screws.
5. Load rating: 1575 p.s.f.

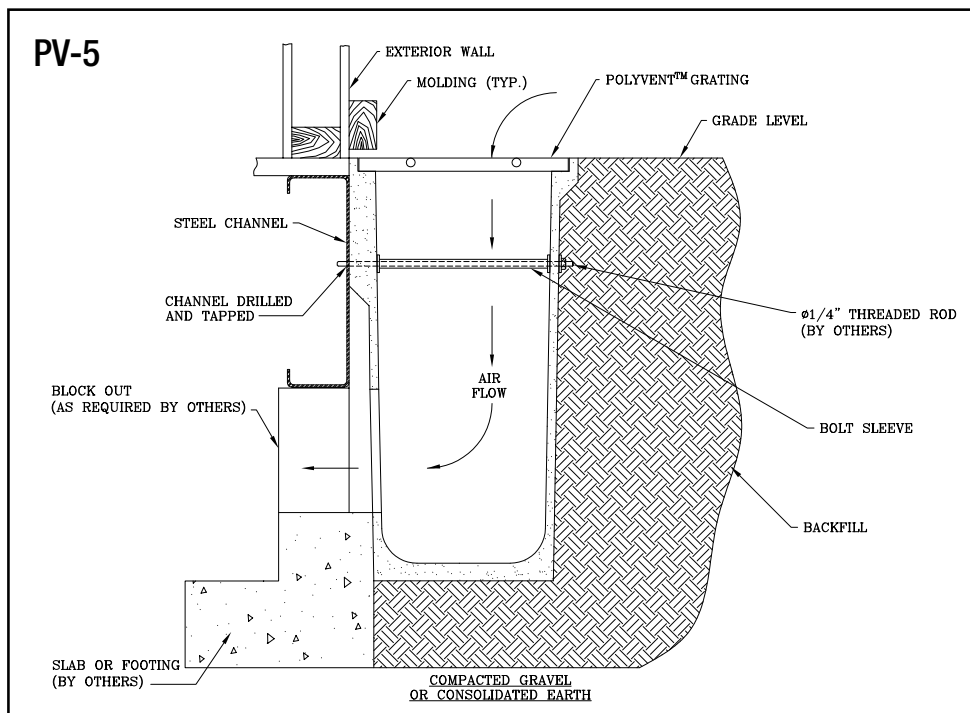


## Installation Details

### 10" Floor Beam Typical



### 12" Floor Beam Typical



Refer to manufacturer's installation instructions 10A-87010.

# Specifications

## Components

All foundation ventilation components shall be of POLYVENT® passive air ventilation system as manufactured of fiberglass reinforced polyester polymer concrete by Hubbell-Lenoir City Division.

## Vent Sections

Design is based on precast polymer concrete modular vent sections, 24" or 48" in length, and will provide the following free air opening (1.75 sq. ft. or 2.25 sq. ft.). Each vent section shall interlock for assembly and come with mounting spacers and washers (minimum total cross flow free air ventilation shall be \_\_\_\_\_ sq. ft. or as required by U.B.C. and/or CA Title 24). The appropriate number of POLYVENT® sections shall be used along with adequate contractor supplied footing blockouts to meet the specified crossflow ventilation requirements.

## Gratings

All POLYVENT® sections shall be equipped with (i.e., expanded metal, galvanized steel bar, pultruded fiberglass bar) metal galvanized steel gratings or pultruded fiberglass vinyl ester grating and grating hold-down devices. The gratings shall withstand a minimum 400 lb. concentrated load.

## Installation

Install the POLYVENT® air ventilation system in strict accordance with manufacturer's recommendations. Generally, vent sections shall be installed level with finished floor and attached directly to the "C" channel or wooden perimeter structural floor member by using "all thread" or "lag bolts" as appropriate, plus the supplied spacers and washers. POLYVENT® sections shall be installed joined end to end, or used individually at specified locations with corresponding contractor supplied footing blockouts as shown. POLYVENT® ends at joints shall be fully entered and their inner surface reasonably flush and even. The joints shall be unsealed (or specify caulk, or sealer if required). Vent sections shall be firmly attached to perimeter structural sub floor building member, and gratings with hold-down devices installed so vents remain in place during back filling or concrete pavement.

## Optional - Rain water management

Rain gutter down spouts shall be extended down into the bottom of the POLYVENT® sections, and each vent section shall be interlocked end to end or joined by 4" PVC pipe used with the appropriate POLYVENT® accessory or drain end plates. Vent rainwater discharge shall be through the bottom or out the end as shown.

**[www.polycastdrain.com](http://www.polycastdrain.com)**

**<http://www.polycastdrain.com/literature/PC-19.pdf>**

**HUBBELL®**  
Power Systems

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