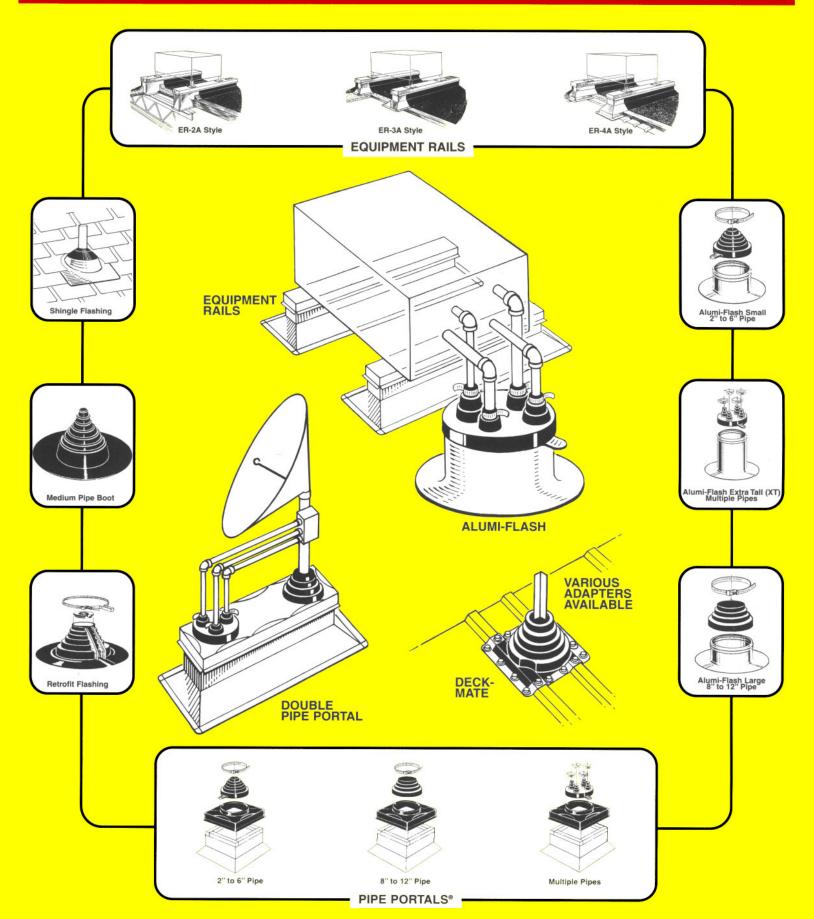
PORTAL PLUS

PREFABRICATED ROOF ACCESSORIES FOR ALL ROOF SYSTEMS

815 Kimberly Drive, Carol Stream, II 60188 TEL: (800) 624-8642 FAX: (866) 466-9335





www.portalsplus.com

For all types of roofs

Good roofing practice allows penetration movement independent of the roof. This requires a flexible seal at the penetration and proper attachment to the roof. With the complexity and assortment of roofing systems available today, a variety of designs is required to work with all conditions. A good flashing system must be versatile- economical- maintenance free- simple to install- adapt to multiple penetrations and angle irons- yet, have uniformity allowing fast, easy installation and specification. All components must be weather resistant, approved by the industry, and, above all, eliminate leaks. For these reasons, Portals Plus offers the following products.

REALISTIC ANSWERS ADVANTAGES ALLOWS PENETRATION MOVEMENT MAINTENANCE FREE ECONOMICAL AND UNIFORM ACCOMMODATES MULTIPLE PROJECTIONS • NO NEED TO DISCONNECT LINES • ELIMINATES LEAKS PERMANENT • SIMPLE AND FAST TO RETROFIT FLASHING ALUMI-FLASH INSTALL SOURCES OF TROUBLE DISADVANTAGES VERY COSTLY PIPE PROJECTION NOT SEALED • LIMITED PIPE DIRECTION DOES NOT ALLOW FOR MOVEMENT TEMPORARY SEAL CONTINUAL MAINTENANCE MAJOR CAUSE OF ROOF DAMAGE PITCH POCKET FIELD FABRICATED HOOD

Roof leaks are the biggest problem of architects and building owners. 85% of all roof leaks occur at penetrations and corner flashings due to poor details which fail to accommodate movement. Extreme roof temperature changes require durable and flexible flashings. High labor costs and no industry standards allow for poor workmanship and non-functional field fabricated flashings. A contractor's "good enough" attitude creates temporary expedients at the owner's expense.

The National Roofing Contractors Association states: "Pitch pockets or pans by their design, are not intended to be continuously watertight. Their use should not be encouraged since better methods are available to accomplish the same end. Pitch pans or pockets require frequent inspection and maintenance, and usually a great deal of damage can occur before the leak around a pitch pan or pocket is evident."

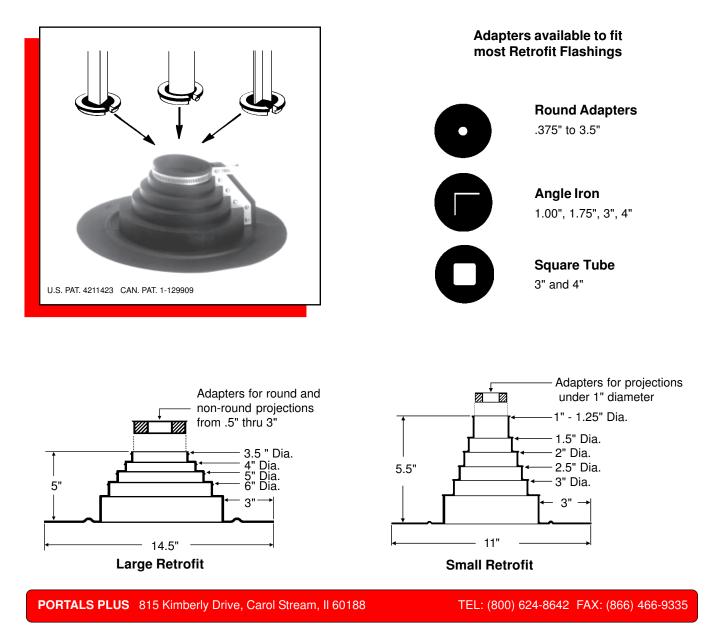
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For existing penetrations that can not be disconnected

The Retrofit Flashing offers a quick and easy installation, eliminating roof leaks at pipes and other roof penetrations without disconnecting the penetration. However, the Retrofit still allows for movement between the penetration and roof, while maintaining a perfect seal. The perfect seal is achieved with an integral tongue and groove closure, plus an overlapping flap, and is mechanically fastened with stainless steel hardware, which is included. Retrofit Flashings are available in EPDM for single-ply roofing and Neoprene for built-up asphalt, coal tar pitch, modified bitumen, and cold process systems. Both materials have excellent resistance to ozone and ultraviolet degradation and a serviceable temperature range of -60° F to +270° F. There are two Retrofits available: Small, for pipes up to 3", and Large for pipes 3.5" through 6". The Retrofit Flashings also have the added benefit of a variety of adapter rings allowing for even greater versatility. By using the Retrofit Adapter Rings, projections with unusual shapes can be flashed in a positive and secure manner.



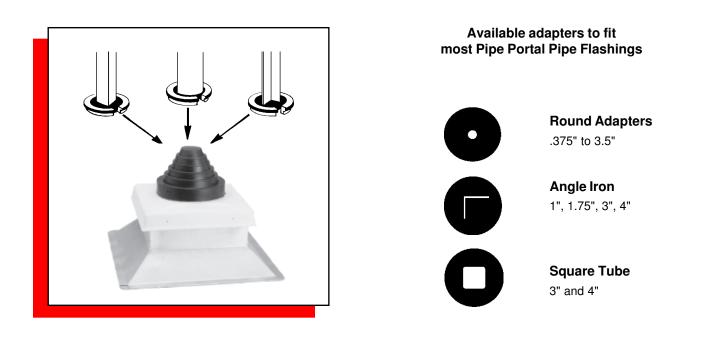


Pipe Portal[®] Systems

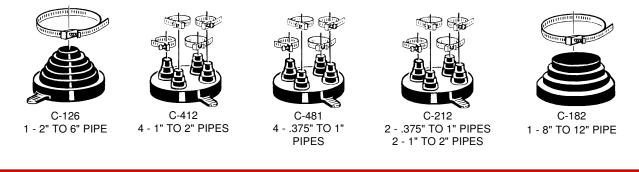
New construction flashings with roof curb mountings

A versatile, leak proof and weathertight solution to routing pipes through the roof. The Pipe Portal System is designed to allow for both vertical and horizontal pipe movement, yet provide maintenance free permanent installation, which accommodates pipe sizes of .375" up to 12". The curb cover is molded from ABS plastic (Acrylonitrile Butadiene Styrene) with a laminated acrylic coating, which gives high resistance to both ozone and ultraviolet sun rays, as well as serviceable temperature range of -40° F to + 160° F. The molded sealing rings on the collared opening of the cover, mated with the grooves in the rubber cap, assures a "Weather-Tite Pressure Seal" and mechanical lock.

The protective rubber caps are compression molded of EPDM (Ethylene Propylene Diene Monomer) rubber with a serviceable temperature range of -60° F to + 270° F, and also have high resistance to both ozone and ultraviolet sun rays. The conically shaped steps of the cap provide a taut waterproof seal around the pipe and the Stainless Steel Snaplock Swivel Action clamps provided give the added protection to guarantee the pipe seal. The swivel action of the clamp cuts installation time by 75%.



SELECT A CAP FOR EACH BASE REQUIRED



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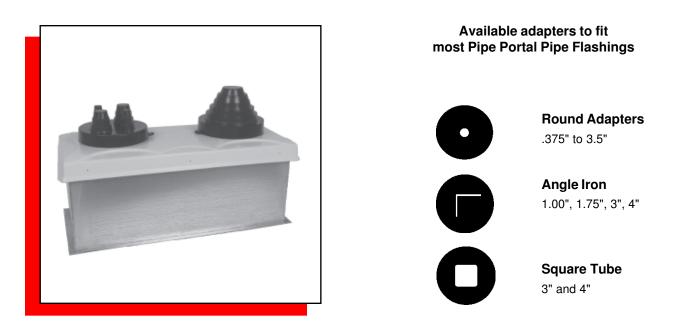
Double Pipe Portal[®] Systems Technical Product Information

New construction flashings with roof curb mountings

A versatile, leak proof and weathertight solution to routing pipes through the roof. The Double Pipe Portal System is designed to allow for both vertical and horizontal pipe movement, yet provide maintenance free permanent installation, which accommodates pipe sizes of .375" up to 6". The curb cover is molded from ABS plastic (Acrylonitrile Butadiene Styrene) with a laminated acrylic coating, which gives high resistance to both ozone and ultraviolet sun rays, as well as serviceable temperature range of -40° F to + 160° F. The molded sealing rings on the collared openings of the cover, mated with the grooves in the rubber caps, assure a "Weather-Tite Pressure Seal" and mechanical lock.

The protective rubber caps are compression molded of EPDM (Ethylene Propylene Diene Monomer) rubber with a serviceable temperature range of -60° F to + 270° F, and also have high resistance to both ozone and ultraviolet sun rays. The conically shaped steps of the cap provide a taut waterproof seal around the pipe and the Stainless Steel Snaplock Swivel Action clamps provided give the added protection to guarantee the pipe seal. The swivel action of the clamp cuts installation time by 75%.

The Double Pipe Portal is ideally used to bring the line sets to condensing units, ice-makers, and chillers etc. Also ideal for mounting roof top satellite dishes.



SELECT TWO CAPS FOR EACH BASE REQUIRED

 C-126
 C-412
 C-481
 C-212

 1 - 2" TO 6" PIPE
 4 - 1" TO 2" PIPES
 4 - .375" TO 1"
 2 - .375" TO 1" PIPES

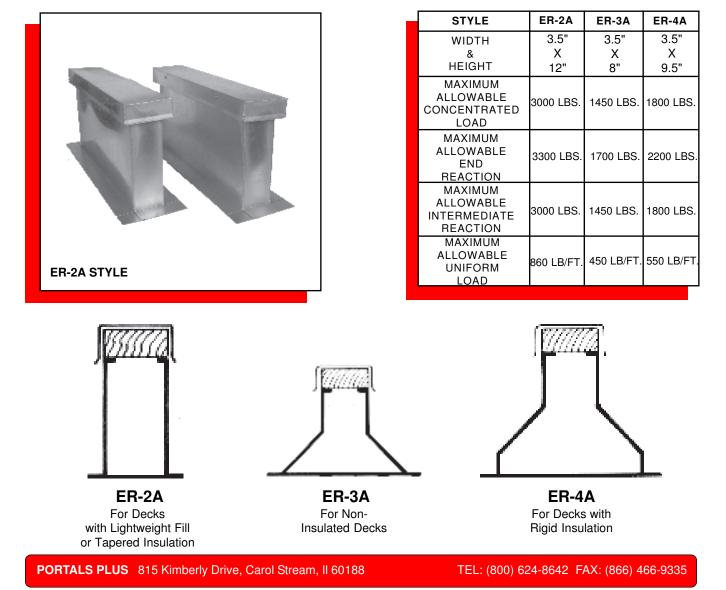
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The solution for mounting roof equipment

Equipment Rails are prefabricated sheet steel structural members designed for all types of roof systems. Provides a uniform mounting pedestal for condensers, blowers, and other roof mounted equipment. Manufactured in 3 ft., 4 ft., and 6 ft. lengths to match the equipment and to span the proper number of roof joists. Equipment Rails have a high bearing capacity attained by a system of internal gussets welded into position at specific intervals along the length of the rails. A continuous wood nailer covered by a removable counterflashing provides for an effective method of attaching roofing felts and assuring a watertight installation. Replaces inadequate railroad ties, arsenic contaminated treated lumber, costly pipe stubs, and leaky pitch pockets.



EQUIPMENT RAIL LOADING CHART

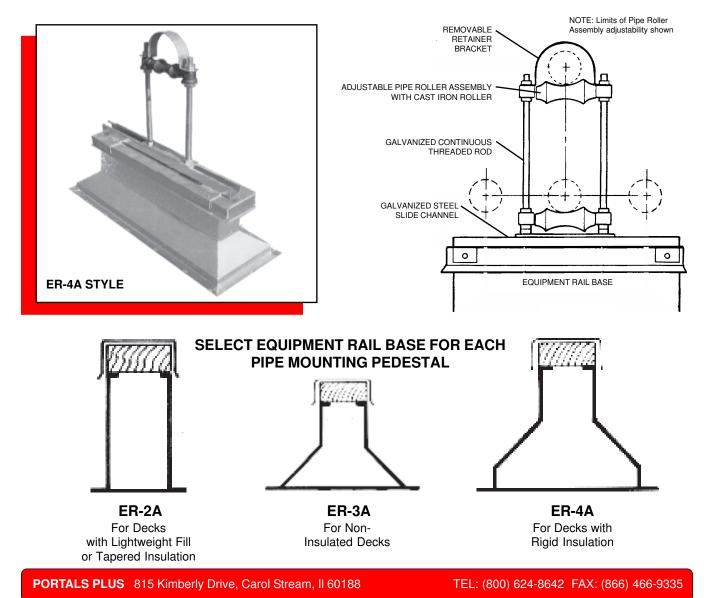
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The solution for mounting rooftop pipes

Pipe Mounting Pedestals are the ultimate solution to mounting pipe runs across rooftops and are designed for all types of roof systems. Provides a uniform mounting pedestal for gas pipes, steam lines, refrigerant piping, water pipes, process piping, conduits, and other rooftop piping. Manufactured with a Portals Plus Equipment Rail as the base unit allows a proper mounting to the roof deck and provides a secure substrate for the roofing assembly flashing system, while the pipe roller assembly allows for pipe movement from expansion and contraction, yet secures the pipe to the assembly to prevent dislodgement. The pipe roller assembly provides full 12" vertical and horizontal adjustments to allow mounting piping level and straight across the rooftop. For weather protection, the pipe roller is solid cast iron and all exposed materials are manufactured of galvanized steel. Standard pipe roller assemblies are available for 2", 4", and 6" diameters, with custom sizes available up to 12" diameter. The Equipment Rail is also manufactured of galvanized steel with a wood nailer for securing the flashing assembly. Provides guick and easy installation and allows for future reroofing without disturbing piping and related interior processes. Replaces inadequate wood blocking, plastic supports, and all types of supports that bear directly on the roof system which compress roof insulation, damage roof membranes, and create ponding water conditions which promote the growth of algae and early failure of the roofing system.



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Roof Drains for new construction

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NOTES: *Included in standard roof drain. **(Plus Pack) Includes standard roof drain and Plus Pack.

DOME STRAINER*

Portals Plus Dome Strainer is epoxy coated die-cast aluminum for longevity. The Dome Strainer bolts securely to clamping collar. (Dome Strainer also available in ultraviolet-stabilized polyethylene)

CLAMPING COLLAR/GRAVEL GUARD*

Portals Plus die-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 Drain Bowls are available in 3", 4" and 6" sizes in Cast Iron, Cast Aluminum, ultraviolet-stabilized injection molded white PVC, and injection molded black ABS.

UNDERDECK CLAMP**

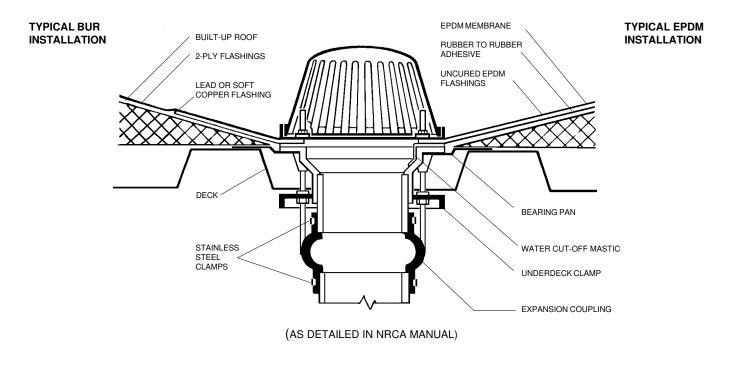
Portals Plus epoxy coated cast aluminum underdeck clamp holds the drain bowl securely to the deck.

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 (for PVC and ABS Plus Packs only).

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).



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Overflow Drains & Drain Options Technical Product Information

Roof Drains for new construction

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

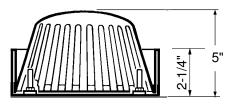
for installing a roof drain flush with the top surface of an un-insulated roof deck, such as plywood or poured decks. Made of heavy 18 gauge spun steel for easy topside installation. Allows structural poured decks to proceed ahead of the plumber- only a standard core hole is required. Accepts all Portals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

OVERFLOW CLAMPING RING

for converting a standard roof drain or reroof drain to an overfow roof drain to comply with modern building codes. Simply install in place of the standard clamping ring. Fits all Portals Plus Roof Drains and ReRoof Drains.





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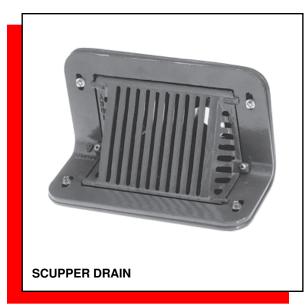
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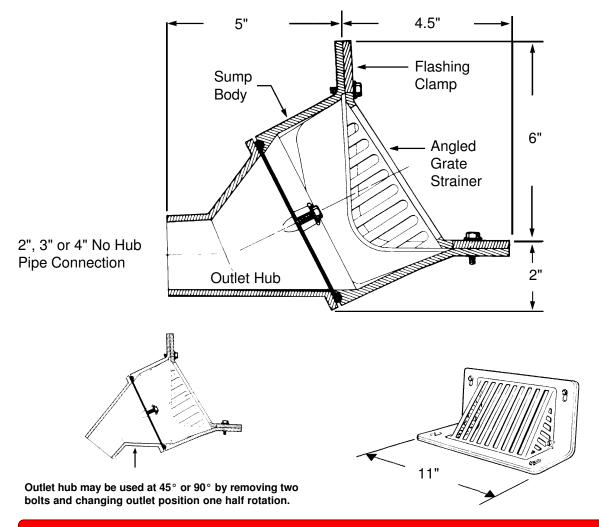
Parapet / Scupper Drain Technical Product Information

Drains for sidewall roof installation

www.portalsplus.com



The Portals Plus Parapet/Scupper Drain is designed for sidewall roof installation to solve those aggravating through-wall drain problems. The Parapet/Scupper Drain combines horizontal and vertical drainage and is made up of four integral parts: the removable angled grate strainer, heavy duty flashing clamp, drain body, and the outlet hub, which may be used at 45° or 90° by removing two bolts and changing the outlet position one-half rotation. The entire Parapet/Scupper Drain is manufactured of cast aluminum which is powder painted after fabrication. (Available in 2", 3", and 4")



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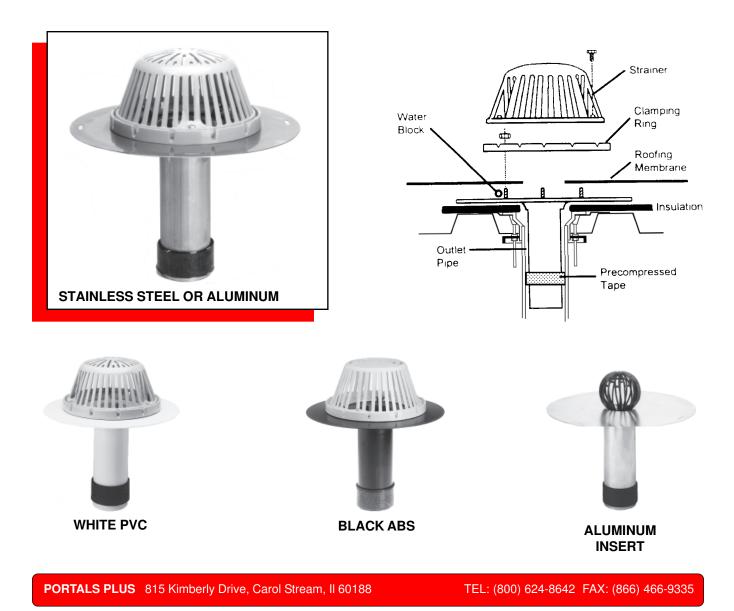
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Drain inserts for retrofit applications

The Portals Plus ReRoof Drain is designed for the easiest and most reliable installation for use in conjunction with an existing drain when reroofing. The unit is based on a flat underside flange for flush roofing material installation. A special pre-compressed modified asphalt impregnated expanding foam sealing tape automatically makes a permanent elastic watertight seal to the existing drain, eliminating water back up. The flange and outlet tube are available in stainless, aluminum, PVC, or high temperature ABS. ReRoof Drains are available to fit 2", 3", 4", 5", and 6" drains.

The drain is completely installed on the roof top with NO special tools and all hardware is stainless steel. The unit is available with either plastic or cast aluminum dome strainer and the outlet tube gives minimum downsizing to the existing drain. The Portals Plus ReRoof Drain makes a perfect roofing termination point and offers an excellent connection to the plumbing below.

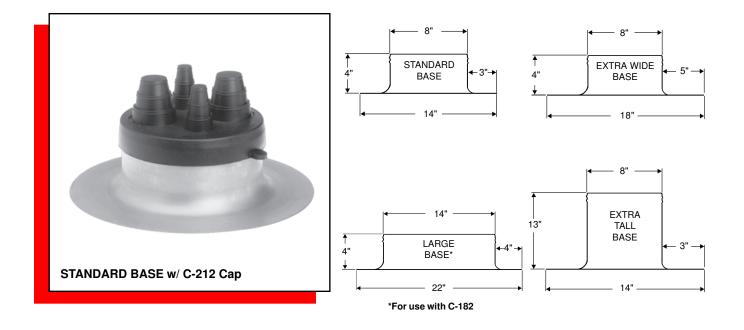




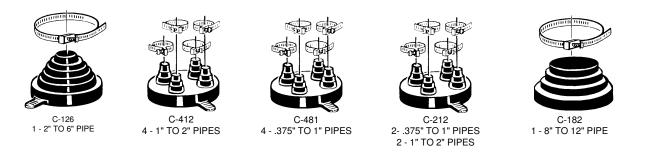
New construction flashings for all roof types

www.portalsplus.com

The Portals Plus Alumi-Flash is compatible with all types of roof systems and makes pitch pans obsolete. Due to the flexibility of the EPDM rubber caps, roof leaks are eliminated because penetrations are allowed to expand, contract, and vibrate independently of the waterproofing. There are five (5) caps available which accommodate a variety of pipes, tubes, and angle irons from .375" through 12". The caps are molded EPDM (Ethylene Propylene Diene Monomer) rubber which is compounded to resist degradation due to oxidation or exposure to ozone and ultraviolet rays, while having a serviceable temperature range of -60° F to +270° F. The caps are mechanically sealed to the Alumi-Flash base with a double "Weather-Tite Pressure Seal", which consists of two (2) beads formed into the collar that mate with the double grooves on the inside of the caps. The base must be roofed in, using good roofing practices. Together, the cap and base provide a permanent, watertight and maintenance free means for penetrating roofs that is simple and easy to install.



SELECT A CAP FOR EACH BASE REQUIRED



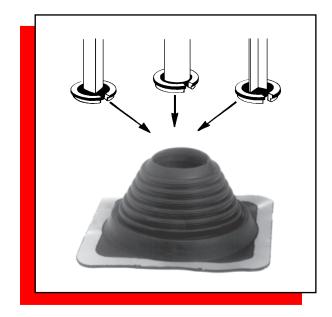
Adapters available to fit most Alumi-Flash

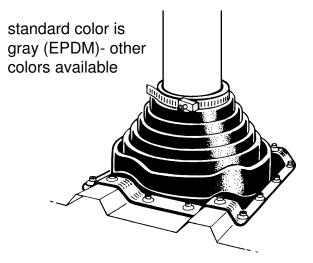
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Flashings for metal roof and wall systems

The Portals Plus Deck-Mate is designed to accommodate projections from .125" to 26" in diameter, and work in conjunction with any configuration of corrugated metal roof. The Deck-Mate comes in two styles, standard for normal projection flashing and retrofit style for use with projections that can not be disconnected. The Deck-Mate is engineered so the aluminum flanged base bends to any contours, roof irregularities, or pitches. The Deck-Mate seals watertight to the roof panel with an approved sealant and standard roofing fasteners. Deck-Mate is available in two materials - EPDM for normal use and Silicone for high temperature pipes. Adapters available for round, square tube, and angle iron available to fit most Deck-Mates.





| DECK-MATE SIZING CHART | | | |
|------------------------|------------------------|------|-------|
| MODEL | SIZE (O.D. of pipe) | Α | В |
| D.M. 0 | .125"75" | .75" | 2.25" |
| D.M. 1 | .25"-2" | 3" | 4.5" |
| D.M. 2 | 1.25"-3" | 4" | 6" |
| D.M. 3 | .25"-4" | 4" | 8" |
| D.M. 4 | 3"-6" | 5" | 10" |
| D.M. 5 | 4"-7" | 5" | 11" |
| D.M. 6 | 5"-9" | 6" | 12" |
| D.M. 7 | 6"-11" | 6" | 14" |
| D.M. 8 | 7"-13" | 6" | 17" |
| D.M. 9 | 10"-18" | 8" | 25" |
| D.M. 10 | 13"-26" | 8" | 34" |

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Flashings for all size penetrations for single ply roofs

The "Pipe Boot" is an economical flashing designed for single pipe penetrations on single ply rubber and thermoplastic roofs. The unit will accomodate virtually all pipe sizes: 1.75" and 2.75" on Small Pipe Boot, 1" through 6" on Medium Pipe Boot and 8" through 12" on Large Pipe Boot. Pipe Boots are available in EPDM, TPO, PVC, Neoprene, or Hypalon material. The Quadraseal is designed to allow as many as four pipes up to 2" in diameter to pass through one flashing. Quadraseals are available in EPDM material only. The conically shaped steps of the Portals Plus pipe flashing will securely seal all pipes and the large double thick molded rib at the top of each step offers supreme tear resistance and reinforcement, as well as a cutting guide. Utilizing the Pipe Flashings eliminates the workmanship error in field fabrication and makes flashing pipes a clean, consistent approach. Adapters for round, square tube, and angle iron available to fit most pipe boots.



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Pre-manufactured inside & outside corners for all roof systems

Outside corners provide a guaranteed, uniform, permanent corner seal. Portals Plus Corners eliminate the cutting, folding, stretching and cementing of materials into unnatural shapes. The Outside Corners have expansion radii molded into the spine to accommodate construction irregularities. All edges on Portals Plus Corners are feathered to allow the best possible adhesion. Outside Corners are available with or without cant and are the true answer to flashing roof curbs and skylight corners.

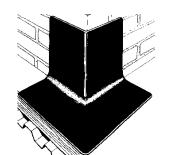
Inside Corners simplify the difficult detail of terminating roofing materials at corners. All Portals Plus Premolded Corners have seamless molded construction and are essential to a leak-free roof. The flexibility of the unit allows for a secure seal. Reduce the high cost of installation and the even higher cost of callbacks by using Premolded Corners. Fast, positive, watertight corner details are important for preventing costly leaks. 85% of all roof leaks occur at corners or penetrations. Quality flashing accessories are the solution to these costly and damaging leak problems. Corners are available in EPDM, TPO, PVC, or Neoprene material.

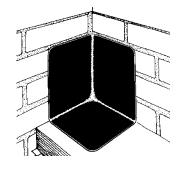


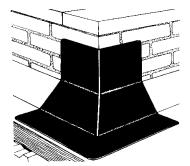
Outside Corner

Inside Corner

Outside Corner with cant







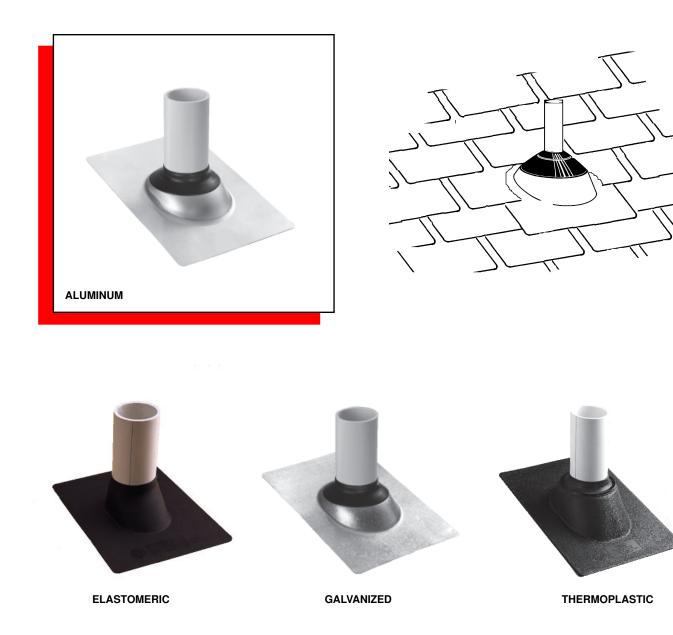
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Shingle Flashing Systems Technical Product Information

Flashings for all types of shingle roofs

Portals Plus Shingle Flashings are designed to effectively seal round pipe penetrations, from 1.25" through 4", penetrating shingle roofing systems at up to 40° slopes. The seal is an elastomeric collar integrally locked into a rigid base which remains flat on the roof. Bases are available in 24 gauge galvanized steel, .032 mill finish aluminum, and black thermoplastic. Installation is easy- the Shingle Flashing slips over the pipe and automatically seals to the pipe at the correct roof angle. Pipes can be all types, including copper, cast iron, plastic, aluminum, and galvanized. Shingle Flashings are rated to 180° F continuous heat. Also available is an all elastomeric one piece Shingle Flashing usable to 45° slope and 200° F continuous heat. All Portals Plus Shingle Flashings are listed by UPC, SBC, AND BOCA- the three major national codes. Shingle Flashings are available to fit the following nominal pipe sizes: 1.25" - 1.5", 2", 3", & 4".



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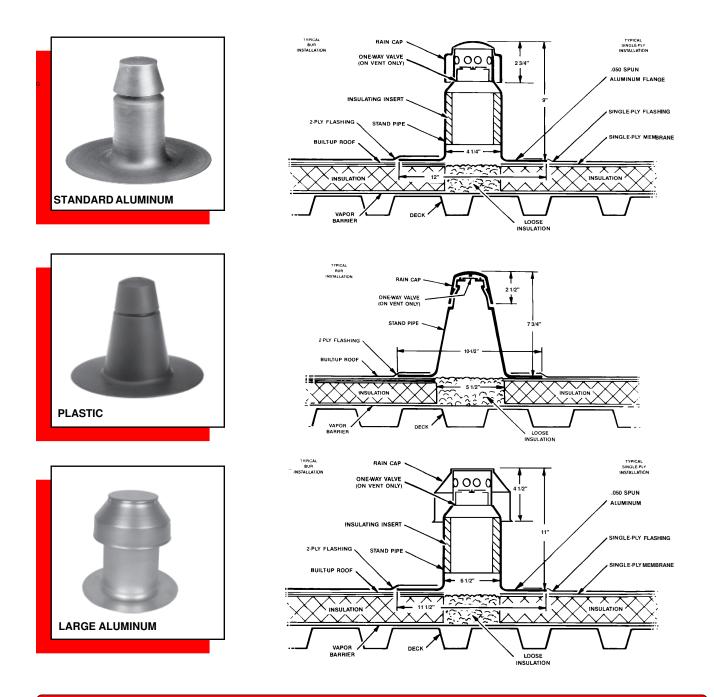
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Relief of trapped moisture in all types of roof systems

Portals Plus insulation Breathers and Vents are used to prevent moisture vapor from becoming trapped in the roof system, equalizing air pressure, reducing the risks of ballooning, blow-off, deteriorating insulation and separating deck seams. The Portals Plus Vents have a one way valve designed in the unit to prevent moisture from re-entering the roof system. The Portals Plus Breathers allow for both exhaust and convective movement of air between breathers. Both the Breather and Vent are available in heavy gauge spun aluminum or black high-density polyethylene with a locking, vandal proof cap that shields against entry of wind blown rain or snow.



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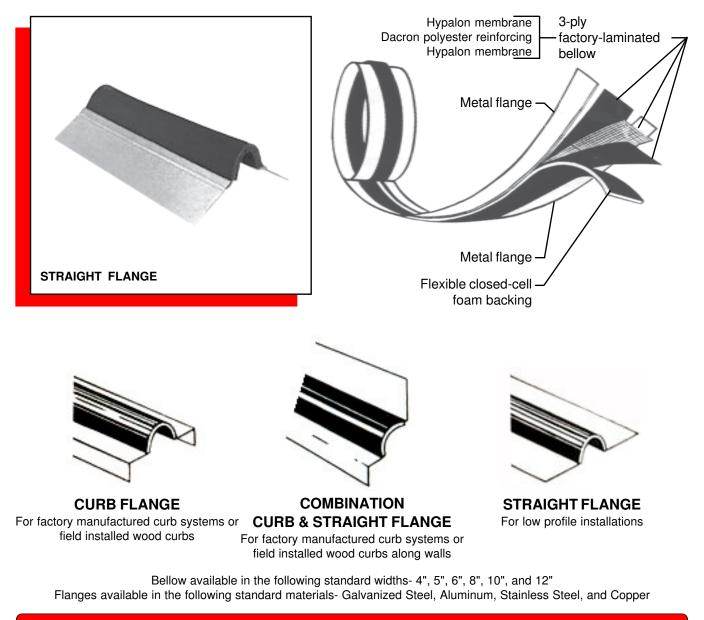
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The solution for sealing building joints

www.portalsplus.com

Expansion Joint Covers are factory-manufactured flexible, weatherproof, exterior covers for structural expansion joint openings, and are effective closures for a wide variety of special applications. Manufactured of a unique 3-ply flexible reinforced Hypalon bellow supported by a durable closed cell foam, which allows for anticipated movement in the structure, and metal mounting flanges factory locked to each edge of the bellow. Expansion Joint Covers with reinforced Hypalon bellow withstand the most extreme chemical and weather conditions without leakage. Factory-manufactured fitting accessories (corners, tees, end terminations, and crossover intersections) are designed for maximum flexibility and are produced using special techniques to ensure clean seam lines and watertight applications. Field seams are easily accomplished with standard splice kits. For use with all types of roofing- asphalt, coal tar bitumen, modified bitumen, EPDM, TPO, PVC, Hypalon, and most others. Replaces easily torn non-reinforced EPDM and Neoprene covers and easily damaged, bent, and leaky metal covers.



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The solution for sealing building joints

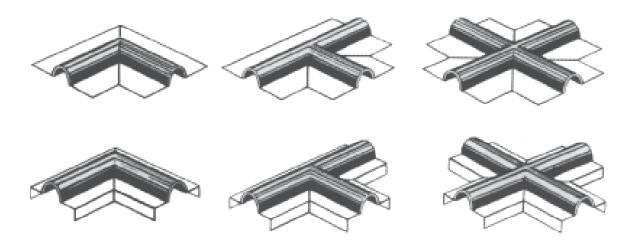
EXPANSION JOINT USE

Roof Expansion Joints are recommended to be provided for any one or more of the following minimum conditions.

- When the roof size exceeds 200 feet in any direction
- · At all structural expansion or contraction joints
- Where the deck material changes, for example from steel to concrete
- Where the deck material or structural framing changes direction
- Where building wings intersect, such as "U", "T", or "L" shapes
- Where interior heating and cooling conditions change, such as between heated and unheated
- At all building additions of any shape
- · Where differential movement between walls and decks may occur

Roof Expansion Joints are recommended to be constructed with raised curb assemblies which can allow adequate base flashing details for the roof system. Raised curb assemblies can be factory fabricated of galvanized steel to suit all project conditions which expedites and unifies project design and installation as opposed to traditional wood curbs which require extensive field installation time and thorough inspection of construction and attachment.

Over the raised curb assemblies, or at low profile expansion assemblies, the Portals Plus Expansion Joint Covers provide superior watertight integrity. Along with the standard cover profiles of Curb Flange, Combination Curb & Straight Flange, and Straight Flange, Portals Plus offers factory manufactured accessories available to suit virtually any project condition. The most common accessories are Corners, Intersections, and Ends. All factory manufactured accessories are custom made to suit each individual project's conditions, thereby assuring clean seam lines, continuity of joint material, and watertight integrity when properly spliced with Portals Plus standard splice kits. Contact Portals Plus for questions regarding any special details or applications.



TYPICAL FACTORY MANUFACTURED CORNERS AND INTERSECTIONS

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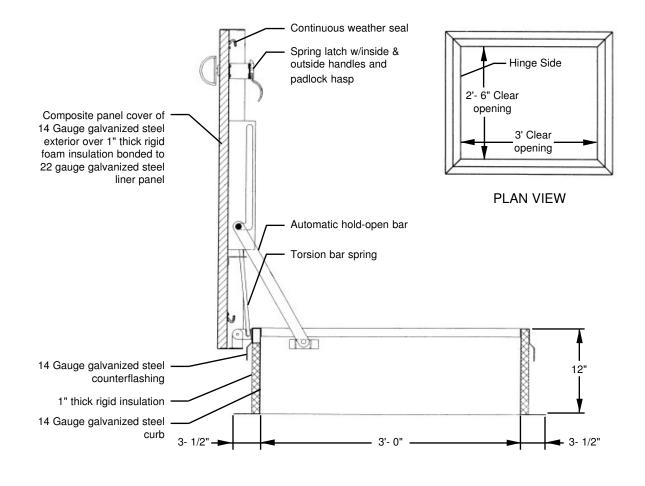


Roof Hatches Technical Product Information

Standard Roof Hatch



The Standard Roof Hatch is compatible with all types of roof systems and provides convenient, weathertight access to the roof. Cover opens easily to a full 90°, assisted by a torsion spring, and remains open with an automatic hold-open arm. The standard roof hatch provides a virtually unobstructed opening- only a narrow hold-open arm is tucked into one corner of the frame. When closed, the roof hatch is sealed with a heavy, mechanically applied weather seal to provide a barrier to weather and drafts. A latch with both inside and outside handles tightly secures the closed hatch. The standard hatch is available in primepainted galvanized steel curb & cover or aluminum curb & cover. Covers and curbs are fully insulated.



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