



## ASI Products

*Waterproofing Difficult Roof Penetrations*

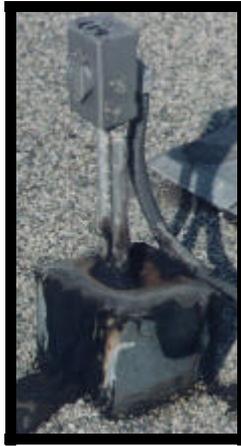
### E.P.D.M. Storm Collars

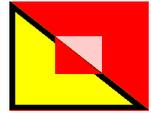


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#### **Waterproofing Storm Collar Applications**

- *Insulated Copper Line Sets*
- *Multiple Conduit Groupings*
- *Equipment Screen Supports*
- *Odd Geometry Penetrations*





## Waterproofing Difficult Roof Penetrations

A disproportionately large percentage of litigation in the building trades involves water damage. Our patented Storm Collars solve potentially significant problems for contractors, engineers, architects and building owners.

Ethylene Propylene Diene Monomer (E.P.D.M.) Rubber Storm Collars were designed to stop leaks caused by roof mounted condenser units, and other multi-pipe and multi-shape roof penetrations. Our Storm Collars can be used to slide onto a roof penetration, or as a retrofit assembly that fits around existing penetrations such as equipment screen posts, angle iron supports, fence posts and other odd-shaped roof penetrations.

Our Collars have been used extensively in both remodeling and new construction. Contractors, developers and projects include Avalon Bay Communities, Essex Property Trust, Trammell Crow Residential and UC Irvine.

Dr. H. Laaly (CPRC/RRC), author of 'The Science & Technology of Traditional & Modern Roofing Systems', recommends our E.P.D.M. Storm Collars.

*"A very effective and economical solution for waterproofing multiple pipes penetrating the roof. Storm Collars made from E.P.D.M. rubber exhibit long life resistance to heat, ozone and sunlight."*



### **(National Roofing Contractors Association)**

**Handbook of Accepted Roofing Knowledge (HARK) page 7, Section VIII Mechanical Curbs and Penetrations.**

"The use of so-called "pitch boxes" or "pitch pockets" around penetrations should be avoided because they pose a constant maintenance problem".



### **ASI Storm Collars**

E.P.D.M. Roof Flashing Storm Collars waterproof multiple pipe penetrations with our patented rubber umbrellas.

Our Line Set Collars were designed to solve leaks that emanate from careless design. The necessity of a secure waterproofing method at the intersection between a roof flashing and insulated line sets is extremely important.



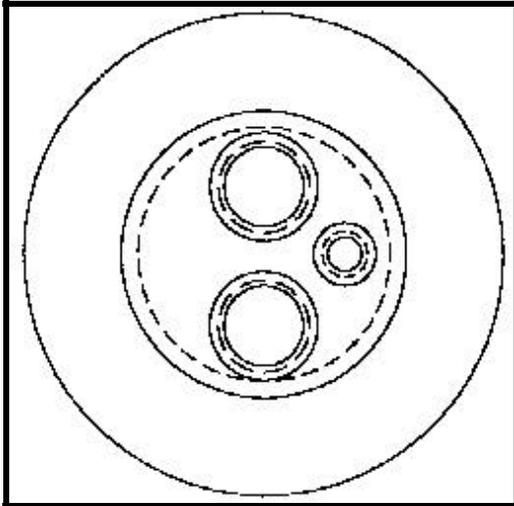
*A.S.I.  
Products*



U.S. Patent #5067291

**Manufacturers of E.P.D.M. Storm Collars.  
Including:**

1. Line Set Collar
2. Conduit Collar
3. Retro-Collar

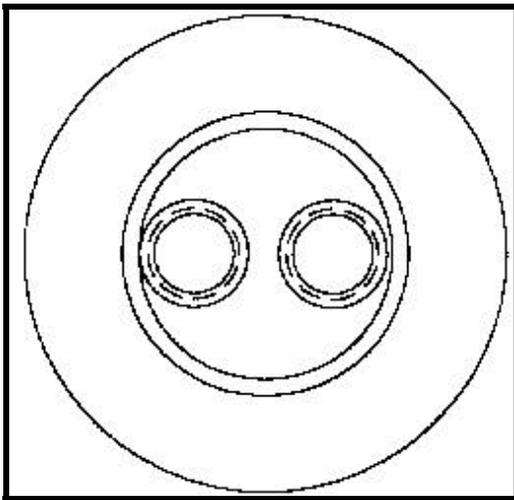
**Line Set Collar:**

Includes three holes. Two holes accept 3/4" to 1" copper pipe or low voltage liquid tight conduit. One hole accepts copper 3/8" tubing. Price includes stainless steel hose clamps.

Price: \$23.00

Order #: LS-3

Type: Three Hole Storm Collar

**Conduit Collar:**

Includes two holes: Conduits can accept two conduit pipes with outside dimensions starting at 3/4" and as large as 1" in diameter. Price includes stainless steel hose clamps.

Price: \$23.00

Order #: CC-2

Type: Double conduit Collar

**2" Retro-Collar**

Includes top plug section, bottom skirt, and stainless steel hose clamp.

Price: \$45.00

Order #: RF-2.1

Type: Opens to allow retrofit applications on difficult irregularly shaped Roof Penetrations. Includes one geometric plug, one skirt, and one stainless steel band clamp. Let us know your exact post dimensions & requirements when ordering.

**4" Retro-Collar**

Includes top plug section, bottom skirt, and stainless steel hose clamp.

Price: \$75.00

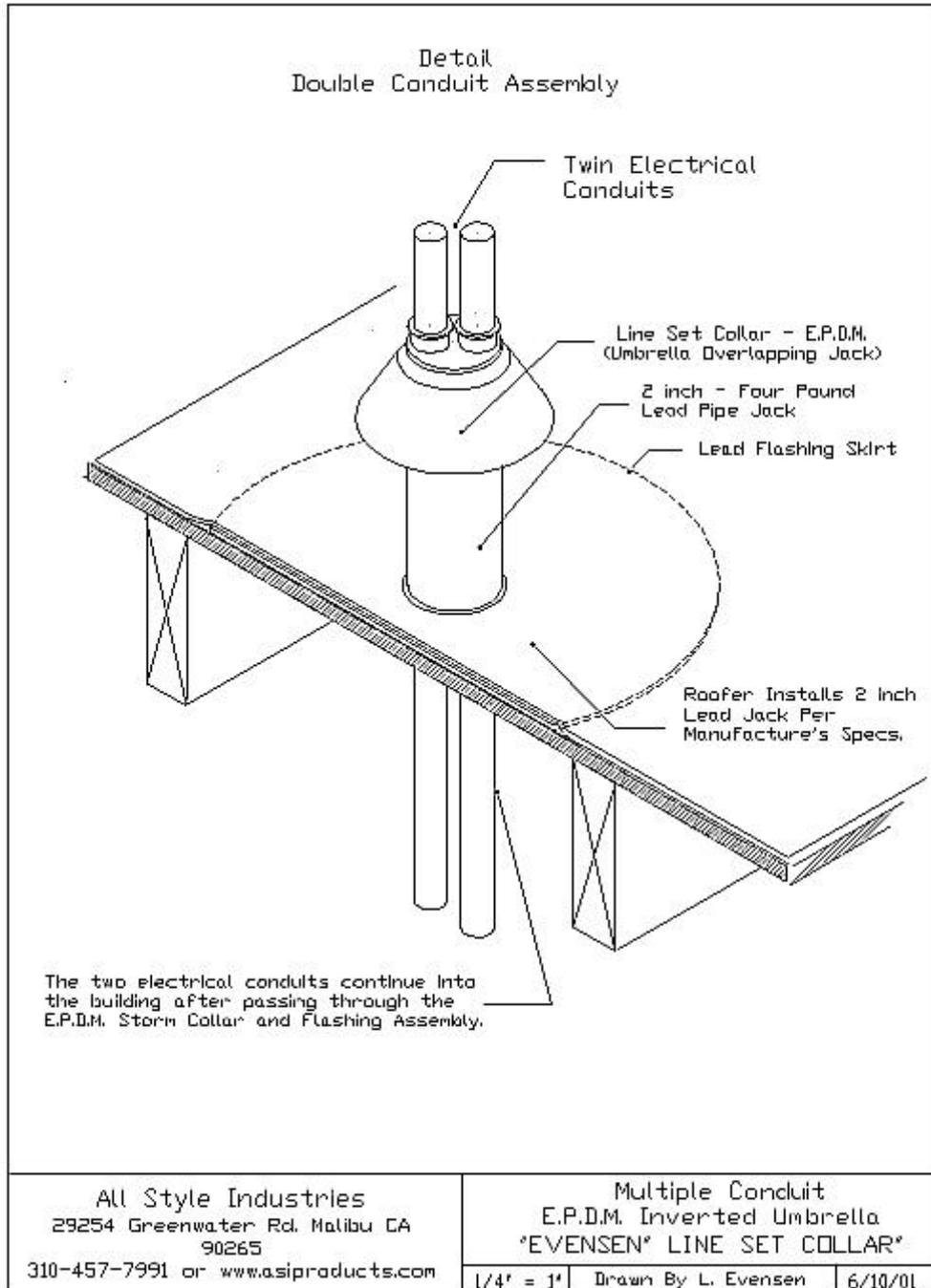
Order #: RF-4.2

Type: Opens to allow retrofit applications on difficult irregularly shaped Roof Penetrations. Includes one geometric plug, two skirts, and one stainless steel band clamp. Let us know your exact post dimensions & requirements when ordering.



## Conduit Collars Installation Detail

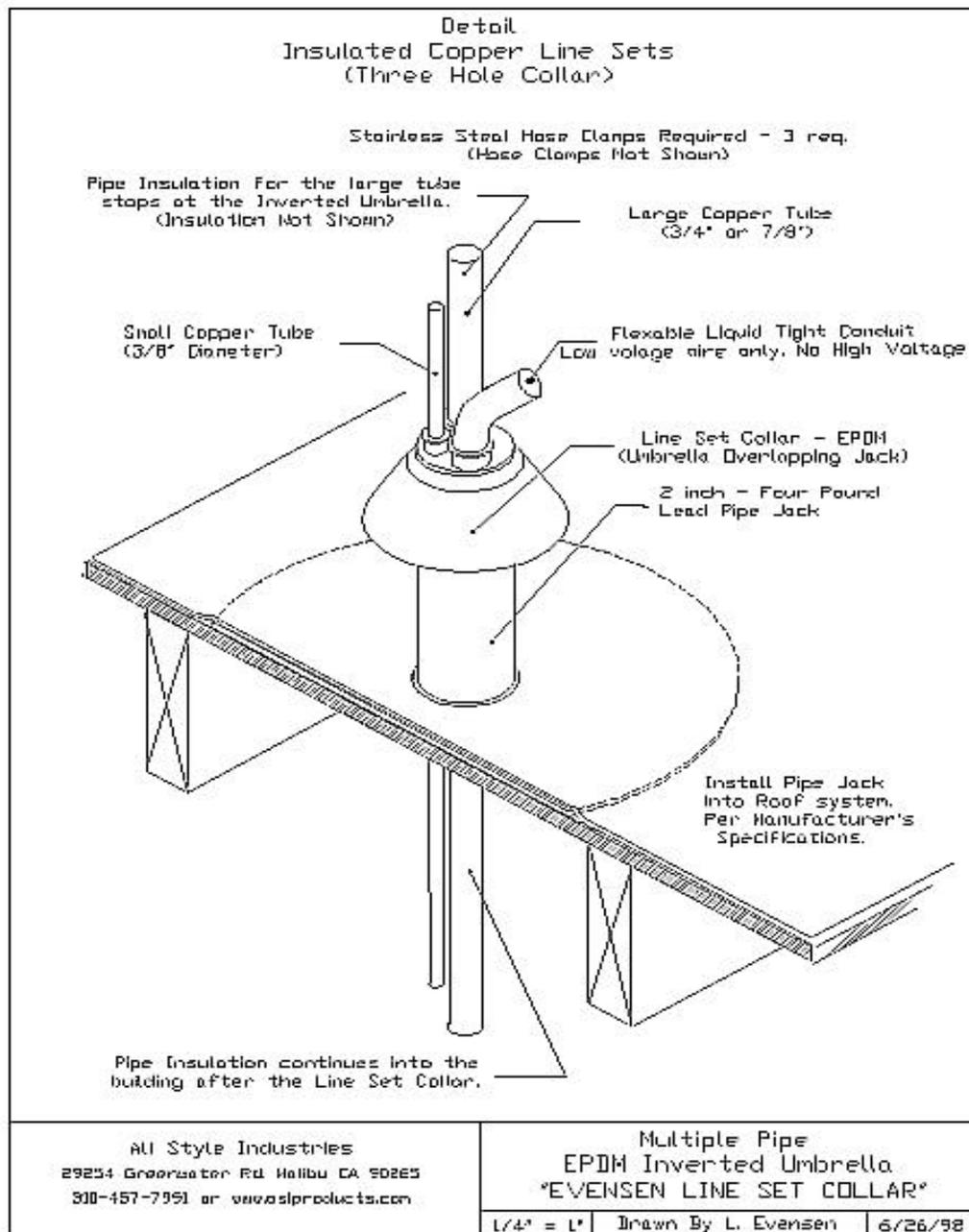
Many times electrical junction boxes, mechanical equipment, or other machinery require the use of roof top electrical service. The supply conduits often run side by side through a common penetration. By utilizing our E.P.D.M. Rubber Conduit Collars with a standard 2 inch pipe jack these penetrations are made waterproof.





## Line Set Collars Installation Detail

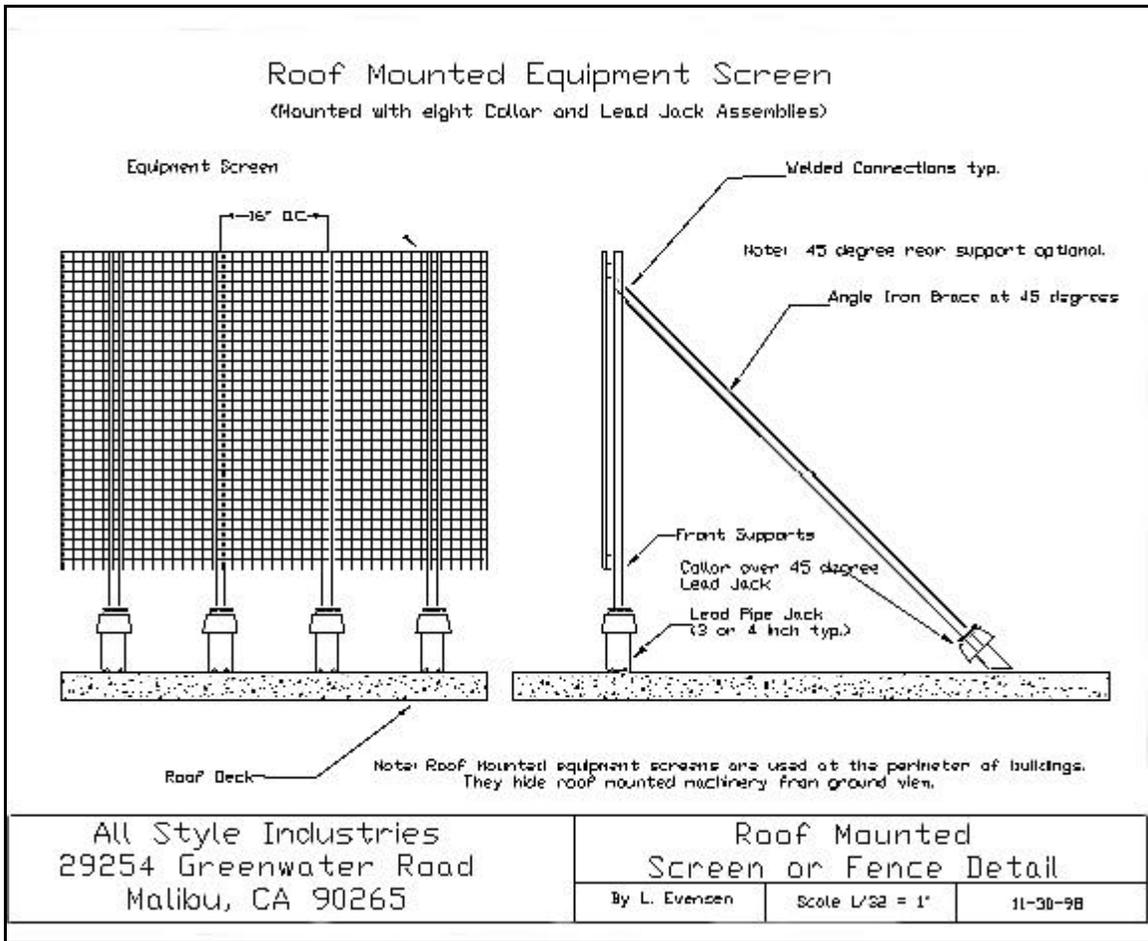
Install one E.P.D.M. Storm Collar for each roof mounted condenser unit. By using a 2 inch 4 lb. lead jack, the assembly meets the 8" height requirements suggested by N.R.C.A. The installing H.V.A.C. contractor stubs out the "Line Set". (Liquid Line, Suction Line, and Low Voltage Thermostat Conduits) The roofing Contractor installs the 2 inch lead flashing over The "Line Sets" using approved roofing practices. To complete the installation, the H.V.A.C. contractor slides the Waterproof Umbrella onto the "Line Set" and finishes his condenser installation.





## Retro Collars Equipment Screen Example

E.P.D.M. Retrofit Storm Collars can be installed around existing posts without disassembling the post. By welding a split lead flashing around the post, and installing one Retro-Collar as an “umbrella counter flashing”, a complete waterproof system is achieved.



**ASI Products**

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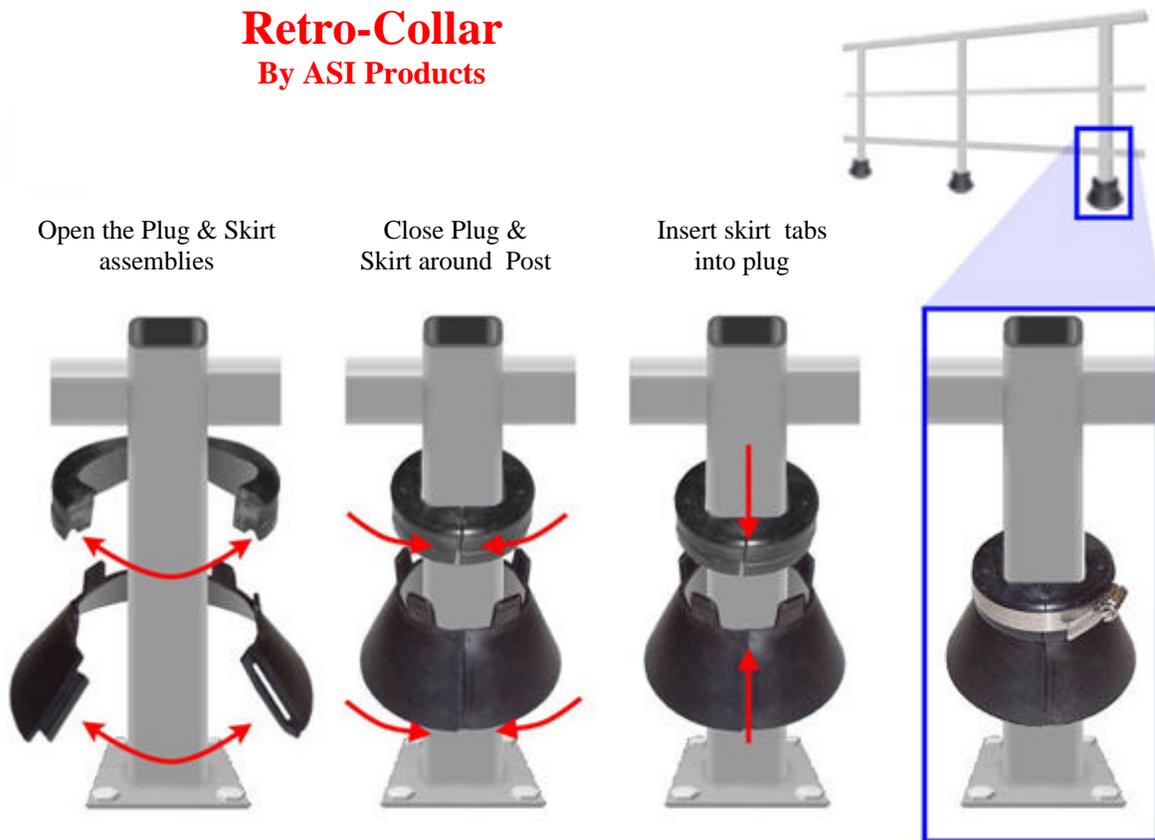
Email: [info@buildmartstore.com](mailto:info@buildmartstore.com)



## Retrofit Collar Assembly

Our Retro-Collars are designed to install around “fixed” geometric-shaped roof penetrations that cannot be disassembled. We offer two sizes of Retro-Collars that can wrap around up to 2” and 4” geometries respectively. Our 2” Retro-Collar includes one geometric plug and a single wrap around skirt. Our 4” Retro-Collar includes a larger geometric plug and two wrap around skirts that link together.

### **Retro-Collar** By ASI Products



Retro-Collars can be manufactured to fit almost any shape. When ordering please send us your exact post cross section or a full size sample of your post. We are able to fabricate your Collars to meet your requirements.



Install Band clamp to secure Storm Collar assembly



## **Frequently Asked Questions**

### **Please describe the different Collars and their functions.**

**A) Line-Set Collar:** Includes 3 holes and is designed to waterproof the Line Sets used on roof mounted condenser units that are a common source of leaks. Two holes accept 3/4" - 1" copper pipe or a low voltage liquid tight conduit and one hole accepts 3/8" copper tubing.

**B) Conduit Collar:** Includes 2 holes. It is not uncommon to find roof mounted electrical equipment with multiple conduits penetrating the roof. If these conduits are placed close together, our Collars provide the counter flashing required to successfully waterproof these "Multi-Pipe" penetrations. Conduit Collars can accept two conduit pipes with O.D. starting at 3/4" and as large as 1".

**C) RetroCollar:** Can be installed around existing penetrations without having to disassemble or disconnect the lines. Waterproofs geometric shapes including equipment screen posts, angle iron supports, fence posts and other irregular-shaped roof penetrations. Comes in 2" and 4", or we can manufacture to size.

### **What are your Collars made out of?**

They are made from E.P.D.M. Nordel Rubber. This is a superior rubber hybrid material, giving our Collars excellent U.V. Stability and Weather Ability. E.P.D.M. offers good resistance to heat, ozone and sunlight, with good flexibility at low temperatures and resistance to alkalis, acids and oxygenated solvents. E.P.D.M. withstands temperatures (minus 40 deg. F to 180 deg. F) without losing flexibility.

### **How do your Collars withstand building movement?**

Our Collars are mechanically attached to the pipes using hose clamps. The Collar is completely separate from the roof pipe jack. Therefore, during seismic activities, or settling and changes in the structure of the building, the Collar and the jack sub-assemblies move separately and will not disconnect, break, or cause leakage.

### **Why do insulated Copper Line Sets need to be waterproofed?**

Because water will follow the copper line sets, often inside the insulation, and throughout the building. Damage to the interior could be several floors below and many feet horizontally from the actual leak.

### **What do the Line-Set Collars do?**

Line-Set Collars isolate and securely fasten to the copper line sets creating a "Watertight Umbrella" that waterproofs the assembly. Water following the insulated line stops on the roof, keeping the water outside.

Our Collars set up a waterproof condition without locking into the roofing structure. The current method of using "pitch pockets" or "pitch boxes" does not allow line sets to move independently of the building.



### **What is the problem with using pitch pockets to waterproof line sets?**

Pitch pockets deform and catch water. The insulated lines wear, break and degrade. Seals breakdown and crack. Additionally, it's impossible to effectively seal between copper lines. Leaks are caused by movement, both seismic and settling, vibrations which break seals, Ultra Violet light, acid rain, rot, temperature fluctuations and climactic conditions

Additionally the NRCA (National Roofing Contractor's Association) states in their HARK Manual in Section VIII, Page 7 the following: "Good practice dictates that curbs be placed around all penetrations. The use of so-called "pitch boxes" or "pitch pockets" around penetrations should be avoided because they pose a constant maintenance problem."

Our Collars provide the accepted solution.

### **Why is it so important to have a secure waterproofing method at the intersection between a roof flashing and an insulated line?**

The necessity of a secure waterproofing method at the intersection between a roof flashing and an insulated line set is extremely important since trade responsibilities overlap at this important installation juncture.

It's difficult to pinpoint whose problem it is when a leak occurs. Is it the Roofing Contractor? The HVAC Contractor? The Engineer? The Architect? In fact it is everyone's problem. All are held responsible when water enters the structure causing damage to a building.

### **Do you have drawings and specifications?**

Yes, please visit our website at <http://www.wantasub.com/asiproductscom.html>

### **Who has used your products?**

Commercial and residential contractors and developers such as Avalon Bay Communities, Trammell Crow Residential, and Essex Property Trust, as well as the University of California at Irvine to mention a few of the larger names.

### **Do you provide technical assistance and design consultation?**

Yes, we do all of the above. We can provide .dwg files for use with AutoCad 2000. Please feel free to contact us either through ASI Products or BuildMartStore.com. We place great value on customer service.

#### **ASI Products**

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