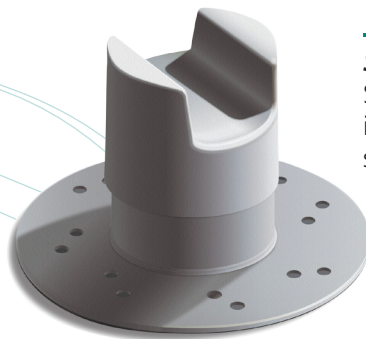


# The KnuckleHead Support System Installation Guide

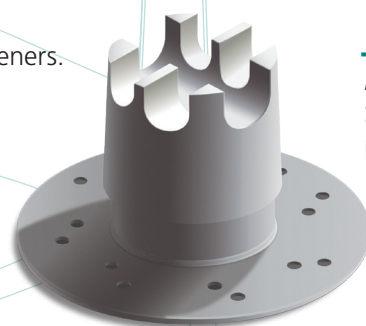
KnuckleHeads are tough, molded fiberglass-reinforced nylon supports designed to keep equipment elevated to extend your roof's life and protect your investment. KnuckleHeads are height-adjustable, can support up to 600 lbs. of weight, and have undergone 10 years of exposure in the field without showing signs of weathering or deterioration.

Four KnuckleHead designs are available depending on the application. Regardless of the design, all KnuckleHeads utilize the same Universal Base and install using the same steps. They can be installed using M-1® Structural Adhesive/Sealant, or M-1® combined with mechanical fasteners.



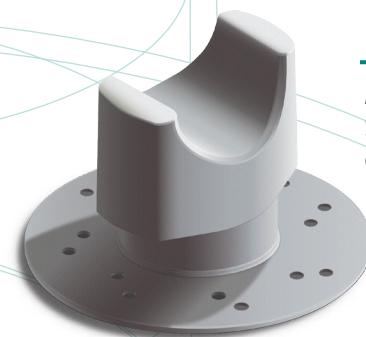
## ***Strut KnuckleHeads***

Support struts, steel framing for installation of heavy equipment, solar panels etc.



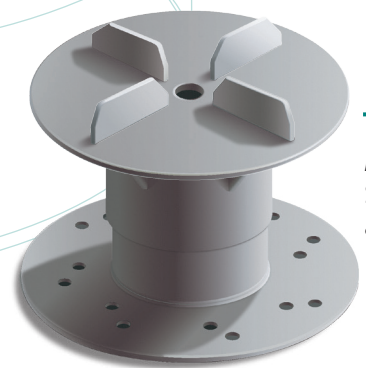
## ***Lite Pipe KnuckleHeads***

Support single 1" diameter pipes or two ½" diameter pipes



## ***Heavy Pipe KnuckleHeads***

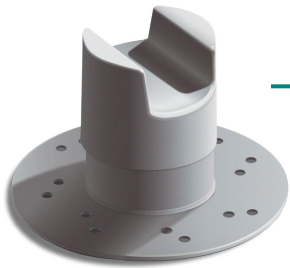
Support larger pipes up to 3" diameter



## ***Paver KnuckleHeads***

Support pavers, ballast stone and walkways

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## KnuckleHead Installation Guide

**NOTE:** The following steps feature a strut support KnuckleHead. All KnuckleHeads use the same Universal Base and can be installed in one of three ways: **1)** They may be loose laid. **2)** For more secure installation, they may be bonded directly to the roof surface using M-1® Structural Adhesive/Sealant. **3)** Where high winds or seismic activity are prevalent, KnuckleHeads may be installed using both M-1® and mechanical fasteners.



### Step 1

Lay out the assembly. Use a marker to indicate location of all KnuckleHead bases.



### Step 2

Use solvent, such as denatured alcohol, to clean application area of dirt and oil.



### Step 3

Apply M-1® Structural Adhesive/Sealant to the bottom of the base. Using a notch trowel, comb the entire surface leaving a uniform, approximately 60-mil layer of M-1®.



### Step 4

Position the base in the marked area and press gently. M-1® Structural Adhesive/Sealant should ooze out from the vent holes.



## KnuckleHead Installation Guide



### Step 5 (optional)

For a more secure installation, attach the base to the deck using an appropriate fastener (.235" ± .010" thread size). Coat the fastener heads with M-1® to create a waterproof seal.



### Step 6

Mate the head to the base and level if necessary. Rotate the head to the desired height, but do not elevate above the "stop" mark which will compromise integrity of the KnuckleHead unit.



### Step 7

Set framing into place and apply light pressure. For a more permanent and secure installation, M-1® Structural Adhesive may be applied directly into the head before setting pipes, struts or pavers. Tool off excess M-1® from the KnuckleHead and base for a more finished appearance.



### Step 8 (optional)

Fixture metal framing using all-purpose fastener.

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## **ECO-ENGINEERING**

3400 Covington Rd.  
Kalamazoo, MI 49001 USA  
[www.greenlinkengineering.com](http://www.greenlinkengineering.com)  
(269)216-9229 (888)672-9897