

# KnuckleHead

Rooftop Support System

## INSTALLATION GUIDE

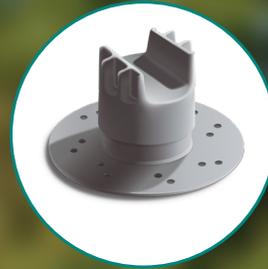
KnuckleHeads are tough, molded fiber-glass-reinforced nylon rooftop supports designed to keep equipment elevated to extend your roof's life and protect your investment. KnuckleHeads are height-adjustable, can support up to 600 lbs. each, and have undergone 10 years of exposure in the field without showing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

Five KnuckleHead designs are available depending on the application. Regardless of the design, all KnuckleHeads utilize the same Universal Base and install using the same basic steps. They can be loose laid, bonded using Duro-Caulk® Advanced Sealant or Duro-Caulk Advanced Sealant combined with mechanical fasteners.



### **Lite Pipe KnuckleHeads**

Support single 1-inch nominal pipe or two 1/2 inch nominal pipes. Lite Pipe Supports are commonly used for condensation pipes and electrical conduit.



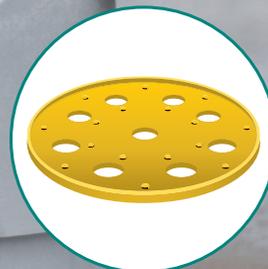
### **Strut KnuckleHeads**

Support all standard strut designs for installation of heavy equipment such as chillers, air conditioning units and other HVAC-related equipment.



### **Heavy Pipe KnuckleHeads**

Support larger pipes up to 3 in. outside diameter such as PVC, natural gas lines or water lines.



### **KnucklePads**

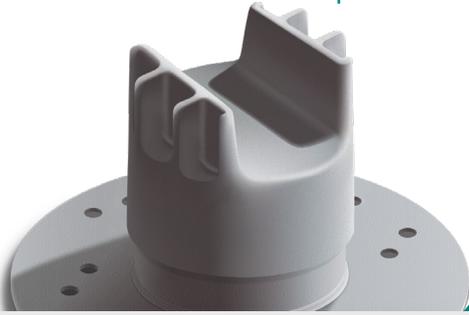
Soft, flexible polyurethane Knuckle Pads fit snugly around the Universal Base. Because they are slip resistant, they reduce movement and help protect the roof membrane.

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**DURO-LAST.**  
THE WORLD'S BEST ROOF.

Knucklehead products are compatible with all Duro-Last membranes.

The following steps feature a **STRUT** support KnuckleHead. **PIPE** KnuckleHeads follow the same basic steps.



## All KnuckleHeads use the same Universal Base and can be installed in one of three ways:

- 1 They may be loose laid.
- 2 For a more secure installation, they may be bonded directly to the roof surface using Duro-Caulk Advanced Sealant.
- 3 Where high winds or seismic activity are prevalent, KnuckleHeads may be installed using both Duro-Caulk Advanced Sealant and mechanical fasteners.

# KnuckleHead INSTALLATION GUIDE

## STEP 1 LAYOUT THE ASSEMBLY

Use a marker to indicate the location of all Universal Bases, when bonding the base with Duro-Caulk Advanced Sealant, which is optional.



## STEP 2 SURFACE PREPARATION

Using solvent such as rubbing alcohol, clean application area, removing dirt and oil.

**NOTE:** If loose laying the bases, surface should be clean from debris and sediment. Set base into KnucklePad (OPTIONAL) and proceed to STEP 6.



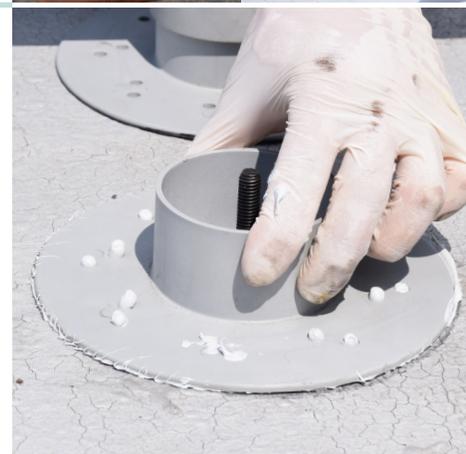
## STEP 3 APPLICATION OF ADHESIVE/ SEALANT (OPTIONAL)

If bonding the base to the roof membrane, apply Duro-Caulk Advanced Sealant to the bottom of the Universal Base. Using a notch trowel, comb the entire surface leaving a uniform, approximately 60-mil layer of Duro-Caulk Advanced Sealant.



## STEP 4 PLACEMENT OF THE BASE (OPTIONAL)

Position the base in the marked area and press gently. Duro-Caulk Advanced Sealant should squeeze out from the "rivet holes."



## STEP 5 MECHANICAL ATTACHMENT

(OPTIONAL)

If also mechanically attaching the Universal Base to the deck, engage the appropriate fastener into the deck. (KnucklePads are not utilized when mechanically attaching base). Apply Duro-Caulk Advanced Sealant to the fastener head to prevent leaking.



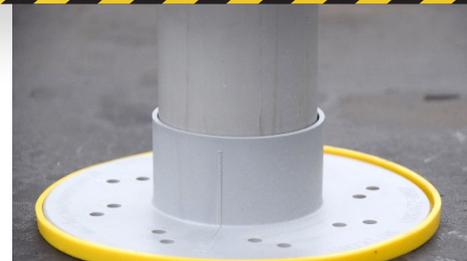
### CAUTION!

It is recommended to contact Duro-Last® to make sure all specifications and requirements are followed. **Failure to do so could void the roof warranty.** If bases are mechanically attached, extension tubes must be used to meet 8" clearance requirement. Additionally, bases must be flashed using a Duro-Last stack or utilize a U-Anchor plate.

## STEP 6 INSTALLING EXTENSIONS

(OPTIONAL)

If the installation is to be elevated, slide the appropriate extensions into the base.



## STEP 7 INSTALLING THE HEAD

Mate the KnuckleHead to the base (or extension) and level, if necessary.

**NOTE:** Rotate the head to the desired height, but do not elevate above the "stop" mark, which can compromise the integrity of the KnuckleHead unit.



## STEP 8 PLACEMENT OF STRUT OR PIPE

Set strut or pipe onto the head, when using metal strut, apply Duro-Caulk Advanced Sealant to the strut head and press into place.



## STEP 9 SECURING THE PLACEMENT

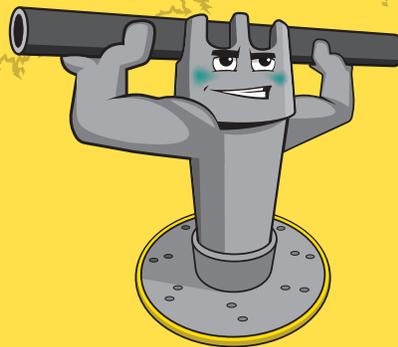
KnuckleStraps and -Caps install using standard stainless steel sheet metal screws (included).



## **Duro-Last & GREEN LINK ECO-ENGINEERING**

As a leader in vertical integration, Duro-Last, Inc. is proud to partner with GREEN LINK to offer authorized contractors the innovative KnuckleHead Rooftop Support System. Available for order directly through Duro-Last, KnuckleHead products provide additional solutions for all types of commercial roofing needs.

# **KNUCKLE UP!**



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