

# KnuckleHead

Elevated Mechanical Support Assembly for HVAC Equipment, Pipelines and Ductwork

Each kit includes four Stanchion Supports, two support rails, two equipment rails, and necessary hardware for mounting/attaching –all made in the U.S.A.

## EASY TO INSTALL

Each kit takes less than 15 minutes to assemble out of the box

System can accommodate all HVAC equipment whether roof-or ground-mounted

Each KnuckleHead supports up to 600 lbs.

## ADJUSTABLE

Equipment rails slide horizontally to fit width of mounted equipment

Green Link Adhesive/Sealant can be used to further secure the installation

**ATTACHABLE**  
Universal Base features 4 holes for mechanical fastening

The Stanchion Supports attach to the Knucklehead Bases

**GREEN LINK**  
ENGINEERING



Made in U.S.A.

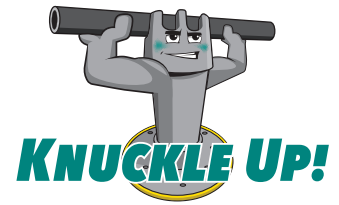
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5519 East Cork Street, Kalamazoo, MI 49048 USA

Original design, engineered from the ground up with the contractor in mind, featuring innovative Green Link technology. All made in the U.S.A.

**Contractor Driven!**

# KnuckleHead

## Elevated Mechanical Support Assembly for HVAC Equipment, Pipelines and Ductwork Equipment



Green Link's Elevated Mechanical Support Assembly is designed to support all types of HVAC equipment including AC units, mini splits, transformers, condensers, heat pumps and related pipelines. The assembly is available in kit form for building a 3' X 4' frame and can be installed on the roof or ground. Each kit includes four 2' stanchion supports and two 4' support rails; four Strut Knucklehead Bases; two equipment rails which can be adjusted by sliding horizontally to fit the equipment to be mounted; and all necessary hardware for assembly. KnucklePads and Green Link Adhesive/Sealant are optional accessories. Each kit is designed for mounting single HVAC units but can be modified to build banks when multiple units are to be installed. Two types of bases are available: the Universal Base, and the Big Base. The systems can be installed in two ways: mechanically attached for maximum support; or free standing without attachment. Green Link's Elevated Mechanical Support Assembly is made in the U.S.A.

## KIT CONTENTS

### Bases

Knucklehead Bases are composed of military-grade reinforced nylon which is strong, durable and weatherproof. Each base is capable of supporting up to 600 pounds and features a vertical steel bolt for mounting Knucklehead Stanchions and four holes in the center for accepting mechanical fasteners.

Two base designs are available. The standard Universal Base features a 7-inch diameter and 38 square inches of surface area.

The Big Base features the standard universal Knucklehead Base overmolded in the center of a larger urethane component featuring a 12-inch diameter and 113.1 square inches of surface area. The Big Base provides more stability at heights over 12-inch and greater load distribution, reducing point loading on the roof resulting from heavier equipment.

The Big Base features a tough, weatherproof, slip-resistant KnucklePad, which is molded onto the base. Compatible with all roof membranes including PVC, and tinted "safety yellow," this custom-engineered urethane pad protects the roof membrane, eliminating the need for slip sheets.



## INSTALLATION

The bases can be installed free standing or attached. The universal Knucklehead Base can be attached by driving screws through the four holes in its center directly into the roof deck. This secures the installation in environments that undergo very high winds or seismic events. Applying Green Link Adhesive/Sealant to the Knucklehead Base further strengthens the installation.

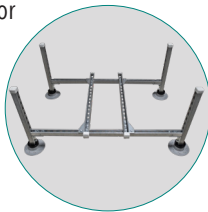
The Big Base can be attached in the same way, but in most cases, attachment is unnecessary because the larger surface area provides sufficient stability.

When the Universal Base is free standing, KnucklePads should be placed on the bases to minimize movement from equipment vibration. Typically, ground installations are free standing on a concrete slab. Applying Green Link Adhesive/Sealant is optional for securing the installation.

## FEATURES

### Stanchion Supports

The Stanchion Supports consist of channel with one end imbedded in a structural urethane element, which includes a female receptacle molded in place for mating to the base bolt.



### Out-of-the-Box Assembly

Once the bases are positioned on the roof or ground surface, stanchions can be placed on the base bolt and rotated until hand tight. Support rails slide into the stanchion slots at the desired height and are secured with connector plates and steel bolts.

This creates a secure unified frame. Equipment rails are then positioned along the support rails, slide into the desired position, and are secured with connector plates and steel bolts. Because of the support assembly's design, electrical boxes can be mounted directly onto the frame using sections of strut bolted into place.

### Height Adjustment

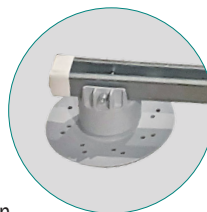
The standard vertical range for the assembly is 12"-24" from the roof surface, but lower profiles can be achieved (see below). Because HVAC equipment must be perfectly level to perform optimally, support rails can be adjusted by sliding within the slots and bolted in place.

### Electrical Boxes

Because of the support assembly's sturdy design, electrical boxes can be mounted directly onto the frame using sections of strut bolted into place.

### Lower Profiles

Green Link offers a separate low-profile kit which eliminates the need for stanchions and yields elevations below 12", but the elevated mechanical support assembly can also deliver lower profiles. By moving the connector plates from below the support rails and placing them above, profiles can be lowered to 6".



### Custom Kits

The standard kit is 3' by 4', but Green Link can provide custom sizes. Supports can be cut to any length and width to build banks of any dimension.

**Green Link Adhesive/Sealant** is an environmentally proprietary formulation engineered to adhere to Green Link Knucklehead Bases as well as most roof membranes including PVC, EPDM, acrylic and primed TPO. The adhesive can be used to strengthen attached systems, or by itself without mechanical fasteners.

## Stanchion Base Physical Data

24" STANCHION	7" BASE	12" BASE
Compression (lbs)	4,000	5,500
Tensile (lbs)	1,000	1,200
Moment (lbs-ft)	7" BASE	12" BASE
12"	286	392

MAX ALLOWABLE SIDELOAD: 120 LBS @ 24", 250 LBS @ 12", 500 LBS @ 6"

12" - 13 BOLT IMPORTANT VALUES: MAXIMUM SLIP LOAD OF CHANNEL NUT 1,000 LBS, MIN SHEAR LOAD 7,000 LBS

ICK - GALVANIZED

ASSEMBLY TORQUE RANGE OF NUTS AND BOLTS: 60-80 FOOT-POUNDS