

# **GREEN LINK**

**ENGINEERING SUSTAINABILITY** 

# Rooftop Support Systems 2023 Product Catalog

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RESOURCES: <a href="https://greenlinkengineering.com/resources">https://greenlinkengineering.com/resources</a>

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# Introduction to the KnuckleHead Support System

# Composition

KnuckleHeads, an engineered product, are designed to perform at the highest level under field conditions. Able to support up to 600 pounds, KnuckleHeads are molded from glass-reinforced, military-grade nylon resin, which is tough, weatherproof, UV stable, and impervious to freeze-thaw cycles. KnuckleHeads are designed with a range of adjustability up to 1 inch (see product for overall dimensions), by simply rotating the KnuckleHead. If necessary, the height can be adjusted further using KnuckleHead extensions.



#### **Universal Base**

The Universal Base is 7 inches in diameter and provides 38.5 square inches of surface area. The center bolt is molded in place and is compatible with all KnuckleHead designs, which are attached by simply screwing them onto the base. The Universal Base can be loose laid but features four holes in the center for mechanical attachment to the roof deck. Green Link Adhesive/Sealant, when applied to the bottom of the base, does create a seal that protects against leaks caused by mechanical attachments. However, it can also be used to bond the base to a fully adhered roof membrane, reducing the need for fasteners under suitable conditions. Green Link's Adhesive/Sealant is moisture-activated and the outer holes on the base flange allow it to cure quickly and thoroughly. Alternatively, safety yellow KnucklePads are compatible with all roofing membranes and function as a slip sheet.

# Big Base

Green Link's 12 inch Big Base is engineered for situations where equipment and pipelines need to be installed at higher elevations and require greater stability; this base provides 113.1 square inches of surface area. Like the Universal Base, the Big Base may be bonded, mechanically attached, or loose laid. The Big Base has an integrated safety yellow slip sheet.

#### **Installation Note**

Consult a roofing contractor for attachment to the roof deck and manufacturer's penetration details on warrantied roofs.

#### Lite Pipe KnuckleHead

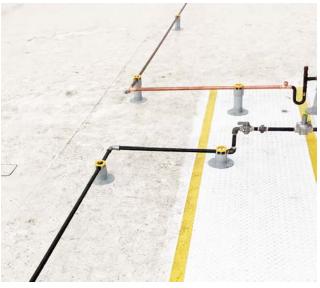


#### Lite Pipe KnuckleHead

The Lite Pipe KnuckleHead is designed to support a single pipe up to 1.315" O.D. pipe or two pipes up to .840" O.D. Lite Pipe KnuckleHeads are height adjustable from 2.25" to 3.25" and have a safety yellow cap for pipe containment. Lite Pipe KnuckleHeads are shipped on Universal Bases unless otherwise specified.

| LITE PIPE K       | LITE PIPE KNUCKLEHEAD*   |                       |
|-------------------|--|-----------------------|
| 2006-12           | 12 LITE PIPE KNUCKLEHEADS WITH UNIVERSAL BASES   | 10 LBS<br>16"x16"x10" |
| 2006-KIT-<br>12   | 12 LITE PIPE KNUCKLEHEADS WITH<br>UNIVERSAL BASES AND 2 CTGS.<br>GREEN LINK ADHESIVE/SEALANT | 12 LBS<br>16"x16"x10" |
| 2006-<br>BULK-120 | 120 LITE PIPE KNUCKLEHEADS WITH UNIVERSAL BASES  | 88 LBS<br>31"x21"x22" |
| *OTHER QL         | JANTITIES AVAILABLE UPON REQUEST   |                       |





Lite Pipe KnuckleHeads support sloping lines on a commercial warehouse with a PVC roof. Loose laid standard KnuckleHeads and KnuckleHead Extensions are used to accommodate slope of pipe on this re-roofing project.

#### Lite Pipe KnuckleHead

Shown with (2) .5" O.D. Pipes and safety yellow KnucklePad slip sheet\*\*



| ACCESSORIES | PKG. WEIGHT/DIM |
|-------------|-----------------|

| A-2001-PAD          | SAFETY YELLOW SLIP SHEET                   | 12 PK. (4 LBS.<br>13"x10"x10")<br>100 PK. (30 LBS.<br>15"x15"x15") |
|---------------------|--|--|
| 3004-GL-            | 12 CTGS. OF GREEN LINK                     | 13 LBS   |
| GR-12PK             | ADHESIVE/SEALANT                           | 13"x7"x8"  |
| 3004-GL-<br>GR-24PK | 24 CTGS. OF GREEN LINK<br>ADHESIVE/SEALANT | 26 LBS<br>13"X13"X9"   |

QUANTITY GUIDE: USE 1 CARTRIDGE SEALANT FOR EVERY (6) UNIVERSAL BASES. SEE INSTALLATION INSTRUCTIONS HERE AND CONSULT ROOFING MANUFACTURER PRIOR TO PENETRATING ROOF.



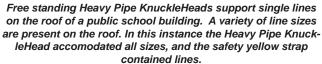


#### Heavy Pipe KnuckleHead

The Heavy Pipe KnuckleHead is designed to support pipes UP TO 3" O.D. and are height adjustable from 2" to 3" with a safety yellow cap for containment. Heavy Pipe KnuckleHeads are shipped on Universal Bases unless otherwise specified.

| HEAVY PIPE       | PKG.WEIGHT/DIM  |                       |
|------------------|---|-----------------------|
| 2011-12          | 12 HEAVY PIPE KNUCKLEHEADS<br>WITH UNIVERSAL BASES  | 11 LBS<br>16"x16"x10" |
| 2011-KIT-12      | 12 HEAVY PIPE KNUCKLEHEADS WITH<br>UNIVERSAL BASES AND 2 CTGS.<br>GREEN LINK ADHESIVE SEALANT | 13 LBS<br>16"x16"x10" |
| 2011-BULK-<br>90 | 90 HEAVY PIPE KNUCKLEHEADS WITH UNIVERSAL BASES   | 83 LBS<br>31"x21"x22" |
| *OTHER QUA       | ANTITIES AVAILABLE UPON REQUEST   |                       |







8" Heavy Pipe KnuckleHead Extensions support a line on a PVC roof. The Heavy Pipe KnuckleHeads are mechanically attached and booted using the roofing manufacturer's reccomendations.



#### **ACCESSORIES PKG. WEIGHT/DIM**

| A-2001-PAD | SAFETY YELLOW SLIP SHEET | 12 PK. (4 LBS.<br>13"x10"x10")<br>100 PK. (30 LBS.<br>15"x15"x15") |
|------------|--------------------------|--|
| 3004-GL-   | 12 CTGS. OF GREEN LINK   | 13 LBS   |
| GR-12PK    | ADHESIVE/SEALANT         | 13"x7"x8"  |
| 3004-GL-   | 24 CTGS. OF GREEN LINK   | 26 LBS   |
| GR-24PK    | ADHESIVE/SEALANT         | 13"X13"X9"   |

QUANTITY GUIDE: USE 1 CARTRIDGE SEALANT FOR EVERY (6) UNIVERSAL BASES. SEE INSTALLATION INSTRUCTIONS HERE AND CONSULT ROOFING MANUFACTURER PRIOR TO PENETRATING ROOF.



#### Strut KnuckleHead

Shown from above, with 1-5/8" slotted strut, adhered and bolted\*\* to Strut KnuckleHead. Strut KnuckleHead is designed to accomodate all standard strut sizes. \*\*Bolts and adhesive Sold Seperately



#### Strut KnuckleHead

The Strut KnuckleHead is designed to support metal strut channel for installation of HVAC equipment, pipes, ductwork, and solar arrays. Strut KnuckleHeads are height adjustable from 3.2" to 5". They are shipped on Universal Bases unless otherwise specified.

| STRUT KNUCKLEHEAD* |  | PKG.WEIGHT/DIM        |
|--------------------|--|-----------------------|
| 2007-12            | 12 STRUT KNUCKLEHEADS WITH UNIVERSAL BASES   | 10 LBS<br>16"x16"x10" |
| 2007-KIT-<br>12    | 12 STRUT KNUCKLEHEADS WITH<br>UNIVERSAL BASES AND 2 CTGS.<br>GREEN LINK ADHESIVE SEALANT | 12 LBS<br>16"x16"x10" |
| 2007-<br>BULK-120  | 120 STRUT KNUCKLEHEADS WITH UNIVERSAL BASES  | 85 LBS<br>31"x21"x19" |
| *071150.01         | LANTITIES AVAILABLE LIBON DESCRIES   |                       |





Strut KnuckleHeads are used to suppport large ammonia lines on a food processing plant. In this instance, two Strut KnuckleHeads are used with a length of strut channel and a pipe reciever to build vertically. KnucklePads are used as slip sheets.



Free standing Strut KnuckleHead Extensions are used to support runs of two 4" pipes on an EPDM re-roofing project. The Strut KnuckleHeads are bolted to strut channel. KnucklePads are used as slip sheets.

# Strut KnuckleHead Shown with safety yellow KnucklePad slip sheet\* \*\*Sold Separately.

| ACCESSORIES         |   | PKG. WEIGHT/DIM  |
|---------------------|---|--|
| A-2001-PAD          | SAFETY YELLOW SLIP SHEET                    | 12 PK. (4 LBS.<br>13"x10"x10")<br>100 PK. (30 LBS.<br>15"x15"x15") |
| 3004-GL-<br>GR-12PK | 12 CTGS. OF GREEN LINK ADHESIVE<br>/SEALANT | 13 LBS<br>13"x7"x8"  |
| 3004-GL-<br>GR-24PK | 24 CTGS. OF GREEN LINK ADHESIVE /SEALANT    | 26 LBS<br>13"x13"x9"   |

QUANTITY GUIDE: USE 1 CARTRIDGE SEALANT FOR EVERY (6) UNIVERSAL BASES. SEE INSTALLATION INSTRUCTIONS HERE AND CONSULT ROOFING MANUFACTURER PRIOR TO PENETRATING ROOF.





### KnuckleHead Extensions

KnuckleHead Extensions are available for applications exceeding base height. Stock extensions are available in two standard sizes with custom height available upon request. KnuckleHead Extensions ARE NOT height adjustable by turning the head, extension must to custom cut to adjust height.

#### Heavy Pipe KnuckleHead Extensions with Universal Base

| HEAVY PIPE KNUCKLEHEAD EXTENSIONS PKG/ WEIGHT/DIM |   |                   |
|---|---|-------------------|
| EXT-08-<br>2011                                   | 1 HEAVY PIPE KNUCKLEHEAD ON 8"<br>HEIGHT EXTENSION  | 3 LBS 13"x10"x10" |
| EXT-12-<br>2011                                   | 1 HEAVY PIPE KNUCKLEHEAD ON 12"<br>HEIGHT EXTENSION | 3 LBS 16"x12"x11" |

#### Heavy Pipe KnuckleHead Extensions with Big Base

Big Bases are recommended for free-standing applications over 12" in height.

| HEAVY PIPE         | E KNUCKLEHEAD EXTENSIONS WITH BIG BASE                         | PKG. WEIGHT/DIM       |
|--------------------|--|-----------------------|
| EXT-08-<br>2011-BB | 1 HEAVY PIPE KNUCKLEHEAD ON 8" HEIGHT EXTENSION WITH BIG BASE  | 5.5LBS<br>15"x15"x15" |
| EXT-12-<br>2011-BB | 1 HEAVY PIPE KNUCKLEHEAD ON 12" HEIGHT EXTENSION WITH BIG BASE | 6 LBS<br>19"x19"x19"  |

#### 12" Heavy Pipe KnuckleHead Extension

includes safety yellow containment strap and Big Base. Big Base has an integrated safety yellow slip sheet.

#### 8" Lite Pipe KnuckleHead Extension

includes safety yellow containment cap (not pictured) and Universal Base. Shown with KnucklePad slip sheet\*. \*Sold Sepately

## <u>lite Pipe KnuckleHead Extensions with Universal Base</u>

|   | LITE PIPE KN    | IUCKLEHEAD EXTENSIONS                              | PKG. WEIGHT/DIM      | <u> </u> |  |
|---|-----------------|--|----------------------|----------|--|
|   | EXT-08-<br>2006 | 1 LITE PIPE KNUCKLEHEAD ON 8" HEIGHT<br>EXTENSION  | 2 LBS<br>13"x10"x10" |          |  |
| 1 | EXT-12-<br>2006 | 1 LITE PIPE KNUCKLEHEAD ON 12"<br>HEIGHT EXTENSION | 3 LBS<br>16"x12"x11" |          |  |

### Lite Pipe KnuckleHead Extensions with Big Base

Big Bases are recommended for free-standing applications over 12" in height.

| LITE PIPE          | PKG. WEIGHT/DIM  |                      |
|--------------------|--|----------------------|
| EXT-08-<br>2006-BB | 1 LITE PIPE KNUCKLEHEAD ON 8" HEIGHT EXTENSION WITH BIG BASE     | 5 LBS<br>15"x15"x15" |
| EXT-12-<br>2006-BB | 1 LITE PIPE KNUCKLEHEAD ON 12"<br>HEIGHT EXTENSION WITH BIG BASE | 6 LBS<br>15"x15"x15" |

# KnuckleHead Extension includes safety

12" Lite Pipe

yellow containment cap and Big Base. Big Base has an integrated safety yellow slip sheet.



#### KnuckleHead Extensions

KnuckleHead Extensions are available for applications exceeding base height. Stock extensions are available in two standard sizes with custom height available upon request. KnuckleHead Extensions ARE NOT height adjustable by turning the head, extension must to custom cut to adjust height.



#### Strut KnuckleHead Extensions with Universal Base

| STRUT KNUCKLEHEAD EXTENSIONS |                            | PKG. WEIGHT/DIM |  |
|------------------------------|----------------------------|-----------------|--|
| EXT-08-                      | 1 STRUT KNUCKLEHEAD ON 8"  | 3 LBS           |  |
| 2007                         | HEIGHT EXTENSION           | 13"x10"x10"     |  |
| EXT-12-                      | 1 STRUT KNUCKLEHEAD ON 12" | 3 LBS           |  |
| 2007                         | HEIGHT EXTENSION           | 16"x12"x11"     |  |

KNUCKLEHEAD STRUT EXTENSIONS ARE NOT DESIGNED TO SUPPORT HVAC EQUIPMENT

Strut KnuckleHead Extensions with Big Base

Big Bases are recommended for free-standing applications over 12" in height. Not for Equipment Supports.

| STRUT KNUCKLEHEAD EXTENSIONS WITH BIG BASE | PKG. WEIGHT/DIM |
|--|-----------------|
|--|-----------------|

| EXT-08- | 1 STRUT KNUCKLEHEAD ON 8" HEIGHT  | 6 LBS       |
|---------|-----------------------------------|-------------|
| 2007-BB | EXTENSION WITH BIG BASE           | 15"x15"x15" |
| EXT-12- | 1 STRUT KNUCKLEHEAD ON 12" HEIGHT | 8 LBS       |
| 2007-BB | EXTENSION WITH BIG BASE           | 15"x15"x15" |

KNUCKLEHEAD STRUT EXTENSIONS ARE NOT DESIGNED TO SUPPORT HVAC EQUIPMENT





#### TELESCOPING STANCHION KNUCKLEHEAD

# Telescoping Stanchion KnuckleHeads

Telescoping Stanchion KnuckleHeads are available for building framing up vertically, where standard Stanchion KnuckleHead heights are not applicable. Telescoping Stanchion KnuckleHeads are made to heights of 8" or 12" nominal, using 1-7/8" telescoping strut. This allows for 3 (8") or 4 (12") attachment holes which can receive 1-5/8" standard slotted strut channels.



#### PKG. WEIGHT/DIM

| 6200X-8"T-EA  | 1 STANCHION KNUCKLEHEAD ON<br>UNIVERSAL BASE | 6 LBS<br>23"x15"x7"  |
|---------------|--|----------------------|
| 6200X-12"T-EA | 4 STANCHION KNUCKLEHEADS ON UNIVERSAL BASES  | 21 LBS<br>51"x13"x6" |

Telescoping Stanchion KnuckleHeads Available in 8" and 12" nominal heights for building vertically with strut channel.





12" Nominal Telescoping Stanchion KnuckleHeads are fastened to 1-5/8" strut channels for building





#### Stanchion KnuckleHead

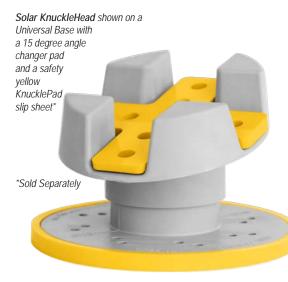
The Stanchion KnuckleHead features a 24" length of strut molded into the head, allowing for custom adjustments when building with strut. This KnuckleHead is designed to support HVAC equipment, large pipes and duct work. Stanchion KnuckleHeads are height adjustable from 5" to 24" dependending on height requirements, and feature an integrated gasket to create a weather-proof seal. Additional hardware for mounting is available upon request.

| STANCHION           | KNUCKLEHEADS   | PKG.WEIGHT/DIM   |
|---------------------|--|--|
| 6200U               | 1 STANCHION KNUCKLEHEAD ON UNIVERSAL BASE                | 6 LBS<br>23"x15"x7"  |
| 6200U-4Set          | 4 STANCHION KNUCKLEHEADS<br>ON<br>UNIVERSAL BASES        | 21 LBS<br>51"x13"x6"   |
| STANCHION           | KNUCKLEHEADS ON BIG BASE                                 |  |
| 6200B               | 1 STANCHION KNUCKLEHEAD ON<br>BIG BASE                   | 9 LBS<br>23"x15"x7"  |
| 6200B-4Set          | 4 STANCHION KNUCKLEHEADS<br>ON BIG BASES                 | 35 LBS<br>51"x13"x6"   |
| ACCESSORIE          | s  | PKG.WEIGHT/DIM   |
| A-2001-<br>PAD      | SAFETY YELLOW SLIP SHEET                                 | 12 PK. (4 LBS.<br>13"x10"x10")<br>100 PK. (30 LBS.<br>15"x15"x15") |
| 3004-GL-<br>GR-12PK | 12 CTGS. OF GREEN LINK ADHESIVE<br>/SEALANT              | 13 LBS<br>13"x7"x8"  |
| 3004-GL-<br>GR-24PK | 24 CTGS. OF GREEN LINK ADHESIVE<br>/SEALANT              | 26 LBS<br>13"X13"X9"   |
| R2001-<br>HW-1      | 1 90° BRACKET WITH 4 1/2-13 BOLTS,<br>WASHERS AND NUTS   | 2 LBS<br>13"x10"x10"   |
| R2001-<br>HW-4      | 4 90° BRACKETS WITH 16 1/2-13<br>BOLTS, WASHERS AND NUTS | 7 LBS<br>13"x10"x10"   |

| STANCHION BAS  | SE PHYSICAL D                         | PATA  |
|--|---------------------------------------|---|
| 24" STANCHION  | 7" BASE                               | 12" BASE  |
| COMPRESSIONS (LBS)   | 2250                                  | 2250  |
| TENSILE (LBS)  | 1000                                  | 1200  |
| MOMENT @ 12" ELEVATION<br>(LBS-FT)                         | 250                                   | 375   |
| ASSEMBLY TORQUE RANGE OF NUTS AND BOLTS: 60-80 FOOT-POUNDS | MAX<br>ALLOWABLE<br>SIDELOAD  125 LBS | MAX<br>ALLOWABLE<br>SIDELOAD<br>188 LBS ——————————————————————————————————— |









This KnuckleHead is designed to support solar arrays at a 15-degree angle. Each Solar KnuckleHead can support 600 lbs. of weight and are height adjustable from 2" to 3" from base to support point.

| SOLAR KNUCKLEHEAD* |   | PKG.WEIGHT/DIM        |  |
|--------------------|---|-----------------------|--|
| 2020-KIT-6         | 6 SOLAR KNUCKLEHEADS WITH<br>UNIVERSAL BASES AND 2 CTGS.<br>GREEN LINK ADHESIVE SEALANT | 9 LBS<br>23"x15"x7"   |  |
| 2020-<br>BULK-60   | 60 SOLAR KNUCKLEHEADS WITH UNIVERSAL BASES  | 59 LBS<br>31"x21"x22" |  |
| *OTHER QI          | JANTITIES AVAILABLE UPON REQUEST  |                       |  |

#### Solar KnuckleHead Extensions

KnuckleHead Extensions are available for applications exceeding base height. Stock extensions are available in three sizes with custom height available upon request. Extensions may be custom cut to meet alternative height requirements. KnuckleHead Extensions ARE NOT adjustable by turning the head, extensions must be cut to desired heights.



#### **SOLAR KNUCKLEHEAD EXTENSIONS\*\***

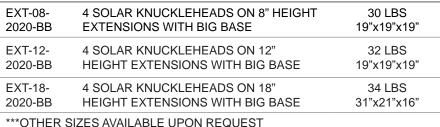
|    | PKG. WEIGHT/DIM    |
|----|--------------------|
| ΗТ | 14 LBS             |
|    | 1 E" \ 1 E" \ 1 E" |

| EXT-08-<br>2020-KIT | 4 SOLAR KNUCKLEHEADS ON 8" HEIGHT<br>EXTENSIONS WITH 1 CTG GLA/S   | 14 LBS<br>15"x15"x15" |  |
|---------------------|--|-----------------------|--|
| EXT-12-<br>2020-KIT | 4 SOLAR KNUCKLEHEADS ON 12" HEIGHT<br>EXTENSIONS WITH 1 CTG GL A/S | 16 LBS<br>15"x15"x15" |  |
| EXT-18-<br>2020-KIT | 4 SOLAR KNUCKLEHEADS ON 18" HEIGHT<br>EXTENSIONS WITH 1 CTG GL A/S | 19 LBS<br>21"x21"x21" |  |
| **OTHER SIZ         | ZES AVAILABLE UPON REQUEST   |                       |  |

#### Strut KnuckleHead Extensions with Big Base

Big Bases are recommended for free-standing applications over 12" in height.





| ACCESSORIES         |   | PKG. WEIGHT/DIM  |  |
|---------------------|---|--|--|
| A-2001-<br>PAD      | SAFETY YELLOW SLIP SHEET                    | 12 PK. (4 LBS.<br>13"x10"x10")<br>100 PK. (30 LBS.<br>15"x15"x15") |  |
| A-2020-<br>WEDGE    | SAFETY YELLOW 5-DEGREE ANGLE PAD            | .2 LBS   |  |
| 3004-GL-<br>GR-12PK | 12 CTGS. OF GREEN LINK ADHESIVE<br>/SEALANT | 13 LBS<br>13"x7"x8"  |  |
| 3004-GL-<br>GR-24PK | 24 CTGS. OF GREEN LINK ADHESIVE<br>/SEALANT | 26 LBS<br>13"x13"x9"   |  |



Paver KnuckleHead Shown with Universal Base. Safety yellow Paver Pad and KnucklePad slip sheet are also

Paver KnuckleHead and 8" Paver

KnuckleHead Extension Shown with

Universal Bases. Safety Yellow Paver Pad and KnucklePad slip sheet are also

shown and available for sale separately.

shown and available for sale separately.



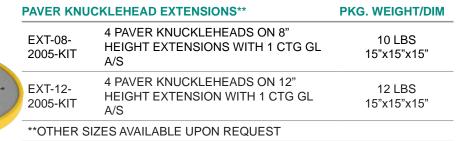
#### Paver KnuckleHead

The Paver KnuckleHead is designed to support pavers and walkways. Each Paver KnuckleHead is able to support up to 600 pounds of weight and are height adjustable from 3.75" to 4.85" from base to support point.

| PAVER KNUCKLEHEAD* |  | WEIGHT/DIM            |  |
|--------------------|--|-----------------------|--|
| 2005-KIT-6         | 6 PAVER KNUCKLEHEADS WITH<br>UNIVERSAL BASE AND 2 CTGS.<br>GREEN LINK ADHESIVE/SEALANT | 9 LBS<br>23"x15"x7"   |  |
| 2005-<br>BULK-50   | 50 PAVER KNUCKLEHEADS WITH UNIVERSAL BASE  | 64 LBS<br>31"x21"x16" |  |
| *OTHER QU          | ANTITIES AVAILABLE UPON REQUEST  |                       |  |

#### Paver KnuckleHead Extensions

KnuckleHead Extensions are available for applications exceeding standard height. Stock extensions of 8" and 12" are available, with custom height available upon request. KnuckleHead Extensions ARE NOT adjustable by turning the head, the extension must to cut to desired heights.



#### Paver KnuckleHead Extensions with Big Base

PAVER KNUCKLEHEAD EXTENSIONS WITH BIG BASE\*\*

Big Bases are recommended for free-standing applications over 12" in height.



| EXT-08-20<br>BB     | 05- 1 PAVER KNUCKLEHEAD ON 8" HEIGHT EXTENSION WITH BIG BASE | 6 LBS<br>15"x15"x15"   |
|---------------------|--|--|
| EXT-12-20           | 05- 1 PAVER KNUCKLEHEAD ON 12" HEIGHT                        | 8 LBS<br>15"x15"x15"   |
|                     |  | 15 X15 X15   |
| OTHER 5             | IZES AVAILABLE UPON REQUEST                                  |  |
| ACCESSORI           | ES   | PKG. WEIGHT/DIM  |
| A-2001-<br>PAD      | SAFETY YELLOW SLIP SHEET                                     | 12 PK. (4 LBS.<br>13"x10"x10")<br>100 PK. (30 LBS.<br>15"x15"x15") |
| A-2005-<br>PAD      | SAFETY YELLOW PAVER TOP PAD                                  | .2 LBS   |
| 3004-GL-<br>GR-12PK | 12 CTGS. OF GREEN LINK ADHESIVE<br>/SEALANT                  | 13 LBS<br>13"x7"x8"  |

24 CTGS. OF GREEN LINK ADHESIVE

**26 LBS** 

13"X13"X9"

PKG. WEIGHT/DIM

/SEALANT

3004-GL-

GR-24PK



#### Pedestal KnuckleHead

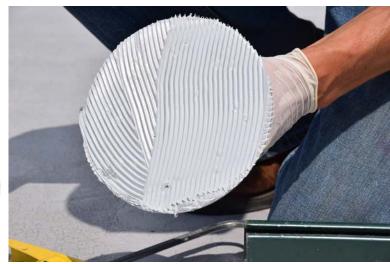
The Pedestal KnuckleHead is designed to support mechanical equipment. A tapped center hole allows for easy attachment of the HVAC unit. The Pedestal Support is height adjustable from 3.75" to 4.85"

Available in 1/2" or 3/8" thread sizes.

| PEDESTAL KNUCKLEHEAD |   | PKG. WEIGHT/DIM        |
|----------------------|---|------------------------|
| 6001AV/PAD           | 4 PEDESTAL SUPPORT KNUCKLEHEADS WITH HARDWARE,<br>ANTI-VIBRATION PADS AND KNUCKLEPADS                 | 7.5 LBS<br>10"x10"x13" |
| 6001-AVGLAS          | 4 PEDESTAL SUPPORT KNUCKLEHEADS WITH HARDWARE,<br>ANTI-VIBRATION PADS AND GREEN LINK ADHESIVE/SEALANT | 7 LBS<br>10"x10"x13"   |
| 6001-KP              | 4 PEDESTAL SUPPORT KNUCKLEHEADS WITH HARDWARE AND KNUCKLEPADS   | 6 LBS<br>10"x10"x13"   |
| 6001-GLAS            | 4 PEDESTAL SUPPORT KNUCKLEHEADS WITH HARDWARE AND GREEN LINK ADHESIVE/SEALANT                         | 5.5 LBS<br>10"x10"x13" |







Green Link Adhesive/Sealant application. In this instance the KnuckleHead will be bonded with adhesive to a fully adhered membrane.

#### Green Link Adhesive/Sealant

Green Link Adhesive/Sealant is a polyether-based, moisture-cure formula that has been proven in the construction industry over many years. The adhesive is high performing and bonds to a wide range of roofing membranes including PVC, EPDM, Mod Bit and TPO\*. It provides up to 275 psi bond strength between the Universal Base and single-ply or built up membranes.

Green Link Adhesive/Sealant is 100% solids and cures when it come into contact with moisture; there is no shrinkage and it can be applied directly in ponding water.

Green Link Adhesive/Sealant is entirely safe with no risk of fire, explosion, or toxic exposure to workers or building inhabitants. It meets the requirements of California Regs: CARB, BAAQMD and SCAQMD. It does not contain cancer-causing chemicals listed in California Proposition 65 and the VOC content is less than 15 per grams per liter.

\*Primer must be used when bonding to TPO membranes

#### **Quantity Guide**

1 cartridge of Green Link Adhesive/Sealant is recommended for each 6 KnuckleHeads on Universal Bases. 1 cartridge of Green Link Adhesive/Sealant is recommended for each 4 KnuckleHeads on Big Bases.

| ADHESIVE/SEALAN | IT                                      | PKG. WEIGHT/DIM      |
|-----------------|---|----------------------|
| 3004-GLGR-EA    | 1 CTG. GREEN LINK<br>ADHESIVE/SEALANT   | 1 LB                 |
| 3004-GLGR-12PK  | 12 CTGS. GREEN LINK<br>ADHESIVE/SEALANT | 13 LBS<br>13"x7"x8"  |
| 3004-GLGR-24PK  | 24 CTGS. GREEN LINK<br>ADHESIVE/SEALANT | 26 LBS<br>13"X13"X9" |



Green Link Adhesive/Sealant SDS



METALHEAD PART 2015



#### **MetalHead**

The MetalHead is a strong and durable support system for pipes, cable management, duct and HVAC/R equipment. The aluminium triangular design provides a sturdy, 50 sq.-in. base, with a built in 1-5/8" x 1-5/8" strut channel top, compatible with all standard strut hardware and accessories. The MetalHead features 100-mil aluminium walls, capable of supporting 10,000 lbs. Its hard anodized and clear finish resists oxidation, salt spray and mild acids found in ponding water. The (optional) black PEF pad protects vulnerable surfaces from abrasion and is compatible with PVC, TPO, EPDM and asphalt-based roof membranes. The MetalHead will last for years and can be reused or recycled. Patent Pending. Made in the USA. Twenty-year limited warranty.

| METALHEADS                |  | PKG. WEIGHT/DIM       |
|---------------------------|--|-----------------------|
| 2015-9.5" w/PE Pad 8 ct.  | 8 METALHEADS <b>WITH</b> ADHERED<br>BLACK PEF SLIP SHEET | 17 LBS<br>16"x12"x11" |
| 2015-9.5"No Pad Box 8 ct. | 8 METALHEADS <b>WITHOUT</b> SLIP SHEET                   | 14 LBS<br>16"x12"x11" |
| METALHEAD DIMENSIONS &    | WEIGHT EACH: 5"(H) x 5"(W) x 9.5"(L) 2 LBS.              |                       |

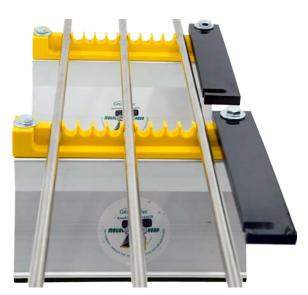


MetalHeads with integrated slipsheets support a lines on a rooftop. The photo on the left shows MetalHeads and Snap-N-Strut clamps. The right-hand photo shows MetalHeads using pipe clamps provided by others.





Pipe Guides Shown are both models of pipe guide with MetalHeads. Pipe Guides can support (7) 1" pipes or (11) .5" pipes. The containment lid swings open for an easy install. Bolts, channel nuts, and washers are included with the part.



#### METALHEAD/STRUT ACCESSORIES

| PKG | \                         | $\cap$ |                         |
|-----|---------------------------|--------|-------------------------|
| PNG | $\vee \vee \vdash \vdash$ | (3H)   | / 1   1   1   1   1   1 |

| 2016-MH-1/2-8      | 8 METALHEADS (PAD) WITH 9.5" PIPE GUIDES<br>FOR UP TO (11) 3/8-1/2" PIPES                     | 31 LBS<br>16"x12"x11" |
|--------------------|---|-----------------------|
| 2016-MH-1-8        | 8 METALHEADS (PAD) WITH 9.5" PIPE GUIDES<br>FOR UP TO (7) 1" PIPES                            | 31 LBS<br>16"x12"x11" |
| 2015-SK-1/2-8      | 8 STRUT KNUCKLEHEADS WITH 9.5" STRUT CHANNEL<br>AND PIPE GUIDES FOR UP TO (11) 3/8-1/2" PIPES | 27 LBS<br>15"x15"x15" |
| 2016-SK-1-8        | 8 STRUT KNUCKLEHEADS WITH 9.5" STRUT CHANNEL<br>AND PIPE GUIDES FOR UP TO (7) 1" PIPES        | 27 LBS<br>15"x15"x15" |
| 1129-12-16-P       | SNS BLACK NYLON STRUT CLAMP FOR 1/4" TO 5/8" PIPES  |                       |
| 1129-21-24-P       | SNS BLACK NYLON STRUT CLAMP FOR 1/2" TO 7/8" PIPES  |                       |
| 1129-30-34-P       | SNS BLACK NYLON STRUT CLAMP FOR 1" TO 1-1/4" PIPES  |                       |
| 1129-48-54-P       | SNS BLACK NYLON STRUT CLAMP FOR 1-1/2" PIPES  |                       |
| 1129-56-63-P       | SNS BLACK NYLON STRUT CLAMP FOR 2" PIPES  |                       |
| 1129-66-76-P       | SNS BLACK NYLON STRUT CLAMP FOR 2 1/2 -2 5/8" PIPES   |                       |
| 1129-79-93-P       | SNS BLACK NYLON STRUT CLAMP FOR 3" TO 3-1/2" PIPES  |                       |
| 1129-101-115-P     | SNS BLACK NYLON STRUT CLAMP FOR 3-1/2"" TO 4" PIPES   |                       |
| 1129-SNS-STRUT NUT | SNS STRUT NUT   |                       |





Pipe Guides

Plpe Guides are available with Green Link's Strut KnuckleHead and MetalHead. Above are the pipes guides adhered and bolted to a Strut KnuckleHead. Both configurations of Pipe Guide come with all attachment hardware, and a simple, swinging containment top.







#### Low Profile KnuckleHead Support Kit

The Low Profile KnuckleHead Support Kit is designed to support HVAC units requiring elevation of 6"-7". The unit features height adjustability of 1" by rotating Strut KnuckleHeads and width adjustable by moving equipment support rails. Additional height adjustment can be achieved by using low profile or double strut. This kit comes with all hardware and pieces required to support HVAC equipment. Standard sizes are listed below, additional sizes are available upon request.

# LOW PROFILE KNUCKLEHEAD SUPPORT KIT\* PKG. WEIGHT/DIM

| 6101U-3X3 | 3'x3' MECHANICAL SUPPORT KIT- UNIVERSAL BASE | 32 LBS<br>52"x14"x6" |
|-----------|--|----------------------|
| 6101B-3X3 | 3'x3' MECHANICAL SUPPORT KIT-BIG BASE        | 46 LBS<br>52"x14"x6" |
| 6101U-3x4 | 3'x4' MECHANICAL SUPPORT KIT-UNIVERSAL BASE  | 36 LBS<br>52"x14"x6" |
| 6101B-3X4 | 3x4' MECHANICAL SUPPORT KIT-BIG BASE         | 50 LBS<br>52"x14"x6" |
| 6101U-4x4 | 4'x4' MECHANICAL SUPPORT KIT-UNIVERSAL BASE  | 40 LBS<br>52"x14"x6" |
| 6101B-4X4 | 4'x4' MECHANICAL SUPPORT KIT-BIG BASE        | 54 LBS<br>52"x14"x6" |

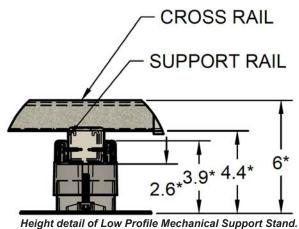
#### \*OTHER SIZES AVAILABLE UPON REQUEST

\*\* ADD "-EM" TO END OF PART NUMBER TO INCLUDE ELECTRICAL MOUNT (PICTURED BELOW)



A 4'x4' frame supports a heat pump on a modifed bitumen roof. In this instance the frame is mechanically fastened and bonded with Green Link Adheisve/Sealant, the installing contractor chose to cover bases with sealant.





\*Adjustable up to 1" by rotating Strut KnuckleHead

#### Multi Unit Low Profile Mechanical Support Kit

These Low Profile frames utilize the Strut KnuckleHead. Kits contain strut channel, hardware to affix Strut KnuckleHeads to channel, and hardware to build the frame. Several examples of Green Link's multi-unit, low profile, solutions are pictured here.

The Strut KnuckleHead allows for 1" of height adjustment for leveling the equipment installation. Base height with 1-5/8" strut rails are detailed in the drawing on the upper right of the page.

For multi-unit Frame options please contact Green Link's team at 888-672-9897 (option 1, for sales) in order to evaluate the roofplan, unit sizing, and spacing requiments to offer the best solution for the individual project.









The Elevated KnuckleHead Support Kit is a single source solution for supporting HVAC equipment. The single unit support kit includes (4) Stanchion KnuckleHeads which allow unit height to be adjusted from 7" to 24" depending upon height requirements, and all strut and hardware required for mounting units. This standard kit is available in the sizes below but can be custom made to meet specific needs or create banks of units. This kit is available with the Universal or Big Base. The Big Base is recommended for free-standing units over 12" in height.

| ELEVATED KNUCKLEHEAD SUPPORT KIT*   |  | PKG. WEIGHT/DIM   |  |
|-------------------------------------|--|-------------------|--|
| 6201U-3x3                           | 3'x3' HEIGHT ADJUSTABLE UNIT WITH UNIVERSAL BASE | 52 LBS 52"x14"x6" |  |
| 6201B-3x3                           | 3'x3' HEIGHT ADJUSTABLE UNIT WITH BIG BASE       | 66 LBS 52"x14"x6" |  |
| 6201U-3x4                           | 3'x4' HEIGHT ADJUSTABLE UNIT WITH UNIVERSAL BASE | 56 LBS 52"x14"x6" |  |
| 6201B-3x4                           | 3x4 HEIGHT ADJUSTABLE UNIT WITH BIG BASE         | 70 LBS 52"x14"x6" |  |
| 6201U-4x4                           | 4x4 HEIGHT ADJUSTABLE UNIT WITH UNIVERSAL BASE   | 60 LBS 52"x14"x6" |  |
| 6201B-4x4                           | 4x4 HEIGHT ADJUSTABLE UNIT WITH BIG BASE         | 74 LBS 52"x14"x6" |  |
| 6201U-4x5                           | 4x5 HEIGHT ADJUSTABLE UNIT WITH UNIVERSAL BASE   | 64 LBS 60"x14"x6" |  |
| 6201B-4x5                           | 4x5 HEIGHT ADJUSTABLE UNIT WITH BIG BASE         | 78 LBS 60"x14"x6" |  |
| *OTHER SIZES AVAILABLE UPON REQUEST |  |                   |  |

<sup>\*\*</sup>ADD "-EM" TO END OF PART NUMBER TO INCLUDE ELECTRICAL MOUNT (PICTURED BELOW)





6204U-4x8-D

heat pumps





#### Multi-Unit Elevated Mechanical Supports

A Multi-Unit Support using the Stanchion KnuckleHead offers the same adjustability and strength of the single unit. The multi-unit frame can be a great solution for saving space on rooftops. The larger frame footprint may also give greater wind stability.

Several examples of Green Link's multi-unit solutions are pictured here.

For multi-unit Frame options please contact Green Link's team at 888-672-9897 (option 1, for sales) in order to evaluate the roofplan, unit sizing, and spacing requiments to offer the best solution for the individual project.







5101U-3FTBS-490

(4) Strut KnuckleHeads and (4) Universal Bases, with (2)

3' spanning struts, (2) 8 hole

angle changing bracets and

(2) 90° brackets

and attachment hardware for

bracketry.

5101U-C24x24 Example of a custom frame 24" high and 24" wide

hardware for bracketry.

with (4) Strut KnuckleHeads and (4) Universal Bases, (2) 3' spanning struts, (2) 24" uprights and (1) 24" crossrail, (2) 8 hole angle changing brackets, (2) 90° brackets, and attachment

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# 5100 Series Pipe and Duct Stands

These adjustable frames provide an incredibly stable base for ductwork, large piping, and runs of pipes. This frames utilizes the Strut KnuckleHead, which has one inch of inherent adjustablility to easily accomodate for leveling on most roof slopes. Kits are available standard with (4) Strut KnuckleHeads, (2) spanning rails, and (2) 8 hole angle changing brackets for building up. As well as (2) 90° brackets for placing supporting and containing rails.

Crossrails to be provided on site.

Custom kits with all strut rails and top containment rails are available on request.

#### 5100 SERIES PIPE AND DUCT STANDS\*\*

#### WEIGHT EA.

(4) STRUT KNUCKLEHEADS ON UNIVER-SAL BASES, WITH (2) 3' SPANNING RAILS, (2) 8 HOLE ANGLE CHANGING BRACKETS, 5101U-3FTBS-490 20.4 LBS (2) 90° BRACKETS AND ALL HARDWARE FOR BRACKETRY. STRUT FOR UPRIGHTS AND CROSSRAIL PROVIDED SEPARATLY. (4) STRUT KNUCKLEHEADS ON UNIVER-SAL BASES, WITH (2) 3' SPANNING RAILS, (2) 8 HOLE ANGLE CHANGING BRACKETS, (4) 90° BRACKETS AND ALL 5102-3FTBS-490 23.3 LBS HARDWARE FOR BRACKETRY. STRUT FOR UPRIGHTS AND CROSSRAILS PROVIDED SEPARATLY.

\*OTHER SIZES AVAILABLE UPON REQUEST











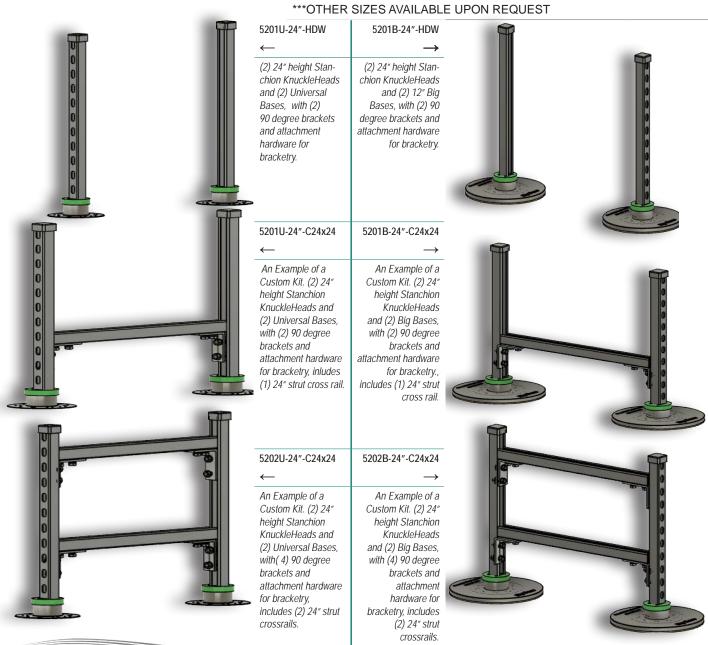
#### 5200 Series Pipe and Duct Stands

These Stanchion KnuckleHead frames are an excellent way to support ductwork or runs of multiple pipes at a standard height of up to 24". Kits are available standard with 24" stanchions and brackets, with crossrails to be provided on site. Custom kits with all strut rails, top containment rails and/or modified height Stanchion KnuckleHeads are available on request.

#### 5200 SERIES PIPE AND DUCT STANDS\*\*\*

#### WEIGHT EA.

| 5201U-24"-<br>HDW | (2) 24" STANCHION KNUCKLEHEADS ON UNIVERSAL BASES WITH (2) 90° BRACKETS AND ATTACHMENT HARDWARE.  CROSSRAILS PROVIDED SEPERATELY         | 5.8 LBS  |
|-------------------|--|----------|
| 5201B-24"-<br>HDW | (2) 24" STANCHION KNUCKLEHEADS ON<br>UNIVERSAL BASES WITH (2) 90° BRACKETS<br>AND ATTACHMENT HARDWARE.<br>CROSSRAILS PROVIDED SEPERATELY | 9.25 LBS |



#### A-2001-PAD



#### **KnucklePads**

KnucklePads are safety yellow urethane slip sheets which are excellent in loose laid applications. KnucklePads are optional but offer a professional look with the benefits of being both a required slip sheet and a vibration dampener.

#### A-2005-PAD



#### **Paver Pad**

The Paver Pad is an pad that is designed to be used with the Paver KnuckleHead.

#### A-2020-WEDGE



### Solar Wedge

The Solar Wedge allows for a 5-degree adjustment in either direction when used in conjunction with the Solar Knuckle-Head. The Solar Wedge consists of safety yellow urethane.

## ACCESSORIES WEIGHT EA.

| A-2001-PAD       | SAFETY YELLOW SLIP SHEET   | .3 LB   |
|------------------|--|---------|
| A-2005-PAD       | SAFETY YELLOW PAVER PAD  | .2 LB   |
| A-2020-<br>WEDGE | ± 5 DEGREE ANGLE CHANGER FOR SOLAR<br>KNUCKLEHEAD  | .2 LB   |
| 6000-AV          | (4) 3"X3" EVA FOAM RUBBER PADS WITH BOLTS,<br>WASHERS, AND CHANNEL NUTS FOR ATTACHING<br>HVAC UNITS TO FRAME | 1.6 LBS |



Attachment Kit

Contains (4) 3"x3" EVA Foam and Rubber pads, (4) 3/8-16" bolts, (4) washers, and (4) 3/8-16" channel nuts.





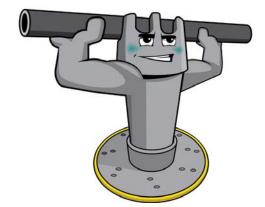


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KnuckleHead Warranty Card



**MetalHead Warranty Card** 



Request a Quote

Technical Guide



KnuckleHead Install Guide



6100 Series Install Guide



6200 Series Install Guide

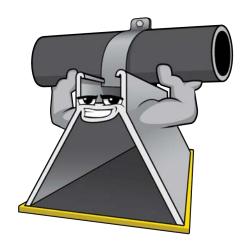


KnuckleHead Specification Data



Green Link BIM Objects
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# Made in the U.S.A.





<u>Product Videos</u>



**Shop Drawings** 

https://greenlinkengineering.com/

CONTRACTOR HOTLINE: 1-888-672-9897