heliodyne
SOLAR HOT WATER

# INSTALLATION GUIDE

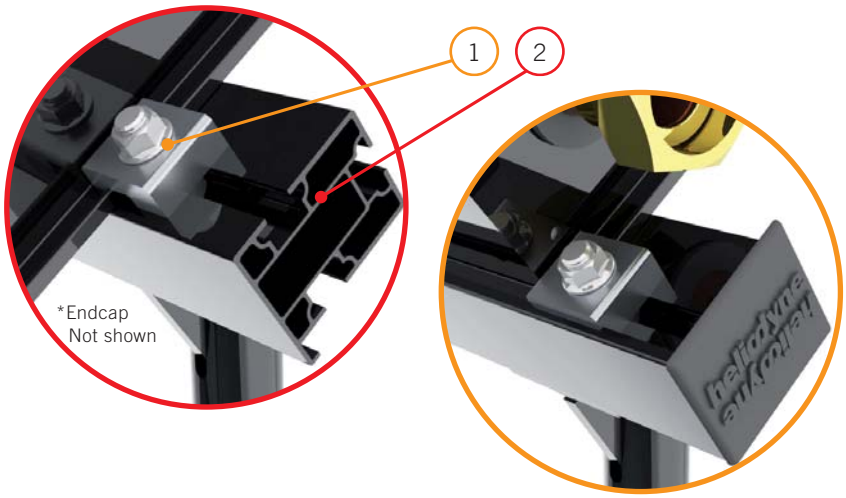
## RACK MOUNTING

EXCELLENCE BY DESIGN

# 1. MOUNTING HARDWARE

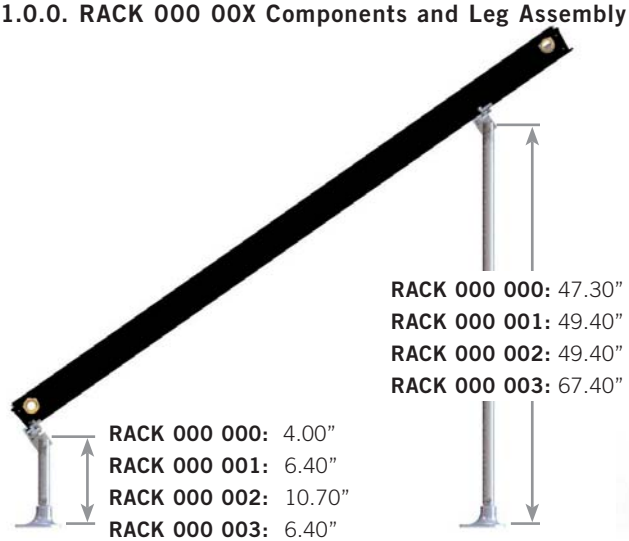
## 1.0. Rack Mounting Overview

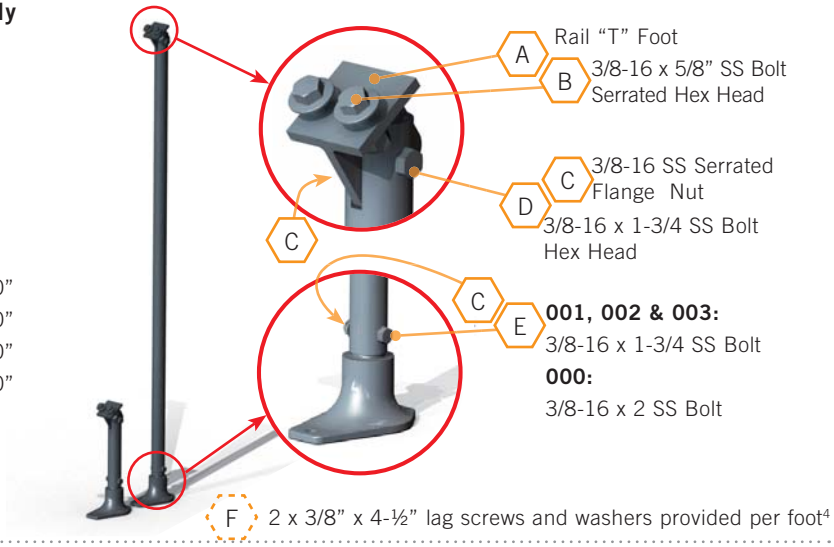
*002B Shown




*All fasteners are black oxide coated; they are shown in silver here for clarity

### 1.0.0. RACK 000 00X Components and Leg Assembly



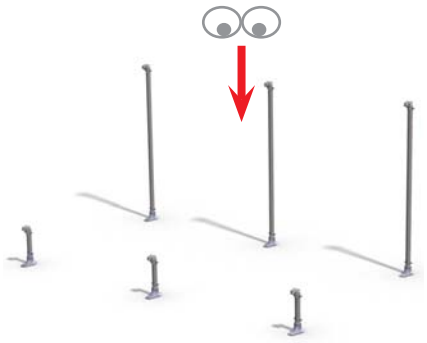

### 1.0.1. RACK Replacement Parts

| ITEM | CODE | PART NUMBER | DESCRIPTION | QUANTITY |
|---|---|---|---|---|
| 1 | CLIP 000 000B | 40082-B | Gobi Rail Clamp, 3/8-16 x 1" SS Serrated Flange Bolt & Nut (set of 4) | 1 / Gobi |
| 2 | RAIL 001 000B<br>RAIL 002 000B | 40092-B<br>40090-B | 2x51" Gobi Mounting Rail with end caps, 1xCLIP 000 000B set<br>2x102" Gobi Mounting Rail with end caps, 2xCLIP 000 000B set | See Note 1 |
| 3 | RACK 000 000B<br>RACK 000 001B<br>RACK 000 002B<br>RACK 000 003B | 40083-B<br>40081-B<br>40080-B<br>40093-B | Commercial Rack Mount, 4" Front Leg, 47" Rear Leg<br>Flat Roof Rack Mount, 4" Front Leg, 47" Rear Leg<br>Flat Roof Rack Mount, 8" Front Leg, 47" Rear Leg<br>Flat Roof Rack Mount, 4" Front Leg, 67" Rear Leg | # Gobi + 1[4] |
| 4 | RAIL 000 001 | 40089 | Splice Kit for Joining Rails (Includes 2 for upper and 2 for lower rail) | 1 Kit |

1. Order minimum quantity of rails that will accommodate number of collectors in array.
2. RACK 000 00X Kits require field assembly.
3. Racks are not for tilts greater than 45°
4. May not be appropriate for site penetration and or loading conditions. Consult a structural engineer for advice on proper securing hardware for your installation.

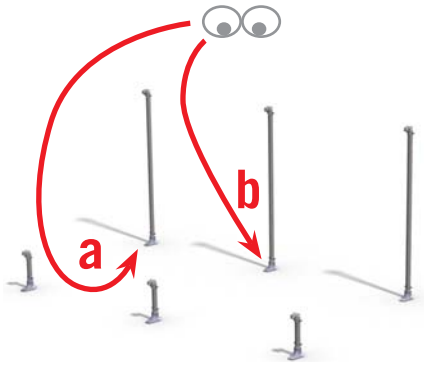
# 1.1. Rack Installation

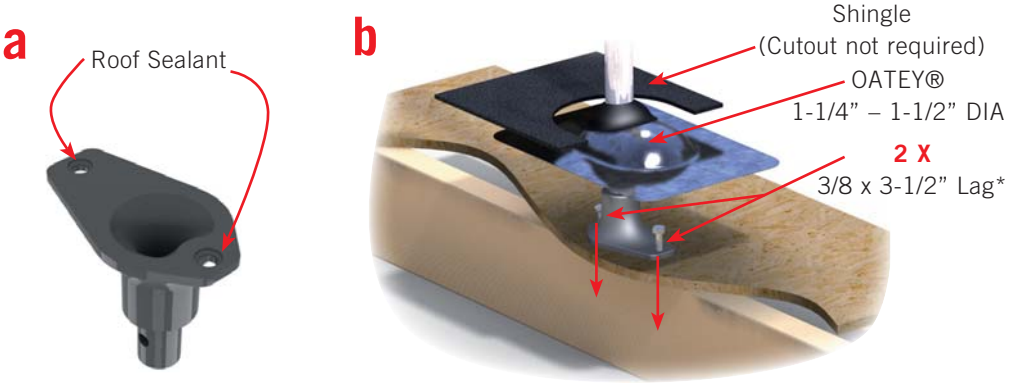
## 1.1.0. Rack Leg Spacing



1. Spacing for tilt is independent of collector size.
2. For other tilts the distance between front and rear mounting points = $\frac{\text{(Rear Leg Height - Front Leg Height)}}{\text{Tan (Gobi Tilt Angle)}}$
3. When using rail splices, space rack legs to ensure splices line up with legs (sec 1.1.4).

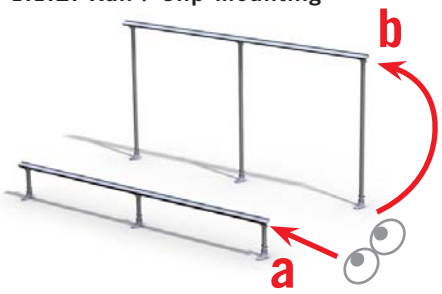
## 1.1.1. Rack Foot Mounting



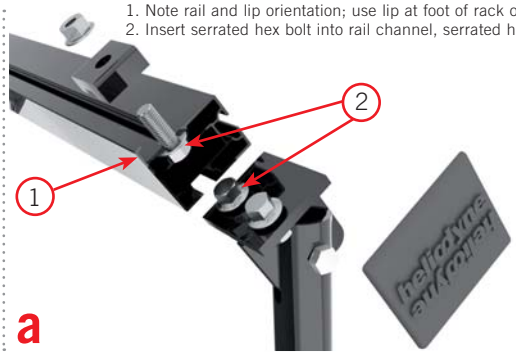




***While lag screws are provided with most kits, consult the American Wood Council NDS 2005 for proper lag screw specifications, or verify with a certified structural engineer, for each specific roof site. Heliodyne is not responsible for mounting anchor integrity.**

## 1.1.2. Rail / Clip Mounting




1. Note rail and lip orientation; use lip at foot of rack oriented upwards to hold GOBI.
2. Insert serrated hex bolt into rail channel, serrated hex nut compressing clip / rail foot

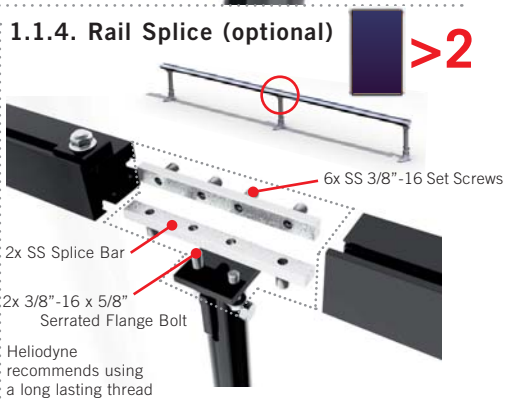


## 1.1.3. Collector Mounting

3. Brace rails for first collector
4. Place first collector and install all (4) Helio-Clips. Tighten bolts on Helio-Clips to engage locking serrated flange nut.

5. Insert O-rings, tighten Unions. Take care not to crimp O-ring. Do not use thread lock or sealants

## 1.1.4. Rail Splice (optional)




Heliodyne recommends using a long lasting thread locker, such as Loctite 277, on rail splice kits.

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