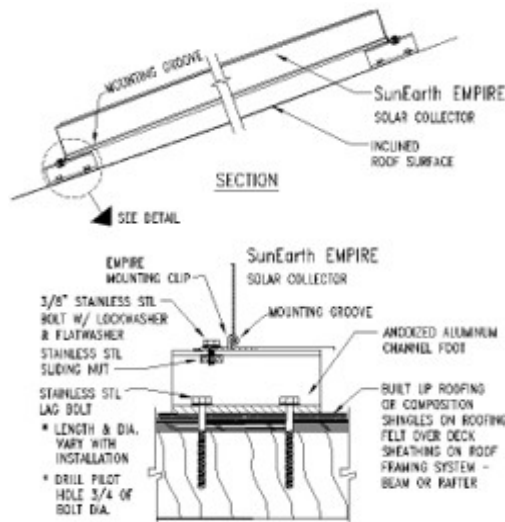


# Standoff Mounting

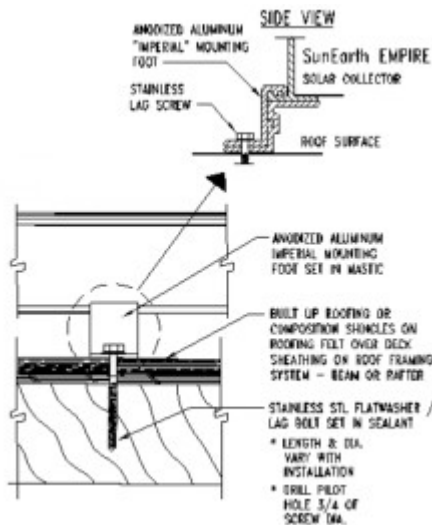
Standoff mounting is the simplest and most cost effective way to install SunEarth solar collectors on sloped roof surfaces. Standoff mounting components are designed to lift the collectors from 1 5/8" to 2 1/2" from the roof surface to facilitate drainage of rainwater under to units and prevent clogging from debris and leaf scatter. Standoff mounting of collectors is typically limited to asphalt shingled roofs and other flat roof surfaces that can provide a flush surface for attachment of mounting feet or flanges without additional flashing. For tile roofs and other uneven roof surfaces, collectors must be mounted using SolarStrut components.

## Empire & SunWise Collectors



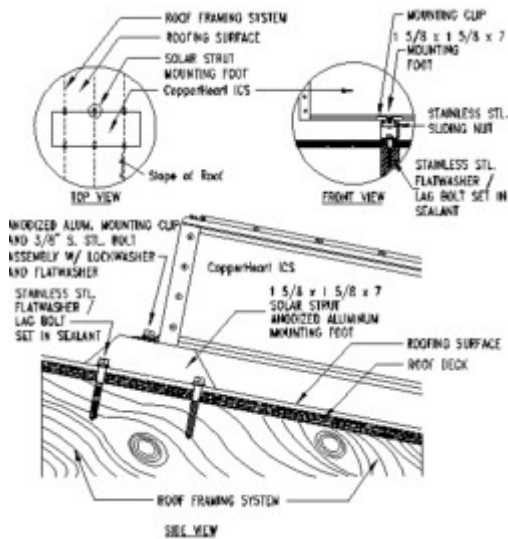
Empire and SunWise collectors are mounted on small foot sections of our SolarStrut (10070-###-4) that are placed near the four corners of the unit, directly over roof rafters. These foot sections are secured to the rafters using 3/8" stainless steel lag bolts (10110-38#). The collectors then clamped onto the foot sections using mounting clips (MTG-C-100) that fit into the extruded mounting channel on the framewall. Our SolarStrut stainless steel sliding nut assembly (SSN-3/8") is then used to clamp the mounting clip firmly to the foot sections. The feet, mounting clips, and strut nuts may be purchased together as a package (MTG-EC-FK).

## Imperial Collectors

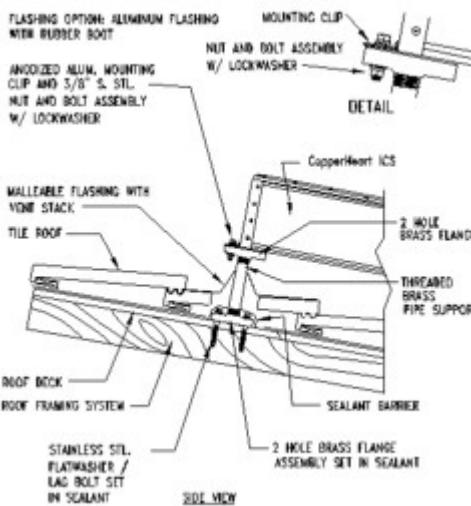


The standoff mounting clip for the Imperial series collectors is a two-part unit (MTG-I-SOC) that secures to the extruded shelf on the bottom of the I-beam framewall. The use of a two-part clip facilitates easy tool-free installation of Imperial collectors on the roof. Once the lower and upper section of this clip are slid together over the framewall, a stainless steel lag bolt (10110-38#) is placed through both sections and into the roof rafter thereby holding the entire assembly firmly in place.

## Copperheart ICS (asphalt shingles)



To support the weight of the CopperHeart units, small foot sections of our SolarStrut (10070-###-7) are placed near the four corners of the unit, directly over roof rafters. These foot sections are secured to the rafters using the same 3/8" stainless steel lag bolts (10110-38#) used to mount our flat plate units. The CopperHeart unit is then clamped onto the foot sections using the CopperHeart mounting clips (MTG-C-100) that fit into the extruded mounting channel on the framewall. Our SolarStrut stainless steel sliding nut assembly (SSN-3/8") is then used to clamp the mounting clip firmly to the foot sections.



## CopperHeart ICS (tiled roof)

Since mounting feet cannot rest on tiled roofs (they'll crush the tile!), mounting standoffs must be used in combination with a flashed roof boot. SunEarth recommends the use of 1" pipe nipples and floor flanges as the standoffs. The bottom flange can be directly lag bolted into the rafter and the upper flange serves the same purpose as the mounting foot in supporting the collector framewall. The CopperHeart mounting clip (MTG-C-100) can be fastened through one of the bolt holes in the upper flange. To eliminate galvanic corrosion, SunEarth recommends the use of brass standoff components with SunEarth stainless steel mounting hardware.

## Mounting Hardware

### COLLECTOR CLIPS AND STRUT NUTS

SunEarth manufactures mounting clips with stainless steel strut nut assemblies that fasten our collectors to SolarStrut™. The penetration-free mounting clips fit into mounting grooves on the framewall of our collectors.

SSN-3/8"	316 Stainless Steel Strut Nut Assembly (Bolt, Nut, flat washer, and lock washer)	\$6.50
C-SSN	Mounting Clip (Black Anodized) with Strut Nut Assembly	\$7.00
C-SSN-024	Mounting Clip (Black Anodized) with Strut Nut Assembly - Pack of 24	\$168.00
S-SSN	Mounting Clip (Mill Finish) with Strut Nut Assembly	\$7.00
S-SSN-024	Mounting Clip (Mill Finish) with Strut Nut Assembly - Pack of 24	\$168.00
MTG-C-100-BA	Mounting Clip (Black Anodized), clips only, set of 4	\$4.70
MTG-C-100-MF	Mounting Clip (Mill Finish), clips only, set of 4	\$4.20

### FLUSH MOUNT KITS

MTG-S-FK	Mill Finish Flush Mount Kit - includes (4) S-SSN and (4) 1 5/8" x 4" Mill Finish Feet	\$38.00
MTG-EC-FK	Black Anodized Flush Mount Kit - includes (4) C-SSN and (4) 1 5/8" x 4" Black Anodized Feet	\$46.00
MTG-CP-FK	CopperHeart Flush Mount Kit - includes (6) C-SSN and (6) 1 5/8" x 4" Black Anodized Feet	\$70.00

### LANDSCAPE RACKS

MTG-LSR-42-BA	Landscape Rack, 42", Black Anodized (for 3' wide collectors)	\$120.00
MTG-LSR-52-BA	Landscape Rack, 52", Black Anodized (for 4' wide collectors)	\$140.00

### UNIVERSAL TILT KITS

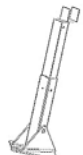
MTG-U-TK	Universal Tilt Kit without Legs	\$54.00
MTG-U-018	Universal Tilt Kit with 18" Legs	\$69.40
MTG-U-024	Universal Tilt Kit with 24" Legs	\$73.60
MTG-U-036	Universal Tilt Kit with 36" Legs	\$82.00
MTG-U-040	Universal Tilt Kit with 40" Legs	\$84.80
MTG-U-048	Universal Tilt Kit with 48" Legs	\$90.60
MTG-U-060	Universal Tilt Kit with 62" Legs	\$99.00
MTG-U-072	Universal Tilt Kit with 72" Legs	\$107.60



MTG-FF



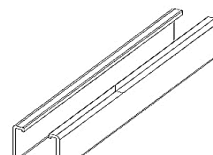
MTG-FTF-1016-LF



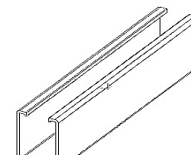
MTG-FTF-1016-BF



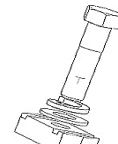
MTG-RTL-XXXX



1-5/8" STRUT



2-1/2" STRUT



STRUT NUT

## RexRack™ Thermal and PV Collector Racking

RexRack™ is the designation for our commercial grade aluminum racking hardware used for tilt mounting SunEarth collectors and can also be used with CompRail™ PV mounting hardware. The Rear Telescoping Legs make it easy to get just the right angle. RexRack™ is comprised of Front Feet (MTG-FF-xx) and Rear Telescoping Legs (MTG-RTL-xxxx-xx) that support lateral runs of SolarStrut™ (10070-158-xxx-xx) to mount SunEarth collectors with C-SSN or CompRail™ with SSN-3/8.

Note: For mounting collectors in landscape/saw tooth/horizontally, please see the Landscape racks MTG-LSR-xx-xx.

Note: (A) No. of Front Feet = No. of collector(s) + 1 (B) No. of Rear Legs = No. of collector(s) + 1 (C) Width of collector + 4 in. = Length of SolarStrut™ per collector (need two pieces-one for top and one for bottom) (D) No. of self drilling #12 screws = No. of Rear Legs x 10 (E) No. of C-SSN OR S-SSN = No. of collector(s) x 4

EG: Mounting 2 EC-32's on a flat roof at an angle of 40 degrees. Parts list: 3- MTG-FF-BA; 3 MTG-RTL-3865; 2 10070-158-104.5-BA; 30 Self Drilling Screws; 8 C-SSN

### FRONT FEET

MTG-FF-MF	Fixed Front Foot, Mill Finish	\$11.50
MTG-FF-BA	Fixed Front Foot, Black Anodized	\$12.00
17BW12X3/4	#12 Stainless Self Drilling Screw, 3/4" (qty 3 per foot)	\$0.25

### MILL FINISH REAR LEGS

MTG-RTL-2441-MF	24-41" Rear Telescoping Leg, Mill Finish	\$35.00
MTG-RTL-3865-MF	38-65" Rear Telescoping Leg, Mill Finish	\$44.00
MTG-RTL-5897-MF	58-97" Rear Telescoping Leg, Mill Finish	\$56.00
17BW12X3/4	#12 Stainless Self Drilling Screw, 3/4" (qty 6 per leg)	\$0.25

### BLACK ANODIZED REAR LEGS

MTG-RTL-2441-BA	24-41" Rear Telescoping Leg, Black Anodized	\$40.00
MTG-RTL-3865-BA	38-65" Rear Telescoping Leg, Black Anodized	\$52.00
MTG-RTL-5897-BA	58-97" Rear Telescoping Leg, Black Anodized	\$70.00
17BW12X3/4	#12 Stainless Self Drilling Screw, 3/4" (qty 6 per leg)	\$0.25

## SolarStrut™ Mounting Hardware

SunEarth SolarStrut™ is similar in concept to UniStrut™, but is extruded from 6063-T6 structural aluminum providing for a lightweight and corrosion resistant rail material.

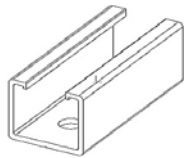
MILL FINISH 1-5/8" SolarStrut™		
10070-158-240-MF	1-5/8" Solar Strut, 240" Length, Mill Finish	\$80.00
10070-158-158-MF	1-5/8" Solar Strut, 158" Length, Mill Finish	\$54.00
10070-158-120-MF	1-5/8" Solar Strut, 120" Length, Mill Finish	\$42.00
10070-158-104.5-MF	1-5/8" Solar Strut, 104.5" Length, Mill Finish	\$37.00
10070-158-081.5-MF	1-5/8" Solar Strut, 81.5" Length, Mill Finish	\$29.00
10070-158-052-MF	1-5/8" Solar Strut, 52" Length, Mill Finish	\$19.00
10070-158-030-MF	1-5/8" Solar Strut, 30" Length, Mill Finish	\$11.50

CLEAR ANODIZED 1-5/8" SolarStrut™		
10070-158-240-CA	1-5/8" Solar Strut, 240" Length, Clear Anodized	\$87.00
10070-158-158-CA	1-5/8" Solar Strut, 158" Length, Clear Anodized	\$58.00
10070-158-120-CA	1-5/8" Solar Strut, 120" Length, Clear Anodized	\$45.00
10070-158-104.5-CA	1-5/8" Solar Strut, 104.5" Length, Clear Anodized	\$39.50
10070-158-081.5-CA	1-5/8" Solar Strut, 81.5" Length, Clear Anodized	\$31.00
10070-158-052-CA	1-5/8" Solar Strut, 52" Length, Clear Anodized	\$20.30
10070-158-030-CA	1-5/8" Solar Strut, 30" Length, Clear Anodized	\$12.30

BRONZE ANODIZED 1-5/8" SolarStrut™		
10070-158-240-BA	1-5/8" Solar Strut, 240" Length, Black Anodized	\$106.00
10070-158-158-BA	1-5/8" Solar Strut, 158" Length, Black Anodized	\$70.00
10070-158-120-BA	1-5/8" Solar Strut, 120" Length, Black Anodized	\$54.00
10070-158-104.5-BA	1-5/8" Solar Strut, 104.5" Length, Black Anodized	\$47.00
10070-158-081.5-BA	1-5/8" Solar Strut, 81.5" Length, Black Anodized	\$37.00
10070-158-052-BA	1-5/8" Solar Strut, 52" Length, Black Anodized	\$24.50
10070-158-030-BA	1-5/8" Solar Strut, 30" Length, Black Anodized	\$14.60

2-1/2" SolarStrut™		
10070-250-240-MF	2-1/2" Solar Strut, 240" Length, Mill Finish	\$115.00
10070-250-240-CA	2-1/2" Solar Strut, 240" Length, Clear Anodized	\$125.00
10070-250-240-BA	2-1/2" Solar Strut, 240" Length, Black Anodized	\$160.00

STRUT NUT & SPLICE		
SSN-3/8"	316 Stainless Steel Sliding Nut Assembly (Bolt, Nut, Washers)	\$6.50
MTG-SPLICE	4" Splice Material for Joining Solar Strut Sections	\$2.50
17BW12X3/4	#12 Stainless Self Drilling Screw, 3/4" (qty 4 per splice)	\$0.25



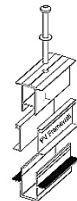
4" STRUT FOOT



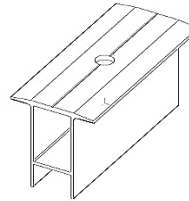
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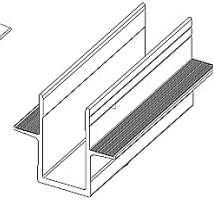
HANGAR BOLT



COMPRAIL ASSEMBLY



CR-UR-XXX-XX



CR-LR-XXX-XX

**Roof Anchors**

SolarStrut™ feet are designed for simple asphalt shingle and built-up roofs. The strut foot can be lagged directly into a rafter if properly sealed. We also provide leveling shims to provide adjustment on uneven roof surfaces.

We have developed 3/8" and 1/2" stainless steel hangar bolts for mounting SunEarth collectors. Hangar bolts have a wood lag screw on the bottom portion of the bolt and a standard UNC machine screw thread on the upper portion.

**4" SolarStrut™**

10070-158-004-MF	1-5/8" x 4" Solar Strut Mounting Foot, Mill Finish	\$5.50
10070-158-004-CA	1-5/8" x 4" Solar Strut Mounting Foot, Clear Anodized	\$5.60
10070-158-004-BA	1-5/8" x 4" Solar Strut Mounting Foot, Black Anodized	\$5.90
10070-250-004-MF	2-1/2" x 4" Solar Strut Mounting Foot, Mill Finish	\$6.50
10070-250-004-CA	2-1/2" x 4" Solar Strut Mounting Foot, Clear Anodized	\$6.60
10070-250-004-BA	2-1/2" x 4" Solar Strut Mounting Foot, Black Anodized	\$6.90

**SHIMS**

SHIM-1/8	1 3/4" x 1 3/4" x 3/16" Aluminum Shim for SolarStrut™ Mounting Installations	\$2.25
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**3/8" HANGAR BOLTS**

HBA-0386	3/8" x 6" Stainless Steel Hangar Bolt Assembly	\$8.00
HBA-0388	3/8" x 8" Stainless Steel Hangar Bolt Assembly	\$10.50

**1/2" HANGAR BOLTS**

HBA-0126	1/2" x 6" Stainless Steel Hangar Bolt Assembly	\$12.00
HBA-0128	1/2" x 8" Stainless Steel Hangar Bolt Assembly	\$15.00
HBA-1210	1/2" x 10" Stainless Steel Hangar Bolt Assembly	\$20.00
HBA-1212	1/2" x 12" Stainless Steel Hangar Bolt Assembly	\$24.00

**SUNSIPHON RACKS - For flat roof installations**

MTG-SS-RACK-48	Tilt Rack for 48 gallon Tank System	\$1,250
MTG-SS-RACK-80	Tilt Rack for 80 gallon Tank System	\$1,350
MTG-SS-RACK-116	Tilt Rack for 116 gallon Tank System	\$1,450
10070-158-xxx-xx	SolarStrut™ for mounting collectors and the tank. (see above)	

\*These are a non-stock item, 2 weeks to build. Constructed with 2" x 2" Black Anodized Aluminum Angle

**CompRail™ PV Mounting Rails**

CompRail™ can be used to mount most PV modules with aluminum frames (1.25" to 2.5" width). Use SunEarth RexRack™ mounting hardware to rack these up at angles.

**CompRail™**

CR-132-MF	132" Length, Mill Finish Finish, 304 SS Compression Bolts & Washers	\$180.00
CR-132-CA	132" Length, Clear Anodized Finish, 304 SS Compression Bolts & Washers	\$205.00
CR-132-BA	132" Length, Black Anodized Finish, 304 SS Compression Bolts & Washers	\$230.00
CR-264-MF	264" Length, Mill Finish, 304 SS Compression Bolts & Washers	\$350.00
CR-264-CA	264" Length, Clear Anodized Finish, 304 SS Compression Bolts & Washers	\$400.00
CR-264-BA	264" Length, Black Anodized Finish, 304 SS Compression Bolts & Washers	\$450.00