

ECO-65[™]

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**THE SPECIALTY DIRECT-TO-DECK SOLUTION
FOR MEMBRANE ROOF TYPES**
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INSTALLATION GUIDE

REVISION: 2/12/24

VERSION: V3.1

ECO-65

INSTALLATION GUIDE



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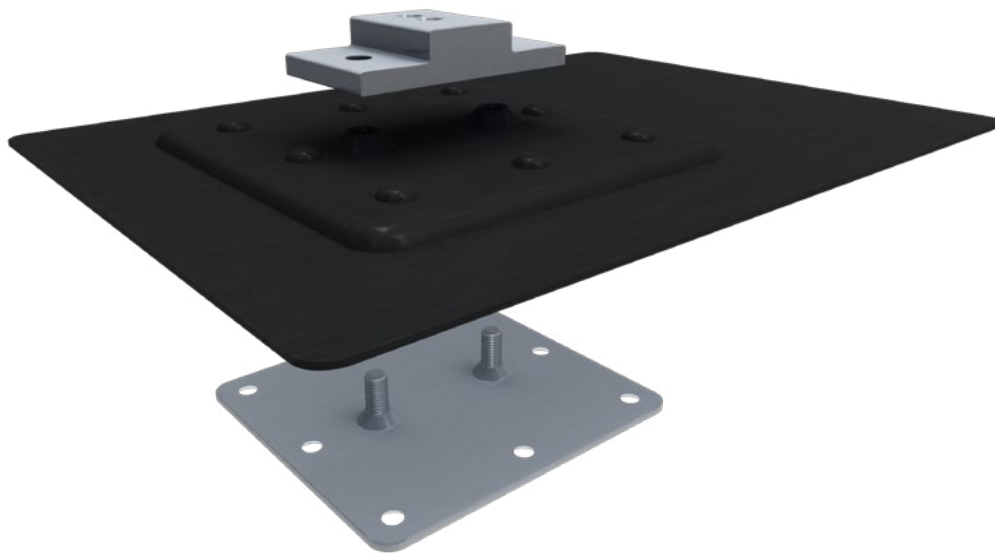
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ECO-65

ECO-65 is engineered specifically for use on new or existing (retrofit) low-slope and flat roofs. It is used by countless manufacturers of ballasted solar racking systems to augment their products for weight reduction and seismic attachment. The ECO-65 base plate is designed to be attached specifically to wood blocking or wood decking. The mount utilizes two studs for attachment, allowing the use of larger compression brackets.

FEATURES

- Engineered for low-slope roofs
- Wide footprint for load dispersal
- Specialized solution to match any proprietary hardware
- Direct to deck attachment

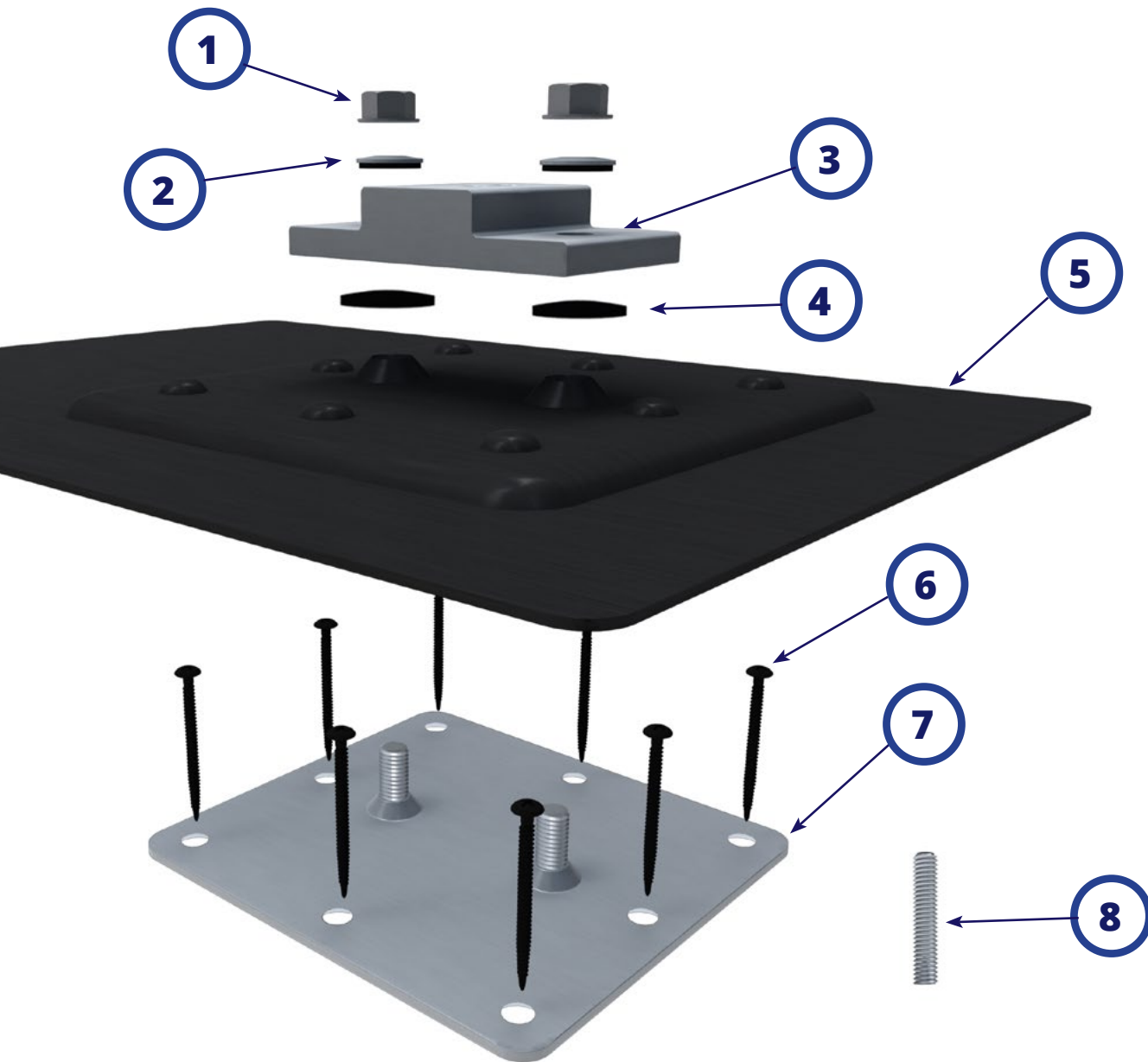
FEATURES + BENEFITS

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SYSTEM COMPONENTS



- | | |
|------------------------------|---------------------------------------|
| 1. 5/16" SERRATED FLANGE NUT | 5. ECO-65 FLASHING AL BLK 10X14" |
| 2. 5/16" EPDM BONDED WASHER | 6. #15-13 SELF DRILLING FASTENER (8X) |
| 3. F-202 BRACKET MLL 3.75" | 7. ECO-65 BASE SS 6X5.5" |
| 4. EPDM SEALING WASHER (2X) | 8. ALL-THREAD AND LOCK NUT |

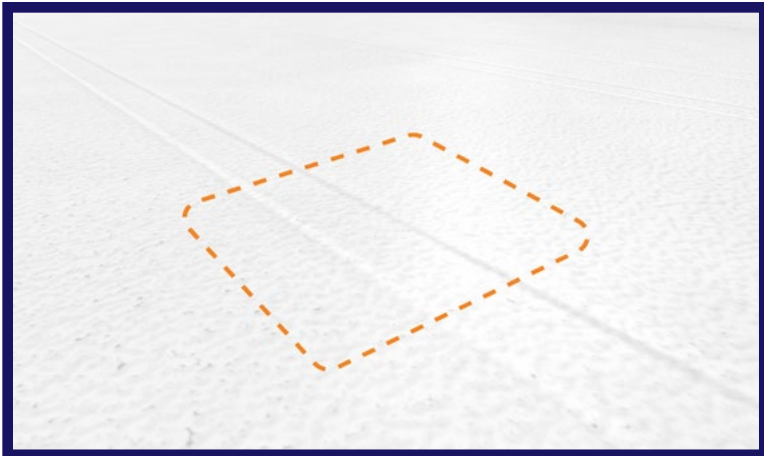
COMPONENTS

ECO-65

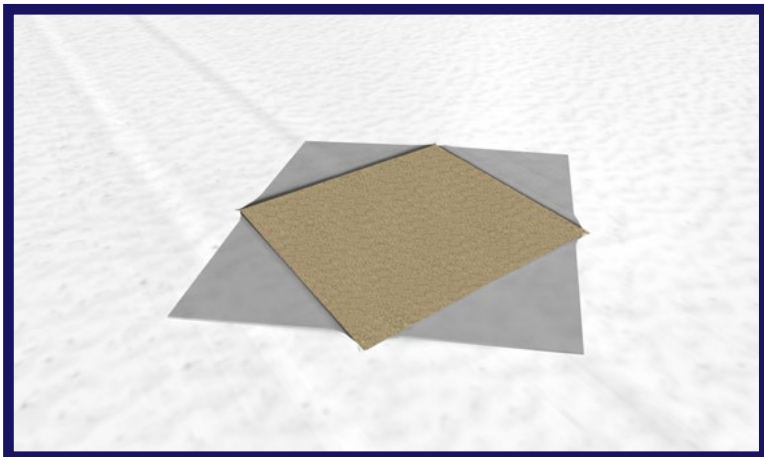
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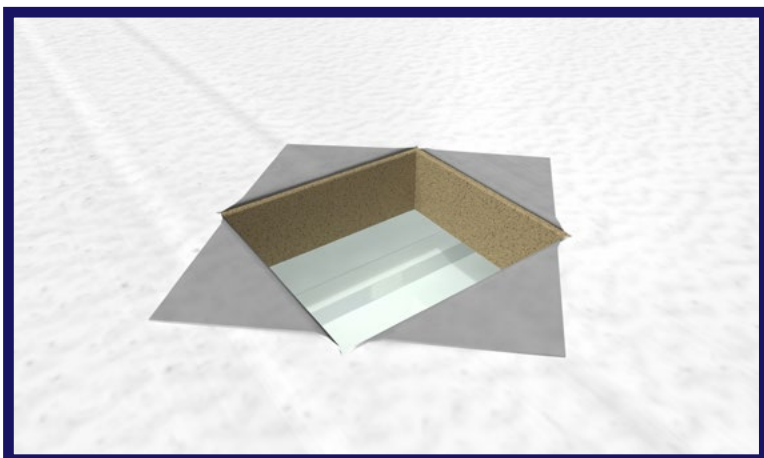
INSTALLING ECO-65



Determine location for mount and place base plate on finished roof deck material. Trace around the base plate adding a one inch perimeter to the base plate.



Use a utility knife or scissors to cut roof membrane from corner to corner diagonally across marked outline to form an X. Fold the resulting four triangles back to expose the insulation below.



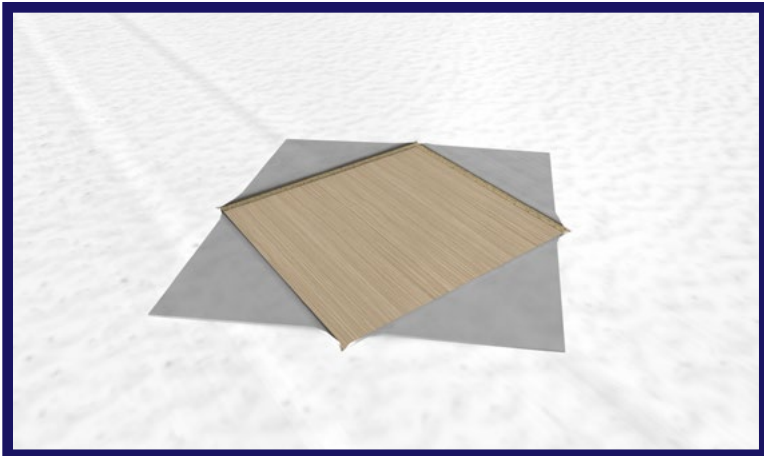
Cut out a section of the insulation equal in size to the base plate outline made in step 1 to expose the supporting substructure.

ECO-65

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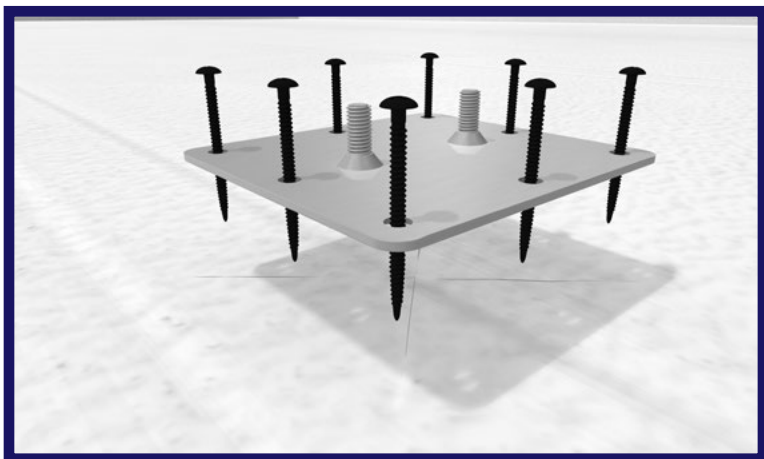


INSTALLING ECO-65



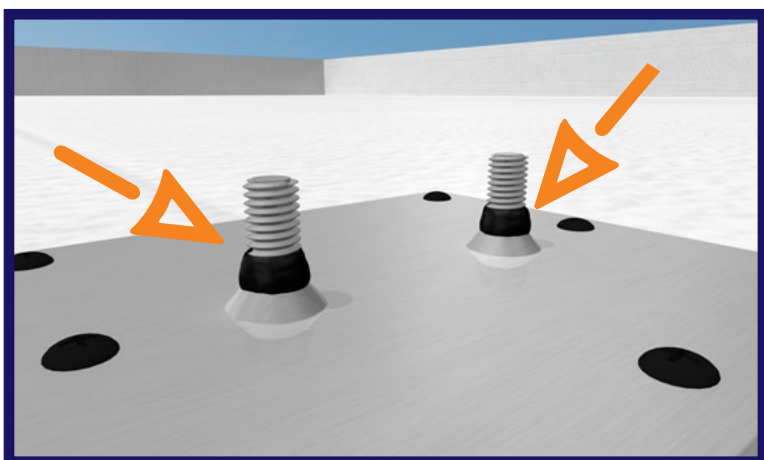
If the substructure is wood, gypsum or concrete install wood blocking to fill the void created by removing the insulation.

For structural steel substructures, it may be necessary to enlarge the hole to assure that the wood blocking sits fully supported on at least two of the high points of the corrugation



Fill any voids around wood blocking in a manner that is approved by the membrane manufacturer to prevent thermal bridging.

Lay the four triangular roof membranes flaps back down over the wood blocking. Place EF-65 Base over the membrane and secure it the wood blocking using 8 fasteners.



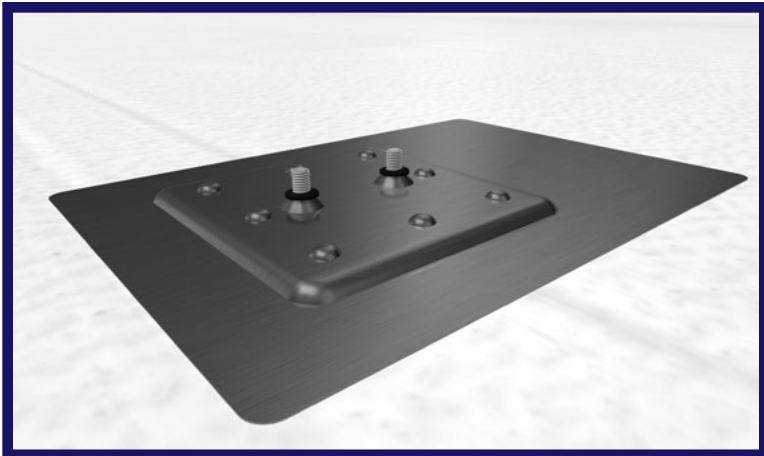
Apply a thin bead of acceptable sealant around the base of the threaded studs protruding from the base plate.

ECO-65

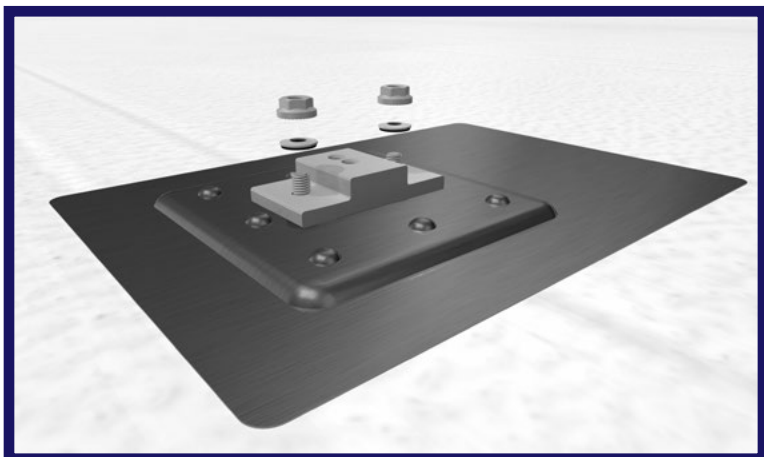
INSTALLATION GUIDE



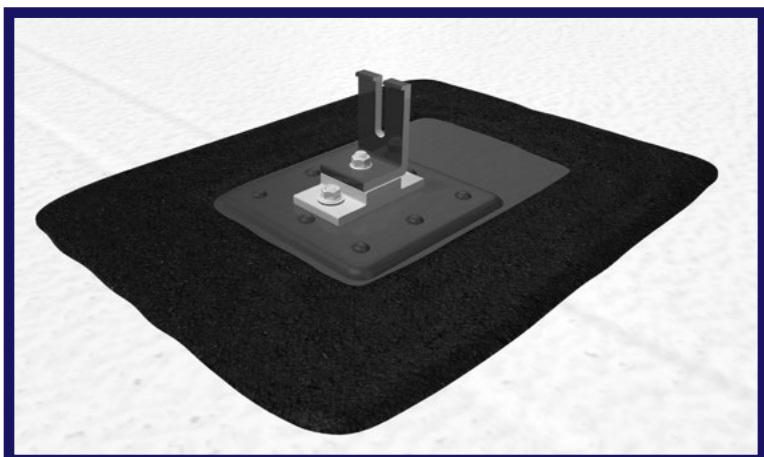
INSTALLING ECO-65



Install the Eco-65 10x14" Flashing over the the two threaded studs of the Base Plate. Install EPDM sealing washers to both threaded studs.



Place the F-202 bracket over the threaded studs. Place a bonded washer over each stud with the rubber side facing the roof and thread it all the way down the stud to compression bracket **before adding the hex nut.** Install and tighten down hex nuts to each threaded stud.



Attach the mounting bracket or post of your choice to the F-202 bracket using the included all-thread. Waterproof the Eco-65 10x14" Flashing following the techniques specific to the roof membrane.

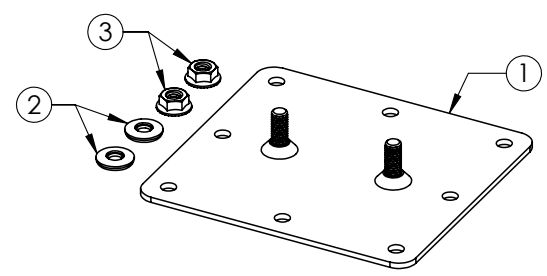
ECO-65

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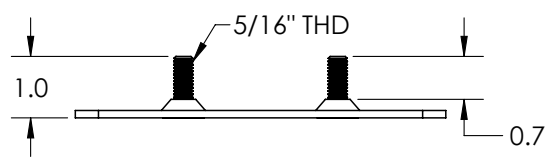
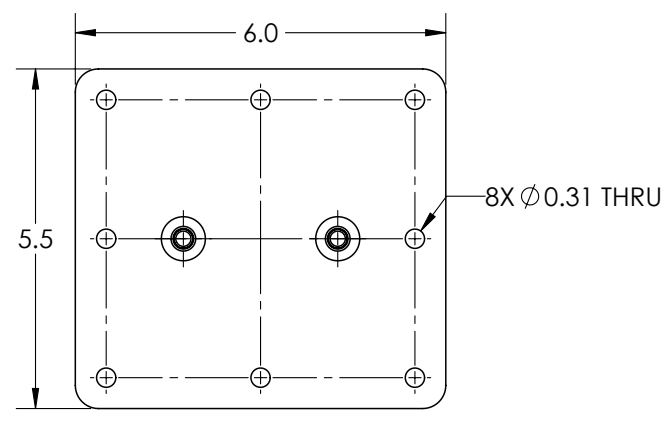
CUT SHEET: ECO-65 BASE SS 6X5.5

PART NUMBER	DESCRIPTION
3015010	ECO-65 BASE SS 6X5.5"



ITEM NO.	DESCRIPTION
1	EF-65-BASE-SS-WELDMENT ASSY
2	WASHER, SEALING, 5/16" EPDM BACKED STAINLESS STEEL
3	SS SERRATED FLANGE LOCK NUT, 5/16-18

1) EF-65-BASE-SS-WELDMENT ASSY



Material	Stainless Steel
Finish	Mill

REV.- CS1

LINE DRAWINGS

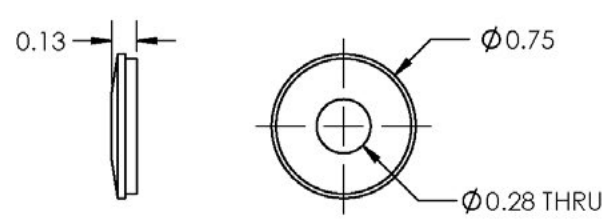
ECO-65

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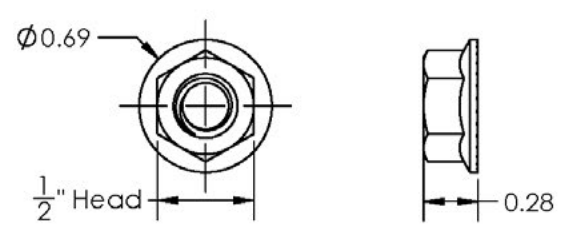
CUT SHEET: ECO-65 BASE SS 6X5.5

2) WASHER, SEALING, 5/16" EPDM BACKED STAINLESS STEEL



Material	Stainless Steel/EPDM
Finish	Mill

3) SS SERRATED FLANGE LOCK NUT, 5/16-18



Material	Stainless Steel
Finish	Mill

REV.- CS1

LINE DRAWINGS

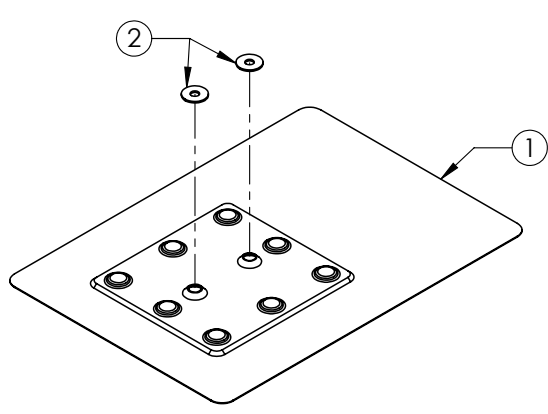
ECO-65

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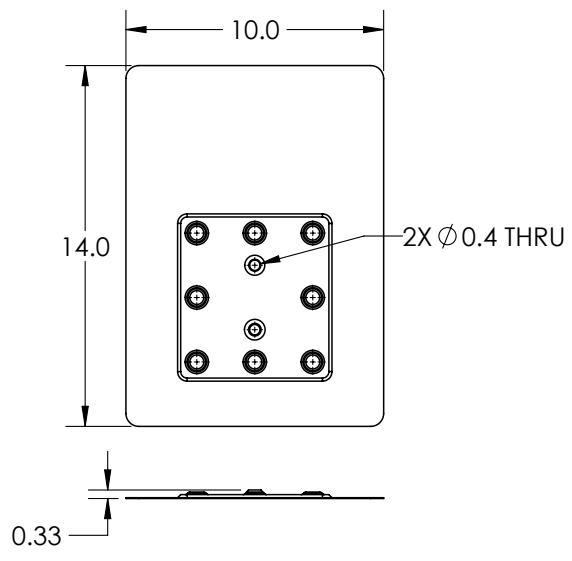
CUT SHEET: ECO-65 FLASHING AL BLK 10X14"

PART NUMBER	DESCRIPTION
3015011	ECO-65 FLASHING AL BLK 10X14"



ITEM NO.	DESCRIPTION
1	EF-65 10" X 14" MATTE BLK FLASHING
2	EPDM SEALING WASHER

1) EF-65 10" X 14" MATTE BLK FLASHING



Material	Aluminum
Finish	Black

REV.- CS1

LINE DRAWINGS

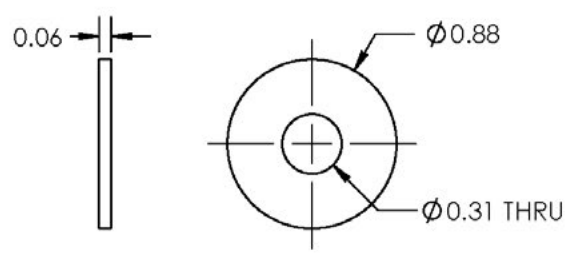
ECO-65

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CUT SHEET: ECO-65 FLASHING AL BLK 10X14"

2) EPDM SEALING WASHER



Material	EPDM
Finish	Black

REV.- CS1

LINE DRAWINGS

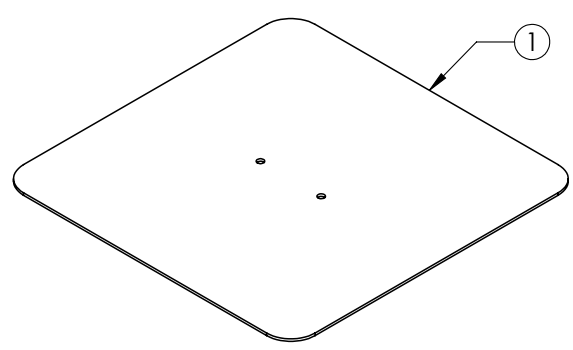
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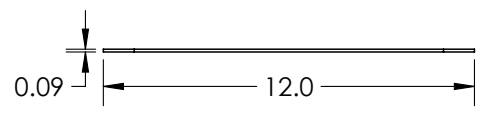
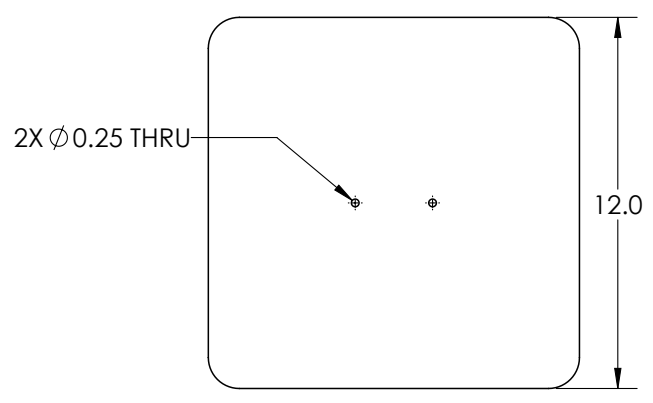
CUT SHEET: ECO-65 EPDM PATCH 12X12"

PART NUMBER	DESCRIPTION
3015012	ECO-65 EPDM PATCH 12X12"



ITEM NO.	DESCRIPTION
1	EF-65 12X12 PEEL STICK EPDM

1) EF-65 12X12 PEEL STICK EPDM



Material	Rubber
Finish	Black

REV.- CS1

LINE DRAWINGS

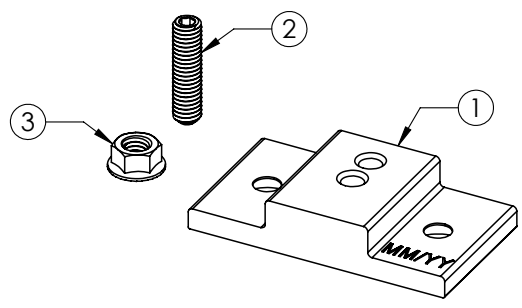
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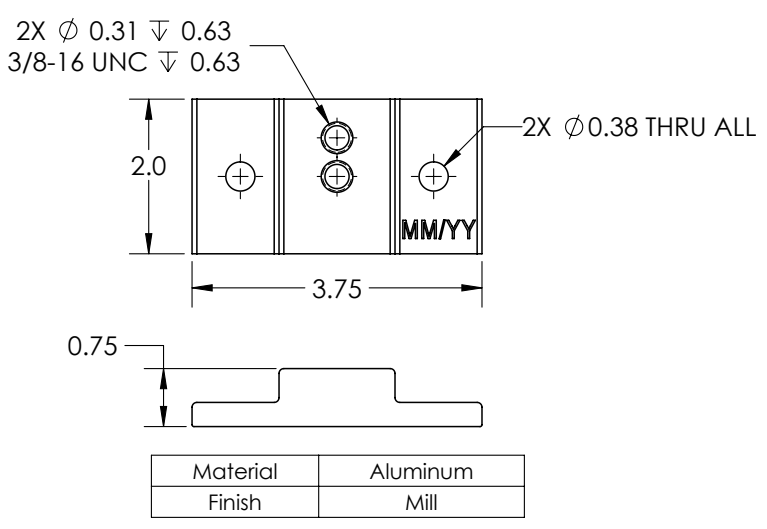
CUT SHEET: F-202 BRKT MLL 3.75"

PART NUMBER	DESCRIPTION
3011012	F-202 BRKT MLL 3.75"



ITEM NO.	DESCRIPTION
1	3-3/8 RECTANGULAR BRACKET MACHINING OPERATIONS
2	3/8-16 UNC HEX DRIVE CUP POINT SOCKET SET SCREW, STAINLESS STEEL
3	SS SERRATED FLANGE LOCK NUT, 3/8-16

1) 3-3/8 RECTANGULAR BRACKET MACHINING OPERATIONS



REV.- CS1

LINE DRAWINGS

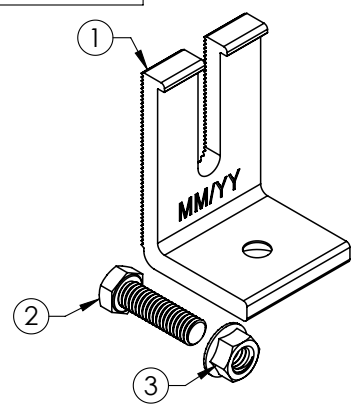
ECO-65

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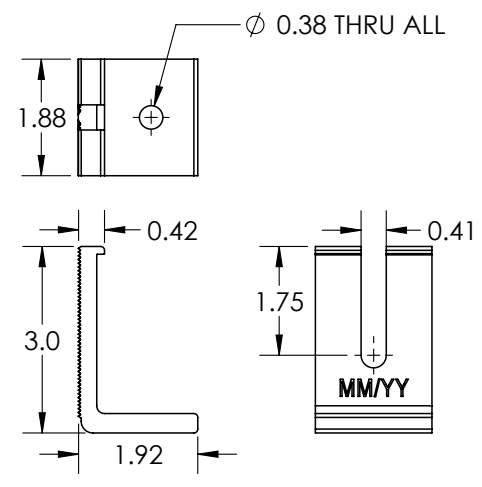
CUT SHEET: L-FOOT SCL-101 BLK 3"

PART NUMBER	DESCRIPTION
3011018	L-FOOT SCL-101 BLK 3"



ITEM NO.	DESCRIPTION
1	L FOOT W/ STANDARD DIMPLE AND OPEN SLOT, 3 IN TALL BLK
2	SS HEX HD CAP SCREW, FULL THD, 3/8-16 UNC X 1.25 LONG
3	SS SERRATED FLANGE LOCK NUT, 3/8-16

1) L FOOT W/ STANDARD DIMPLE AND OPEN SLOT, 3 IN TALL BLK



Material	Aluminum
Finish	Mill

REV.- CS1

LINE DRAWINGS

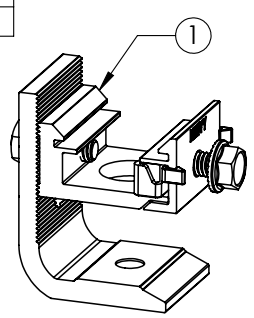
ECO-65

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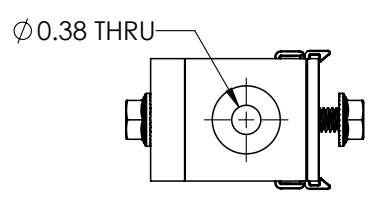
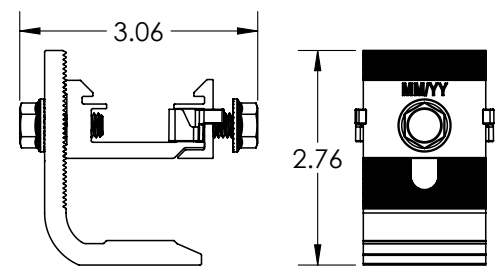
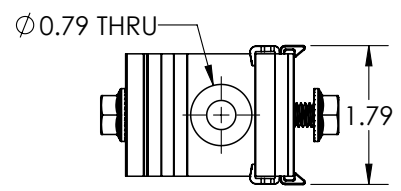
CUT SHEET: CF UNIV L-FOOT MLL 3"

PART NUMBER	DESCRIPTION
2012022	CF UNIV L-FOOT MLL 3"



ITEM NO.	DESCRIPTION
1	CLICKFIT L FOOT ASSEMBLY

1) CLICKFIT L FOOT ASSEMBLY



Material	Aluminum/Stainless Steel
Finish	Mill

REV.- CS1

LINE DRAWINGS

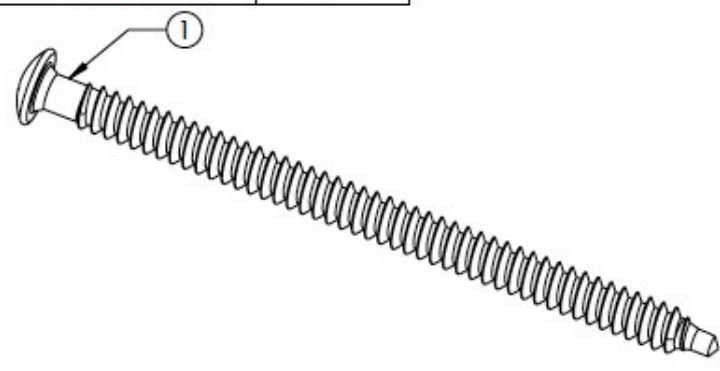
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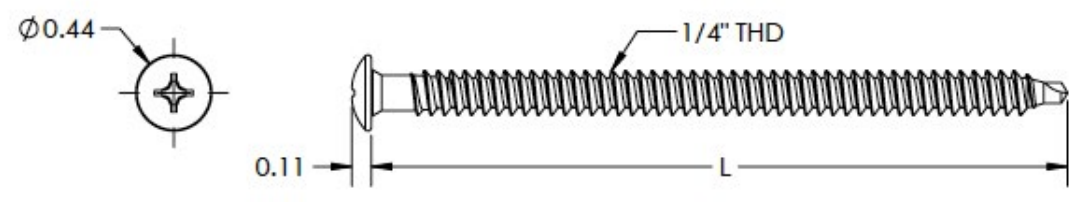
DECK SCREW SS

PART NUMBER	DESCRIPTION	LENGTH (L)
3016010	DECK SCREW SS #15X2"	2"
3016011	DECK SCREW SS #15X3"	3"
3016012	DECK SCREW SS #15X4"	4"



ITEM NO.	DESCRIPTION
1	ROOFING SCREW, DRILL POINT, BLACK

1) ROOFING SCREW, DRILL POINT, BLACK



Material	Steel
Finish	Black

REV.- CS1

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SYSTEM COMPONENTS

1. **ECO-65 BASE SS 6X5.5" - Base Plate and Hardware:**

Consists of (1) stainless steel base plate with (2) integrated stainless steel studs, (2) stainless steel serrated flange nut, (2) EPDM sealing washers, and (2) stainless steel / EPDM bonded washers. Base Plate is 11 gauge material thickness 304 stainless steel with two 5/16" 304 stainless steel screw welded into embossed countersink.

2. **ECO-65 FLASHING AL BLK 10X14":**

Black finish (Kynar painted) .032 gauge aluminum, embossed.

3. **F-202 BRKT MLL 3.75":**

Consists of (1) aluminum bracket, (1) 3-3/8"-16 stainless steel set screw, (1) 3-3/8"-16 stainless steel flanged lock nut. Bracket is made out 6000 series aluminum.

4. **Recommended Fasteners**

Self-drilling #15 roofing screws are available from Ecofasten in 2", 3" and 4" lengths.

5. **Recommended Sealant:**

If required by roof manufacturer, sealant shall be roof manufacturer approved.

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DELIVERY / STORAGE / HANDLING

Inspect material upon delivery. Notify manufacturer within 24 hours of any missing or defective items. Keep material dry, covered and off the ground until installed.

PATENTS

Visit www.efpatents.com for patent information.

DESIGN REQUIREMENTS

1. Bracket spacing to be recommended by project engineer.
2. Install a minimum of eight fasteners per base plate.
3. It is important to design new structures or assess existing structures to make sure they withstand retained loads.

EXAMINATION

1. Substrate: Inspect structure on which brackets are to be installed and verify that it will withstand any additional loading that may be incurred.
2. Notify General Contractor of any deficiencies before installing EcoFasten Solar brackets.
3. Verify that roofing material has been installed correctly prior to installing solar attachment bracket.

INSTALLATION

Comply with architectural drawings and project engineer's recommendation for location of system. Comply with Manufacturer's written installation instructions for installation and layout.