TR FLASHKIT TILE REPLACEMENT

INSTALLATION GUIDE

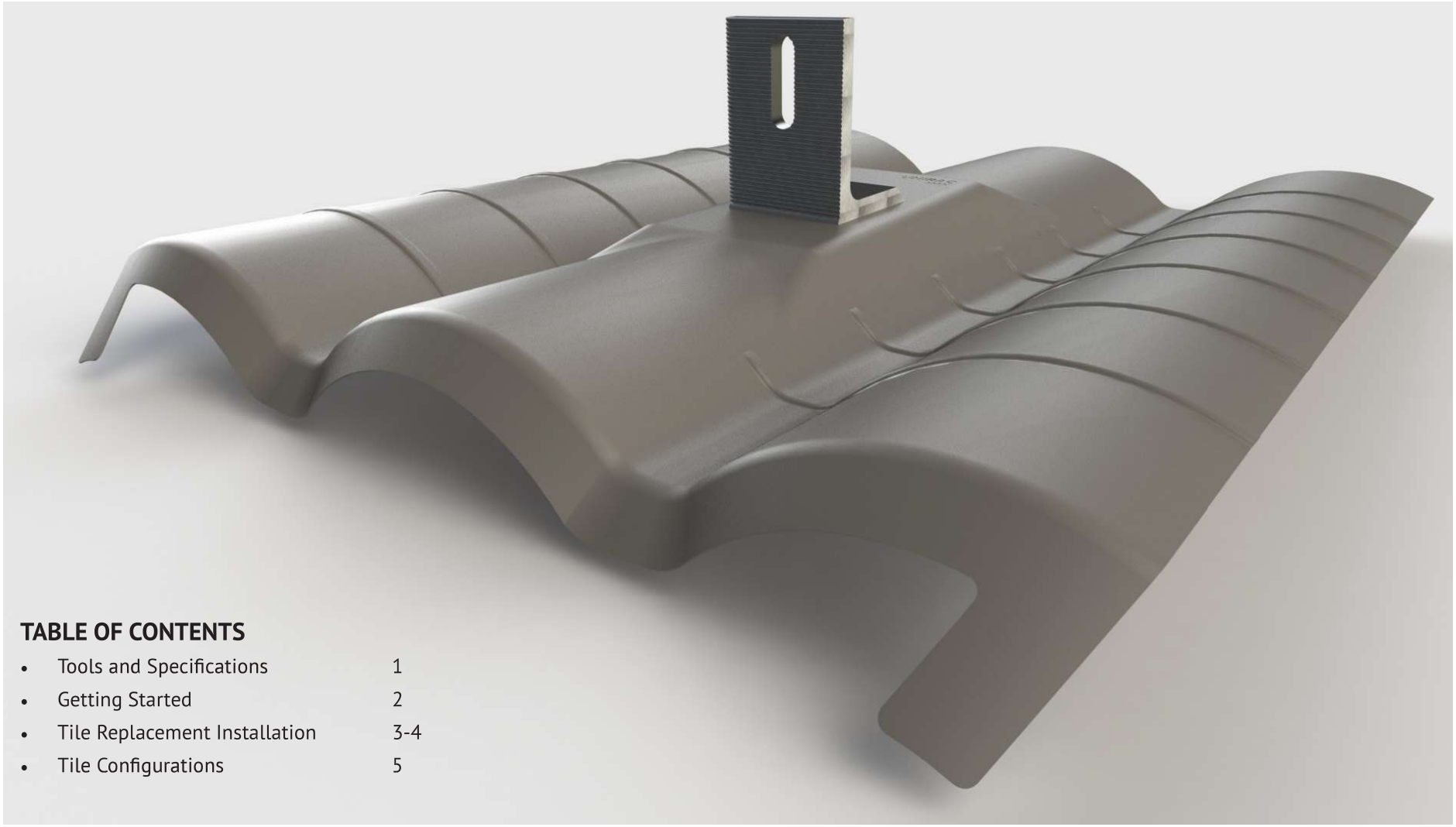
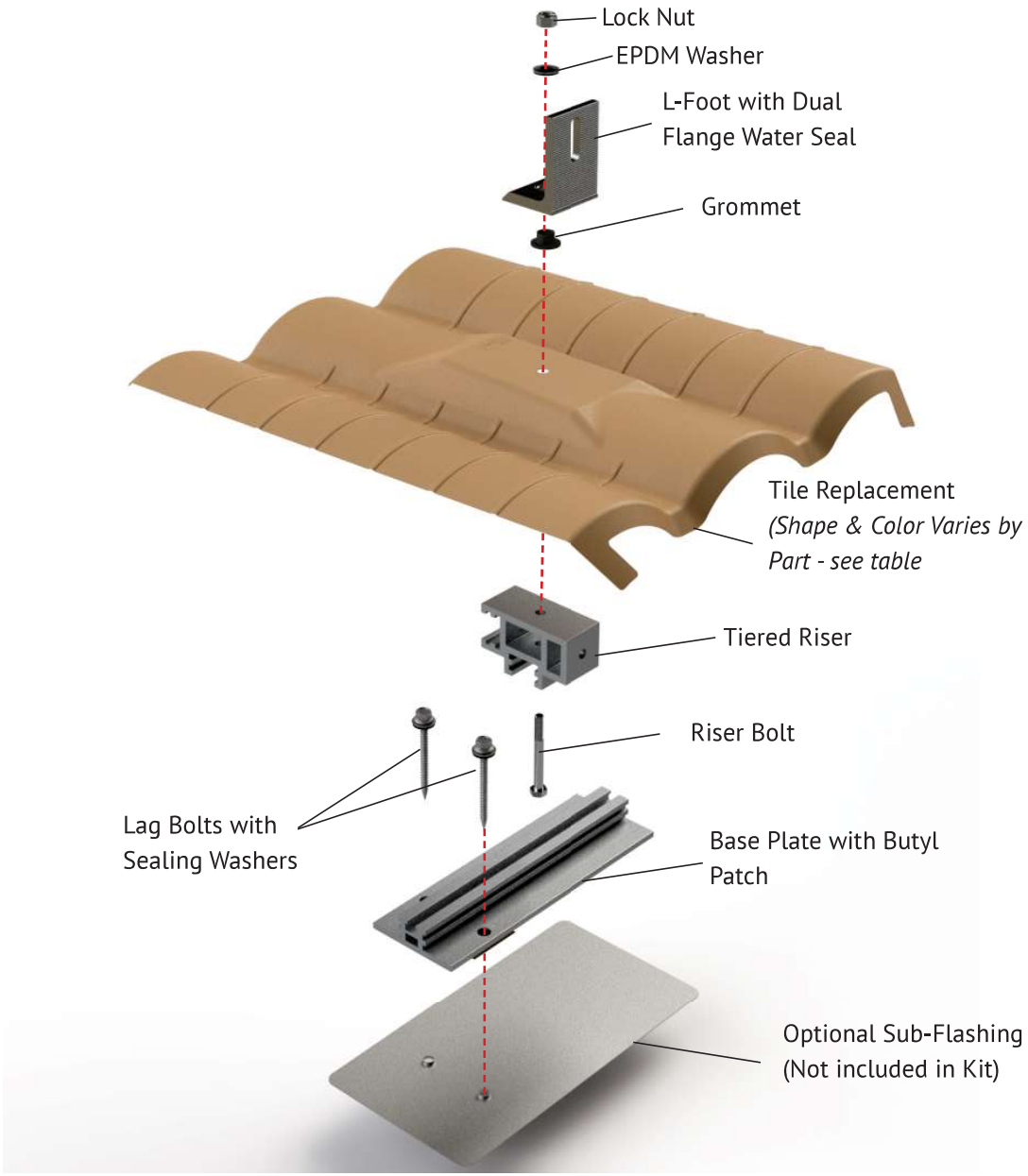


TABLE OF CONTENTS

- Tools and Specifications 1
- Getting Started 2
- Tile Replacement Installation 3-4
- Tile Configurations 5

PUB2022SEP21



TECHNICAL SPECIFICATIONS

MATERIAL TYPES

All Extruded Components:

6005A-T61 or 6061-T6 Aluminum.

Tile Flashing: 1060 Series Aluminium.

Subflashing (Optional): 5000 Series Aluminum Sheet.

Hardware: 300 Series Stainless Steel.

TOOLS REQUIRED OR RECOMMENDED

- Marker/Crayon
- String Line
- Measuring Tape
- Drill
- Pilot Drill Bit
- Ratchet/Driver
- 1/2" Socket
- 1/4" Hex Drive

FLASHKIT PART	TILE SHAPE	TILE COLOR
004TRFA	Flat	Adobe
004TRFD	Flat	Charcoal
004TRFM	Flat	Mill
004TRSA	Spanish	Adobe
004TRSD	Spanish	Charcoal
004TRSM	Spanish	Mill
004TRWA	W	Adobe
004TRWD	W	Charcoal
004TRWM	W	Mill

SUB-FLASHING	TILE SHAPE	TILE COLOR
004TRSF	All	Mill

NOTE: All parts are included in kit except optional Sub-Flashing.

TILE REPLACEMENT CAPACITIES AND ENGINEERING

Refer to engineering report tables for tested allowable loads. Refer to local AHJ to determine the correct code (ASCE 7-05, 7-10, 7-16 or 7-22), wind speed and snow load. It is the responsibility of the installer to ensure these mounting attachments are appropriate for the application. Please contact your 3rd party engineer for more information.

ENGINEERING GUIDE LIMITATIONS

- Flush roof installations only
- Roof slope must be 0-45 degrees (0/12 - 12/12 pitch)
- Surrounding ground area must not slope more than 10 degrees
- Location must fall into Exposure Category B or C

Please refer to the Solarmount Installation Manual for proper installation of the Solar-mount system. Unirac Flashkit Tile Replacements are intended to replace L-feet in the system and the rail connection should be torqued to the appropriate L-foot to rail torque specification from the Solarmount Manual.

Please refer to www.unirac.com in the Technical Support section for the Solarmount D&E guide which should be used in installations that do not comply with the limitations above.

FIGURE 1: Lag pull-out (withdrawal) capacities (lbs) in typical roof lumber (ASD)

	Specific Gravity	Lag Screw Specifications 5/16" shaft,* per inch thread depth
Douglas Fir, Larch	0.50	266
Douglas Fir, South	0.46	235
Engelmann Spruce, Lodgepole Pine (MSR 1650f & higher)	0.46	235
Hem. Fir, Redwood (Close Grain)	0.43	212
Southern Pine	0.55	307
Spruce, Pine, Fir	0.42	205
Spruce, Pine, Fir (E of 2million PSI & higher grades of MSR & MEL)	0.50	266

SOURCES: AMERICAN WOOD COUNCIL, NDS 2005, TABLE 1

Figure 1 (for reference only) Refer to latest AWC, NDS data to select a lag bolt embedment depth to satisfy your Uplift Point Load Force (lbs), requirements. It is the installer's responsibility to verify that the substructure and attachment method is strong enough to support the maximum point loads calculated.

NOTES:

1. Thread must be embedded in the side grain of a rafter or other structural member integral with the building structure.
2. Lag bolts must be located in the middle third of the structural member.
3. This table does not include shear capacities. If necessary, contact a local engineer to specify lag bolt size with regard to shear forces.
4. Install lag bolts with head and washer flush to surface (no gap). Do not over torque.
5. Withdrawal design values for lag screw connections shall be multiplied by applicable adjustment factors if necessary. See table 10.3 in the American Wood Council NDS for Wood Construction

LAYOUT

Locate rail attachment locations and remove corresponding tile that will be replaced by Unirac Tile Replacement.

LOCATE RAFTER & DRILL PILOT

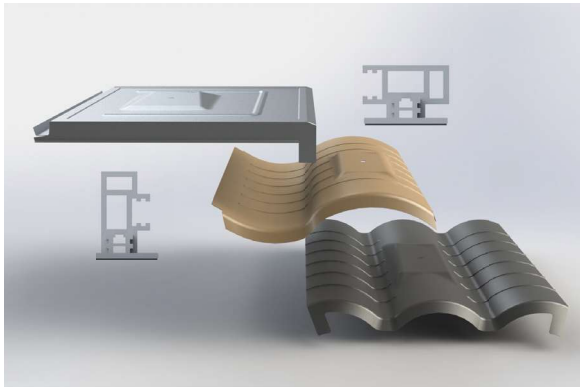
Locate rafter where tile was removed and align tile replacement base mounting holes over rafter and vertically. Mark and drill pilot holes.

PREPARE UNDERLAYMENT & BUTYL

Clear any pilot hole debris from underlayment and peel to remove sealing patch release liner.

INSTALL BASE

Optional: Place Tile Replacement Sub Flashing Align base over pilot holes and install base using supplied lag screws and sealing washers.



RISER CONFIGURATION

The Universal Tile Base can be configured for all three tile types. See: Page-5.

PREPARE RISER

Assemble tile replacement riser and bolt using the correct configuration for tile type.

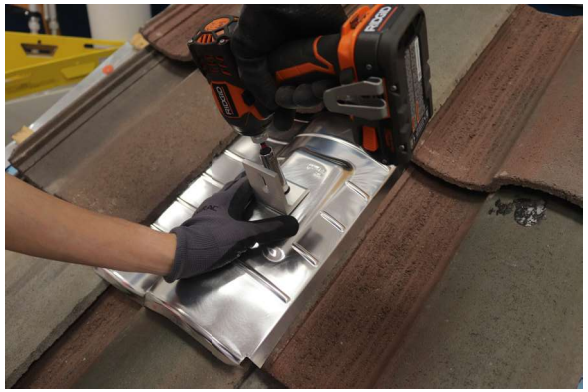
(Can be completed before Base Installation; S-Tile Configuration Shown)

PLACE RISER

Position riser on correct mating rail surfaces of base for tile type. Rotate bolt to slide as necessary. Align position of riser with crown of tile course.
(Can be completed before base installation; S-Tile Configuration Shown; See Also: Riser Configuration)

INSERT TILE FLASHING:

Lift upslope and adjacent tile to insert tile flashing into tile course. Position replacement flashing over riser and insert into replacement flashing. Riser can be freely slid to position with mating flashing hole.

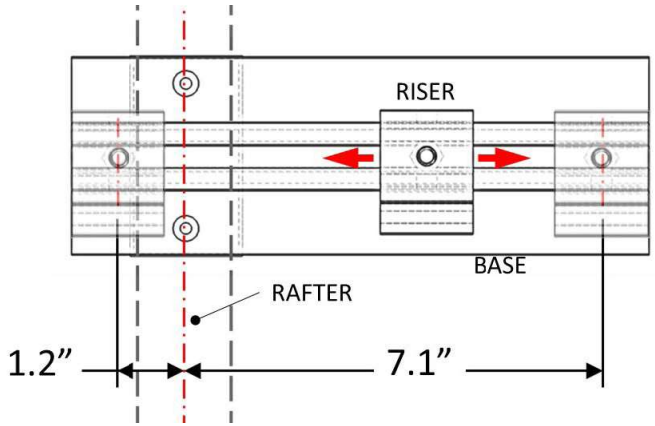


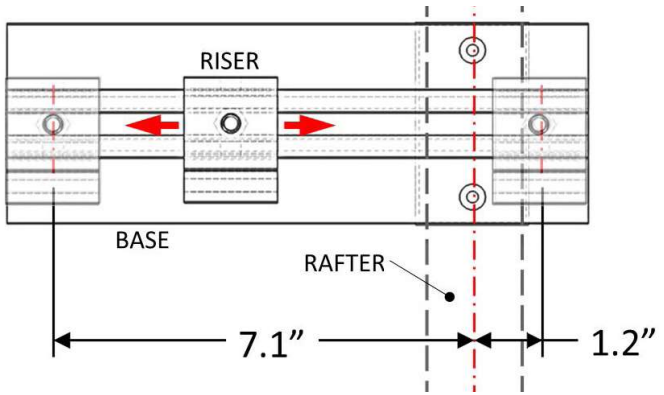
ATTACH L-FOOT:

Install sealing L-Foot, Washer and Locknut. Fasten the nut on to the base of the L-feet to 10 ft-lbs torque.

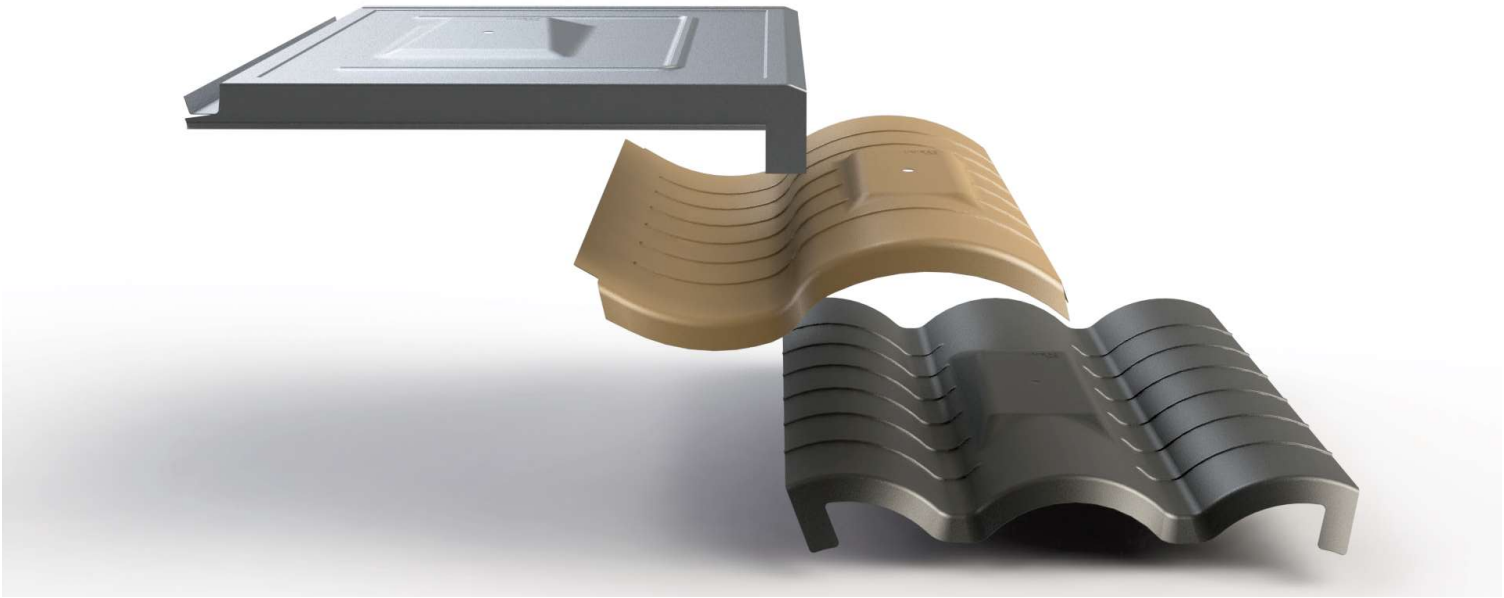
ADJUSTMENT RANGE OF RISER RELATIVE TO RAFTER ATTACHMENT LOCATION

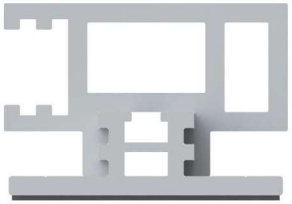
Base may be positioned with rafter attachment holes on either the left or right hand side.





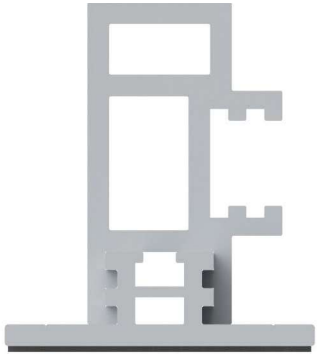
NOTE: Refer to SM D&E guide for design rules, load capacities and pressure tables.





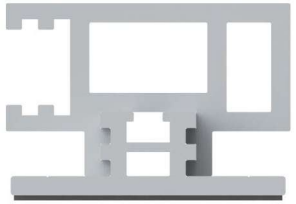
FLAT

Set the Tiered Riser in a horizontal orientation and to its lowest height setting on the Base Plate to mount Flat Tile Replacements.



S-TILE

Set the Tiered Riser in a vertical orientation and to its bottom height setting on the Base Plate to mount Spanish Tile Replacements.



W-TILE

Set the Tiered Riser in a horizontal orientation and to its lowest height setting on the Base Plate to mount W-Tile Replacements.