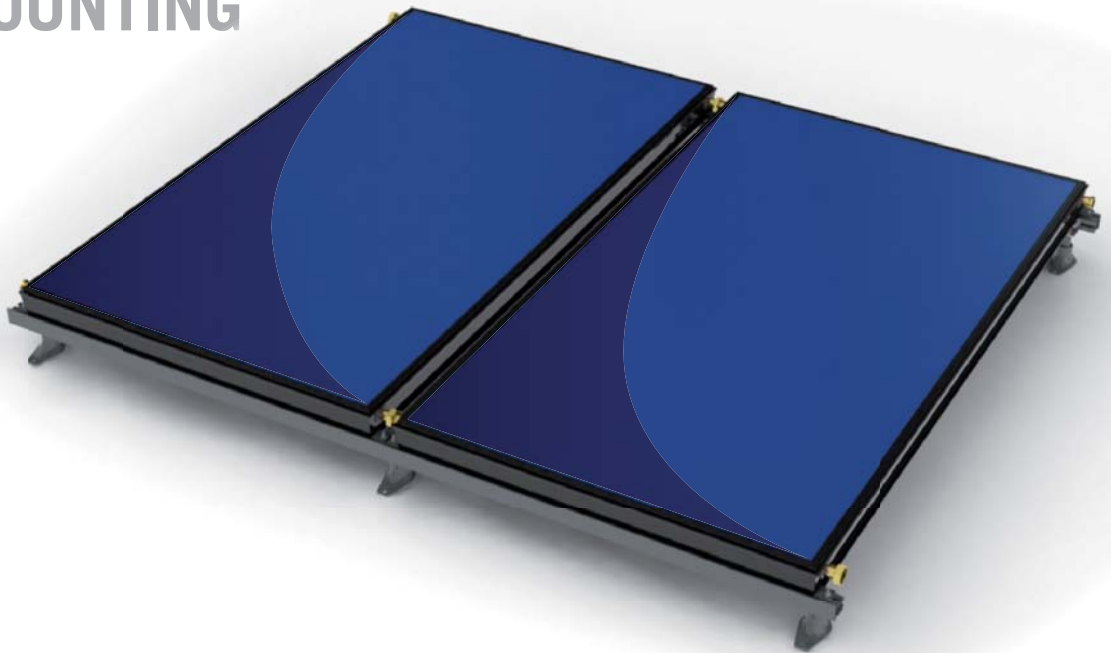


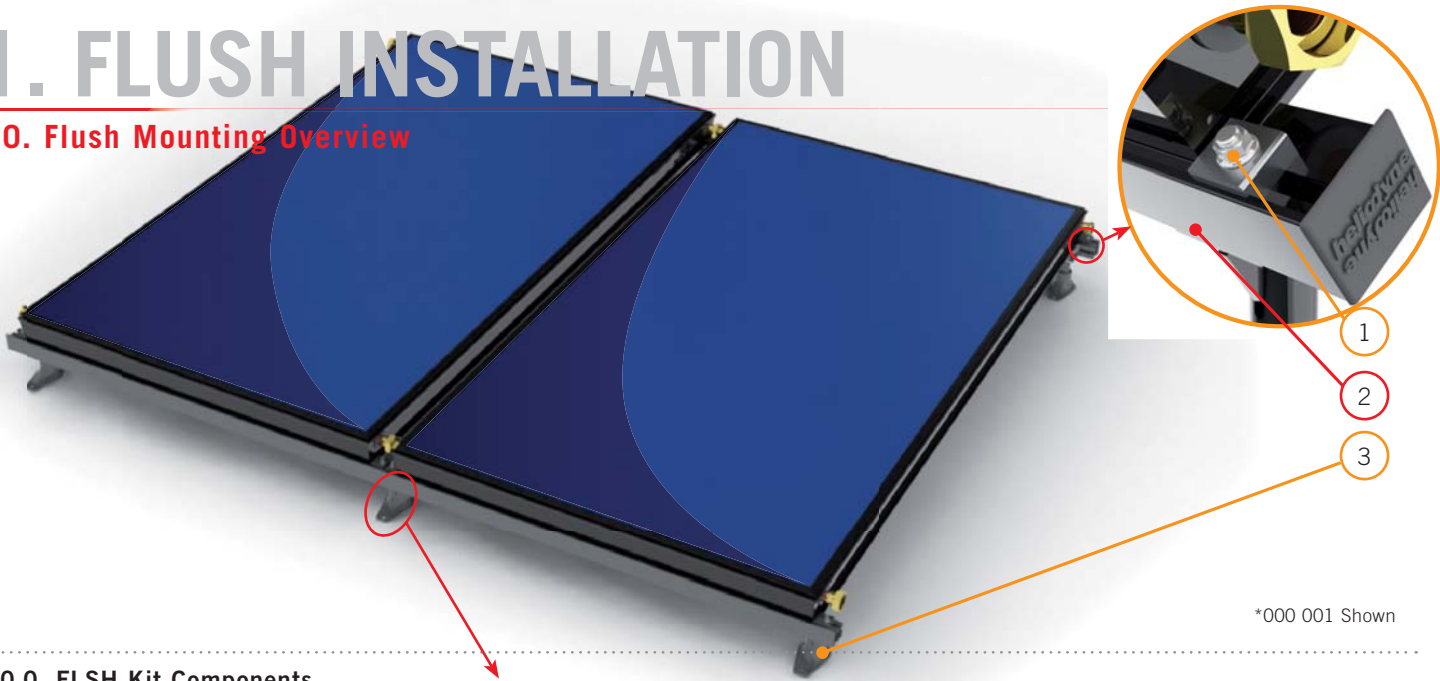
INSTALLATION GUIDE

FLUSH MOUNTING

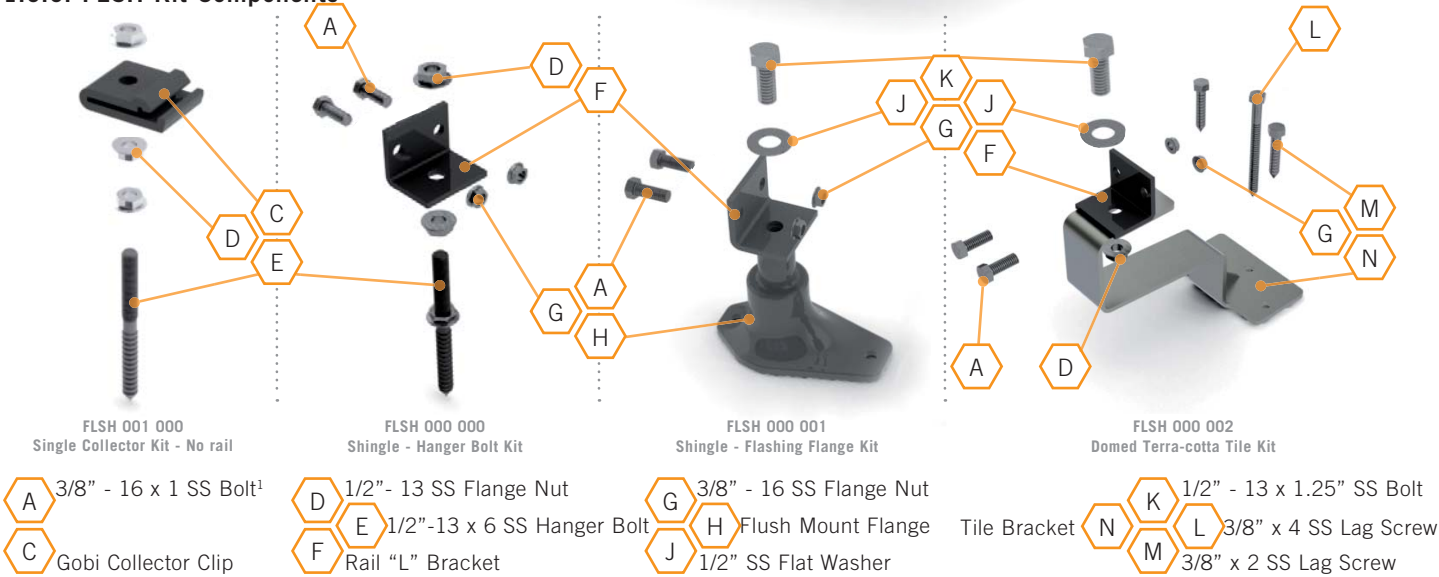


1. FLUSH INSTALLATION

1.0. Flush Mounting Overview



1.0.0. FLSH Kit Components



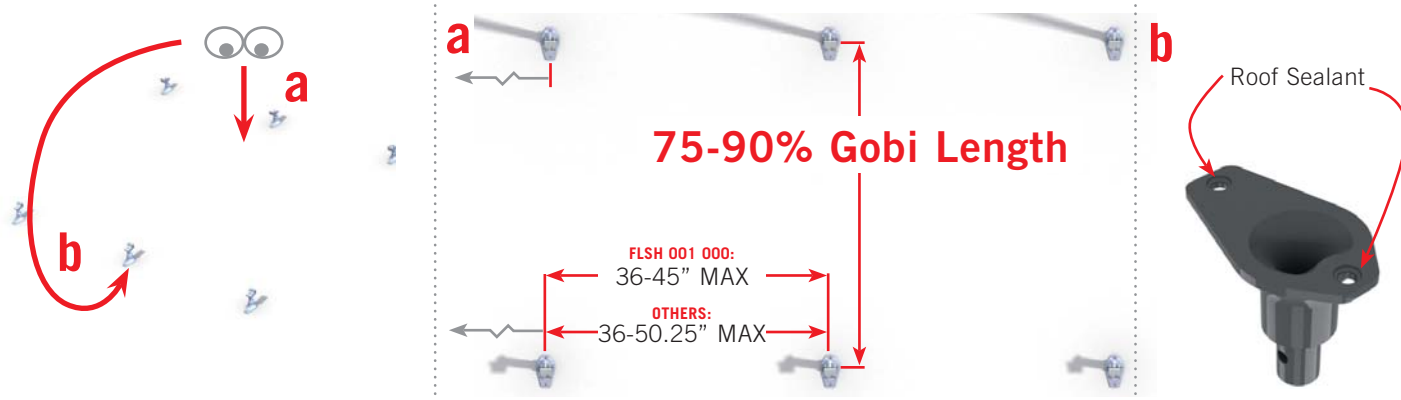
¹May be substituted with integrated washer head bolt without notice

1.0.1. Flush Replacement Parts

ITEM	CODE	PART NUMBER	DESCRIPTION	QUANTITY
1	CLIP 000 000	40082	Helio-Clamp, 3/8-16 x 3/4 SS Bolt, Flange Nut (set of 4)	1 / Gobi
2	RAIL 001 000 RAIL 002 000	40092 40090	2 x 1 Collector Mounting Rail - 51", 1 x CLIP 000 000 set 2 x 2 Collector Mounting Rail - 102", 2 x CLIP 000 000 set	See Note 1
3	FLSH 001 000 FLSH 000 000 FLSH 000 001 FLSH 000 002	40087 40084 40085 40086	1 Collector Mounting Kit Shingle Mount Hanger Bolt Kit Shingle Mount Flange Kit Tile Mount Kit	# Gobi + 1
4	RAIL 000 001	40089	Splice Kit for Joining Rails	1 Kit

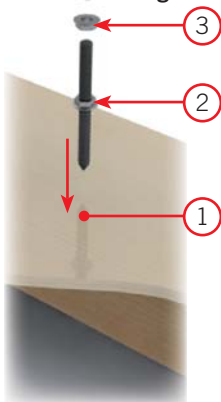
1.1. Flush Installation

1.1.0. Flush Foot Spacing



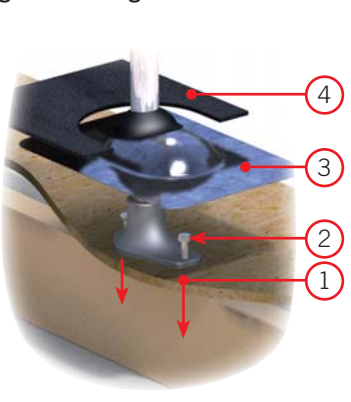
1.1.1. Hanger Bolt Mounting²

1. Locate a rafter and drill a 3/8" hole for lag portion add roof sealant; use two flange nuts backed against each other to lag bolt into roof.
2. Use one flange nut face down for compression seal.
3. Thread on 2nd nut with flange upwards, then Clip or "L" bracket, then third flange nut and tighten.



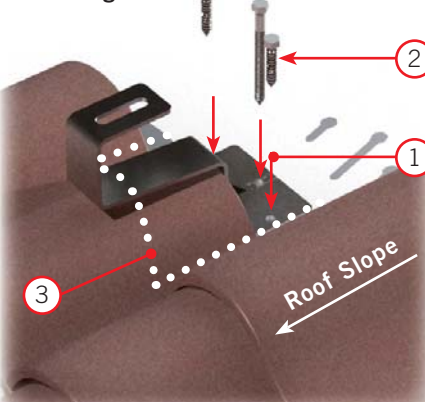
1.1.2. Flange Mounting²

1. Locate a rafter and use flange as template to drill two 3/8" holes for lag screws; add roof sealant to holes and flange.
2. Lag in screws.
3. Place OATEY 1-1/4" flashing over flange.
4. Replace shingle over flashing; follow best roofing practices to ensure seal.

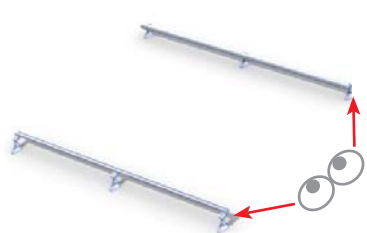


1.1.3. Tile Mounting²

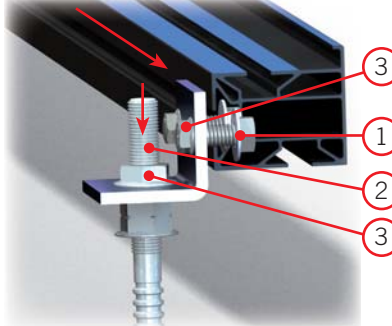
1. Remove tiles. Locate a rafter and use tile bracket as template to drill three 3/8" holes for lag screws; add roof sealant to holes.
2. Lag in screws.
3. Replace tiles over bracket; follow best roofing practices to ensure seal.



1.1.4. Rail Mounting

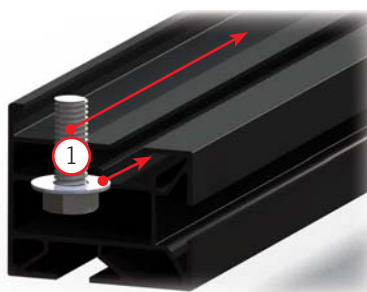


1. With serrated bolts and nuts installed, slide all "L" brackets onto each rail into approximate position of hanger bolts, flash flange or tile bracket; ensure the washer is on the inside of the rail flange for proper strength.
2. Insert "L" bracket onto each mount.
3. Tighten all nuts and bolts for proper strength.

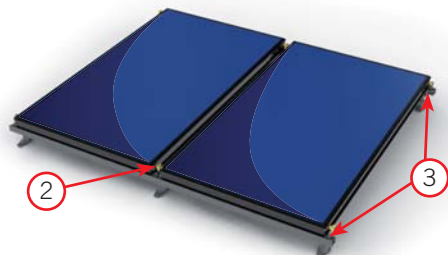


1.1.5. Collector Mounting

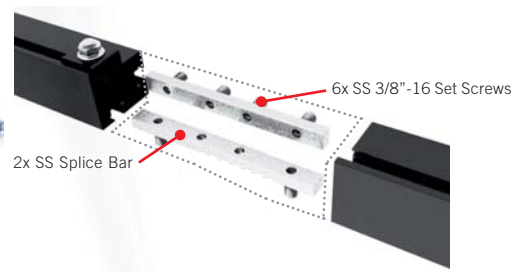
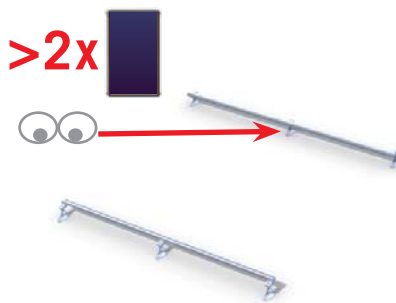
1. Before placing collectors, slide all clamp serrated bolts and nuts into approximate position on rails. Ensure washer is inside the rail channel for proper strength.



1.1.6. Rail Splice (optional)



2. Place collectors. Insert O-rings, tighten Unions. Take care not to crimp O-ring. Do not use thread lock or sealants.
3. Place Helio-Clamps, and thread flanged nuts on exposed bolts and tighten securely.

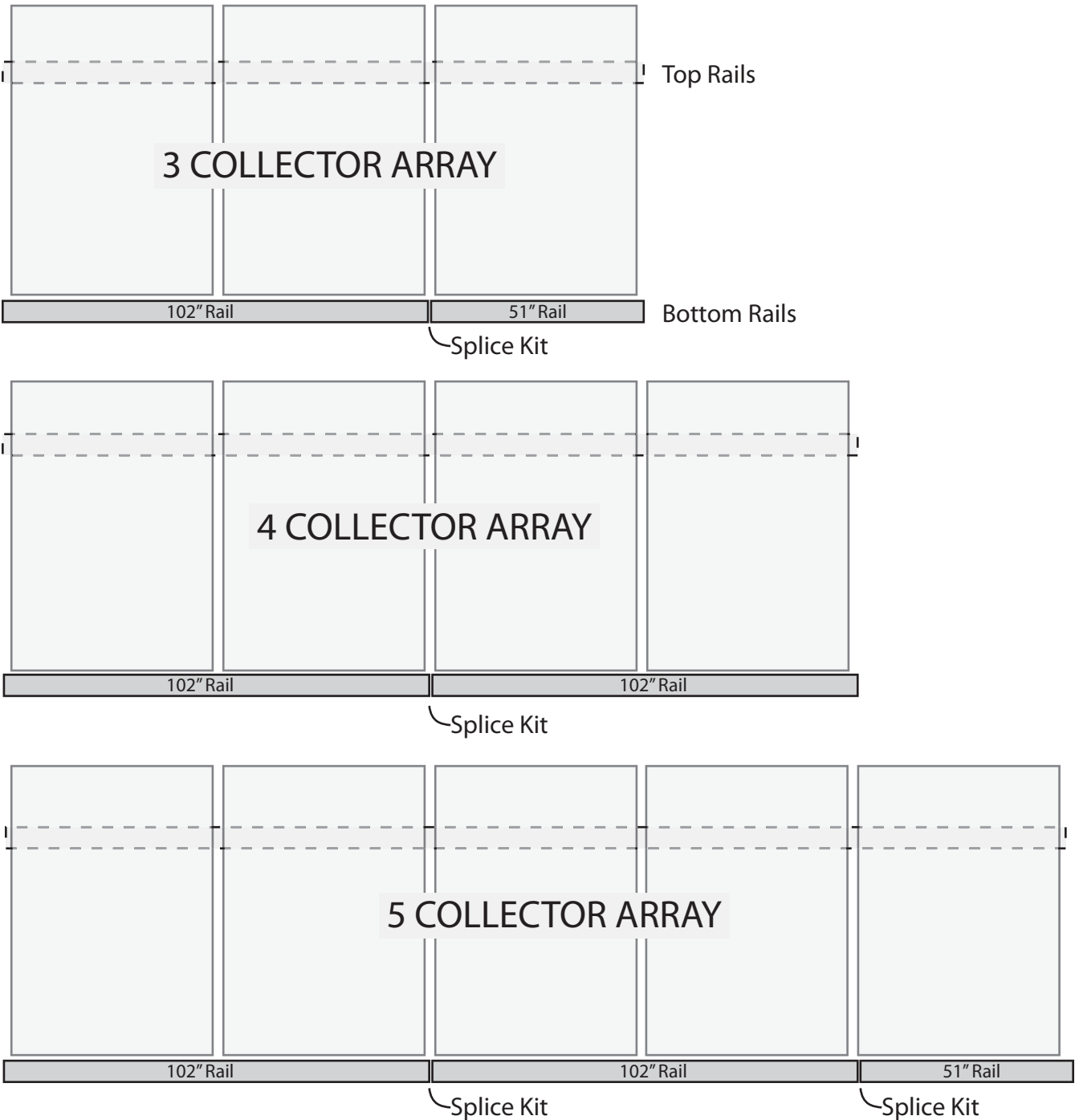


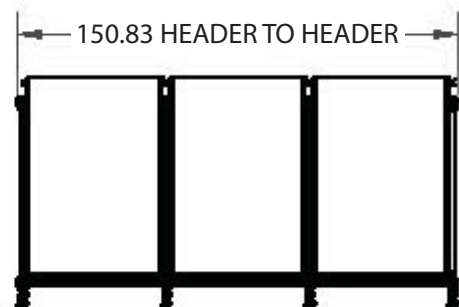
Heliodyne recommends using a long lasting thread locker, such as Loctite 277, on rail splice kits.

²While 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.

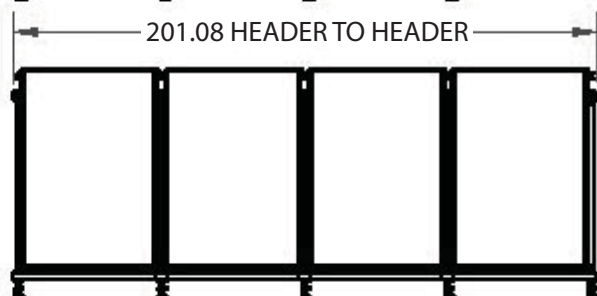
Horizontal mounting rails come in two lengths, 102" and 51".

The combination of rails vary dependent on amount of collectors in each Array configuration. For example a 3 Collector Array will consist of a 102" rail, 51" rail, and a Splice Kit. A 4 Collector Array will have 2 -102" rails, and a Splice Kit. A 5 Collector Array will consist of 2 -102" rails, 51" rail, and 2-Splice Kits. There are 2 rows of rails, top and bottom. Same rail assembly applies to both top and bottom.



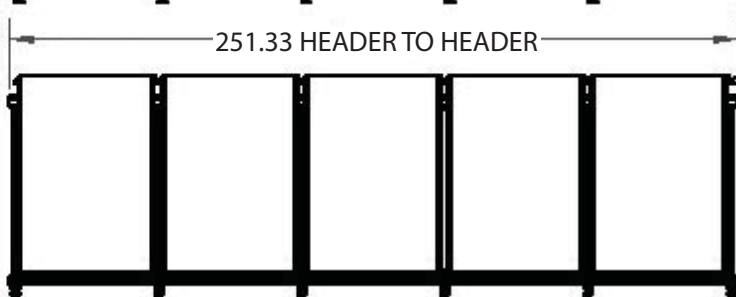


3 COLLECTOR ARRAY

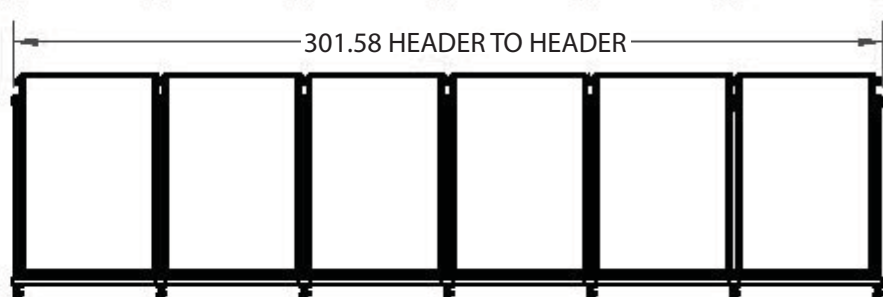


4 COLLECTOR ARRAY

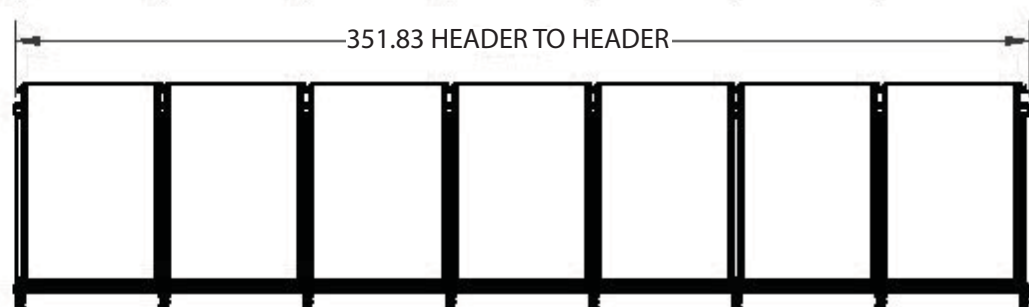
rail width: 204"
wide.



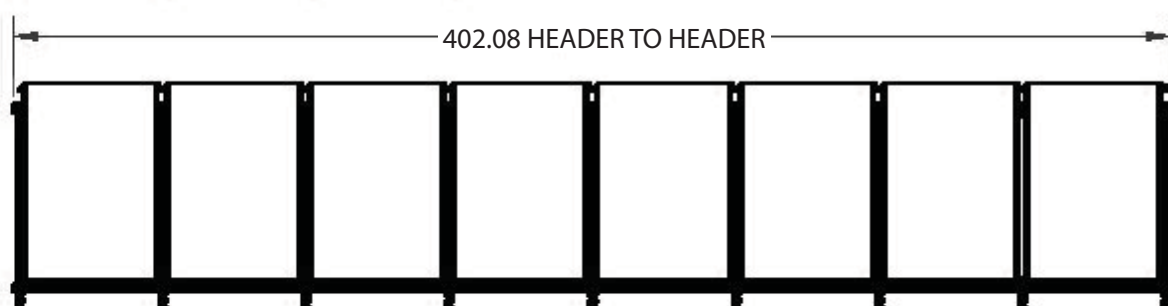
5 COLLECTOR ARRAY



6 COLLECTOR ARRAY



7 COLLECTOR ARRAY



8 COLLECTOR
ARRAY

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