

S-5![®]

The Right Way!

The right way to attach almost anything to metal roofs!

Installation Instructions

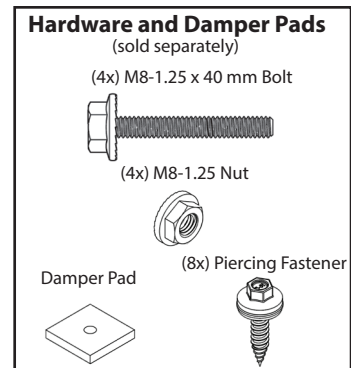
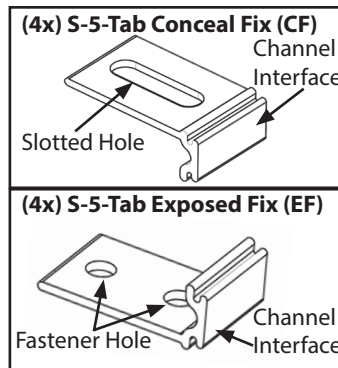
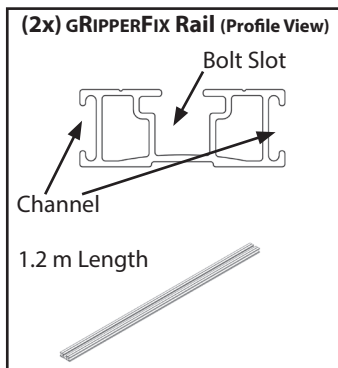
S-5![®] Warning! Please use these products responsibly! Visit our website or contact your S-5! distributor for available load test results. The user and/or the installer of these parts is responsible for all necessary engineering and design for the intended use of these parts in an assembly or application. Visit www.S-5.com for more details.

S-5! clamps for concealed fix application sold separately

Tools Needed

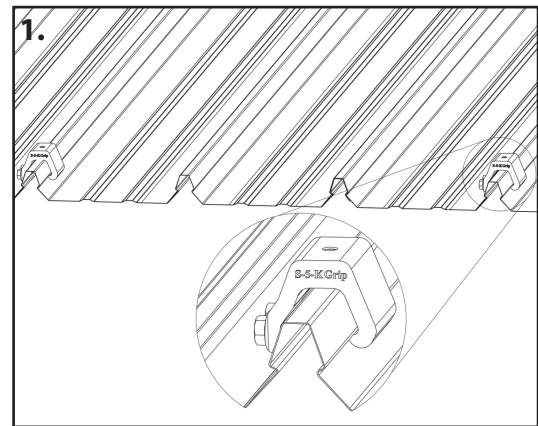
- Ratchet or Screw Gun
- 13 mm Socket
- Calibrated Dial Torque Wrench
- Measuring Tape

Parts



To Install gRIPPERFIX Fix on Concealed Fix

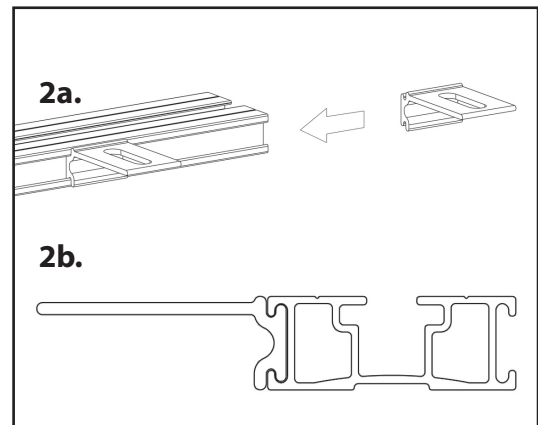
1. Install the first two S-5! clamps: If using S-5-K Grip style clamps, tighten the bolt(s) at the feet of the S-5-K Grip using a ratchet or screw gun until the head of the bolt(s) rests against the body of the clamp (**Fig. 1**). If using S-5! setscrew clamps (not shown), tighten the setscrews with Screw Gun and the Hex Bit Tip included with clamps. The setscrews will dimple the seam material but will not penetrate it. When relying on published load values, setscrew tension should be verified periodically using a calibrated torque wrench to ensure the tool is consistently achieving the proper torque range (**see setscrew torque table below**). Please see installation instructions provided with clamps for specifics.



S-5! Clamp Setscrew Torque Table (Does not apply to S-5-K Grip)

Specified Torque	Inch Pounds	Foot Pounds	Nm
22ga steel	160-180	13-15	18-20
All other metals and thinner gauges of steel	130-150	11-12.5	15-17

2. Slide S-5-Tab Conceal Fix (CF) into channel of gRIPPERFIX Rail: Two S-5-Tab Conceal Fix (CF) should be used with each gRIPPERFIX Rail. Slide the tab's channel interface into the channel as shown in (**Fig 2a**). These tabs will be the connection to the clamps mounted in step 1. Both tabs should be located on the same side of the rail, and surface with slotted hole should be oriented towards the top side of the rail as illustrated in (**Fig 2b**).



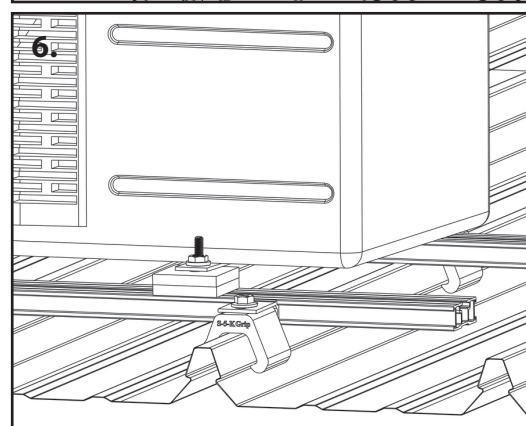
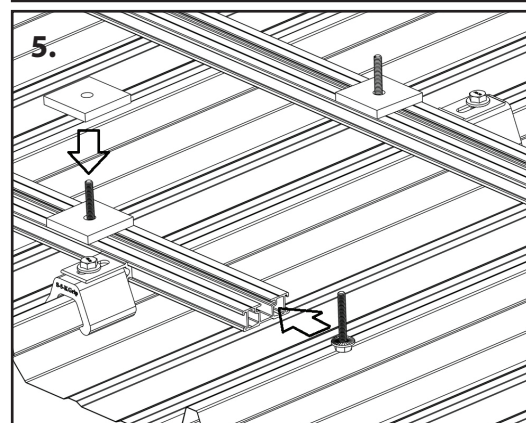
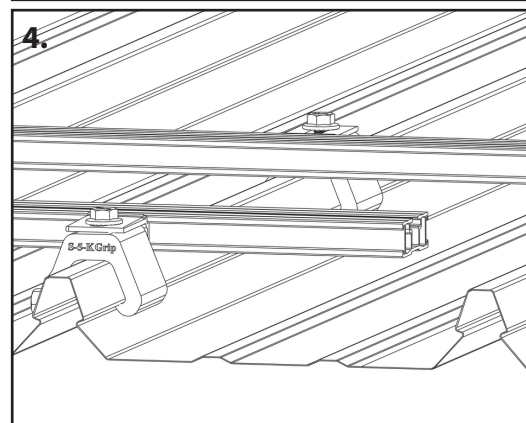
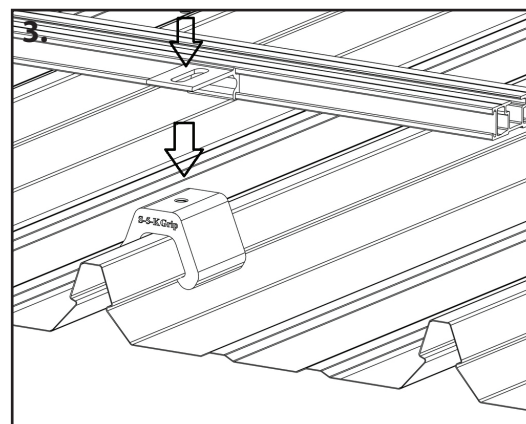
These instructions are for use by those experienced in the trade. Always follow appropriate safety precautions and use appropriate tools.

3. Attach the gRIPPERFIX Rail to the clamps: Align the two S-5-Tab CF that were inserted into the rail in step 2, such that they set atop the clamps, and the gRIPPERFIX Rail rests on the ribs of the roof (**Fig. 3**). The rail should be centered left to right with equal cantilever. Using 16 mm M8-1.25 Hex flange bolts (provided with clamps), attach the tabs to the clamps. Bolts should be threaded into clamp but left loose at this point to allow for adjustability.

4. Installing the remaining two clamps and gRIPPERFIX Rail: Measure the center to center distance between upslope and downslope mounting points on the condenser units feet. Install the second row of clamps on the roof following the same procedure from step 1, so that the bolt slots atop the two gRIPPERFIX Rails are the same distance (from eave to ridge) apart as the distance between the condenser unit's mounting points when mounted to the clamps. Place the two gRIPPERFIX rails on the clamps with both S-5-Tab CF resting atop the clamps. Each gRIPPERFIX Rail should be on the side of the clamp that is nearest the opposing set of clamps (**Fig. 4**). Using M8-1.25 x 16 mm Hex flange bolts (provided with clamps), attach the tabs to the clamps. The Slotted Holes on the S-5-Tab CF allow for adjustability should clamp placement be slightly off. Bolts should be threaded into clamp but left loose at this point to allow for adjustment later, when placing the condenser unit.

5. Slide M8-1.25 x 40 mm Bolts into Bolt Slot and place Damper Pads: Slide (2) M8-1.25 x 40 mm bolts into the top slot of each gRIPPERFIX Rail (**Fig. 5**). Measure the center to center horizontal distance between mounting holes on the condenser unit's feet. Position M8-1.25 x 40 mm bolts such that they align with mounting holes of the condenser unit centered on the gRIPPERFIX Rail. Place Damper Pads over the shafts of the inserted bolts.

6. Place condenser unit mounting holes over M8-1.25 x 40 mm Bolts atop Damper Pads and Fix to gRIPPERFIX Rail: Some adjustment of the M8-1.25 x 40 mm Bolts & Damper Pads may be necessary to align with mounting holes of condenser unit. **Additional Damper Pads can be added to the downslope mounting locations to level the condenser unit if necessary.** Place the mounting holes on the feet of the condenser unit over the M8-1.25 x 40 mm bolts. Thread the M8-1.25 Nuts onto the M8-1.25 x 40 mm Bolts. Nuts should be torqued to 18 Nm (160 in lbs). Bolts atop clamps that were left loose in steps 3-4 should now be torqued to 18 Nm (160 in lbs). (**Fig. 6**)



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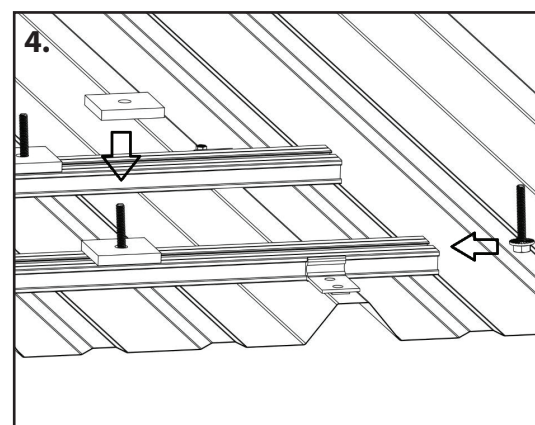
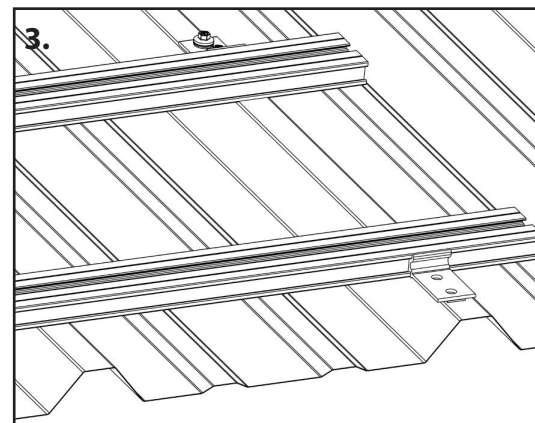
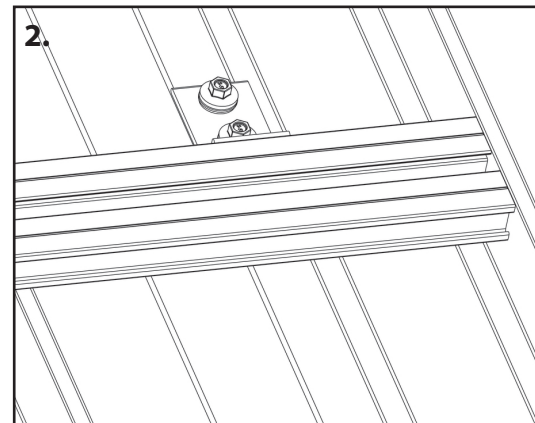
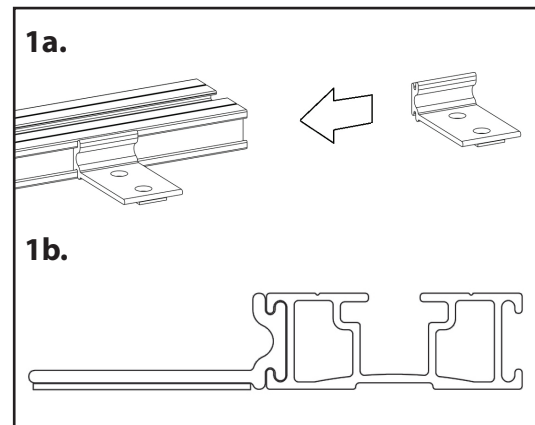
To Install GRIPPERFIX On Exposed Fix

1. Slide S-5-Tab Exposed Fix (EF) into channel of GRIPPERFIX Rail: Two S-5-Tab Exposed Fix (EF) should be used with each GRIPPERFIX Rail. Slide the tab's channel interface into the channel as shown in **(Fig 1a)**. These tabs will be the connection to the top of the roof profile ribs. Both tabs should be located on the same side of the rail with EPDM strip facing towards bottom of rail. **(Fig 1b)**

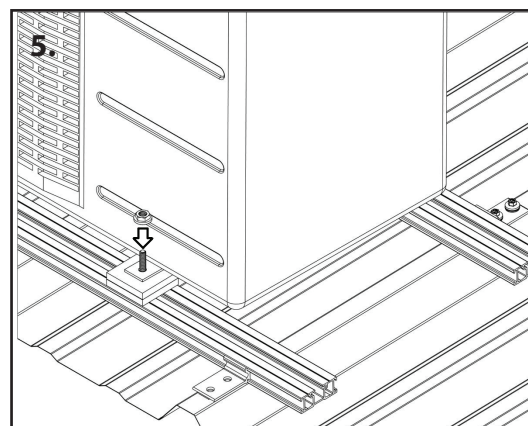
2. Fasten the upslope GRIPPERFIX Rail to the roof ribs: Align the two S-5-Tab EF that were inserted into the rail previously, such that they set atop the ribs of the roof, and the GRIPPERFIX Rail rests on the ribs of the roof. The rail should be centered left to right with equal cantilever. Secure the S-5-Tab EF directly into the top of the roof profile by driving the piercing fasteners into the two pre-punched holes of each tab. Drive the fastener in until it is tight and the washer is firmly seated **(Fig. 2)**. Do not over-drive fasteners; a slight extrusion of rubber around the washer is a good visual-tightness check.

3. Placing downslope rail on roof (do not fasten down yet): Measure the center to center distance between upslope and downslope mounting points on the condenser unit's feet. Place the second rail so that the bolt slots atop the two GRIPPERFIX Rails are the same distance (from eave to ridge) apart as the distance between the condenser unit's mounting locations **(Fig. 3)**. Align the two S-5-Tab EF that were inserted into the rail previously, such that they set atop the ribs of the roof, and the GRIPPERFIX Rail rests on the ribs of the roof. The rail should be centered left to right with equal cantilever. **DO NOT fasten to roof at this point.**

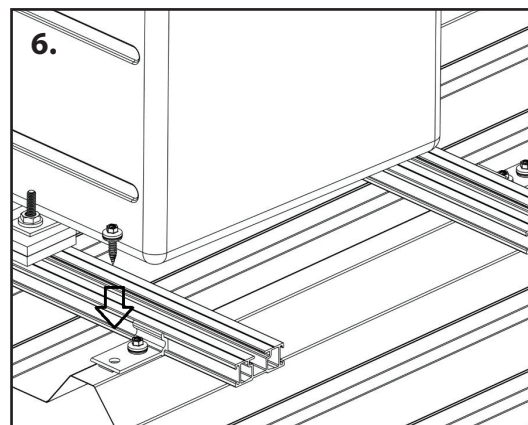
4. Slide M8-1.25 x 40 mm Bolts into Bolt Slot and place Damper Pads: Slide (2) M8-1.25 x 40 mm bolts into the top slot of each GRIPPERFIX Rail **(Fig. 4)**. Measure the center to center horizontal distance between mounting holes on the condenser unit's feet. Position M8-1.25 x 40 mm bolts such that they align with mounting holes of the condenser unit centered on the GRIPPERFIX Rail. Place Damper Pads over the shafts of the inserted bolts.



5. Place condenser unit mounting holes over M8-1.25 x 40 mm Bolts atop Damper Pads and Fix to GRIPPERFIX Rail: Some adjustment of the M8-1.25 x 40 mm Bolts & Damper Pads may be necessary to align with mounting holes of condenser unit. **Additional Damper Pads can be added to the downslope mounting locations to level the condenser unit if necessary.** Place the mounting holes on the feet of the condenser unit over the M8-1.25 x 40 mm bolts. Thread the M8-1.25 nuts onto the M8-1.25 x 40 mm Bolts (**Fig. 5**). Nuts should be torqued to 18 Nm (160 in lbs).



6. Fasten downslope GRIPPERFIX Rail to the roof ribs: Secure the two downslope S-5-Tab EF directly into the top of the roof profile by driving the piercing fasteners into the two pre-punched holes of each tab. Drive the fastener in until it is tight and the washer is firmly seated (**Fig. 6**). Do not over-drive fasteners; a slight extrusion of rubber around the washer is a good visual-tightness check.



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