

ICC-ES Evaluation Report

ESR-3869

Reissued July 2025

This report also contains:

Revised March 2026

- [CA Supplement](#)

Subject to renewal July 2026

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DIVISION: 05 00 00— METALS Section: 05 05 23— METAL FASTENINGS	REPORT HOLDER: S-5! METAL ROOF INNOVATIONS, LTD.	EVALUATION SUBJECT: S-5! STANDING SEAM CLAMPS	
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1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2024, 2021, 2018 and 2015 [International Building Code® \(IBC\)](#)
- 2024, 2021, 2018 and 2015 [International Residential Code® \(IRC\)](#)

Property evaluated:

- Structural

2.0 USES

The S-5! Standing Seam Clamps are used to attach nonstructural components to standing seam metal roofs described in this report and are designed to transfer uplift and parallel loads. The clamps may be used on structures regulated under the IRC when addressed in an engineered design in accordance with IRC Section R301.1.3.

3.0 DESCRIPTION

3.1 General:

The S-5! clamps consist of an aluminum clamp with or without an aluminum insert, M8-1.25 stainless steel bolt(s), and No. 3/8-24 (10 mm) stainless steel set screws. The applicable S-5! clamp models are identified in [Table 1](#). See [Figure 1](#) for depictions of the S-5! clamps.

3.2 Material:

The clamps and inserts are made from extruded 6061-T6 aluminum. The stainless steel bolts are made from 300 series stainless steel having a minimum tensile strength of 101.5 ksi (700 MPa) and minimum yield strength of 65.3 ksi (450 MPa). The stainless steel set screws are made from 300 series stainless steel.

4.0 DESIGN AND INSTALLATION

4.1 Design:

The values shown in [Table 1](#) of this report represent the connection capacity of the S-5! clamps to the described standing seam metal roof. The connection of the nonstructural components to the S-5! clamps must be designed by a registered design professional and must not exceed the published values in [Table 1](#). The ability of the standing seam metal roof to resist the loads applied by the clamps must be determined by a registered design professional.

4.2 Installation:

The S-5! clamps are designed to fit the seam configuration of the standing seam metal roof. Installation is limited to the standing seam metal roofs described in [Table 1](#) of this report. Once the clamp and insert have been placed on the seam, the set screws must be tightened to a torque as indicated in [Table 1](#) of this report. Ancillary items are fixed to the clamps using the supplied bolts. The bolt-thread must engage the clamp a minimum of 0.32-inch (8.1 mm).

4.3 Special Inspection:

In Seismic Design Categories E and F, periodic special inspection as indicated in Item 2 of 2024 and 2021 IBC Section 1705.13.6 (2018 and 2015 IBC Section 1705.12.6) is required. The role of the special inspector is to verify that the clamps and standing seam metal roof materials and installation are as described in the evaluation report. In lieu of conducting special inspections, , installation must be done in accordance with S-5! Metal Roof Innovations, Ltd. installation instructions and this report, and a certificate of installation must be provided to the code official by the installer.

5.0 CONDITIONS OF USE:

The S-5! Standing Seam Clamps described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The S-5! Standing Seam Clamps must be installed in accordance with this report and the manufacturer's published installation instructions. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.
- 5.2 Calculations showing compliance with this report must be submitted to the code official. The calculations must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.
- 5.3 Clamps subject to vibrations induced by mechanical equipment are outside the scope of this evaluation report.
- 5.4 Special inspection must comply with Section 4.3 of this report.
- 5.5 The S-5! clamps are manufactured under quality control programs with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Connection load test reports.
- 6.2 Engineering analyses prepared by a registered design professional
- 6.3 Installation instructions.
- 6.4 Quality control documentation complying with the [ICC-ES Acceptance Criteria for Quality Documentation \(AC10\)](#).

7.0 IDENTIFICATION

- 7.1 The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-3869) along with the name, registered trademark, or registered logo of the report holder must be included in the product label.
- 7.2 In addition, packages of S-5! clamps are identified by a label bearing the product name or designation.
- 7.3 The report holder's contact information is the following:

S-5! METAL ROOF INNOVATIONS, LTD.
12740 BLACK FOREST ROAD
COLORADO SPRINGS, COLORADO 80908
(888) 825-3432
www.s-5.com

TABLE 1—ALLOWABLE CONNECTION CAPACITY OF THE S-5! CLAMPS TO STANDING SEAM METAL ROOF¹

S-5! Clamps	Standing Seam Metal Roof			Installed Torque (in-lbf)	Allowable (ASD) Connection Capacity (lbf)		Design (LRFD) Connection Capacity (lbf)	
					Uplift	Lateral	Uplift	Lateral
	Manufacturer	Product Designation	Required Yield Strength (ksi)		Normal to Seam	Parallel to Seam	Normal to Seam	Parallel to Seam
S-5-S	A.B. Martin Roofing Supply	ABSeam (24 ga. steel w/ AZ50 and PVDF)	61.2	130-150	280	605	448	969
		ABSeam (26 ga. steel w/ AZ50 and SMP)	58.4	130-150	519	499	830	798
S-5-S mini		ABSeam (24 ga. steel w/ AZ50 and PVDF)	61.2	130-150	140	396	224	633
		ABSeam (26 ga. steel w/ AZ50 and SMP)	58.4	130-150	221	308	354	493
S-5-V		ABSeam (24 ga. steel w/ AZ50 and PVDF)	61.2	130-150	N/A	544	N/A	871
		ABSeam (26 ga. steel w/ AZ50 and SMP)	58.4	130-150	N/A	433	N/A	693
S-5-V mini		ABSeam (24 ga. steel w/ AZ50 and PVDF)	61.2	130-150	207	N/A	331	N/A
		ABSeam (26 ga. steel w/ AZ50 and SMP)	58.4	130-150	243	N/A	389	N/A
S-5-H	AEP Span	Span-lok hp (0.040" alum. w/PVDF)	22.0	130-150	432	385	691	617
S-5-H mini		Span-lok hp (0.040" alum. w/PVDF)	22.0	130-150	183	265	292	424
S-5-H		Span-lok hp (22 ga. steel w/AZ50 and PVDF)	55.8	160-180	452	669	724	1,070
S-5-H mini		Span-lok hp (22 ga. steel w/AZ50 and PVDF)	55.8	160-180	452	182	724	291
S-5-H		Span-lok hp (24 ga. steel w/AZ50 and PVDF)	63.0	130-150	559	707	895	1,131
S-5-H mini		Span-lok hp (24 ga. steel w/AZ50 and PVDF)	63.0	130-150	559	419	895	670
S-5-H		Span-lok (22 ga. steel w/AZ50 and PVDF)	56.7	160-180	901	456	1,441	730
S-5-H mini		Span-lok (22 ga. steel w/AZ50 and PVDF)	56.7	160-180	846	182	1,353	291
S-5-H		Span-lok (24 ga. steel w/AZ50 and PVDF)	67.3	130-150	421	388	673	621
S-5-H mini		Span-lok (24 ga. steel w/AZ50 and PVDF)	67.3	130-150	137	198	220	317
S-5-V		SpanSeam (22 ga. steel w/AZ50 and PVDF)	55.2	160-180	972	619	1,555	991
S-5-V mini		SpanSeam (22 ga. steel w/AZ50 and PVDF)	55.2	160-180	284	184	455	294
S-5-V		SpanSeam (24 ga. steel w/AZ50 and PVDF)	61.7	130-150	1,399	363	2,238	580
S-5-V mini		SpanSeam (24 ga. steel w/AZ50 and PVDF)	61.7	130-150	616	363	985	580
S-5-B	Arapahoe Roofing & Sheet Metal, Inc.	1" SnapLock (16 oz. copper)	28.8	130-150	261	125	418	200
S-5-B mini		1" SnapLock (16 oz. copper)	28.8	130-150	110	76	176	122
S-5-S	AEP Span/ASC Building Products	Design Span hp (22 ga. steel w/AZ50 and PVDF)	54.0	160-180	618	588	988	940
S-5-S mini		Design Span hp (22 ga. steel w/AZ50 and PVDF)	54.0	160-180	242	110	387	177
S-5-S		Design Span hp (24 ga. steel w/AZ50 and PVDF)	57.2	130-150	394	573	630	916
S-5-S mini		Design Span hp (24 ga. steel w/AZ50 and PVDF)	57.2	130-150	287	187	460	300
S-5-N	ASC Building Products	Skyline (24 ga. steel w/AZ50 and PVDF)	63.0	130-150	509	80	815	129
S-5-N mini		Skyline (24 ga. steel w/AZ50 and PVDF)	63.0	130-150	395	53	632	85
S-5-N		Skyline (26 ga. steel w/ AZ50 and PVDF)	48.4	130-150	N/A	325	N/A	520
S-5-N		Skyline (26 ga. steel w/AZ50 and SMP)	55.3	130-150	379	196	606	313
S-5-N mini		Skyline (26 ga. steel w/AZ50 and SMP)	55.3	130-150	337	N/A	539	N/A

TABLE 1—ALLOWABLE CONNECTION CAPACITY OF THE S-5! CLAMPS TO STANDING SEAM METAL ROOF¹ (Continued)

S-5! Clamps	Standing Seam Metal Roof			Installed Torque (in-lbf)	Allowable (ASD) Connection Capacity (lbf)		Design (LRFD) Connection Capacity (lbf)	
					Uplift	Lateral	Uplift	Lateral
	Manufacturer	Product Designation	Required Yield Strength (ksi)		Normal to Seam	Parallel to Seam	Normal to Seam	Parallel to Seam
S-5-E	Astron Buildings	LMR 600 (0.66 mm steel w/AZ185)	52.0	130-150	1079	671	1,727	1,074
S-5-E mini		LMR 600 (0.66 mm steel w/AZ185)	52.0	130-150	834	319	1,335	511
S-5-H mini	All Weather Insulated Panels	SR2 SF (26 ga. 304 2B Stainless Steel)	45.4	130-150	N/A	264	N/A	423
S-5-N	Bridger Steel	SL-16 (24 ga. steel w/ PVDF and AZ50)	56.3	130-150	N/A	494	N/A	790
		SL-16 (26 ga. steel w/ PVDF and AZ50)	45.1	130-150	N/A	416	N/A	666
S-5-N mini		SL-16 (24 ga. steel w/ PVDF and AZ50)	56.3	130-150	368	N/A	588	N/A
		SL-16 (26 ga. steel w/ PVDF and AZ50)	45.1	130-150	227	N/A	363	N/A
S-5-S		Tru-Snap(24 ga. steel w/ PVDF and AZ50)	57.1	130-150	N/A	417	N/A	667
		Tru-Snap(26 ga. steel w/ PVDF and AZ50)	45.8	130-150	N/A	459	N/A	735
S-5-N	The Bryer Company	TBC-Proseam (24 ga. steel w/ PVDF and AZ55)	53.5	130-150	827	451	1,342	721
		TBC-Proseam (26 ga. steel w/ PVDF and AZ55)	56.8	130-150	526	312	841	499
S-5-N mini		TBC-Proseam (24 ga. steel w/ PVDF and AZ55)	53.5	130-150	553	128	884	205
		TBC-Proseam (26 ga. steel w/ PVDF and AZ55)	56.8	130-150	377	237	603	377
S-5-N 1.5		TBC-Truloc (24 ga. steel w/ PVDF and AZ55)	45.8	130-150	577	344	924	551
		TBC-Truloc (26 ga. steel w/ PVDF and AZ55)	53.5	130-150	419	293	670	469
S-5-N 1.5 mini		TBC-Truloc (24 ga. steel w/ PVDF and AZ55)	45.8	130-150	526	76	842	121
		TBC-Truloc (26 ga. steel w/ PVDF and AZ55)	53.5	130-150	328	237	525	380
S-5-N	Central Texas Metal Roofing Supply (CTMRS)	ProSnap 100 (24 ga. steel w/ Galvalume)	41.0	130-150	339	342	542	547
S-5-N mini		ProSnap 100 (24 ga. steel w/ Galvalume)	41.0	130-150	253	121	404	193
S-5-T	Dimensional Metals, Inc. (DMI)	TL25 (24 ga. steel w/ AZ & PVDF)	54.1	130-150	1,228	705	1,965	1,127
S-5-T mini		TL25 (24 ga. steel w/ AZ & PVDF)	54.1	130-150	739	277	1,182	443
S-5-H	Dynamic Metals	DM1500 (24 ga. steel)	47.1	130-150	657	172	1051	275
S-5-H mini		DM1500 (24 ga. steel)	47.1	130-150	477	170	763	272
S-5-H		DM1500 (0.032 in aluminum)	18.7	130-150	334	346	535	554
S-5-H mini		DM1500 (0.032 in aluminum)	18.7	130-150	152	255	244	408
S-5-S		DM1700 (0.032 in aluminum)	18.7	130-150	509	414	815	663
S-5-S mini		DM1700 (0.032 in aluminum)	18.7	130-150	198	235	317	377
S-5-N mini	Englert	A1101 (0.04 inch Aluminum w/ PVDF)	26.4	130-150	193	N/A	308	N/A

TABLE 1—ALLOWABLE CONNECTION CAPACITY OF THE S-5! CLAMPS TO STANDING SEAM METAL ROOF¹ (Continued)

S-5! Clamps	Standing Seam Metal Roof			Installed Torque (in-lbf	Allowable (ASD) Connection Capacity (lbf)		Design (LRFD) Connection Capacity (lbf)	
	Manufacturer	Product Designation	Required Yield Strength (ksi)		Uplift	Lateral	Uplift	Lateral
					Normal to Seam	Parallel to Seam	Normal to Seam	Parallel to Seam
S-5-S	Extreme Metal Fabricators	PeakMax (24 ga. w/ AZ-50)	53.6	130-150	364	350	582	561
S-5-S mini		PeakMax (24 ga. w/ AZ-50)	53.6	130-150	N/A	316	N/A	506
S-5-S		PeakMax (24 ga. w/ AZ-55)	42.6	130-150	653	151	1044	242
S-5-S mini		PeakMax (24 ga. w/ AZ-55)	42.6	130-150	356	197	570	315
S-5-S		PeakMax (0.032 in aluminum w/PVDF)	13.3	130-150	166	224	266	358
S-5-S mini		PeakMax (0.032 in aluminum w/PVDF)	13.3	130-150	291	333	465	533
S-5-H	FALK	Standing Seam SF (24 ga. steel)	33.7	130-150	789	372	1263	596
S-5-H mini		Standing Seam SF (24 ga. steel)	33.7	130-150	522	168	836	270
S-5-T	Garland	R-Mer® Span (22 ga. G90 and PVDF coated steel)	50.5	160-180	779	1,093	1,247	1,749
		R-Mer® Span (0.04 inch Aluminum w/ PVDF coating)	25.9	130-150	548	775	877	1,240
		R-Mer® Span (24 ga. G90 and PVDF coated steel)	52.3	130-150	685	505	1,097	808
S-5-T mini		R-Mer® Span (22 ga. G90 and PVDF coated steel)	50.5	160-180	671	389	1,074	623
		R-Mer® Span (0.04 inch Aluminum w/ PVDF coating)	25.9	130-150	381	575	610	920
		R-Mer® Span (24 ga. G90 and PVDF coated steel)	52.3	130-150	466	N/A	746	N/A
S-5-N 1.5	Graber Post Buildings	1.5" Snap Standing Seam (26 ga. steel w/ SMP and AZ50)	54.6	130-150	N/A	332	N/A	531
S-5-N 1.5 mini		1.5" Snap Standing Seam (26 ga. steel w/ SMP and AZ50)	55.2	130-150	197	N/A	315	N/A
S-5-T	Green Span Profiles	RidgeLine (24 ga. steel w/ PVDF, Galvalume G90)	52.3	130-150	1,044	650	1,670	1,039
S-5-H90	MBCI	BattenLok® HS (22 ga. steel w/ AZ55 & Galvalume Plus)	54.1	160-180	1,013	687	1,621	1,099
		BattenLok® HS (24 ga. steel w/ AZ55 & Galvalume Plus)	62.3	130-150	1,029	595	1,646	953
S-5-H90 mini		BattenLok® HS (22 ga. steel w/ AZ55 & Galvalume Plus)	54.1	160-180	944	513	1,510	820
		BattenLok® HS (24 ga. steel w/ AZ55 & Galvalume Plus)	62.3	130-150	756	474	1,209	758
S-5-V		Ultra-Dek® (22 ga. steel w/ AZ55 & Galvalume Plus)	54.0	160-180	1,204	548	1,927	876
		Ultra-Dek® (24 ga. steel w/ AZ55 & Galvalume Plus)	54.8	130-150	482	600	772	961
		SuperLok® (22 ga. steel w/ AZ55 & Galvalume Plus)	54.0	160-180	1,169	830	1,870	1,328
		SuperLok® (24 ga. steel w/ AZ55 & Galvalume Plus)	63.2	130-150	1,137	660	1,819	1,057
		Double-Lok® (22 ga. steel w/ AZ55 & Galvalume Plus)	55.2	160-180	909	955	1,455	1,528
		Double-Lok® (24 ga. steel w/ AZ55 & Galvalume Plus)	60.1	130-150	1,158	846	1,852	1,354

TABLE 1—ALLOWABLE CONNECTION CAPACITY OF THE S-5! CLAMPS TO STANDING SEAM METAL ROOF¹ (Continued)

S-5! Clamps	Standing Seam Metal Roof			Installed Torque (in-lbf)	Allowable (ASD) Connection Capacity (lbf)		Design (LRFD) Connection Capacity (lbf)	
					Uplift	Lateral	Uplift	Lateral
	Manufacturer	Product Designation	Required Yield Strength (ksi)		Normal to Seam	Parallel to Seam	Normal to Seam	Parallel to Seam
S-5-V mini	MBCI	Ultra-Dek® (22 ga. steel w/ AZ55 & Galvalume Plus)	54.0	160-180	811	131	1,298	289
		Ultra-Dek® (24 ga. steel w/ AZ55 & Galvalume Plus)	54.8	130-150	384	292	614	566
		SuperLok® (22 ga. steel w/ AZ55 & Galvalume Plus)	54.0	160-180	1,008	568	1,613	908
		SuperLok® (24 ga. steel w/ AZ55 & Galvalume Plus)	63.2	130-150	838	460	1,340	736
		Double-Lok® (22 ga. steel w/ AZ55 & Galvalume Plus)	55.2	160-180	1,032	644	1,652	1,030
		Double-Lok® (24 ga. steel w/ AZ55 & Galvalume Plus)	60.1	130-150	619	550	990	879
S-5-S		LokSeam® (22 ga. steel w/ AZ55 & Galvalume Plus)	53.1	160-180	779	838	1,247	1,341
		LokSeam® (24 ga. steel w/ AZ55 & Galvalume Plus)	54.5	130-150	644	634	1,030	1,014
S-5-S mini		LokSeam® (22 ga. steel w/ AZ55 & Galvalume Plus)	53.1	160-180	376	581	602	929
		LokSeam® (24 ga. steel w/ AZ55 & Galvalume Plus)	54.5	130-150	235	476	376	761
S-5-N	McElroy Metals	Meridian (24 ga. steel w/ PVDF and Galvalume AZ50)	58.0	130-150	511	416	817	666
		Meridian (26 ga. steel w/ PVDF and Galvalume AZ50)	50.2	130-150	352	357	563	570
S-5-N mini		Meridian (24 ga. steel w/ PVDF and Galvalume AZ50)	58.0	130-150	384	335	615	536
		Meridian (26 ga. steel w/ PVDF and Galvalume AZ50)	50.2	130-150	188	247	301	394
S-5-T		238T (0.032 Aluminum w/ PVDF)	19.8	130-150	626	384	1003	615
S-5-T mini		238T (0.032 Aluminum w/ PVDF)	19.8	130-150	450	317	720	507
S-5-T		238T (0.040 Aluminum w/ PVDF)	13.6	130-150	531	618	850	990
S-5-T mini		238T (0.040 Aluminum w/ PVDF)	13.6	130-150	440	332	704	532
S-5-V	Merchant & Evans	ZipLock 2" (22 ga. steel w/ PVDF and AZ55)	52.9	160-180	1,218	635	1,949	1,016
		ZipLock 2" (24 ga. steel w/ PVDF and AZ55)	53.6	130-150	904	718	1,447	1,149
		Ziplock 2" (0.040 inch Aluminum w/ PVDF)	20.4	130-150	N/A	458	N/A	733
		Ziplock 2" (0.032 inch Aluminum w/ PVDF)	25.0	130-150	N/A	501	N/A	801
S-5-V mini		ZipLock 2" (22 ga. steel w/ PVDF and AZ55)	52.9	160-180	951	522	1,521	835
		ZipLock 2" (24 ga. steel w/ PVDF and AZ55)	53.6	130-150	505	390	808	623
		ZipLock 2" (0.040 inch Aluminum w/ PVDF)	20.4	130-150	390	514	624	823
		ZipLock 2" (0.032 inch Aluminum w/ PVDF)	25.0	130-150	349	380	558	608

TABLE 1—ALLOWABLE CONNECTION CAPACITY OF THE S-5! CLAMPS TO STANDING SEAM METAL ROOF¹ (Continued)

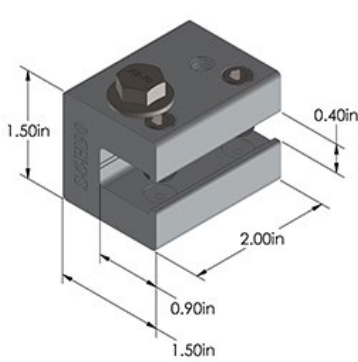
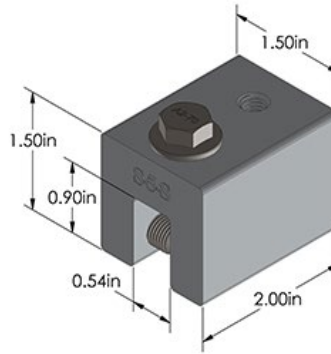
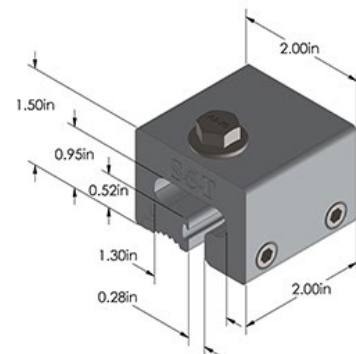
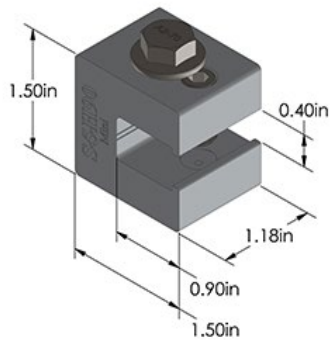
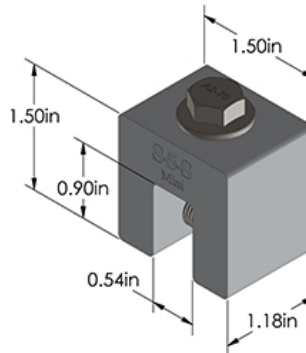
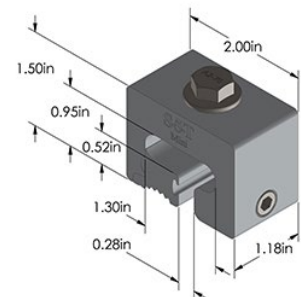
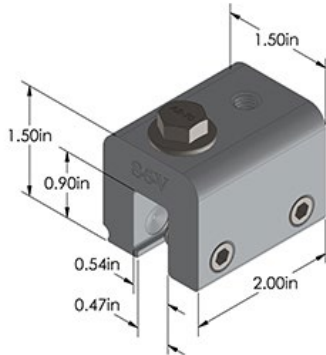
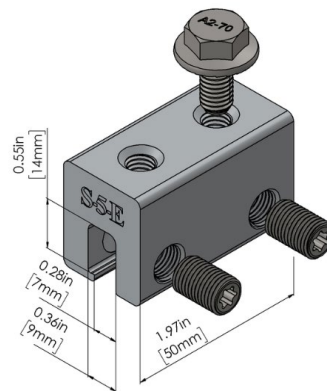
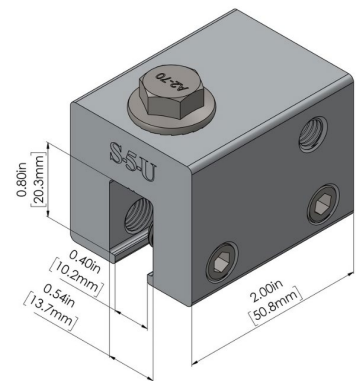
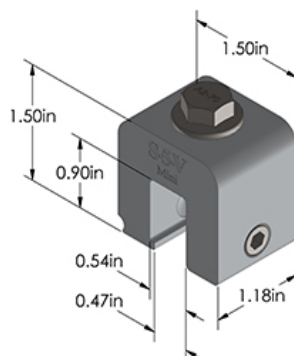
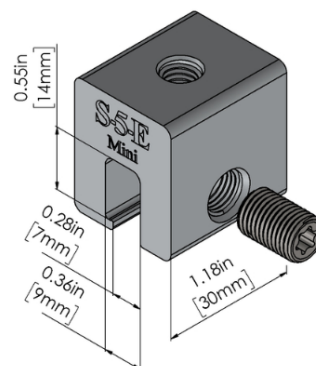
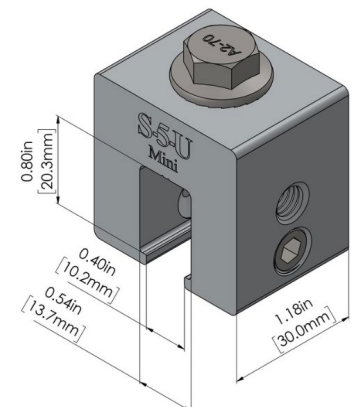
S-5! Clamps	Standing Seam Metal Roof			Installed Torque (in-lbf)	Allowable (ASD) Connection Capacity (lbf)		Design (LRFD) Connection Capacity (lbf)	
					Uplift	Lateral	Uplift	Lateral
	Manufacturer	Product Designation	Required Yield Strength (ksi)		Normal to Seam	Parallel to Seam	Normal to Seam	Parallel to Seam
S-5-E	Merchant & Evans	ZipLock 1.5" (0.040 inch Aluminum w/ PVDF)	20.0	130-150	358	519	572	831
		ZipLock 1.5" (0.032 inch Aluminum w/ PVDF)	25.0	130-150	N/A	466	N/A	746
S-5-E mini		ZipLock 1.5" (0.040 inch Aluminum w/ PVDF)	20.0	130-150	402	N/A	643	N/A
		ZipLock 1.5" (0.032 inch Aluminum w/ PVDF)	25.0	130-150	433	401	693	642
S-5-Z		Zip Rib (20 ga. steel w/ AZ55 & PVDF)	50.6	160-180	1,211	900	1,938	1,441
		Zip Rib (22 ga. steel w/ AZ55 & PVDF)	51.4	160-180	997	837	1,595	1,339
		Zip Rib (24 ga. steel w/ AZ55 & PVDF)	51.9	130-150	577	683	923	1,093
		Zip Rib (0.050 inch Aluminum w/ PVDF)	31.2	130-150	936	891	1,497	1,426
		Zip Rib (0.040 inch Aluminum w/ PVDF)	30.4	130-150	788	778	1,261	1,245
		Zip Rib (0.032 inch Aluminum w/ PVDF)	29.7	130-150	647	374	1,035	598
S-5-Z mini		Zip Rib (20 ga. steel w/ AZ55 & PVDF)	50.6	160-180	557	732	891	1,171
		Zip Rib (22 ga. steel w/ AZ55 & PVDF)	51.4	160-180	554	N/A	886	N/A
		Zip Rib (24 ga. steel w/ AZ55 & PVDF)	51.9	130-150	456	N/A	730	N/A
		Zip Rib (0.050 inch Aluminum w/ PVDF)	31.2	130-150	441	616	705	985
		Zip Rib (0.040 inch Aluminum w/ PVDF)	30.4	130-150	497	591	797	945
		Zip Rib (0.032 inch Aluminum w/ PVDF)	29.7	130-150	330	523	527	837
S-5-U	Metal Sales Manufacturing	Magna-Loc 180 [DBF] (24 ga. steel with AZ50)	50.0	130-150	1,069	841	1,710	1,346
S-5-U mini		Magna-Loc 180 [DBF] (24 ga. steel with AZ50)	50.0	130-150	655	635	1,048	1,016
S-5-N		Image II (26 ga. steel)	53.8	130-150	356	298	569	477
S-5-N mini		Image II (26 ga. steel)	53.8	130-150	222	248	356	397
S-5-H		MagnaLoc 90 Deg (24 ga. steel)	62.2	130-150	261	388	417	621
S-5-H mini		MagnaLoc 90 Deg (24 ga. steel)	62.2	130-150	304	171	487	273
S-5-V	Morin	SLR-17 (0.032 in aluminum)	20.5	130-150	706	476	1129	762
S-5-V mini		SLR-17 (0.032 in aluminum)	20.5	130-150	512	368	819	589
S-5-N	New Tech Machinery	FF100 (24 ga. steel with Galvalume & PVDF)	60.8	130-150	336	404	537	647
S-5-N 1.5	Ottawa Valley Metal	OVM Easy Snap (24 ga. steel)	43.1	130-150	73	N/A	117	N/A
S-5-N 1.5 mini		OVM Easy Snap (24 ga. steel)	43.1	130-150	N/A	211	N/A	338
S-5-N	Sheet Metal Supply	NS-1 (24 ga. steel with G90 & PVDF)	45.8	130-150	562	480	899	768
S-5-N mini		NS-1 (24 ga. steel with G90 & PVDF)	45.8	130-150	282	277	451	443

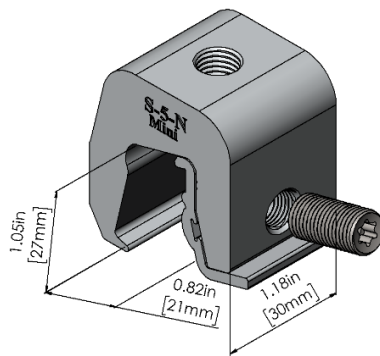
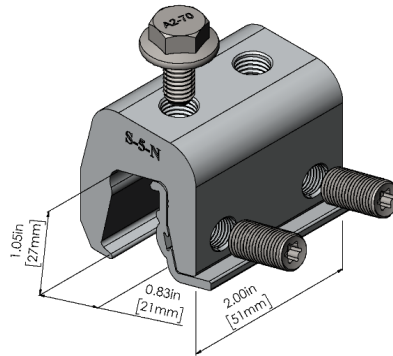
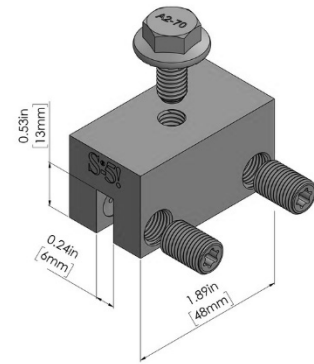
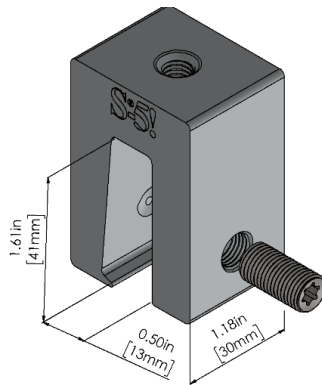
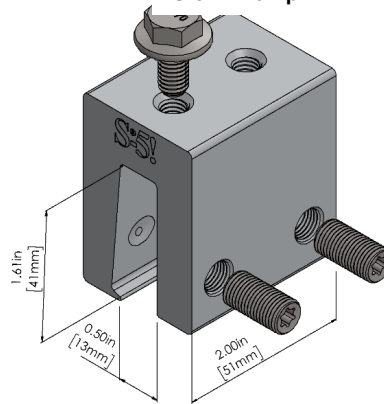
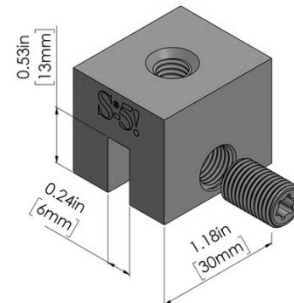
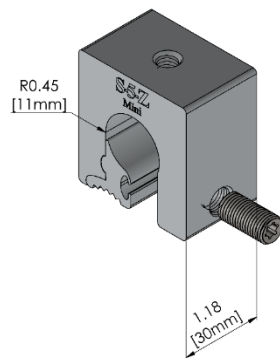
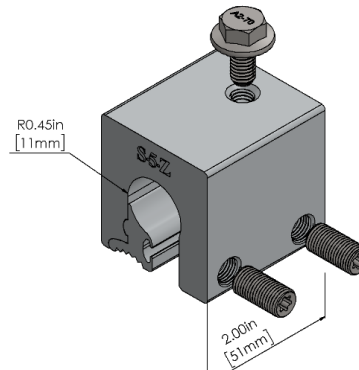
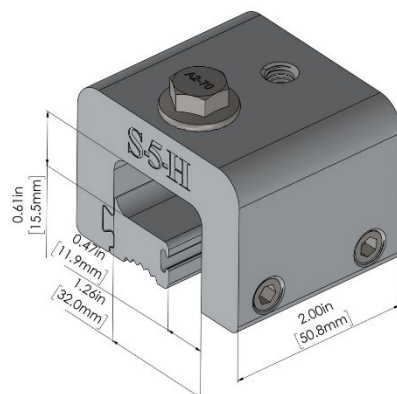
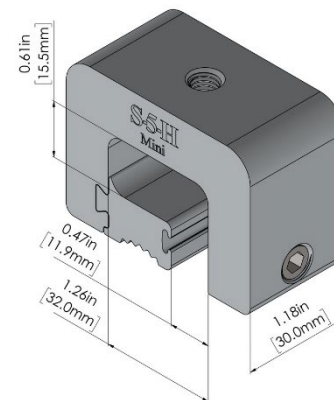
TABLE 1—ALLOWABLE CONNECTION CAPACITY OF THE S-5! CLAMPS TO STANDING SEAM METAL ROOF¹ (Continued)

S-5! Clamps	Standing Seam Metal Roof			Installed Torque (in-lbf)	Allowable (ASD) Connection Capacity (lbf)		Design (LRFD) Connection Capacity (lbf)	
					Uplift	Lateral	Uplift	Lateral
	Manufacturer	Product Designation	Required Yield Strength (ksi)		Normal to Seam	Parallel to Seam	Normal to Seam	Parallel to Seam
S-5-H	Taylor Metal	MS200 (22 ga. steel)	54.5	160-180	N/A	541	N/A	865
S-5-H mini		MS200 (22 ga. steel)	54.5	160-180	716	N/A	1146	N/A
S-5-H		MS200 (24 ga. steel)	48.4	130-150	803	114	1286	183
S-5-S		VersaSpan (22 ga. steel)	58.4	160-180	N/A	727	N/A	1164
S-5-S mini		VersaSpan (22 ga. steel)	58.4	160-180	377	N/A	604	N/A
S-5-S		VersaSpan (24 ga. steel)	61.0	130-150	N/A	336	N/A	538
S-5-S mini		VersaSpan (24 ga. steel)	61.0	130-150	252	N/A	404	N/A
S-5-T	Vicwest	Tradition 150 w/ clips (22 ga. steel w/ SMP and G90)	47.1	160-180	N/A	939	N/A	1,503
S-5-S		Tradition 100 w/ clips (24 ga. steel w/ SMP and G90)	57.0	130-150	N/A	331	N/A	529
S-5-S mini		Tradition 100 w/ clips (24 ga. steel w/ SMP and G90)	57.0	130-150	75	N/A	119	N/A
S-5-N	Westform Metals	Prolok (24 ga. steel with G90)	42.0	130-150	461	366	738	585
S-5-N mini		Prolok (24 ga. steel with G90)	42.0	130-150	338	N/A	540	N/A
S-5-N		Prolok (26 ga. steel with G90)	44.5	130-150	266	321	425	514
S-5-N mini		Prolok (26 ga. steel with G90)	44.5	130-150	260	N/A	417	N/A
S-5-N 1.5	Woody's Sheet Metal	1.5" Nail Strip (24 ga. steel)	49.6	130-150	390	313	642	502
S-5-N 1.5 mini		1.5" Nail Strip (24 ga. steel)	49.6	130-150	291	176	467	281

For **SI**: 1 ksi = 6.89 MPa; 1 lbf = 4.45 N.

¹The S-5 clamps must be installed in accordance with Section 4.2 of this report.

**S-5-H90 Clamp****S-5-S Clamp****S-5-T Clamp****S-5-H90 Mini Clamp****S-5-S Mini Clamp****S-5-T Mini Clamp****S-5-V Clamp****S-5-E Clamp****S-5-U Clamp****S-5-V Mini Clamp****S-5-E Mini Clamp****S-5-U Mini Clamp****FIGURE 1—S-5! CLAMP CONFIGURATIONS**

**S-5-N Mini Clamp****S-5-N Clamp****S-5-B Clamp****S-5-N 1.5 Mini Clamp****S-5-N 1.5 Clamp****S-5-B Mini Clamp****S-5-Z Mini Clamp****S-5-Z Clamp****S-5-H Clamp****S-5-H Mini Clamp****FIGURE 1—S-5! CLAMP CONFIGURATIONS (Continued)**

ICC-ES Evaluation Report

ESR-3869 CA Supplement

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This report is subject to renewal July 2026.

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DIVISION: 05 00 00—METALS

Section: 05 05 23—METAL FASTENINGS

REPORT HOLDER:

S-5! METAL ROOF INNOVATIONS, LTD.

EVALUATION SUBJECT:

S-5! STANDING SEAM CLAMPS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that S-5! Standing Seam Clamps, described in ICC-ES evaluation report [ESR-3869](#), have also been evaluated for compliance with the codes noted below.

Applicable code edition(s):

- 2025 *California Building Code* (CBC)
- 2025 *California Residential Code* (CRC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

2.0 CONCLUSIONS

2.1 CBC:

The S-5! Standing Seam Clamps, described in Sections 2.0 through 7.0 of the evaluation report [ESR-3869](#), comply with CBC Chapter 22, provided the design and installation are in accordance with the 2024 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16, 17 and 22, as applicable.

2.1.1 OSHPD: The applicable OSHPD Sections of the CBC are beyond the scope of this supplement.

2.1.2 DSA: The applicable DSA Sections of the CBC are beyond the scope of this supplement.

2.2 CRC:

The S-5! Standing Seam Clamps, described in Sections 2.0 through 7.0 of the evaluation report [ESR-3869](#), comply with CRC Chapter 3, provided the design and installation are in accordance with the 2024 *International Residential Code*® (IRC) provisions noted in the evaluation report.

This supplement expires concurrently with the evaluation report, reissued July 2025 and revised March 2026.