

CFS Connections

Self-Drilling E Metal Screw

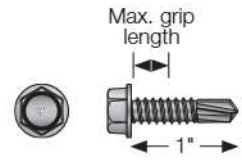
Common Application:

Cold-formed steel framing

- Recommended for use with certain Simpson Strong-Tie connectors
- #3 drill point (maximum total drilling thickness 0.35")

Codes/Standards: ASTM C1513 compliant

For more information, see p. 114, C-F-2023 Fastening Systems catalog



E Metal Screw — Strength Properties

Size-TPI x Length	Model No.	Nominal Strength (lb.)		Design Strength (LRFD) (lb.) $\phi = 0.5$		Allowable Strength (ASD) (lb.) $\Omega = 3.0$	
		P_{ss}	P_{ts}	ϕP_{ss}	ϕP_{ts}	P_{ss}/Ω	P_{ts}/Ω
#14-14 x 1	E1B1414	3,130	5,395	1,565	2,700	1,045	1,800

E Metal Screw — Cold-Formed Steel Connection Loads

Size-TPI x Length	Model No.	Nominal Dia. (in.)	Washer Dia. (in.)	Load Description	Reference Shear (lb.)					Reference Pullover (lb.)					Reference Pullout (lb.)				
					Steel Thickness: [mil (ga.)]					Steel Thickness: [mil (ga.)]					Steel Thickness: [mil (ga.)]				
					33 (20)	43 (18)	54 (16)	68 (14)	97 (12)	33 (20)	43 (18)	54 (16)	68 (14)	97 (12)	33 (20)	43 (18)	54 (16)	68 (14)	97 (12)
#14-14 x 1	E1B1414	0.242	0.5	ASD	200	295	605	850	1,045	390	505	920	1,160	1,655	105	140	250	320	455
				LRFD	300	445	905	1,280	1,565	585	760	1,380	1,740	2,480	160	210	380	480	680
				Nominal strength	600	890	1,810	2,555	3,130	1,170	1,520	2,760	3,475	4,960	320	415	755	955	1,360

1. Screws shall extend through the connection with a minimum of three exposed threads per AISI General Provisions Standard Section D1.3.

2. Maximum grip length is 0.40". Grip length is the total connection thickness plus three protruding threads.

3. Tabulated loads are based on calculations per AISI S100 using the thinner steel member in the connection.

A safety factor of $\Omega = 3.0$ and resistance factor $\phi = 0.5$ were used to determine the ASD and LRFD strength values.

Steel thickness for both members must be in the range of 12–20 gauge.

4. Loads are based on cold-formed steel members with a minimum yield strength, F_y , of 33 ksi and tensile strength, F_u , of 45 ksi for 43 mil (18 ga.) and thinner, and a minimum yield strength of 50 ksi and tensile strength of 65 ksi for 54 mil (16 ga.) and thicker.