

Sheathing-to-Steel Fastening

Strong-Drive® CBSDQ SHEATHING-TO-CFS Screw

Common Application:

Wood structural panel/sheathing to cold-formed steel

Codes/Standards: ASTM C1513 compliant, ICC-ES ESR-4208

For more information, see p. 244, C-F-2023 *Fastening Systems* catalog



CBSDQ — Pullout Loads — Steel Connections

Model No.	Size	Load Description	Reference Pullout Loads (lb.)	
			Steel Thickness [mil (ga.)]	
			43 (18)	54 (16)
CBSDQ158S	#8	ASD	105	175
		LRFD	170	280
		Nominal strength	300	460
CBSDQ214S	#10	ASD	155	255
		LRFD	250	410
		Nominal strength	445	665

- Screws and connections have been tested per AISI Standard Methods S904-17 and S905-17.
- Values are based on cold-formed steel (CFS) members with a minimum yield strength of $F_y = 33$ ksi and tensile strength of $F_u = 45$ ksi for 43 mil (18 ga.), and a minimum yield strength of $F_y = 50$ ksi and $F_u = 65$ ksi for 54 mil (16 ga.).
- For design purposes, steel sheet thicknesses are 0.0451 inch for 43 mil (18 ga.) and 0.0566 inch for 54 mil (16 ga.).
- A minimum of three exposed screw threads are required to achieve the loads in the Table.
- Maximum grip length for the CBSDQ158S is 1.15". Maximum grip length for the CBSDQ214S is 1.73". Grip length is the total connection thickness plus three protruding threads.

CBSDQ — Pull-Through Loads — Rated Sheathing Panels

Model No.	Size	Load Description	Reference Pull-Through Loads (lb.)		
			Minimum Nominal Panel Thickness (in.)		
			OSB		
			15/32	19/32	23/32
CBSDQ158S	#8	ASD	58	63	86
		LRFD	125	135	185
		Nominal strength	290	315	430
CBSDQ214S	#10	ASD	47	47	78
		LRFD	102	102	168
		Nominal strength	235	235	390

- The tabulated values are based on testing per AC233.
- ASD pull-through loads based on a factor of safety of five applied to the nominal strength value ($C_D = 1.0$, increases to $C_D = 1.6$ allowed when applicable).
- LRFD load based on adjustment of ASD load per NDS 2018 Appendix N using $K_c = 3.32$, $\Phi_z = 0.65$, and $\lambda = 1.0$.
- Maximum grip length for the CBSDQ158S is 1.15". Maximum grip length for the CBSDQ214S is 1.73". Grip length is the total connection thickness plus three protruding threads.