SBR Structural Spacer Bracer



The SBR provides bracing along the length of the stud, and for head-of-wall slip conditions for exterior, structural cold-formed steel walls. This structural spacer bracer reduces the installed cost of cold-formed steel stud walls by enabling faster stud layout with prepunched slots that minimize the need for bridging clips with on-module studs. The SBR is the only structural spacer bracer on the market that comes with bracing load data based on assembly testing, thus mitigating risk for designers and maximizing confidence in design specifications.

Key Features

- Patent-pending, precision-engineered, prepunched slots are strategically located to enable 12", 16" and 24" on-center stud spacing and can be used to space the studs without having to mark the top track for layout
- Prepunched holes provide rapid screw installation when spacer-bracer splices are needed for axial load-bearing studs
- In off-layout or end-of run conditions, the hat-section profiles enable clip attachments to the stud with Simpson Strong-Tie® LSSC or RCA connectors
- Accommodates 3 5/8" up to 8" studs in thicknesses of 33 mil (20 ga.) through 68 mil (14 ga.)

Material

- 43 mil (40 ksi)

Finish

- Galvanized (G90)

Installation

- Spacer bracers are fed through the stud knockout at a 90° angle until studs align with spacer-bracer slots. With the slots engaging the stud web, the spacer-bracer is then rotated back to the flat position so that the slotted flanges are on the bottom.
- For off-layout or end-of-run studs where a spacer-bracer slot does not engage a stud, manually snip the spacer-bracer flanges with a 1/2"-deep slot and secure the spacer bracer to the stud with Simpson Strong-Tie LSSC or RCA connectors. Use all specified fasteners.
- Wear gloves while handling and installing spacer bracers.

Disclaimer

Some specific models of this product might not be covered in the associated code reports. Please verify coverage for the models you wish to use

Product Information Table

Model No.	Thickness (mil)	Ga.	L (in.)	Coating/Material	Packaging Qty.
SBR/43-R20	43	18	50 3/4	Zinc Galvanized, G90	20
SBR/43-R680	43	18	50 3/4	Zinc Galvanized, G90	680

Load Tables

SBR Spacer Bracer — Connection Strength and Stiffness

Model No.	Stud Depth (in.)	Stud Thickness mil (ga.)	Allowable Torsional Moment (in./lb.)	Allowable Brace Strength (lb.)	Brace Stiffness[2] (lb./in.)
SBR/43	3⅝	33 (20)	240	330	2,090
		43 (18)	310	435	3,190
		54 (16)	400	435	3,190
		68 (14)	400	435	3,190
	6	33 (20)	215	135	655
		43 (18)	310	330	1,275
		54 (16)	370	450	1,400
		68 (14)	370	450	1,400
	8	33 (20)	195	70	320
		43 (18)	305	175	635
		54 (16)	345	315	855
		68 (14)	345	485	1,350

1. Allowable loads are for use when utilizing the traditional Allowable Stress Design methodology. For LRFD loads multiply the ASD tabulated values by 1.6.
2. Brace stiffness is at 40% of ultimate load per test standard AISI S915-20. Tabulated values apply to both ASD and LRFD designs.
3. Allowable loads consider bridging connection only. It is the responsibility of the designer to verify the strength and serviceability of the framing members.
4. EQ — equivalent, DW — drywall, STR — structural.

Load Tables

SBR Gross Properties

Model No.	Design Thickness (in.)	F_y (ksi)	Area[2] (in.)	I_x[4] (in.)	S_x[3] (in.)	R_x (in.)	I_y[4] (in.)	S_y[3] (in.)	R_y (in.)	Torsional Properties					
										Jx1,000[4] (in.)	C_w[6] (in.)	Y_o (in.)	m (in.)	R_o (in.)	β
SBR/43	0.0468	40	0.126	0.0047	0.1458	0.1936	0.0436	0.0400	0.5891	0.0916	5.56E-04	0.283	0.017	0.681	0.828

Load Tables

SBR Net Properties

Model No.	Area[2] (in.)	I_x[4] (in.)	S_x[3] (in.)	R_x (in.)	I_y[4] (in.)	S_y[3] (in.)	R_y (in.)	Torsional Properties					
								Jx1,000[4] (in.)	C_w[6] (in.)	Y_o (in.)	m (in.)	R_o (in.)	β
SBR/43	0.085	0.0028	0.0097	0.1816	0.0120	0.0184	0.3765	0.0617	3.43E-05	0.355	0.141	0.548	0.581

Load Tables

SBR Allowable Member Strengths

Model No.	M_a (F_y) (in.-lb.)	M_a (12" o.c.) (in.-lb.)	M_a (16" o.c.) (in.-lb.)	Ma (24" o.c.) (in.-lb.)	P_a (12" o.c.) (lb.)	P_a (16" o.c.) (lb.)	P_a (24" o.c.) (lb.)
SBR/43	369	369	369	360	945	904	618

1. Net section properties are based a section that excludes all material that is interrupted by the slots.
2. Member strengths are based on DSM Analysis (non-prequalified section, $\Omega = 2.0$).
3. $C_b = 1.67$ has been applied to M_a to account for a triangular moment diagram with zero end moment.

Load Tables

SBR/43 Maximum Bridging Distance (ft.)

Stud Spacing (in.)	Stud Section	Stud Thickness mil (ga.)	Lateral Stud Pressure (psf)									
			5	10	15	20	25	30	35	40	45	50
12	362S162	33 (20)	8	8	8	8	7	6	5	4	4	—
		43 (18)	8	8	8	8	8	8	7	6	5	5
		54 (16)	8	8	8	8	8	8	8	7	7	6
		68 (14)	8	8	8	8	8	8	8	8	7	6
	362S200	33 (20)	8	8	8	7	6	5	4	—	—	—
		43 (18)	8	8	8	8	8	6	5	5	4	4
		54 (16)	8	8	8	8	8	8	6	6	5	4
		68 (14)	8	8	8	8	8	8	6	6	5	4
	600S162	33 (20)	8	8	8	8	8	7	6	5	4	4
		43 (18)	8	8	8	8	8	8	8	7	6	6
		54 (16)	8	8	8	8	8	8	8	8	8	7
		68 (14)	8	8	8	8	8	8	8	8	8	7
	600S200	33 (20)	8	8	8	7	6	5	4	—	—	—
		43 (18)	8	8	8	8	8	7	6	5	5	4
		54 (16)	8	8	8	8	8	8	7	6	6	5
		68 (14)	8	8	8	8	8	8	7	6	6	5
16	362S162	33 (20)	8	8	8	7	5	4	4	—	—	—
		43 (18)	8	8	8	8	7	6	5	4	4	—
		54 (16)	8	8	8	8	8	7	6	5	5	4
		68 (14)	8	8	8	8	8	8	6	6	5	4
	362S200	33 (20)	8	8	7	5	4	—	—	—	—	—
		43 (18)	8	8	8	7	6	5	4	—	—	—
		54 (16)	8	8	8	8	7	6	5	4	4	—
		68 (14)	8	8	8	8	7	6	5	4	4	—
	600S162	33 (20)	8	8	8	7	6	5	4	—	—	—
		43 (18)	8	8	8	8	8	7	6	5	5	4
		54 (16)	8	8	8	8	8	8	7	6	6	5
		68 (14)	8	8	8	8	8	8	7	6	6	5
	600S200	33 (20)	8	8	7	5	4	—	—	—	—	—
		43 (18)	8	8	8	8	6	5	4	4	—	—
		54 (16)	8	8	8	8	8	6	5	5	4	4
		68 (14)	8	8	8	8	8	6	5	5	4	4
24	362S162	33 (20)	8	8	6	4	—	—	—	—	—	—
		43 (18)	8	8	8	6	5	4	—	—	—	—
		54 (16)	8	8	8	7	6	5	4	—	—	—
		68 (14)	8	8	8	7	6	5	4	—	—	—
	362S200	33 (20)	8	7	5	—	—	—	—	—	—	—
		43 (18)	8	8	6	5	4	—	—	—	—	—
		54 (16)	8	8	7	5	4	—	—	—	—	—
		68 (14)	8	8	7	5	4	—	—	—	—	—
	600S162	33 (20)	8	8	7	5	4	—	—	—	—	—
		43 (18)	8	8	8	7	6	5	4	—	—	—
		54 (16)	8	8	8	8	7	6	5	4	4	—
		68 (14)	8	8	8	8	7	6	5	4	4	—
	600S200	33 (20)	8	7	5	—	—	—	—	—	—	—
		43 (18)	8	8	7	5	4	—	—	—	—	—
		54 (16)	8	8	8	6	5	4	—	—	—	—
		68 (14)	8	8	8	6	5	4	—	—	—	—

1. Tabulated solutions are for ASD lateral pressure. Contact Simpson Strong-Tie for LRFD solutions.
2. Lateral pressures shall be determined based on the load combinations of the applicable building code. For designs in accordance with the 2009 IBC and earlier, wind pressures are at the working stress level and may be used directly. For designs in accordance with the 2012 and later, wind pressures are at the strength level and must be multiplied by 0.6 for ASD load combinations.
3. Tabulated values are based on the minimum of the tested connection strength and the calculated SBR member strength. Studs must be checked separately for unbraced length.