

## The Seismic Ceiling Runner (SCR) OLMAR SUPPLY, INC.

- Designed to accommodate up to two inches of relative vertical movement of studs
- Allowable stud wall heights and lateral capacities are tabulated for conditions with installed gaps of 3/4 inch and 1 inch between the top of the stud and the SCR web

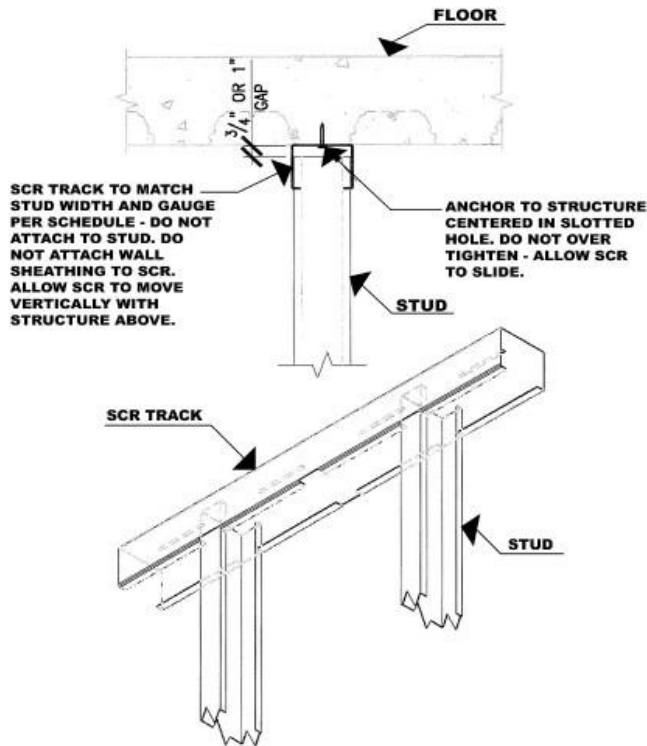
The allowable values were established by calculation and verified by full-scale laboratory testing in accordance with the recommendation of The Steel Stud Manufacturers Association (SSMA) for design gap.

SSMA recommends that the gap used for deflection track design be based on the wall studs having traveled half of their design movement away from the structure. For the SCR system, Design Gap = 1.5 x Initial Gap.

For the condition requiring a deflection capability of 3/4 inch up or down (1 1/2 inches total), the allowable capacity was calculated and tests were run using a gap of 1.5 x 3/4 inch = 1 1/8 inches.

Similarly, for the capacity of the system with 2 inches total movement, calculations were run using a gap of 1.5 x 1 inch = 1 1/2 inches.

The full scale testing was performed at the University of California at Irvine and was conducted in accordance with Section F of The Specification For The Design Of Cold-Formed Steel Structural Members, 1996 edition, published by the American Iron and Steel Institute (AISI).



## Maximum Allowable Interior Wall Heights & Stud Loads For DSI Seismic Ceiling Runner

Wall Depths	Allowable Movement	Total Movement Capability	Seismic Runner		Maximum Stud Height (ft)		Allowable Stud Reaction (lbs.)	
			Gauge	MILS	Spacing of Wall Studs (in.)		Spacing of Wall Studs (in.)	
					16	24	16	24
2 1/2", 3 5/8", 4", 6", or 8"	+/- 3/4"	1 1/2 inches	20	33	22	22	74	109
			18	43	38	28	125	139
			16	54	80	53	265	265
			14	68	104	69	345	346
2 1/2", 3 5/8", 4", 6", or 8"	+/- 1"	2 inches	20	33	17	17	55	83
			18	43	28	23	94	115
			16	54	66	44	218	218
			14	68	84	56	280	280

- NOTES:
1. This table provides a stud height based solely on the Seismic Ceiling Runner capacity. The SCR's attachment to the structure, the stud gauge and all other design calculations must be performed to ensure adequacy of the wall system
  2. Interior wall heights determined based upon 5 psf design load.
  3. No modification has been made to the loads or allowable stresses to account for wind loading.
  4. Runners available in 10" and 12" depths.
  5. All runners are available in 12 ga. and 10 ga steel.

## Structural Properties

Designation*	Depth	Design Thickness (In.)	Area (In. <sup>2</sup> )	Weight (lb/ft)	Gross Section				Effective Section	
					Strong Axis	Weak Axis	Strong Axis	Weak Axis	Section Modulus (S <sub>x</sub> )	Moment of Inertia (I <sub>x</sub> )
250SCR300-33	2-1/2"	0.035	0.294	1.000	0.301	0.398	0.150	0.290	0.119	0.215
250SCR300-43	2-1/2"	0.045	0.383	1.302	0.391	0.195	0.195	0.378	0.174	0.306
250SCR300-54	2-1/2"	0.057	0.480	1.633	0.492	0.664	0.243	0.470	0.246	0.425
250SCR300-68	2-1/2"	0.071	0.605	2.057	0.623	0.858	0.305	0.589	0.355	0.600
250SCR300-97	2-1/2"	0.102	0.862	2.932	0.897	1.280	0.432	0.831	0.631	1.032
362SCR300-33	3-5/8"	0.035	0.333	1.132	0.457	0.861	0.159	0.327	0.197	0.491
362SCR300-43	3-5/8"	0.045	0.434	1.475	0.594	1.124	0.207	0.425	0.291	0.701
362SCR300-54	3-5/8"	0.057	0.544	1.85	0.746	1.425	0.259	0.531	0.403	0.955
362SCR300-68	3-5/8"	0.071	0.685	2.33	0.941	1.824	0.324	0.665	0.568	1.320
362SCR300-97	3-5/8"	0.102	0.927	3.323	1.348	2.684	0.459	0.938	0.978	2.197
400SCR300-33	4"	0.035	0.346	1.176	0.512	1.061	0.162	0.338	0.219	0.601
400SCR300-43	4"	0.045	0.451	1.532	0.665	1.384	0.210	0.439	0.334	0.878
400SCR300-54	4"	0.057	0.565	1.922	0.835	1.754	0.263	0.548	0.461	1.190
400SCR300-68	4"	0.071	0.712	2.421	1.045	2.240	0.330	0.687	0.647	1.637
400SCR300-97	4"	0.102	1.015	3.45	1.508	3.285	0.466	0.968	1.104	2.702
600SCR300-33	6"	0.035	0.415	1.411	0.833	2.559	0.171	0.384	0.331	1.383
600SCR300-43	6"	0.045	0.541	1.839	1.083	3.338	0.223	0.498	0.557	2.144
600SCR300-54	6"	0.057	0.679	2.307	1.359	4.212	0.278	0.622	0.822	3.018
600SCR300-68	6"	0.071	0.855	2.905	1.713	5.351	0.349	0.779	1.128	4.072
600SCR300-97	6"	0.102	1.218	4.142	2.443	7.763	0.493	1.097	1.862	6.524
800SCR300-33	8"	0.035	0.484	1.647	1.200	4.887	0.177	0.416	0.444	2.511
800SCR300-43	8"	0.045	0.631	2.145	1.582	6.372	0.231	0.540	0.738	3.880
800SCR300-54	8"	0.057	0.792	2.692	1.959	8.028	0.288	0.675	1.180	5.735
800SCR300-68	8"	0.071	0.997	3.390	2.466	10.171	0.362	0.845	1.711	7.977
800SCR300-97	8"	0.102	1.422	4.833	3.513	14.678	0.511	1.189	2.763	12.547

\* MEMBER IDENTIFICATION

600 SCR 300 - 54 / 137

1. **MEMBER DEPTH:** All member depths are taken in 1/100 inches. (Example: 6" = 600/100 inches)
2. **STYLE:** Seismic Ceiling Runner
3. **FLANGE WIDTH:** Flange widths are taken in 1/100 inches.
4. **MATERIAL THICKNESS:** The minimum base metal thickness in mils. (Example: 0.054 in. = 54 mils; 1 mil = 1/1000 in.) Minimum base metal thickness represents 95% of the design thickness.
5. **REQUIRED STUD FLANGE WIDTH:** The stud size corresponding to the notch size in the SCR return in 1/100 inches. (Example: 1-3/8" = 1.375 = 1375/1000 inches wide stud flange).