



# ICC-ES REPORT ESR-2054

Reissued July 1, 2011

**STEELER<sup>®</sup> STEEL FRAMING PRODUCTS**

**STEELER<sup>®</sup> SLOTTED STUD<sup>®</sup>**



# 1-800-275-2279

### INTERIOR & EXTERIOR FRAMING

#### Steeler Manufactured Products

- \* Steel Studs & Track
- \* Smooth Products™
- \* Slotted Track
- \* Sound Resilient Channel
- \* Furring Channel
- \* Cold-Rolled Channel
- \* Angle
- \* Flat Stock
- \* Shaftwall Studs
- \* J Track
- \* Z-Furring Channel
- \* Custom Brake Shapes
- \* Steeler Slotted Studs™
- \* Pony Wall Supports



### INTERIOR FINISHING & DRYWALL

#### Steeler Product Offerings



- \* Hanger Wire
- \* U-Hank Tie Wire
- \* Engineered Slide Clips
- \* National Gypsum
- \* The Steel Network
- \* Knauf Insulation
- \* Westpac Materials
- \* Products from USG
- \* Murco Wall Products
- \* Award Metals Corner Beads
- \* Trim-Tex Drywall Products
- \* And more...



### FASTENERS

#### Steeler Product Offerings

- \* Super Steelers™\*
- \* Hi-Lo Super Steelers™
- \* Super Woodies™\*
- \* Super Framers\*
- \* Super Lathers\*
- \* Super Hex Framers\*
- \* Super Laminating
- \* Rust Resistant Screws
- \* Drywall Drillers\*
- \* Cement Board Screws
- \* Super Framing Drillers\*
- \* Wafer Head Drillers\*
- \* Super Hex Drillers\*
- \* And more...



\*Denotes availability in zinc coating

### TOOLS & ACCESSORIES

#### Steeler Product Offerings



- \* Bit Tips & Bit Tip Holders
- \* Magnetic Nut Runners
- \* Chop Saw Blades
- \* DeWalt
- \* Empire Levels
- \* Kett Tool Company
- \* ToolPro
- \* Pacific Laser Systems
- \* Wal-Board Tools
- \* Ramset Fastening Systems
- \* 3M Construction Supplies
- \* And more...



# ICC-ES Evaluation Report

## ESR-2054

Reissued July 1, 2011

This report is subject to renewal in two years.

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**DIVISION: 05 00 00—METALS**
**Section: 05 40 00—Cold-Formed Metal Framing**
**Section: 05 41 00—Structural Metal Stud Framing**
**Section: 05 42 00—Cold-Formed Metal Joists Framing**
**REPORT HOLDER:**
**STEELER, INC.**
**10023 MARTIN LUTHER KING JR WAY SOUTH**
**SEATTLE, WASHINGTON 98178**
**(206) 725-2500**
[www.steeler.com](http://www.steeler.com)
**EVALUATION SUBJECT:**
**COLD-FORMED STEEL FRAMING**
**1.0 EVALUATION SCOPE**
**Compliance with the following code:**

 2006 *International Building Code*® (IBC)

**Property evaluated:**

Structural

**2.0 USES**
**2.1 S-Members:**

S-members are used as load-bearing and nonload-bearing studs and joists in light-framed steel construction. S-members with a galvanized coating of G40 are limited to use in interior nonload-bearing walls with lateral loads of 5 psf or less.

**2.2 T-Members:**

T-members are used as tracks in load-bearing and nonload-bearing walls of light-framed steel construction. T-members with a galvanized coating of G40 are limited to use in interior nonload-bearing walls with lateral loads of 5 psf or less.

**2.3 U-, F-, and Z-, and A-Members:**

U-members are used in applications such as bridging and bracing and as main runners of suspended ceilings. F- and Z-members are used in applications such as furring for gypsum board and other sheathing materials. Z-members are also used as secondary framing members, such as purlins and girts. A-members are used for angle clips, struts, bridging and other miscellaneous framing.

**3.0 DESCRIPTION**
**3.1 General:**

The Steeler, Inc., cold-formed framing members are cold-formed from coils of steel at the Steeler facilities in Seattle,

Washington, and Newark, California. Framing members include S-members (C-sections), T-members (tracks), U-members (channels), F-members (hat-sections), Z-members (Z-shapes) and A-members (angles).

**3.2 Materials:**

Framing members having thickness designations of 30 mils or less are cold-formed from steel coils conforming to ASTM A 653 SS Grade 33 or Grade 50, Class 1, galvanized with a minimum G40 coating; or ASTM A 1003 Nonstructural Grade 33 (NS33). Framing members having thickness designations of 33 mils or more are cold-formed from steel coils conforming to ASTM A 653 SS Grade 33 or Grade 50, Class 1, galvanized with a minimum G60 coating; ASTM A 1003 Structural Grade 33 Type H (ST33H); or ASTM A 1003 Structural Grade 50 Type H (ST50H). The framing members have uncoated minimum base-metal thicknesses ranging from 18 to 118 mils [0.0179 to 0.118 inch (0.46 to 3.15 mm)], with design thicknesses as shown in the tables in this report.

**3.3 S-Members:**

S-members have depths ranging from 1.62 inches to 16 inches (41 to 406 mm) and widths ranging from 1.25 inches to 3.5 inches (32 to 89 mm). Dimensional details and available punch-outs are shown in Figures 1 and 2. Section properties of S-members are given in Table 1. The value for the coefficient  $\beta$  is determined as follows:

$$\beta = 1 - (x_o/r_o)^2$$

where  $x_o$  and  $r_o$  are as shown in Table 1.

**3.4 T-Members:**

T-members (tracks) are available in depths to match available S-members. See Figure 2 and Table 2 for dimensions and section properties.

**3.5 U-Members:**

U-members are channels with a flange width of 0.5 inch (12.7 mm) and depths ranging from 0.75 inch to 2.5 inches (19.1 to 64 mm). Dimensions and section properties of U-members are given in Table 3.

**3.6 F-Members:**

F-members are single hat sections, available in depths ranging from 0.50 inch to 1.50 inches (12.7 to 38 mm). Dimensions and section properties of F-members are given in Table 4.

**3.7 Z-Members:**

Z-members are available in depths ranging from 1 inch to 16 inches (25.4 to 406 mm). Dimensions and section properties of Z-members are given in Table 5.

### 3.8 A-Members:

A-members are equal-leg angle sections available in depths ranging from 1 inch to 7<sup>1</sup>/<sub>2</sub> inches (25 to 191 mm). Dimensions and section properties of A-members are given in Table 6.

## 4.0 DESIGN AND INSTALLATION

### 4.1 General:

Steeler, Inc., cold-formed steel members and their connections must be designed and installed in accordance with IBC Section 2210 using the section properties referenced in Section 3.

### 4.2 Design:

Nominal strength must be determined using the section properties shown in Tables 1 through 6. The allowable moments ( $M_{axo}$ ) given in the section property tables are for use with Allowable Strength Design (ASD), and are for flexural members installed with the compression flange continuously braced. For other conditions of compression flange bracing, the allowable moment must be determined in accordance with the AISI North American Specification for the Design of Cold-formed Structural Steel, including 2004 Supplement (AISI-NAS).

### 4.3 Installation:

The Steeler, Inc., cold-formed steel members must be installed in accordance with the approved plans, the general requirements of Section C of AISI-General, and this report. The approved plans must be available at the jobsite at all times during installation.

S-members used as wall studs must be fastened to the top and bottom tracks with one screw at each flange. Where Sheathing Braced Design is used, the sheathing must be fastened to the top and bottom tracks in accordance with Section C3(b) of AISI-WSD. S-members used as floor or ceiling joists must be fastened to the supporting construction.

### 4.4 Fire-resistance-rated Construction:

Steeler cold formed steel framing may be used in fire-resistance-rated construction where noncombustible steel studs or joists of comparable size, shape and thickness are indicated in IBC Tables 720.1(2) and 720.1(3).

## 5.0 CONDITIONS OF USE

The Steeler cold-formed framing members described in this report comply with, or are suitable alternatives to what is specified in, the code indicated in Section 1.0 of this report, subject to the following conditions:

- 5.1 The Steeler, Inc., cold formed steel framing must be installed in accordance with this report, the IBC and the approved plans. In the case of conflict between this report and the submitted plans, this report governs.
- 5.2 Uncoated minimum steel thickness of cold-formed members, as delivered to the jobsite, must not be less than 95 percent of the design thickness stated in this report.
- 5.3 Complete plans and calculations verifying compliance with this report and the IBC must be submitted to the code official for each project. The calculations and drawings must be prepared and sealed by a registered design professional where required by the statutes of the jurisdiction in which the project is constructed.
- 5.4 Products with a G40 coating are limited to use in interior, nonstructural, nonload-bearing walls, with a maximum transverse load of 5 psf (239 Pa).

## 6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Cold-formed Steel Framing Members (AC46), dated February 2011.

## 7.0 IDENTIFICATION

Each Steeler, Inc., member recognized in this report must have a legible label, stamp or embossment, at a maximum of 48 inches (1219 mm) on center, indicating the manufacturer's name (Steeler, Inc.); the evaluation report number (ESR-2054); the acronym "ICC-ES"; the minimum base-metal thickness (uncoated) in decimal inches or mils; minimum specified yield strength [if greater than 33 ksi (228 MPa)]; and coating grade (if G60 or greater).















TABLE 1—S-MEMBER (C-SHAPE) SECTION PROPERTIES<sup>1,2,3,4</sup> (Continued)

Table with columns: MEMBER ID DESIGNATION, FULL PROPERTIES, TORSIONAL PROPERTIES, 33 KSI EFFECTIVE PROPERTIES, 50 KSI EFFECTIVE PROPERTIES. Rows include properties like Area, Wt., Ix, Iy, Sx, Sy, r, rT, Sy(t), J, Cw, Io, Xc, Maxo, Ieff, Ixe, Sxet(t), Vay, Ase, Maxo, Ieff, Ixe, Sxet(t), Vay, Ase.















TABLE 2—T MEMBER (TRACK) SECTION PROPERTIES<sup>1,2</sup> (Continued)

MEMBER ID DESIGNATION	FULL PROPERTIES					TORSIONAL PROPERTIES					33 KSI EFFECTIVE PROPERTIES					50 KSI EFFECTIVE PROPERTIES				
	Area (in <sup>2</sup> )	Wt. (lb/ft)	I <sub>x</sub> (in <sup>4</sup> )	I <sub>y</sub> (in <sup>4</sup> )	R <sub>y</sub> (in)	J 10 <sup>3</sup> in <sup>4</sup>	C <sub>w</sub> (in <sup>6</sup> )	r <sub>o</sub> (in)	X <sub>o</sub> (in)	MaxO (k-in)	I <sub>xe</sub> (in <sup>4</sup> )	S <sub>xe(t)</sub> (in <sup>3</sup> )	A <sub>e</sub> (in <sup>2</sup> )	MaxO (k-in)	I <sub>xe</sub> (in <sup>4</sup> )	S <sub>xe(f)</sub> (in <sup>3</sup> )	A <sub>e</sub> (in <sup>2</sup> )			
400T150-024	0.1732	0.5889	0.4445	1.6020	0.0370	0.4621	0.0353	1.8645	-0.8345	2.332	0.2992	0.1180	0.0605	2.932	0.2644	0.0979	0.0512			
400T150-027	0.1981	0.6735	0.5085	1.6023	0.0422	0.4614	0.0529	1.8639	-0.8329	3.047	0.3730	0.1542	0.0771	---	---	---	---			
400T150-030	0.2183	0.7423	0.5607	1.6026	0.0464	0.4609	0.0708	1.8635	-0.8317	3.614	0.4314	0.1829	0.0920	---	---	---	---			
400T150-033	0.2421	0.8230	0.6219	1.6029	0.0513	0.4603	0.0986	1.8629	-0.8302	4.122	0.4884	0.2086	0.1108	---	---	---	---			
400T150-043	0.3153	1.0720	0.8111	1.6040	0.0662	0.4583	0.2138	1.8613	-0.8256	5.806	0.6736	0.2938	0.1780	---	---	---	---			
400T150-054	0.3955	1.3447	1.0256	1.6103	0.0823	0.4562	0.4223	1.8644	-0.8214	7.904	0.9006	0.4000	0.2683	11.216	0.8614	0.3746	0.2299			
400T150-068	0.4980	1.6932	1.3061	1.6195	0.1024	0.4534	0.8439	1.8693	-0.8161	10.854	1.2151	0.5493	0.4023	15.397	1.1633	0.5143	0.3493			
400T150-097	0.7097	2.4128	1.9043	1.6381	0.1422	0.4476	2.4466	1.8793	-0.8049	18.552	1.9044	0.8744	0.7097	25.014	1.8498	0.8355	0.6424			
400T200-033	0.2767	0.9407	0.7681	1.6663	0.1129	0.6388	0.1104	2.1724	-1.2388	4.348	0.5431	0.2200	0.1120	---	---	---	---			
400T200-043	0.3604	1.2253	1.0022	1.6676	0.1462	0.6369	0.2443	2.1700	-1.2338	6.153	0.7527	0.3114	0.1807	---	---	---	---			
400T200-054	0.4521	1.5372	1.2683	1.6749	0.1821	0.6347	0.4828	2.1724	-1.2292	8.436	1.0126	0.4269	0.2738	11.902	0.9637	0.3975	0.2335			
400T200-068	0.5693	1.9356	1.6173	1.6855	0.2273	0.6319	0.9647	2.1765	-1.2235	11.718	1.3789	0.5930	0.4138	16.472	1.3108	0.5502	0.3569			
400T200-097	0.8114	2.7586	2.3646	1.7071	0.3181	0.6261	2.7973	2.1848	-1.2112	19.467	2.2253	0.9852	0.7497	27.404	2.1220	0.9153	0.6668			
400T225-043	0.3829	1.3020	1.0977	1.6931	0.2015	0.7254	0.2596	2.3422	-1.4468	6.290	0.7876	0.3183	0.1816	---	---	---	---			
400T225-054	0.4804	1.6334	1.3897	1.7008	0.2513	0.7233	0.5130	2.3442	-1.4421	8.641	1.0619	0.4373	0.2756	12.171	1.0089	0.4065	0.2347			
400T225-068	0.6050	2.0568	1.7730	1.7119	0.3140	0.7205	1.0251	2.3479	-1.4362	12.045	1.4506	0.6095	0.4175	16.885	1.3756	0.5640	0.3593			
400T225-097	0.8622	2.9315	2.5947	1.7347	0.4404	0.7147	2.9726	2.3551	-1.4235	20.203	2.3585	1.0224	0.7612	28.284	2.2401	0.9447	0.6744			
400T250-043	0.4055	1.3786	1.1932	1.7154	0.2682	0.8133	0.2749	2.5247	-1.6643	6.409	0.8199	0.3243	0.1822	---	---	---	---			
400T250-054	0.5087	1.7296	1.5110	1.7235	0.3347	0.8111	0.5432	2.5263	-1.6595	8.819	1.1076	0.4463	0.2770	12.405	1.0507	0.4143	0.2356			
400T250-068	0.6406	2.1780	1.9286	1.7351	0.4186	0.8084	1.0855	2.5294	-1.6534	12.324	1.5170	0.6237	0.4204	17.241	1.4357	0.5759	0.3612			
400T250-097	0.9131	3.1044	2.8248	1.7589	0.5883	0.8027	3.1479	2.5356	-1.6404	20.821	2.4813	1.0637	0.7702	29.030	2.3491	0.9696	0.6803			
400T300-054	0.5653	1.9220	1.7537	1.7613	0.5482	0.9848	0.6037	2.9158	-2.1047	9.112	1.1900	0.4611	0.2790	12.795	1.1261	0.4273	0.2370			
400T300-068	0.7119	2.4205	2.2398	1.7738	0.6866	0.9821	1.2064	2.9178	-2.0984	12.781	1.6367	0.6468	0.4246	17.830	1.5439	0.5955	0.3640			
400T300-097	1.0148	3.4502	3.2850	1.7992	0.9677	0.9765	3.4985	2.9219	-2.0848	21.810	2.7020	1.1037	1.4162	30.236	2.5454	1.0099	0.6889			
550T100-024*	0.1856	0.6310	0.7314	1.9853	0.0128	0.2621	0.0379	2.0400	-0.3891	2.943	0.5157	0.1489	0.0603	3.838	0.4652	0.1282	0.0511			
550T100-027	0.2122	0.7216	0.8365	1.9854	0.0145	0.2615	0.0567	2.0398	-0.3879	3.700	0.6284	0.1872	0.0769	---	---	---	---			
550T100-030	0.2339	0.7954	0.9222	1.9855	0.0159	0.2610	0.0759	2.0396	-0.3869	4.361	0.7237	0.2207	0.0916	---	---	---	---			
550T100-033	0.2594	0.8818	1.0225	1.9855	0.0176	0.2605	0.1035	2.0394	-0.3858	5.178	0.8384	0.2620	0.1103	---	---	---	---			
550T100-043	0.3378	1.1486	1.3322	1.9858	0.0226	0.2587	0.2291	2.0388	-0.3824	7.921	1.2076	0.4009	0.1768	---	---	---	---			
550T100-054	0.4238	1.4409	1.6779	1.9898	0.0279	0.2568	0.4526	2.0418	-0.3792	11.216	1.6372	0.5676	0.2656	15.377	1.5433	0.5136	0.2281			
550T125-024*	0.1979	0.6730	0.8286	2.0460	0.0240	0.3483	0.0404	2.1472	-0.5504	3.004	0.5433	0.1520	0.0609	3.903	0.4880	0.1304	0.0514			
550T125-027	0.2264	0.7697	0.9478	2.0462	0.0274	0.3476	0.0604	2.1469	-0.5491	3.789	0.6640	0.1917	0.0777	---	---	---	---			
550T125-030	0.2495	0.8484	1.0449	2.0463	0.0301	0.3471	0.0810	2.1467	-0.5481	4.476	0.7666	0.2265	0.0928	---	---	---	---			
550T125-033	0.2767	0.9407	1.1587	2.0465	0.0332	0.3465	0.1104	2.1464	-0.5469	5.331	0.8907	0.2698	0.1119	---	---	---	---			
550T125-043	0.3604	1.2253	1.5100	2.0470	0.0428	0.3447	0.2443	2.1457	-0.5430	8.240	1.2935	0.4170	0.1803	---	---	---	---			
550T125-054	0.4521	1.5372	1.9031	2.0517	0.0531	0.3426	0.4828	2.1489	-0.5396	11.822	1.7700	0.5982	0.2728	16.031	1.6559	0.5354	0.2329			
550T125-068	0.5693	1.9356	2.4125	2.0586	0.0658	0.3400	0.9647	2.1540	-0.5352	15.973	2.3534	0.8083	0.4109	23.053	2.2777	0.7700	0.3550			



















TABLE 5—Z-MEMBER SECTION PROPERTIES<sup>1,2</sup> (Continued)

Table with columns: MEMBER IDENTIFICATION, DIMENSIONS (A, B, C, Area, Wt., Ix, Rx, Iy, ry, J, Cw, Ix, Iy, Ae, Vav, Sxe, Ixe, Maxo), 33 ksi EFFECTIVE PROPERTIES, and 50 ksi EFFECTIVE PROPERTIES. Rows list member types like 350Z200-033, 350Z200-043, 350Z200-054, etc.

For S1: 1 inch = 25.4 mm, 1 in² = 645 mm², 1 in³ = 1.64x10⁴ mm³, 1 in⁴ = 4.16x10⁵ mm⁴, 1 in⁵ = 2.69x10⁶ mm⁵, 1 kip-in = 113.3 N-m, 1 kip = 4.4 kN

- 1. Xo = 0 in.
2. The last three digits of the Member ID is the member thickness in mils. For member thickness (T) in inches and inside bend radius (R), see table in Figure 1. See Figure 5 for member illustration.



TABLE 6—EQUAL LEG ANGLE SECTION PROPERTIES (Continued)

MEMBER IDENTIFICATION <sup>2,3</sup>	FULL PROPERTIES										TORSIONAL PROPERTIES					33 ksi EFFECTIVE PROPERTIES					50 ksi EFFECTIVE PROPERTIES				
	Area (in <sup>2</sup> )	Wt. (lb/ft)	I <sub>x</sub> , I <sub>y</sub> (in <sup>4</sup> )	I <sub>x</sub> , I <sub>y</sub> (in)	r <sub>x</sub> , r <sub>y</sub> (in)	S <sub>x</sub> (t), S <sub>y</sub> (r) (in <sup>3</sup> )	S <sub>x</sub> (b), S <sub>y</sub> (l) (in <sup>3</sup> )	R <sub>z</sub> <sup>1</sup> (in)	J (10 <sup>3</sup> in <sup>4</sup> )	C <sub>w</sub> (10 <sup>6</sup> in <sup>6</sup> )	r <sub>o</sub> (in)	X <sub>o</sub> (in)	Maxo (k-in)	I <sub>xe</sub> (in <sup>4</sup> )	S <sub>xe</sub> (t) (in <sup>3</sup> )	V <sub>ay</sub> (k)	A <sub>e</sub> (in <sup>2</sup> )	Maxo (k-in)	I <sub>xe</sub> (in <sup>4</sup> )	S <sub>xe</sub> (t) (in <sup>3</sup> )	V <sub>ay</sub> (k)	A <sub>e</sub> (in <sup>2</sup> )			
400A400-068	0.5610	1.9072	0.9211	1.2814	0.3106	0.8904	0.8027	0.9506	2.500	2.2964	-0.9973	0.383	0.0724	0.0194	3.3720	0.1910	0.338	0.0429	0.0113	5.1090	0.1603				
400A400-097	0.7944	2.7009	1.2961	1.2773	0.4393	1.2351	0.7966	2.7387	14.000	2.2900	-0.9952	1.492	0.2677	0.0755	4.7140	0.3751	1.301	0.1587	0.0435	7.1430	0.3174				
400A400-118	0.9649	3.2808	1.5669	1.2743	0.5331	1.4776	0.7920	4.9616	37.000	2.2850	-0.9933	3.224	0.5523	0.1631	5.6710	0.5441	2.786	0.3286	0.0931	8.5920	0.4632				
450A450-097	0.8961	3.0467	1.8548	1.4387	0.5577	1.5794	0.8987	3.0894	16.000	2.5790	-1.1206	1.351	0.2785	0.0684	5.3430	0.3801	1.184	0.1651	0.0395	8.0960	0.3207				
450A450-118	1.0891	3.7031	2.2450	1.4357	0.6773	1.8938	0.8941	5.6002	42.000	2.5741	-1.1188	2.915	0.5783	0.1475	6.4390	0.5535	2.532	0.3432	0.0846	9.7560	0.4694				
500A500-097	0.9978	3.3925	2.5547	1.6001	0.6903	1.9661	1.0008	3.4400	18.000	2.8679	-1.2458	1.238	0.2880	0.0626	5.9730	0.3841	1.088	0.1706	0.0363	9.0500	0.3233				
500A500-118	1.2133	4.1253	3.0948	1.5971	0.8388	2.3618	0.9963	6.2388	47.000	2.8631	-1.2442	2.665	0.6003	0.1349	7.2080	0.5610	2.326	0.3559	0.0777	10.9210	0.4744				
550A550-097	1.0995	3.7382	3.4120	1.7615	0.8370	2.3952	1.1029	3.7906	20.000	3.1568	-1.3710	1.144	0.2965	0.0579	6.6020	0.3874	1.009	0.1755	0.0337	10.0030	0.3255				
550A550-118	1.3375	4.5476	4.1360	1.7585	1.0175	2.8815	1.0984	6.8774	53.000	3.1521	-1.3696	2.459	0.6197	0.1245	7.9760	0.5670	2.155	0.3673	0.0720	12.0850	0.4783				
600A600-097	1.2012	4.0840	4.4410	1.9229	0.9979	2.8666	1.2050	4.1412	22.000	3.4456	-1.4962	1.066	0.3041	0.0539	7.2310	0.3900	0.941	0.1799	0.0314	10.8850	0.3272				
600A600-118	1.4617	4.9699	5.3880	1.9198	1.2135	3.4530	1.2005	7.5161	58.000	3.4410	-1.4948	2.288	0.6372	0.1158	8.7450	0.5720	2.010	0.3774	0.0671	13.2490	0.4816				
650A650-118	1.5859	5.3922	6.8690	2.0812	1.4267	4.0762	1.3027	8.1547	60.000	3.7299	-1.6201	2.141	0.6531	0.1084	9.5130	0.5761	1.886	0.3867	0.0630	14.4140	0.4844				
700A700-118	1.7101	5.8145	8.6010	2.2426	1.6572	4.7511	1.4048	8.7933	70.000	4.0188	-1.7453	2.015	0.6675	0.1020	10.2820	0.5797	1.778	0.3951	0.0594	15.5780	0.4867				
750A750-118	1.8343	6.2367	10.6010	2.4040	1.9050	5.4778	1.5069	9.4319	70.000	4.3076	-1.8704	1.905	0.6809	0.0964	11.0500	0.5827	1.682	0.4028	0.0562	16.2350	0.4887				

For SI: 1 inch = 25.4 mm, 1 in<sup>2</sup> = 645 mm<sup>2</sup>, 1 in<sup>3</sup> = 1.64x10<sup>4</sup> mm<sup>3</sup>, 1 in<sup>4</sup> = 4.16x10<sup>5</sup> mm<sup>4</sup>, 1 in<sup>6</sup> = 2.69x10<sup>6</sup> mm<sup>6</sup>, 1 kip-in = 113.3 N-m, 1 kip = 4.4 kN

1. Radius of gyration, r<sub>z</sub>, is minimum about the axis rotation of 45 degrees.

2. Member identification provides dimensions as shown the example below (See Figure 6):

Example: 150A150-054

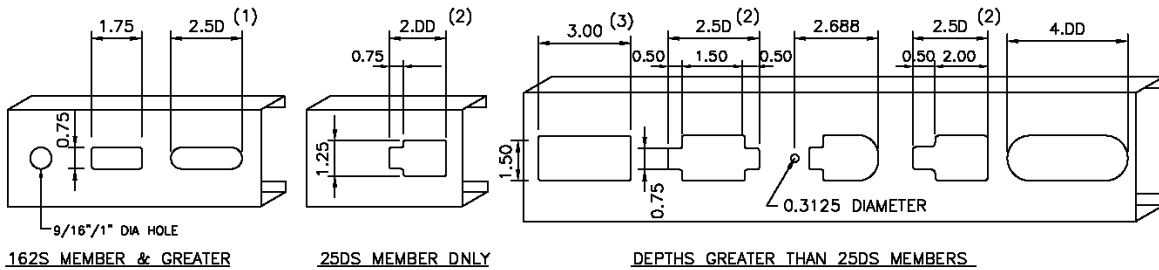
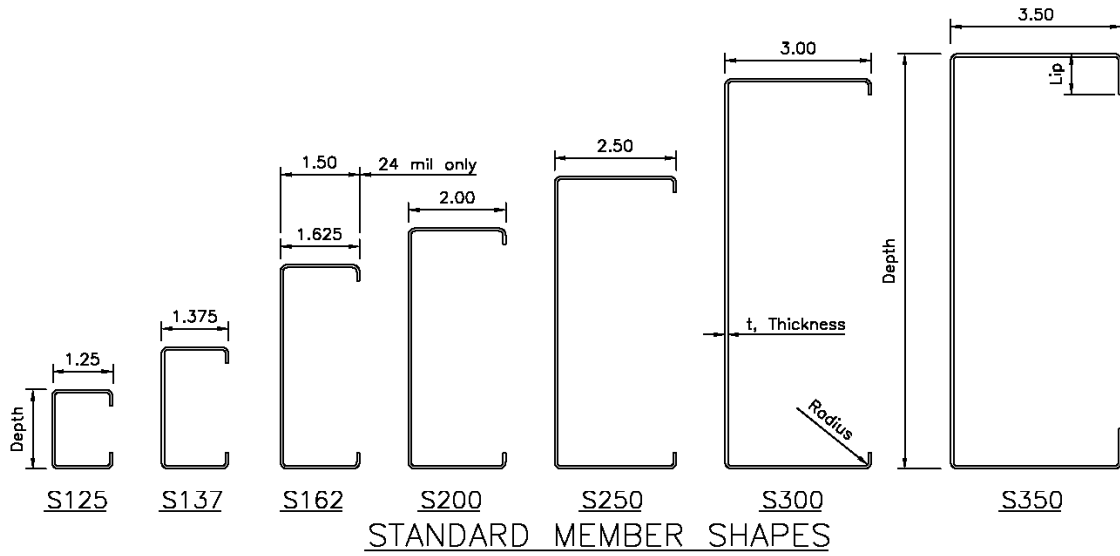
First number: 150 = length of 1 1/2 inches.

Second letter: A = Angle.

Third number: 150 = Other leg length of 1 1/2 inches.

Last number: 054 = minimum thickness in mils, 54 mil = 0.054 inches.

3. The last three digits of the Member ID is the member thickness in mils. For member thickness (T) in inches and inside bend radius (R), see table in Figure 1.



**VARIOUS CENTERLINE PUNCHOUTS AVAILABLE**

**Note:** 2.50" Diameter Punchout available on special order for depths 5.5" & greater

- PUNCHOUT NOTES:**  
 (1) 18-54 mils 162S Only  
 (2) 18-68 mils Only  
 (3) 3D-68 mils Only

DESIGNATED MEMBER THICKNESS (mils=0.001")	T DESIGN THICKNESS (in.)	t DN-SITE THICKNESS (in.)	Ri INSIDE RADIUS (in.)	LIP LENGTH SCHEDULE, INCHES							
				MEMBER TYPE							
				S125	S137	S150	S162	S200	S250	S300	S350
18	0.0188	0.0179	0.0843	0.20	-	-	-	-	-	-	-
24	0.0247	0.0235	0.0814	0.25	0.31	0.34	0.34	-	-	-	-
27	0.0283	0.0269	0.0796	0.20	0.31	-	0.34	-	-	-	-
30	0.0312	0.0296	0.0782	0.20	0.31	-	0.34	0.36	-	-	-
33	0.0346	0.0329	0.0764	0.20	0.31	-	0.34	0.36	-	-	-
43	0.0451	0.0428	0.0712	0.20	0.36	-	0.50	0.50	0.50	-	-
54	0.0566	0.0538	0.0849	0.20	0.41	-	0.50	0.50	0.53	0.57	0.80
68	0.0713	0.0677	0.1069	0.20	0.45	-	0.51	0.56	0.61	0.66	0.80
97	0.1017	0.0966	0.1525	0.26	0.48	-	0.58	0.67	0.75	0.75	0.80
118	0.1242	0.1180	0.1863	0.38	0.58	-	0.63	0.75	0.75	0.75	0.80

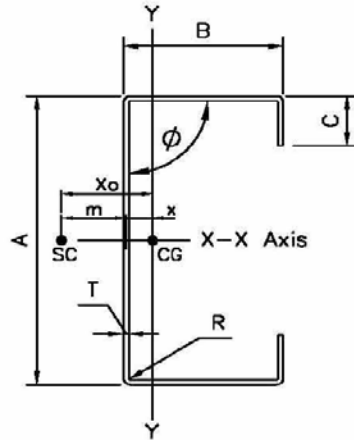
- NOTES:**  
 1. ALL THICKNESSES ARE UNCOATED BASE METAL THICKNESS.  
 2. MINIMUM ON-SITE THICKNESS EQUALS 95% DESIGN THICKNESS PER AISI SPECIFICATIONS.  
 3. INSIDE RADIUS IS THE LARGER OF:  $(Ri = 3/32 - T/2)$  or  $(Ri = 2T - T/2 = 1.5T)$   
 4. ALL PUNCHOUTS @ 24" OC AND NO CLOSER THAN 10" FROM END OF MEMBER.  
 5. ALL DIMENSIONS SHOWN ARE INCHES.

**S-Member Details**

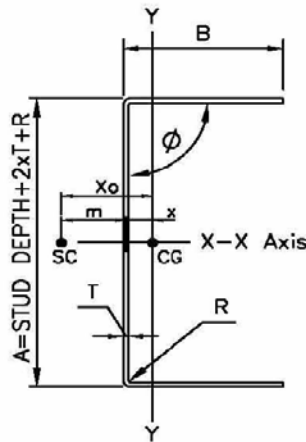
Steeler Slatted Studs have the same properties and details as S-Member

Note: Steeler Slatted Studs must be limited to nonload-bearing wall applications.

**FIGURE 1—S-MEMBER (C-SHAPE) DETAILS**



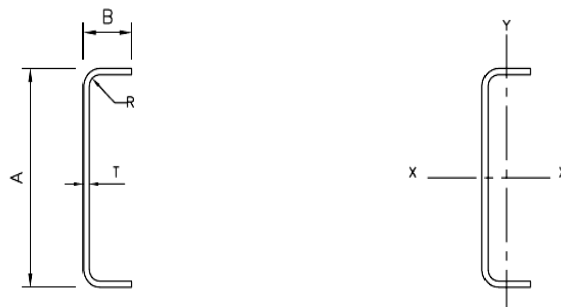
STEELER S-Member & N-Member Property Dimensions



STEELER T-Member Property Dimensions

SC = SHEAR CENTER  
 CG = CENTER OF GRAVITY  
 \* Negative sign indicates X<sub>0</sub> is measured in negative x direction.

**FIGURE 2—S-MEMBER (C-SHAPE) AND T-MEMBER (TRACK) DIMENSIONS**



**FIGURE 3—STEELER U-MEMBER (COLD ROLLED CHANNEL)**

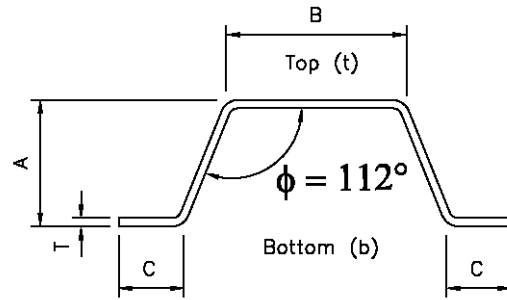
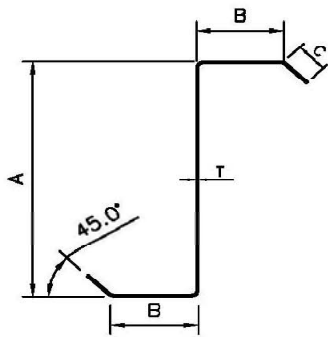


FIGURE 4—STEELER F-MEMBER



Z-Members with Lips

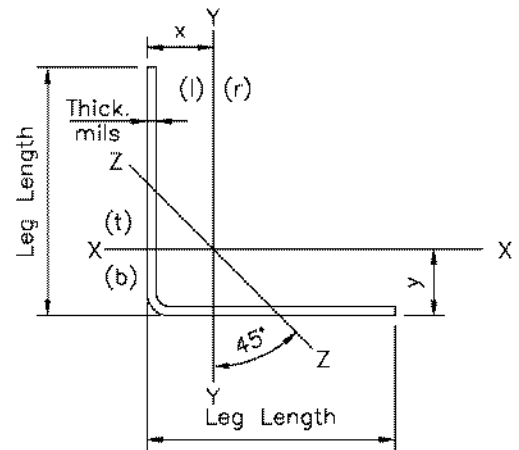
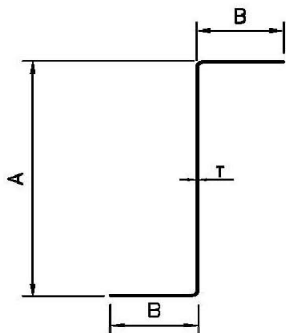


FIGURE 6—STEELER A-MEMBERS



Z-Members without Lips

FIGURE 5—STEELER Z-MEMBERS



**SUGGESTED ALLOWABLE PULLOUT AND SHEAR VALUES FOR SCREWS IN POUNDS**

GAUGE	THICKNESS, INCHES	#6 SCREW DIA. = .135 IN. MIN.		#8 SCREW DIA. = .161 IN. MIN.		#10 SCREW DIA. = .183 IN. MIN.		#12 SCREW DIA. = .209 IN. MIN.	
		PULLOUT, LBS	SHEAR, LBS	PULLOUT, LBS	SHEAR, LBS	PULLOUT, LBS	SHEAR, LBS	PULLOUT, LBS	SHEAR, LBS
25	0.0188	37	137	N/A	N/A	N/A	N/A	N/A	N/A
22	0.0283	52	161	66	194	N/A	N/A	N/A	N/A
20	0.0346	85	207	96	251*	129	272	121	287
18	0.0451	136	274*	149	327*	184	371*	192	421
16	0.0566	183	320	184	366	241	499	267	625
14	0.0713	N/A	N/A	N/A	N/A	349	517	370	657
12	0.1017	N/A	N/A	N/A	N/A	404	547	509	718

**NOTES:**

1. Values for 25 and 22 gauge are based on ultimate values divided by a safety factor of three. Values for 20 through 12 gauge based on lesser of the ultimate value divided by a safety factor of 3 and the allowable bearing capacity per AISI Para. E3.3 for single shear and no washer.  $P_a = F_p \cdot \text{dia.} \cdot \text{thickness} / 2.22$ .  $F_u = 45$  ksi for 25, 22, 20 and 18 gauges and  $F_u = 65$  ksi for 16, 14 and 12
2. Values with asterik (\*) indicates bearing capacity governs. Those with N/A indicate screw is not typically used with that gauge thickness.
3. Suggested minimum of 0.50" edge margin and spacing for #6, #8, #10 and #12 screws. Distances based on AISI paragraph E3.1.
4. Engineer should confirm screws ultimate failure data and the appropriate factor of safety for a particular loading condition.
5. When joining materials of different gauges the value for the thinner material shall be used.

**SUGGESTED ALLOWABLE FILLET AND FLARE GROOVE WELD LOADS IN LBS/INCH**

GAUGE	THICKNESS	WELD SIZE	ALLOWABLE LOAD
20	0.0346	1/8"	467 lb / in
18	0.0451	1/8"	609 lb / in
16	0.0566	1/8"	1104 lb / in
14	0.0713	1/8"	1390 lb / in
12	0.1017	5/32"	1983 lb / in

**NOTES:**




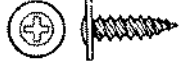

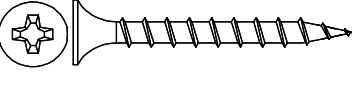


1. Values may be increased by 1.33 for wind or seismic.
2. When joining materials of different gauges the value for the thinner material shall be used.
3. Values are based upon  $F_u$ , the ultimate tensile strength of the material, with the allowable load =  $0.75(t)(F_u) / 2.5$  per AISI Section E2.
4.  $F_y = 33$  ksi and  $F_u = 45$  ksi for 20 and 18 gauge.  $F_y = 50$  ksi and  $F_u = 65$  ksi for 16, 14 and 12 gauge.

# STEELER<sup>®</sup> INC.

## Construction Screws

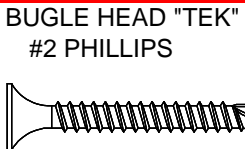

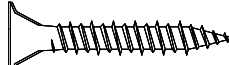

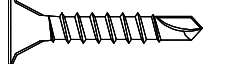

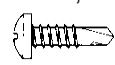

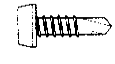

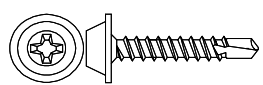


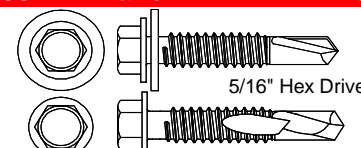
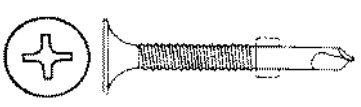


STEELER<sup>®</sup> Construction Screws are Produced in ISO 9002 & ISO 14001 Certified Environments and Meet or Exceed one or more of the following ASTM Designations: C 954, C 1002, or C 1513.

DESCRIPTION	PART #	SIZE	QTY/BOX	NET WT	APPLICATION
<b>SUPER STEELERS™</b>	168	# 6 X 1"	10M	28.6	1/4"-1/2" GYP. TO 25GA-20GA STEEL
	268 & 268YZ	# 6 X 1-1/8"	10M	30.8	1/2"- 5/8" GYP. TO 25GA-20GA STEEL
	368	# 6 X 1-1/4"	8M	27.8	5/8" GYP. TO 25GA-20GA STEEL
	468 & 468YZ	# 6 X 1-5/8"	5M	21.6	DOUBLE LAYERS OF GYPSUM TO 25GA & 20GA STEEL
	768	# 6 X 2"	5M	26.6	MULTIPLE LAYERS OF GYPSUM OR OTHER MATERIALS TO 25GA & 20GA STEEL
	868 & 868YZ	# 8 X 2-1/4"	4M	22	DEEP RECESS SHARP POINT
	968 & 968YZ	# 7 X 2-1/2"	2.5M	19.1	
	1168 & 1168YZ	# 8 X 3"	2M	20.2	
	1268 & 1268YZ	# 10 X 3-1/2"	1M	18	
	1368 & 1368YZ	# 10 X 4"	1M	20.7	
	1568 & 1568YZ	# 10 X 5"	1M	24.6	
1768 & 1768YZ	# 10 X 6"	1M	29		
* Z or YZ denotes availability in zinc coating.					
<b>HI-LO SUPER STEELERS™</b>	368HL	# 6 X 1-1/4"	8M	27.7	5/8" GYP. TO 26GA-20GA STEEL
	468HL	# 6 X 1-5/8"	5M		HIGH-LOW THREAD - FASTER MORE HOLDING IN LIGHT GAUGES
	768HL	# 6 X 2"	5M		
<b>SUPER FRAMER</b>	23 & 23Z	# 7 X 7/16"	15M	37.6	FRAMING 25 GA & 20 GA STEEL DEEP RECESS SHARP POINT
	<b>SUPER LATHERS</b>				
	31 & 31Z	# 8 X 1/2"	10M	35.2	METAL LATH TO 25 GA & 20 GA STEEL
	32 & 32Z	# 8 X 1"	5M	26.6	
	33 & 33Z	# 8 X 1-1/4"	5M	31.2	FRAMING 25 GA & 20 GA STEEL
	<b>SUPER HEX FRAMERS</b>				
	25AZ	# 8 X 1/2"	10M	29.3	MULTIPURPOSE SHEET METAL AND HVAC WORK. FRAMING 25 GA & 20 GA STEEL STUD AND TRACK. SIDING AND AWNING TO WOOD FRAME
	25BZ	# 8 X 3/4"	10M	37	
	25CZ	# 8 X 1"	8M	37.9	
	25DZ	# 8 X 1-1/4"	5M	27.9	
	25EZ	# 8 X 1-1/2"	5M	32.3	
	HWH14-1	# 14 X 1"	4M	55.5	
HWH14-114	# 14 X 1-1/4"				
<b>SUPER WOODIES™</b>	100 & 100YZ	# 6 X 1"	10M	28.6	1/4" - 1/2" GYPSUM TO WOOD
	200 & 200YZ	# 6 X 1-1/8"	10M	30.8	"
	300 & 300YZ	# 6 X 1-1/4"	8M	27.8	1/2" - 5/8" GYPSUM TO WOOD
	400 & 400YZ	# 6 X 1-5/8"	5M	21.6	DOUBLE LAYER OF GYPSUM TO WOOD
	700 & 700YZ	# 6 X 2"	5M	26.6	MULTIPLE LAYERS OF GYPSUM OR OTHER MATERIALS TO WOOD
	800 & 800YZ	# 6 X 2-1/4"	4M	22	DEEP RECESS SHARP POINT
	900 & 900YZ	# 7 X 2-1/2"	2.5M	19.1	
	1100 & 1100YZ	# 8 X 3"	2M	20.2	
<b>SUPER LAMINATING</b>	12	# 10 X 1-1/2"	5M	38.7	TEMPORARY GYPSUM TO GYPSUM
	<b>RUST RESISTANT SCREWS</b>				
	300R1K	# 6 X 1-1/4"	8M	BUGLE HEAD	COARSE THREAD, SHARP PT. 1000 HR
	400R1K	# 6 X 1-5/8"	5M	BUGLE HEAD	COARSE THREAD, SHARP PT. 1000 HR
	700R1K	# 7 X 2"	5M	BUGLE HEAD	COARSE THREAD, SHARP PT. 1000 HR
	900R1K	# 8 X 2-1/2"	2.5M	BUGLE HEAD	COARSE THREAD, SHARP PT. 1000 HR
	1100R1K	# 8 X 3"	2M	BUGLE HEAD	COARSE THREAD, SHARP PT. 1000 HR
	14R1K	# 6 X 1-1/4"	8M	BUGLE HEAD	FINE THREAD, DRILL PT., 1000 HR
	16R1K	# 7 X 1-7/8"	4M	BUGLE HEAD	FINE THREAD, DRILL PT., 1000 HR
	44R2KMAG	# 10 X 3/4"	5M	WAFER HEAD	HEAVY GAUGE FRAMING, 2000 HR
GRAY RUSPERT COATING, DEEP RECESS, FAST DRILL TIME RECOMMENDED FOR EXTERIOR SHEATHING APPLICATIONS AND HIGH MOISTURE AREAS (KITCHENS, BATHROOMS, ETC.)					
<b>CABINET SCREWS</b>	90-114	#6 X 1-1/4"	10M		CABINET SCREWS ARE USED FOR CABINET & FACE FRAME INSTALLATION WOOD SURFACE FROM SPLITTING
	90-112(Z)SQ	#6 X 1-1/2"	5M		
	90-212ZSQ	#8 X 2-1/2"	2.5M		

**Construction Screws**

**STEELER® Construction Screws are Produced in ISO 9002 & ISO 14001 Certified Environments and Meet or Exceed one or more of the following ASTM Designations: C 954, C 1002, or C 1513.**

DESCRIPTION	PART #	SIZE	QTY/BOX	NET WT	APPLICATION
<b>DRYWALL DRILLERS</b>	13	# 6 X 1"	10M	32.6	1/2" GYPSUM STEEL UP TO 12 GA.
 BUGLE HEAD "TEK" #2 PHILLIPS  DEEP RECESS FAST DRILL TIME	13.5 & 13.5Z	# 6 X 1-1/8"	10M	37.2	5/8" GYPSUM STEEL UP TO 12 GA.
	14 & 14Z	# 6 X 1-1/4"	8M	31.8	5/8" GYPSUM STEEL UP TO 12 GA.
	15 & 15Z	# 6 X 1-5/8"	5M	25.5	DOUBLE LAYERS OF GYPSUM
	16 & 16Z	# 6 X 1-7/8"	4M	23.5	UP TO 12 GA.
	30S	# 8 X 2-3/8"	2M	18.5	MULTIPLE LAYERS OF GYPSUM
	30M & 30MZ	# 8 X 2-5/8"	2M	20	UP TO 12 GA.
	30L	# 8 X 3"	2M	23.8	
<b>CEMENT BOARD SCREWS</b>	CB368	# 8 X 1-1/4"	5M	MULTI-LAYERS C.B. TO WOOD OR 20-25 GA STEEL	1/2" C.B. TO WOOD OR 20-25 GA STEEL
   	CB468	# 8 X 1-5/8"	4M		5/8" C.B. TO WOOD OR 20-25 GA STEEL
	CB868	# 8 X 2-1/4"	2M		1/2" CEMENT BOARD TO 14-20 GA STEEL
	CB14	# 8 X 1-1/4"	5M		5/8" CEMENT BOARD TO 14-20 GA STEEL
	CB15	# 8 X 1-5/8"	4M		MULTI-LAYERS C.B. TO 14-20 GA STEEL
	CB30S	# 8 X 2-1/4"	2M		
<b>SUPER FRAMING DRILLERS</b>	19 & 19Z	# 7 X 7/16"	15M	39.6	FRAMING 20 GA. STEEL
 PAN HEAD "TEK", #2 PHILLIPS    DEEP RECESS FAST DRILL TIME	20 & 20Z	# 8 X 1/2"	10M	31.9	FRAMING STEEL UP TO 14 GA.
	40-12	# 10 X 1/2"	10M	46.9	PAN HEAD, ZINC
	41Z SUPER-12	# 10 X 1/2"	10M	44	FLAT HEAD, ZINC
	41ZSUPER	# 10 X 3/4"	10M	59.4	FLAT HEAD, ZINC
<b>WAFER HEAD DRILLERS</b>	34 & 34Z	# 8 X 1/2"	10M	36.3	EXTRA WIDE WASHER
 WAFER HEAD "TEK" #2 PHILLIPS 	35 & 35Z	# 8 X 1"	5M	27.5	METAL LATH TO STEEL &
	36 & 36Z	# 8 X 1-1/4"	5M	31.9	FRAMING STEEL UP TO 14 GA.
	38(Z) SUPER	# 8 X 1-3/4"	4M	32.6	SUPER POINT
	50PZ	# 10 X 5/8"	5M	27.5	SUPER POINT, SUPER HEAD
	44ZMAG	# 10 X 3/4"	5M	30.8	*SUPER POINT, SUPER HEAD*
					*FRAMING STEEL UP TO 12 GA.*
<b>SUPER HEX DRILLERS</b>	26A & 26AZ	# 8 X 1/2"	10M	31.9	MULTI-PURPOSE SHEET METAL AND HVAC WORK, STEEL FRAMING AND METAL TO METAL APPLICATIONS HEX HEADS ALLOWS FOR GREATER TORQUE WITHOUT CAMOUTS HEAVY DUTY STEEL FRAMING MULTI-LAYERS OF HEAVY GA. STEEL
 HEX WASHER HEAD "TEK" OTHER GAUGES AND LENGTHS AVAILABLE	26BZ	# 8 X 3/4"	10M	41.8	
	26C & 26CZ	# 8 X 1"	8M	39.6	
	26EZ	# 8 X 1-1/2"	5M	34.3	
	28AZ	# 10 X 1/2"	10M	47.5	
	28BZ	# 10 X 3/4"	5M	30.6	
	28CZ	# 10 X 1"	8M	56.3	
	HWHTZ10-2	# 10 X 2"	2M	24.2	
	29BZ	# 12 X 3/4"	5M	37.8	
	29CZ	# 12 X 1"	3M	29	
	HWHTZ14-114	# 14 X 1-1/4"	2M	34	
<b>SUPER #4 &amp; #5 PT HEX DRILLERS</b>	HWHT4Z12-114	# 12 X 1-1/4"	2M	WITH WASHER	#4 POINT, 500 HR, ZINC + SEAL
 5/16" Hex Drive HWHT5Z12-114	# 12 X 1-1/4"	2.5M	NO WASHER	#5 POINT, SILVER 1000 HR	
<b>PLY METAL DRILLERS</b>	RT10-1716	# 10 X 1-7/16"	4M	38.3	PLYWOOD OR COMPOSITE TO METAL ALL REAMER TEK'S HAVE ZINC COATING
 REAMER TEK WINGED DRILLER	RT10-212	# 10 X 2-1/2"	1.5M	21.8	
	RT12-2	# 12 X 2"	1.5M	24	
	RT12-212	# 12 X 2-1/2"	1M	19.8	
	RT12-258	# 12 X 2-5/8"	1M	23	
	RT12-234	# 12 X 2-3/4"	1M	23.8	
<b>PILOT POINT DRILLERS</b>	P81516F3	#8 x 1-15/16"	4M		PILOT POINT PRE-DRILLS THRU PLYWOOD, COMPOSITE, OR LAMINATED MATERIALS TO HEAVY GAUGE STEEL

**STEELER® INC.**  
**SLOTTED STUD™**  
**1-800-275-2279**



The **STEELER® SLOTTED STUD™** is an innovative and economical light gauge steel framing Head-Of-Wall (HW) Joint System that is Classified by Underwriters Laboratories, Inc. for 500 successful cycles.

It is unlike any other head-of-wall assembly currently in the construction industry and can be used for both non-load bearing and wind load-bearing walls. The **STEELER® SLOTTED STUD™** has a slot of 2-1/4" which allows for up to a 1" deflection up or down, depending on which Head-Of-Wall Joint System is used. The Engineer of Record shall specify which Head-Of-Wall Joint System to use.

**UL® Head of Wall Systems:**

<u>System Number:</u>	<u>Fire Rating:</u>	<u>Movement Class &amp; Capabilities:</u>
HW-D-0016	1 & 2 Hour Fire Rating	Classes II & III, 25% Compression
HW-D-0020	1 & 2 Hour Fire Rating	Class II, 25% Compression or Extension
HW-D-0021	1 & 2 Hour Fire Rating	Class II, 18.75% Compression and Extension
HW-D-0029	1 & 2 Hour Fire Rating	Class II, 25% Compression or Extension
HW-D-0032	2 Hour Fire Rating	Class II, 50% Compression or Extension
HW-D-0033	2 Hour Fire Rating	Class II 50% Compression or Extension
HW-D-0034	1 & 2 Hour Fire Rating	Class II, 25% Compression or Extension
HW-D-0037	2 Hour Fire Rating	Class II, 18.75% Compression or Extension
HW-D-0048	1 & 2 Hour Fire Rating	Class II, 33% Compression or Extension
HW-D-0049	1 & 2 Hour Fire Rating	Class II, 50% Compression or Extension



U.L Classified XHLI.R21503

U.L Classified for Canada XHLI7.R21503



**ICC-ES ESR-2054**

**For questions, please contact your local Steeler or call our Marketing Department.**

**STEELER® INC. Corporate Headquarters**

**1-800-275-2279 Toll Free**

**206-725-2500 Local**

**206-725-1700 Marketing Fax**

10023 Martin Luther King Jr. Way South

Seattle, WA 98178

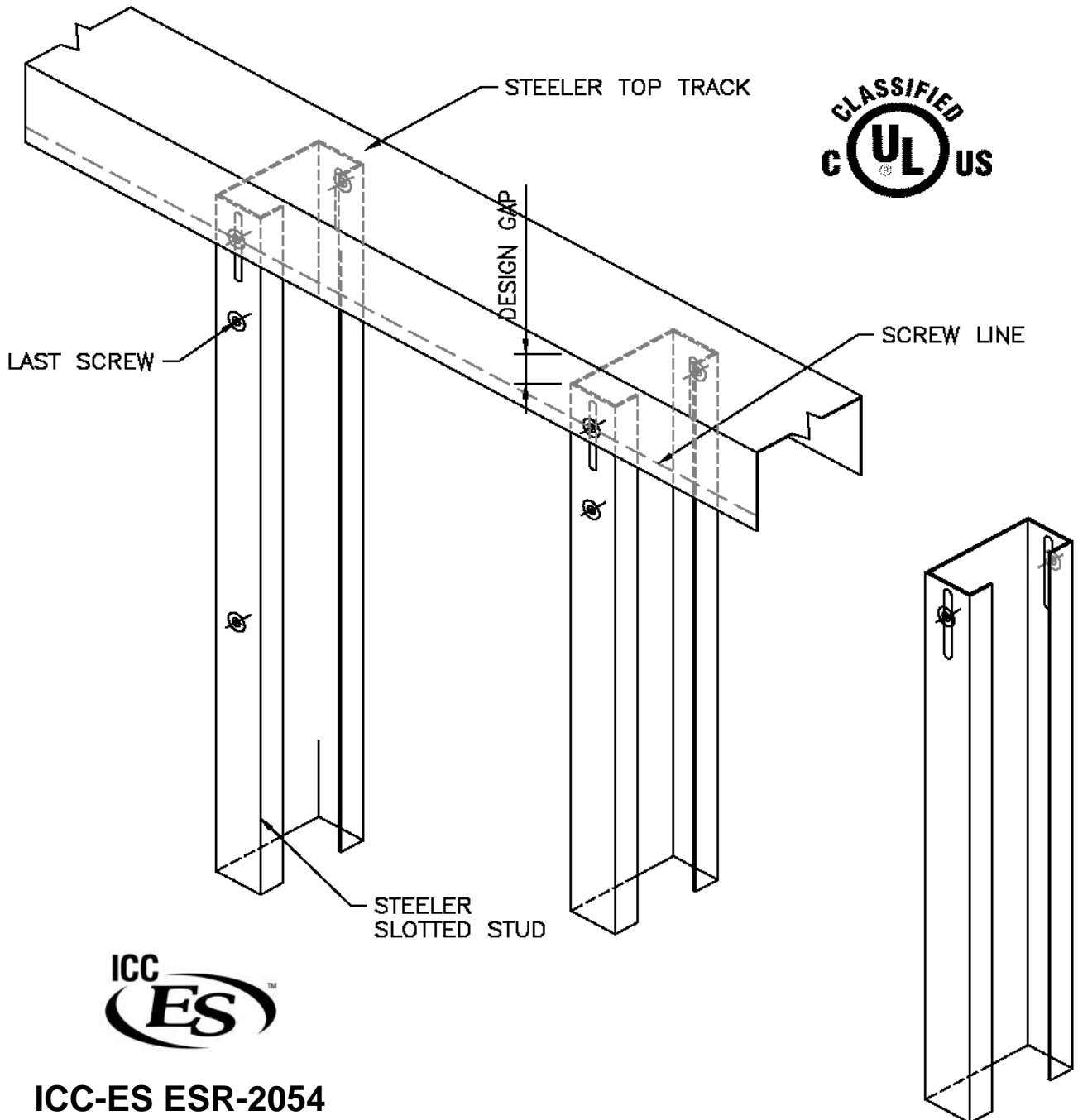
e-mail: info@ steeler.com

U.S. Patent No. 6,854,237 B2

Note: This page is not included in ICC-ES ESR-2054

# STEELER<sup>®</sup> INC. SLOTTED STUD<sup>™</sup>

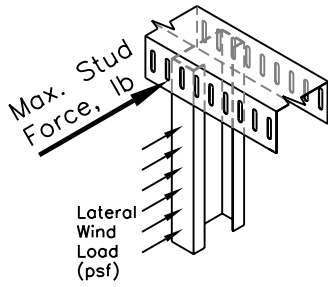
## Wind Load & Non-Load Bearing Deflection Wall System



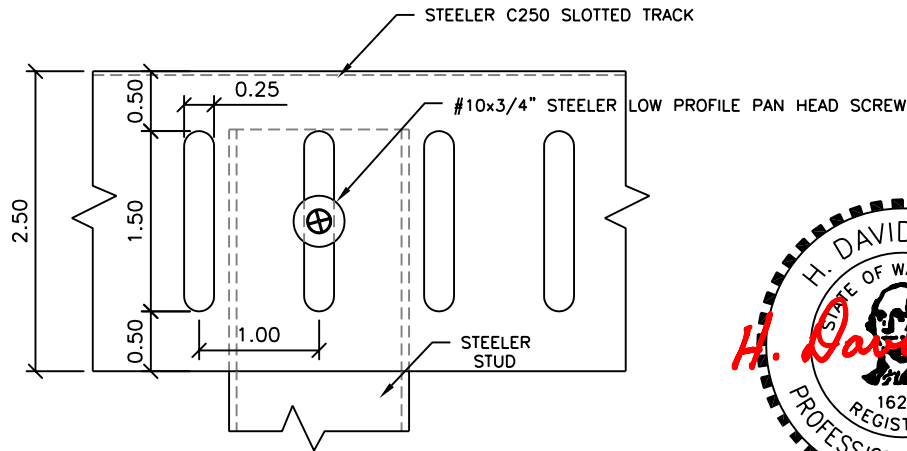
**ICC-ES ESR-2054**

U.S. Patent No. 6,854,237 B2

Note: This page is not included in ICC-ES ESR-2054



STEELER C250 SLOTTED TRACK



DETAIL SLOTTED TRACK



EXPIRES: 07/27/2007

TABLE 11.0 C250, Gap=0.625" Height Limits based on Slotted Track Thickness, ft.

Member ID	Max. Stud Force, lb	Spacing in	Lateral wind load applied to stud, psf					
			5	10	15	20	25	30
C250-30	59	12	23.8	11.9				
	59	16	17.8	8.9				
	59	24	11.9					
C250-33	74	12	29.5	14.7	9.8			
	74	16	22.1	11.1				
	74	24	14.7					
C250-43	128	12	51.2	25.6	17.1	12.8	10.2	8.5
	128	16	38.4	19.2	12.8	9.6		
	128	24	25.6	12.8	8.5			
C250-54 (50 ksi)	314	12	125.5	62.7	41.8	31.4	25.1	20.9
	314	16	94.1	47.0	31.4	23.5	18.8	15.7
	314	24	62.7	31.4	20.9	15.7	12.5	10.5
C250-68 (50 ksi)	515	12	205.9	103.0	68.6	51.5	41.2	34.3
	515	16	154.4	77.2	51.5	38.6	30.9	25.7
	515	24	103.0	51.5	34.3	25.7	20.6	17.2
C250-96 (50 ksi)	1127	12	450.9	225.5	150.3	112.7	90.2	75.2
	1127	16	338.2	169.1	112.7	84.6	67.6	56.4
	1127	24	225.5	112.7	75.2	56.4	45.1	37.6

Note: Max Stud Force is based on calculation:  $be=3.625"$ ,  $e_{ave}=0.554"$ ,  $P_n=beff^2 \cdot F_y / (4 \cdot e)$ ,  $P_a=P_n/W$ ,  $W=1.67$

STEELER C250 SLOTTED TRACK

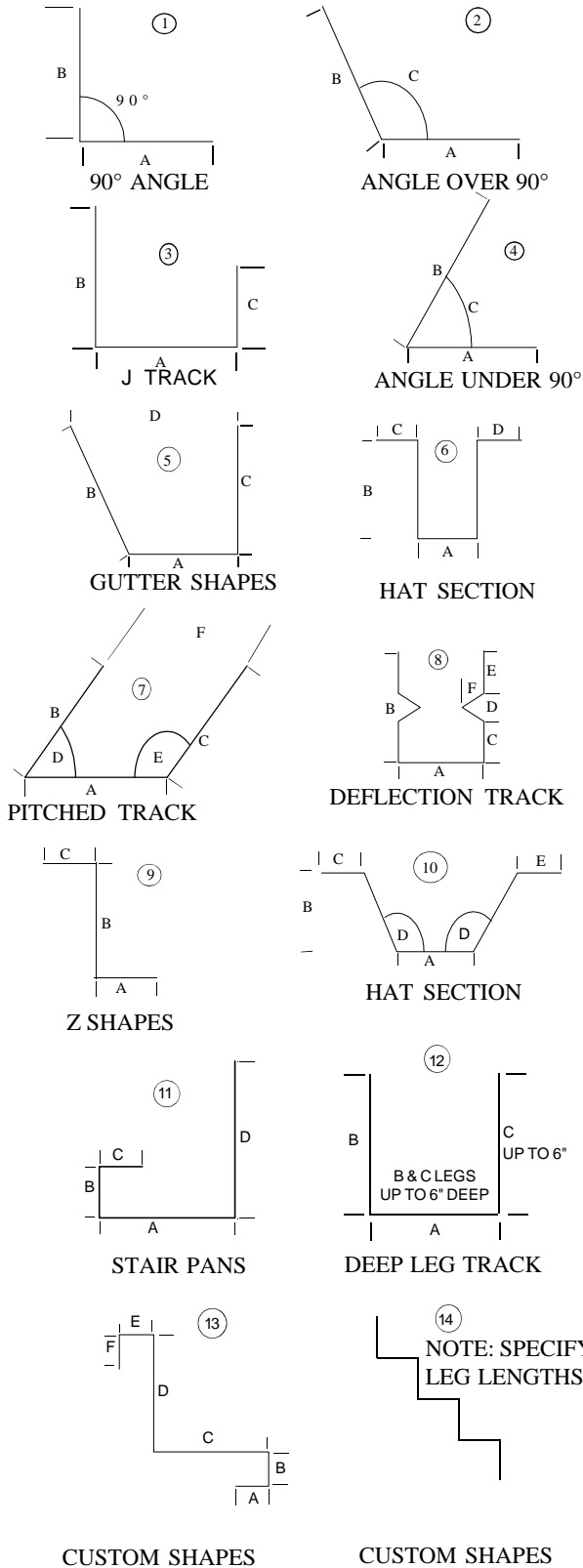
DATE: 7 May 07

SHEET: ST-1

# Custom Brake Shapes



1-800-275-2279



**STEELER INC.** will provide brake shapes to you on an as needed basis. We are able to provide custom shapes for your special job requirements within reasonable lead times. At left are some shapes which are common in industry and dimensioning variables to help you with your ordering. Our shop is not limited to these shapes and it is just a matter of a request to receive information on shapes not shown.

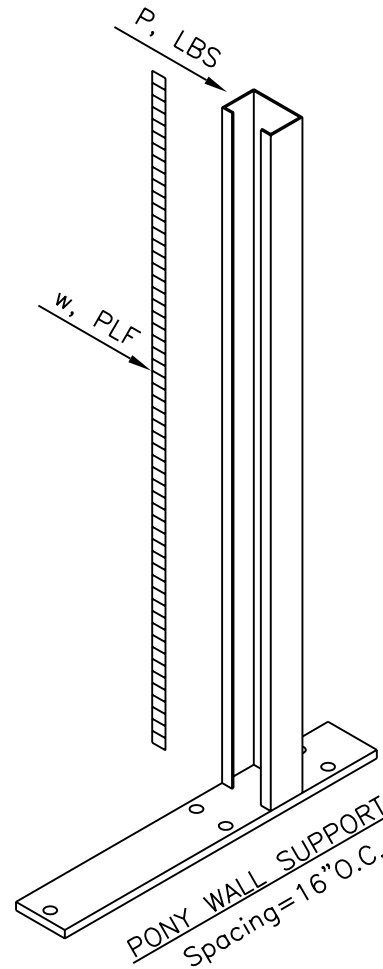
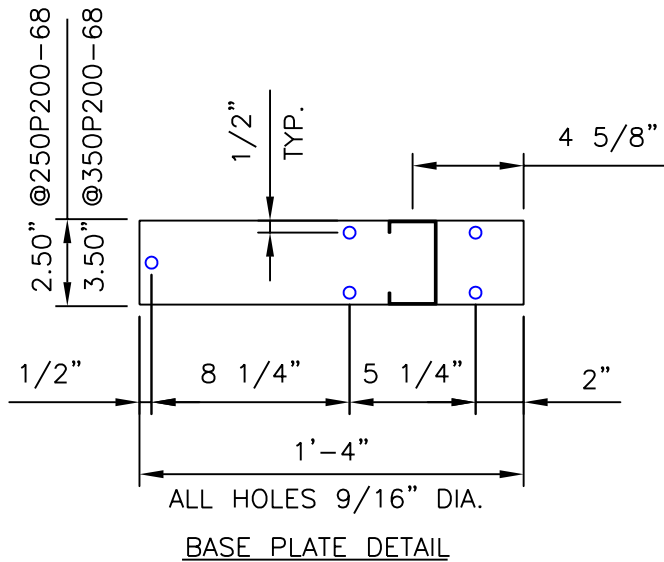
## Materials

- a) Light gauge steel meeting the physical and galvanization requirements of A.S.T.M. A-653 or equal.
- b) Shape and Dimensions as requested
- c) Maximum Length = 32' - 0"
- d) Gauges available: 25, 20, 18, 16, 14, 12, 10 and up to 1/4 of an inch thick.
- e) Packaging = Varies on Order
- f) Up to 6 brakes/bends available (BS1 = 1 bend; BS6 = 6 bends)

## Ordering information

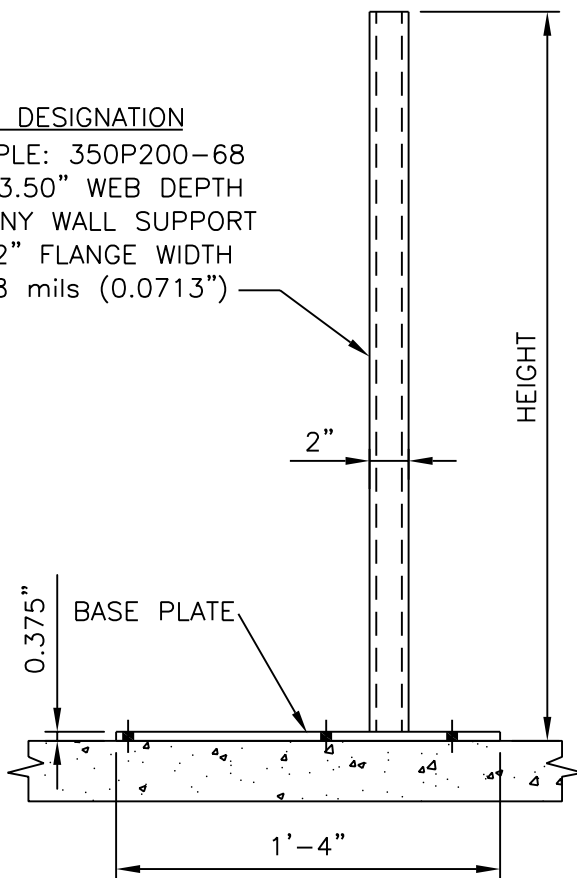
Please be sure to provide quantity, length, thickness (gauge) and appropriate dimensional information. A drawing of the brake shape is required for all orders. Be sure to identify inside or outside measurements and to let us know of acceptable variances on angles or dimensions.

Consult with your engineering firm before using this product.



MEMBER DESIGNATION

EXAMPLE: 350P200-68  
350=3.50" WEB DEPTH  
P=PONY WALL SUPPORT  
200=2" FLANGE WIDTH  
68=68 mils (0.0713")



NOTES:

1. ANCHOR BOLTS 1/2"Ø HILTI KWIK BOLTS 3 WITH 3.50" MIN. EMBEDMENT.
2. MINIMUM CONCRETE STRENGTH  $f'_c=2500$  PSI

PONY WALL SUPPORT SCHEDULE			
MEMBER DESIGNATION	HEIGHT in.	LATERAL LOAD	
		P, LBS	w, PLF
250P200-68	36	248	13.8
	42	212	10.1
	48	186	7.7
	60	149	5.0
350P200-68	36	416	23.1
	42	357	17.0
	48	312	13.0
	60	250	8.3

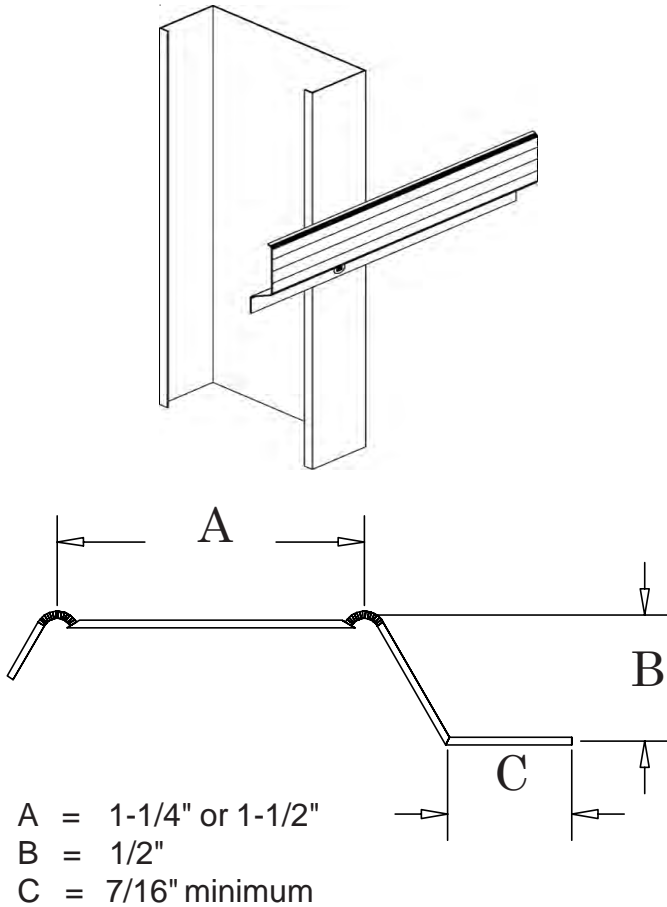
ABBREVIATIONS:

LBS=Pounds  
PLF=Pounds per Linear Foot  
PSI=Pounds per Square Inch  
in.=Inches  
mils: 1mil=0.001"  
 $f'_c$ =28 day concrete strength

Revised Date: 4-13-07



# 12 SRC (Resilient Channel) STC 56 Lab Certified



STEELER INC. is pleased to offer a Lab Certified product for use in wall assemblies requiring a **Lab Certified STC 56 Rated Product** for assemblies requiring higher STC ratings as stipulated by the Uniform Building Code (Report No. TL06-287; Dated August 1, 2006). Our 12 SRC meets the minimum design dimensions (A, B & C) as shown on page 5 of the Gypsum Association's ICC-ES ECR No. 1632.

When used in accordance with the Gypsum Association's Fire Resistance and Sound Control Design Manual, **STEELER 12 SRC** will meet or exceed their listed ratings.

**STEELER 12 SRC is Lab Certified - STC 56; tested according to the provisions and requirements of ASTM E 90-04, Standard Test Methods for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions.**

## Materials

- a) Steeler 12 SRC (P art # 0125R050-018)  
 Available flanges of 1-1/4" and Extra Wide 1-1/2" (P art # 0150R050-018H)

L length = 12' - 0"

Custom lengths available

Available with hemming for 1-1/4" and hemming is required for 1-1/2"

Packaging = Bundles of 40 (480 feet per bundle)

- b) Steeler Steel Framing; minimum 3-1/2" 25 gauge Steeler Studs (P art # 0350S125-018) & minimum 3-1/2" 25 gauge 1" Steeler Track (P art # 0350T100-018)

- c) Steeler Construction Screws:  
 # 7 x 7/16" Super Framers (P N# 23)  
 # 8 x 9/16" W afer H d. Sharp P t. (P N# 31)  
 # 8 x 1/2" Super W afer H d. Driller (P N# 34Z)  
 # 6 x 1" Super Steelers (P N# 168)  
 # 10 x 1-1/2" Super Laminators (P N# 12)

- d) OSB Sound Caulking P art # OSISC 175

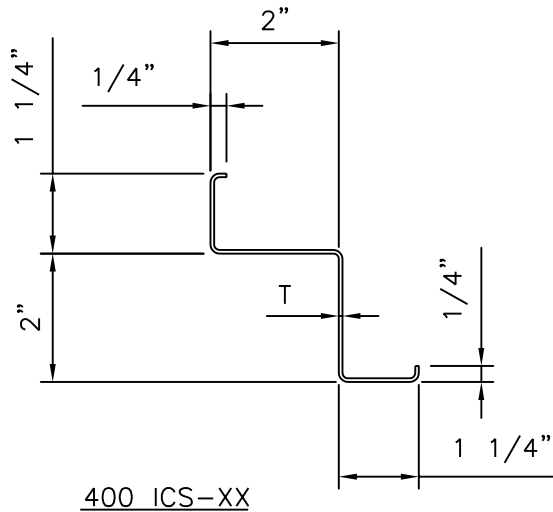
- e) 5/8" thick Type X Gypsum Board (Fire Rated)

- f) 3-1/2" thick un-faced fiberglass sound insulations batts

Note: The products listed above have been tested as an assembly; substitutions to the assembly have not been tested and may have substantially different results.

Steeler Sound Resilient Channels (12 SRC) are to be installed horizontally 24" O.C. to the framing.

Please refer to STEELER's SRC Technical Catalog (Online Catalog) for detailed installation details, which is available from your Steeler Representative.



Inside Corner Stud (ICS)

GROSS PROPERTY TABLES—SMOOTH PRODUCTS (ICS) Inside Corner Studs								
MEMBER ID	GA	T, in	A, in <sup>2</sup>	WT, plf	I <sub>x</sub> , in <sup>4</sup>	r <sub>x</sub> , in	I <sub>y</sub> , in <sup>4</sup>	r <sub>y</sub> , in
400 ICS-27	(22)	0.0283	0.1884	0.641	0.1897	1.003	0.190	1.003
400 ICS-30	(21)	0.0312	0.2073	0.705	0.2078	1.001	0.208	1.001
400 ICS-33	(20)	0.0346	0.2293	0.779	0.2288	0.999	0.229	0.999
400 ICS-43	(18)	0.0451	0.2965	1.008	0.2916	0.992	0.292	0.992
400 ICS-54	(16)	0.0566	0.366	1.246	0.353	0.982	0.353	0.982

EFFECTIVE PROPERTY TABLES				
MEMBER Identification	FY=33 KSI			
	Maxo k-in	I <sub>xe</sub> in <sup>4</sup>	S <sub>xe(t)</sub> in <sup>3</sup>	S <sub>xe(b)</sub> in <sup>3</sup>
400 ICS-27	1.8012	0.1687	0.0912	0.1230
400 ICS-30	2.0507	0.1901	0.1038	0.1370
400 ICS-33	2.3574	0.2160	0.1193	0.1538
400 ICS-43	3.9347	0.2759	0.1531	0.1966
400 ICS-54	5.1342	0.3400	0.1905	0.2412

LIMITING HEIGHT TABLE			
MEMBER Identification	5 PSF, L/120, FY=33 KSI		
	MEMBER HEIGHT, ft		
	12"OC	16"OC	24"OD
400 ICS-27	15.50	13.42	10.96
400 ICS-30	16.54	14.32	11.69
400 ICS-33	17.73	15.35	12.54
400 ICS-43	19.34	17.57	15.35
400 ICS-54	20.73	18.84	16.46



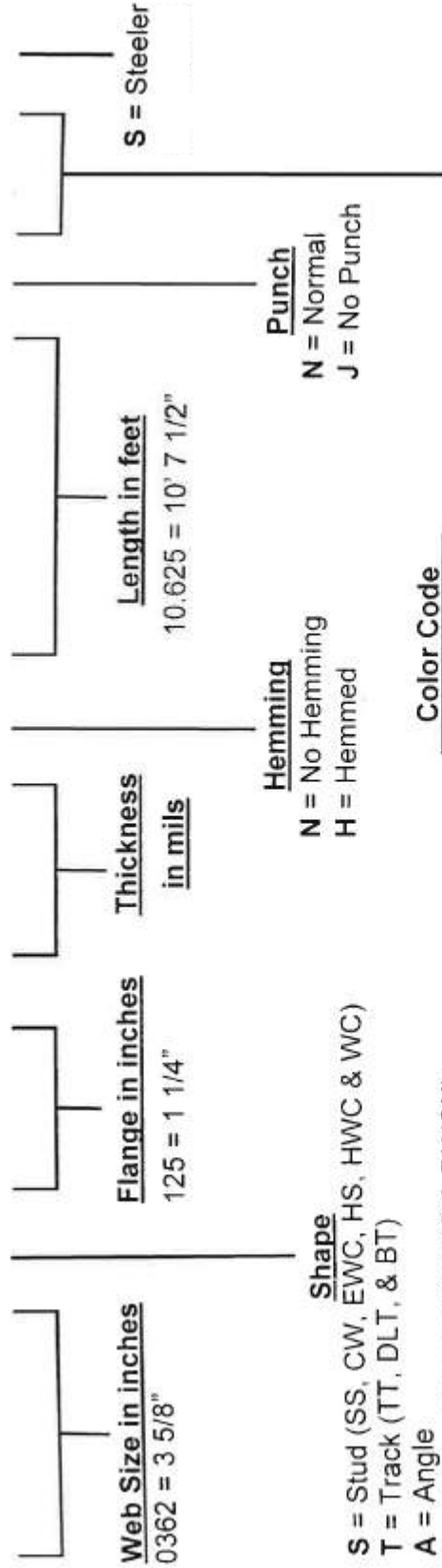
EXPIRES: 07/27/2007

SMOOTH PRODUCTS INC. ---- (ICS) Inside Corner Stud	DATE: 2-6-07
DRYWALL PRODUCTS, TACOMA, WASHINGTON	DRAWING: SP-1



PART NUMBER SPECIFICATION

# 0362S125-030N10.625JG4S



- Shape**  
 S = Stud (SS, CW, EWC, HS, HWC & WC)  
 T = Track (TT, DLT, & BT)  
 A = Angle  
 F = Furring Channel (DWC & DWCX)  
 H = Shaft Wall Stud (SWS)  
 J = J Track (JT)  
 L = Slip Track (ST)  
 N = Slotted Stud (NS)  
 R = Sound Resilient Channel (SRC)  
 U = Cold Rolled Channel (CRC)  
 Z = Z Furring (ZF)  
 D = Deflection Track (DFT)  
 P = Pony Wall Studs (PWS)  
 C = Slotted Track (CC)  
 I = Steeler Floor Joist

**Color Code**

Non-Structural			Structural		
Gage	Mil	Color	Gage	Mil	Color
25-TI	016	Clear / White Stripe	33 ES	028	Purple
25 Ga	018	Clear / (No Paint)	20 Ga	033	White
20-TI	019	Clear / Red Stripe	43 ES	038	Brown
30 ED1	021	Red	18 Ga	043	Yellow
30 ED2	022	Blue	54 ES	048	Lite Blue
30 ED4	024	Orange	16 Ga	054	Green
22 Ga	027	Black	14 Ga	068	Orange
21 Ga	030	Pink	12 Ga	097	Red
			10 Ga	118	Blue

- Finish**  
 G4 = G40 Galvanization  
 G6 = G60 Galvanization  
 G9 = G90 Galvanization  
 A4 = A40 Galvanization  
 A6 = A60 Galvanization  
 P4 = G40 Painted Steel  
 P6 = G60 Painted Steel  
 BP = G40 Black Paint

B\* = Brake Shape (BS)  
 K\* = Flat Stock (FS)  
 \* use existing part numbers

# STEELER

CONSTRUCTION SUPPLY



**STEELER® ICC-ES REPORT ESR-2054**



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**(800) 275-2279 Toll Free**

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**916-483-3018 FAX**

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**425-869-5557 FAX**

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**253-572-8400 FAX**

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**604-940-1334 FAX**

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**520-292-1037 FAX**

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**503-235-2908 FAX**

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**661-399-0004 FAX**

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**619-527-1005 FAX**