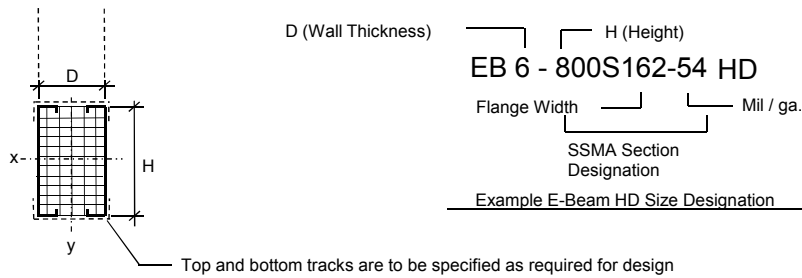


E-BEAM HD™ NOMENCLATURE

CSI SPEC #054233



The designer should specify the wall thickness and C-stud shapes to be used in the E-Beam HD
The designer is responsible for determining the adequacy of the sections for their intended use.

E-BEAM HD™ SECTION PROPERTIES TABLE

Design Thickness (in)	Gauge (No.)	Gross Properties							Effective Properties				
		F _y (ksi)	Area (in ²)	Weight (lb/ft)	I _x (in ⁴)	S _x (in ³)	R _x (in)	I _{xe} (in ⁴)	S _{xe} (in ³)	M _{ax} (k-in)	V _{ax} (lb)	(EI) _{ye} (k-in ²)	
EB6-600S162-43 HD ¹	0.0451	18	33	0.894	3.04	4.632	1.544	2.276	4.63	1.92	36.15	2832	36682
EB8-600S162-43 HD ¹													70179
EB6-600S162-54 HD ¹	0.0566	16	50	1.112	3.78	5.720	1.906	2.268	5.72	2.29	64.75	5646	45666
EB8-600S162-54 HD ¹													87026
EBD-600S162-68 HD ²	0.0713	14	50	1.386	4.72	7.050	2.350	2.255	7.05	2.33	71.38	10700	-
EB6-800S162-43 HD ¹	0.0451	18	33	1.074	3.66	9.266	2.316	2.937	9.00	2.55	45.83	2102	40563
EB8-800S162-43 HD ¹													77102
EB6-800S162-54 HD ¹	0.0566	16	50	1.340	4.56	11.472	2.868	2.926	11.20	3.07	82.03	4182	50482
EB8-800S162-54 HD ¹													95588
EBD-800S162-68 HD ²	0.0713	14	50	1.672	5.68	14.178	3.544	2.912	14.14	3.33	90.22	8442	-
EBD-1000S162-43 HD ¹	0.0451	18	33	1.254	4.26	16.050	3.210	3.578	15.05	3.26	56.23	1672	-
EBD-1000S162-54 HD ¹	0.0566	16	50	1.566	5.32	19.900	3.980	3.565	18.78	3.93	100.93	3322	-
EBD-1000S162-68 HD ²	0.0713	14	50	1.956	6.66	24.650	4.930	3.550	23.96	4.31	112.70	6690	-
EBD-1200S162-54 HD ¹	0.0566	16	50	1.792	6.10	31.460	5.244	4.190	28.60	4.79	116.88	2754	-
EBD-1200S162-68 HD ²	0.0713	14	50	2.242	7.62	39.036	6.506	4.173	36.78	5.29	132.28	5542	-
EBD-1400S162-54 HD ²	0.0566	16	50	2.018	6.86	46.604	6.658	4.806	40.73	4.51	104.26	2354	-
EBD-1400S162-68 HD ²	0.0713	14	50	2.526	8.60	57.904	8.272	4.788	52.75	6.27	149.12	4730	-

"D" is the wall thickness. See typical nomenclature

Notes:

- Based on direct testing in accordance with AISI S911-08 and the AISI S100-2007 specification, an increase in the 2012 SSMA Product Technical Guide values for effective strong axis section modulus and effective strong axis moment of approximately 25% has been applied to 6", 8", 10", and 12" deep sections with thicknesses of 43 mil and 54 mil.
- Section properties are for two stud shapes per the 2012 SSMA Product Technical Guide and have not been increased.
- Typically, for out-of-plane (weak axis) loading, top and bottom tracks would be added to the E-Beam HD by the design engineer. However, the foam core does provide a limited amount of composite action of the E-Beam section alone. The weak axis capacity of the E-Beam HD by itself is controlled by deflection. The effective stiffness in this direction, (EI)_{ye}, corresponds to a deflection ratio of L/360 and is based on testing for the 6" E-Beam HD.
- User should check end reaction for web crippling.
- Bending capacities are based on the assumption that the compression flange is adequately laterally braced on both sides.
- Allowable Moment is the lesser of M_{ai} and M_{ad}. Stud distortional buckling is based on an assumed K φ = 0.
- Allowable Moment and Shear Values are calculated assuming a negligible axial load. Load bearing jamb studs are to be designed for combined axial and bending loads by a qualified professional.
- Strength increase due to cold work of forming has been incorporated per AISI 2007 Specification A7.2.
- The effective Moment of Inertia for deflection has been calculated using Procedure 1 of the AISI S100-2007 Specification for serviceability determination.
- If punch-outs are used in members, values may be smaller than those listed above and shall be per the AISI S100-2007 Specification.