



**STRONGER
THAN STEEL.™**

INTERIOR AND EXTERIOR FRAMING

IN CONFORMANCE WITH: IBC 2021 • AISI S100

HDS® Framing System

The HDS® Framing System is a high-performance, cost-effective, multipurpose, heavy-duty framing stud for headers, jambs, posts and built-up tube truss chords and webs. The superior strength and carrying capacity of the HDS Framing System means higher performance with fewer members. It means eliminating box beam headers, nesting track and stud for posts and jambs, and eliminating multi-member built-up truss chords and webs. It also means improved finish quality by eliminating excessive material and screw head buildup around doors and windows.

The HDSC header bracket is the perfect complement to the HDS Framing System. This simple, yet innovative header bracket turns curtain wall header installation from a two-person job into a one-person job. This unique, prepunched clip also eliminates surface head fastener buildup that can create finishing challenges.

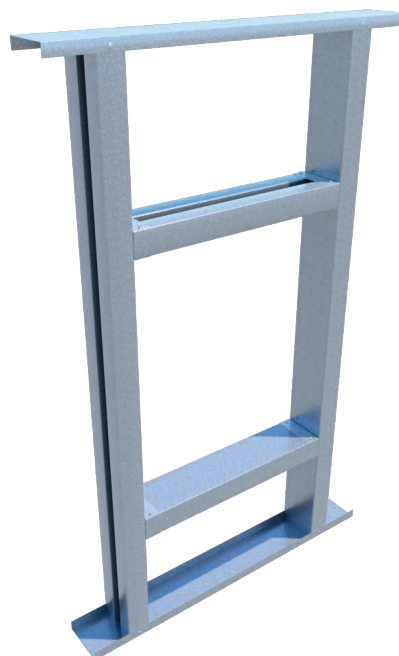
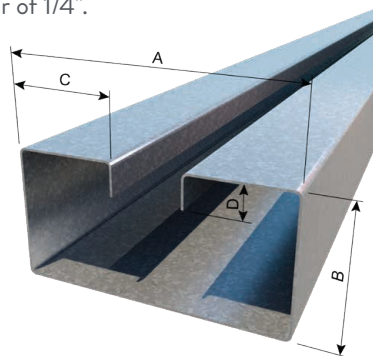
HDS U.S. Patent No. 7,739,850 B2. Issued June 22, 2010.

CONSTRUCTION ADVANTAGES:

- Outstanding bending strength in two directions.
- Reduces installation time by 50%.
- Eliminates box beam header assembly.
- Reduces material and labor costs up to 50%.
- HDS can be screw-attached from either side.
- Eliminates stud-to-track nesting for post, header and jamb studs.
- Openings up to 20' wide.
- Improves drywall finishing around doors and windows. No screw head buildup.
- Superior axial strength.

ORDERING INFORMATION:

- Pre-cut headers (4'-0" and over) available standard, based on minimum quantity orders.
- Minimum quantity orders of 30 headers required.
- **HEADER LENGTHS SHOULD BE ORDERED 1/2" SHORTER THAN OPENING WIDTH TO FIT INSIDE CLIPS**
(header length = inside of jamb to inside of jamb minus 1/2")
Listed capacities are based on a maximum gap between the clip and the end of the header of 1/4".



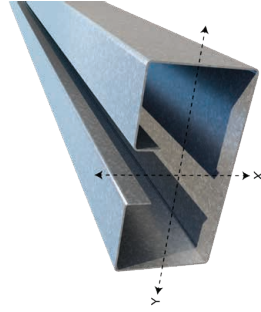
HDS® Profile Information

Product Code	Dimensions				Thickness		Fy (ksi)
	Web Size (A)	Flange (B)	Return Lip (C)	Stiffening Lip (D)	Mils (Gauge)	Design Thickness (in)	
362HDS300-33	3-5/8"	3.00"	1.0625"	0.75"	33 (20)	0.0346	33
362HDS300-43					43 (18)	0.0451	33
362HDS300-54					54 (16)	0.0566	50
362HDS300-68					68 (14)	0.0713	50
362HDS300-97					97 (12)	0.1017	50
400HDS300-33	4"	3.00"	1.0625"	0.75"	33 (20)	0.0346	33
400HDS300-43					43 (18)	0.0451	33
400HDS300-54					54 (16)	0.0566	50
400HDS300-68					68 (14)	0.0713	50
400HDS300-97					97 (12)	0.1017	50
600HDS300-33	6"	3.00"	2.250"	0.75"	33 (20)	0.0346	33
600HDS300-43					43 (18)	0.0451	33
600HDS300-54					54 (16)	0.0566	50
600HDS300-68					68 (14)	0.0713	50
600HDS300-97					97 (12)	0.1017	50
800HDS300-33	8"	3.00"	2.250"	0.75"	33 (20)	0.0346	33
800HDS300-43					43 (18)	0.0451	33
800HDS300-54					54 (16)	0.0566	50
800HDS300-68					68 (14)	0.0713	50
800HDS300-97					97 (12)	0.1017	50

HDS® Header Studs

Section Properties

Product Code	Thickness Mils (Gauge)	F _y (ksi)	Gross Section Properties										Effective Section Properties (Header without Punchout)										Torsional Properties					
			Area (in ²)	W _t (lbs/ft)	I _x (in ⁴)	S _x (in ³)	R _x (in)	I _y (in ⁴)	S _y (in ³)	R _y (in)	A _c (in ²)	I _{xc} (in ⁴)	S _{xc} (in ³)	S _{yc} (in ³)	M _{xx,local} (in-k)	M _{yy,local} (in-k)	M _{xx,dist} (in-k)	M _{yy,dist} (in-k)	V _{xx,g} (lbs)	V _{yy,g} (lbs)	J*1000 (in ⁴)	C _w (in ⁶)	X _o (in)	m	R _o (in)	β		
362HDS300-33	33 (20)	33	0.443	1.51	0.927	0.512	1.447	0.625	0.416	1.188	0.215	0.851	0.626	0.369	0.416	7.29	8.23	9.83	8.23	10.24	20.48	0.177	4.541	-3.502	1.709	3.971	0.222	
362HDS300-43	43 (18)	33	0.574	1.95	1.198	0.661	1.444	0.804	0.536	1.183	0.334	1.161	0.804	0.570	0.536	11.27	10.59	13.06	10.59	17.39	30.89	0.388	5.743	-3.485	1.702	3.954	0.223	
362HDS300-54	54 (16)	50	0.714	2.43	1.481	0.817	1.440	0.988	0.659	1.177	0.422	1.449	0.990	0.717	0.659	21.47	19.73	24.39	19.73	33.72	57.67	0.764	6.894	-3.479	1.695	3.946	0.222	
362HDS300-68	68 (14)	50	0.887	3.02	1.829	1.009	1.435	1.210	0.807	1.168	0.611	1.829	1.211	1.009	0.807	30.20	24.15	30.20	24.15	43.69	70.68	1.503	8.150	-3.476	1.685	3.938	0.221	
362HDS300-97	97 (12)	50	1.231	4.19	2.499	1.379	1.425	1.624	1.083	1.149	0.864	2.499	1.627	1.379	1.083	41.28	32.41	41.28	32.41	59.43	95.02	4.246	10.200	-3.469	1.665	3.922	0.218	
400HDS300-33	33 (20)	33	0.456	1.55	1.167	0.584	1.600	0.650	0.433	1.194	0.212	1.073	0.651	0.420	0.433	8.30	8.56	11.07	8.56	9.76	20.48	0.182	5.062	-3.438	1.683	3.976	0.252	
400HDS300-43	43 (18)	33	0.591	2.01	1.508	0.754	1.597	0.837	0.558	1.190	0.330	1.463	0.837	0.650	0.558	12.84	11.02	14.90	11.02	17.39	30.89	0.400	6.410	-3.421	1.676	3.958	0.253	
400HDS300-54	54 (16)	50	0.735	2.50	1.866	0.933	1.593	1.029	0.686	1.183	0.417	1.827	1.031	0.818	0.686	24.48	20.54	27.41	20.54	33.72	57.67	0.787	7.715	-3.414	1.668	3.949	0.253	
400HDS300-68	68 (14)	50	0.914	3.11	2.306	1.153	1.588	1.260	0.840	1.174	0.606	2.306	1.261	1.153	0.840	34.52	25.15	34.52	25.15	48.71	70.68	1.548	9.158	-3.409	1.659	3.940	0.251	
400HDS300-97	97 (12)	50	1.269	4.32	3.158	1.579	1.577	1.692	1.128	1.155	0.912	3.158	1.696	1.579	1.128	47.27	33.78	47.27	33.78	66.58	95.02	4.378	11.569	-3.398	1.638	3.921	0.249	
600HDS300-33	33 (20)	33	0.607	2.07	3.016	1.005	2.229	0.986	0.657	1.275	0.198	2.819	0.953	0.705	0.556	13.93	10.99	19.11	12.15	6.38	20.48	0.243	24.581	-3.650	1.548	4.463	0.331	
600HDS300-43	43 (18)	33	0.788	2.68	3.907	1.302	2.226	1.272	0.848	1.270	0.312	3.796	1.272	1.094	0.848	21.61	16.76	25.73	16.76	14.15	30.89	0.533	31.355	-3.635	1.541	4.448	0.332	
600HDS300-54	54 (16)	50	0.983	3.34	4.851	1.617	2.222	1.571	1.048	1.265	0.395	4.753	1.573	1.379	1.048	41.30	31.37	47.66	30.29	28.22	57.67	1.052	38.082	-3.630	1.534	4.440	0.332	
600HDS300-68	68 (14)	50	1.226	4.17	6.021	2.007	2.216	1.937	1.292	1.257	0.581	6.021	1.938	1.994	1.292	59.69	38.67	60.09	38.67	53.50	70.68	2.076	45.718	-3.626	1.524	4.432	0.331	
600HDS300-97	97 (12)	50	1.714	5.83	8.327	2.776	2.204	2.641	1.761	1.241	1.036	8.327	2.645	2.776	1.761	83.11	52.71	83.11	52.71	104.71	95.02	5.911	59.043	-3.619	1.504	4.415	0.328	
800HDS300-33	33 (20)	33	0.676	2.30	6.101	1.525	3.003	1.115	0.743	1.284	0.191	5.794	1.075	0.984	0.626	19.44	12.38	26.04	13.67	4.74	20.48	0.271	32.968	-3.424	1.442	4.732	0.477	
800HDS300-43	43 (18)	33	0.879	2.99	7.909	1.977	3.000	1.438	0.959	1.279	0.303	7.721	1.438	1.533	0.959	30.29	18.95	36.72	18.95	10.51	30.89	0.594	42.129	-3.407	1.428	4.717	0.478	
800HDS300-54	54 (16)	50	1.096	3.73	9.833	2.458	2.995	1.777	1.185	1.273	0.384	9.662	1.779	1.934	1.185	57.90	35.47	65.42	34.12	20.91	57.67	1.173	51.433	-3.399	1.421	4.706	0.478	
800HDS300-68	68 (14)	50	1.369	4.66	12.228	3.057	2.989	2.192	1.461	1.266	0.567	12.228	2.193	2.805	1.461	83.99	43.75	87.49	43.75	42.20	70.68	2.317	62.222	-3.391	1.412	4.694	0.478	
800HDS300-97	97 (12)	50	1.917	6.52	16.977	4.244	2.976	2.991	1.994	1.249	1.023	16.977	2.995	4.244	1.994	127.07	59.69	127.07	59.69	108.85	95.02	6.612	81.753	-3.374	1.392	4.669	0.478	



Notes:

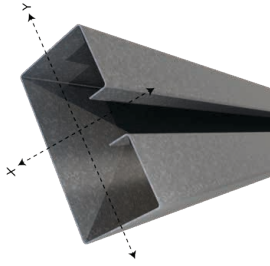
- Section properties are based on using AISI S100-16 (2020) / S2-20.
 - Axial load capacities are based on full-braced condition (structural elements that are installed to provide full restraint or support, i.e. KL=0)

- I_x = Gross Moment of Inertia about x-axis
- I_y = Gross Moment of Inertia about y-axis
- S_x = Gross Section Modulus about x-axis
- S_y = Gross Section Modulus about y-axis
- R_x = Gross Radius of Gyration about x-axis
- R_y = Gross Radius of Gyration about y-axis
- I_{xc} = Gross moment of inertia about y-axis
- I_{yc} = Gross Section Modulus about y-axis
- M_{xx,local} = Allowable local moment capacity about x-axis
- M_{yy,local} = Allowable local moment capacity about y-axis
- M_{xx,dist} = Allowable distortional moment capacity about x-axis
- M_{yy,dist} = Allowable distortional moment capacity about y-axis
- V_{xx,g} = Shear strength capacity of section about x-axis
- V_{yy,g} = Shear strength capacity of section about y-axis
- A_c = Effective area
- J = Effective Moment of Inertia about x-axis
- J = Effective Moment of Inertia about y-axis
- C_w = Warping constant
- X_o = Distance from shear center to the centroid along the principal axis
- m = Distance from shear center to web center line
- R_o = Radii of gyration
- Beta = Torsional flexural constant
- L_u = Maximum unbraced length
- P_{Solid} = Allowable Axial load for section without punchout.
- P_{Punchout} = Allowable Axial load for section with punchout.

HDS® Jamb Studs

Perforated Section Properties

Product Code	Thickness		Gross Section Properties										Effective Section Properties (Jamb with Punchout)						Torsional Properties						Axial Load	
	Mils (Gauge)	Fy (ksi)	Area (in ²)	Wt. (lbs/ft)	I _x (in ⁴)	S _x (in ³)	R _x (in)	I _y (in ⁴)	S _y (in ³)	R _y (in)	A _e (in ²)	I _{we} (in ⁴)	S _{we} (in ³)	M _{xx,local} (in-k)	M _{yy,local} (in-k)	M _{xy,local} (in-k)	V _{xx} (lbs)	V _{yy} (lbs)	J*1000 (in ⁴)	C _w (in ⁶)	X _o (in)	m	R _o (in)	β	L _u (in)	P _{solid} (kips)
362HDS300-33	33 (20)	33	0.443	1.51	0.927	0.512	1.447	0.625	0.416	1.188	0.215	0.851	0.358	7.08	9.76	521	2048	0.177	4.541	-3.502	1.709	3.971	0.222	102.6	3.9	3.9
362HDS300-43	43 (18)	33	0.574	1.95	1.198	0.661	1.444	0.804	0.536	1.183	0.334	1.161	0.554	10.94	12.92	676	3089	0.388	5.743	-3.485	1.702	3.954	0.223	102.3	6.1	6.1
362HDS300-54	54 (16)	50	0.714	2.43	1.481	0.817	1.440	0.988	0.659	1.177	0.422	1.449	0.696	20.83	23.96	1016	5767	0.764	6.894	-3.479	1.695	3.946	0.222	82.4	11.7	11.7
362HDS300-68	68 (14)	50	0.887	3.02	1.829	1.009	1.435	1.210	0.807	1.168	0.611	1.829	0.998	29.87	29.87	1003	7068	1.503	8.150	-3.476	1.685	3.938	0.221	81.7	17.0	17.0
362HDS300-97	97 (12)	50	1.231	4.19	2.499	1.379	1.425	1.624	1.083	1.149	0.854	2.499	1.363	40.81	40.81	875	9502	4.246	10.200	-3.469	1.665	3.922	0.218	80.6	24.0	23.7
400HDS300-33	33 (20)	33	0.456	1.55	1.167	0.584	1.600	0.650	0.433	1.194	0.212	1.073	0.408	8.06	10.98	595	2048	0.182	5.062	-3.438	1.683	3.976	0.252	99.6	3.9	3.9
400HDS300-43	43 (18)	33	0.591	2.01	1.508	0.754	1.597	0.837	0.558	1.190	0.330	1.463	0.631	12.48	14.78	810	3089	0.400	6.410	-3.421	1.676	3.958	0.253	99.3	6.0	6.0
400HDS300-54	54 (16)	50	0.735	2.50	1.866	0.933	1.593	1.029	0.686	1.183	0.417	1.827	0.794	23.76	27.18	1223	5767	0.787	7.715	-3.414	1.668	3.949	0.253	80.0	11.6	11.6
400HDS300-68	68 (14)	50	0.914	3.11	2.306	1.153	1.588	1.260	0.840	1.174	0.606	2.306	1.141	34.17	34.22	1356	7068	1.548	9.158	-3.409	1.659	3.940	0.251	79.4	16.8	16.8
400HDS300-97	97 (12)	50	1.269	4.32	3.158	1.579	1.577	1.692	1.128	1.155	0.903	3.158	1.565	46.84	46.84	1207	9502	4.378	11.569	-3.398	1.638	3.921	0.249	78.3	25.3	25.1
600HDS300-33	33 (20)	33	0.607	2.07	3.016	1.005	2.229	0.986	0.657	1.275	0.198	2.819	0.624	12.33	19.03	638	2048	0.243	24.581	-3.650	1.548	4.463	0.331	124.8	3.6	3.6
600HDS300-43	43 (18)	33	0.788	2.68	3.907	1.302	2.226	1.272	0.848	1.270	0.312	3.796	0.972	19.21	25.65	1240	3089	0.533	31.355	-3.635	1.541	4.448	0.332	124.4	5.7	5.7
600HDS300-54	54 (16)	50	0.983	3.34	4.851	1.617	2.222	1.571	1.048	1.265	0.395	4.753	1.225	36.68	47.43	1947	5767	1.052	38.082	-3.630	1.534	4.440	0.332	100.4	11.0	11.0
600HDS300-68	68 (14)	50	1.226	4.17	6.021	2.007	2.216	1.937	1.292	1.257	0.581	6.021	1.778	53.22	59.89	2879	7068	2.076	45.718	-3.626	1.524	4.432	0.331	99.5	16.2	16.2
600HDS300-97	97 (12)	50	1.714	5.83	8.327	2.776	2.204	2.641	1.761	1.241	1.036	8.327	2.766	82.82	82.82	3805	9502	5.911	59.043	-3.619	1.504	4.415	0.328	98.0	28.8	28.8
800HDS300-33	33 (20)	33	0.676	2.30	6.101	1.525	3.003	1.115	0.743	1.284	0.191	5.794	0.839	16.57	25.92	474	2048	0.271	32.968	-3.424	1.442	4.732	0.477	112.4	3.5	3.5
800HDS300-43	43 (18)	33	0.879	2.99	7.909	1.977	3.000	1.438	0.959	1.279	0.303	7.721	1.313	25.95	36.56	1051	3089	0.594	42.129	-3.407	1.428	4.717	0.478	112.0	5.5	5.5
800HDS300-54	54 (16)	50	1.096	3.73	9.833	2.458	2.995	1.777	1.185	1.273	0.384	9.662	1.656	49.59	65.08	2091	5767	1.173	51.433	-3.399	1.421	4.706	0.478	90.4	10.7	10.7
800HDS300-68	68 (14)	50	1.369	4.66	12.228	3.057	2.989	2.192	1.461	1.266	0.567	12.228	2.416	72.34	87.01	3367	7068	2.317	62.222	-3.391	1.412	4.694	0.478	89.7	15.8	15.8
800HDS300-97	97 (12)	50	1.917	6.52	16.977	4.244	2.976	2.991	1.994	1.249	1.023	16.977	4.235	126.79	126.86	5938	9502	6.612	81.753	-3.374	1.392	4.669	0.478	88.4	28.4	28.4



Notes:

- Section properties are based on using AISI S100-16 (2020) /S2-20.
- Axial load capacities are based on full-braced condition (structural elements that are installed to provide full restraint or support, i.e. KL=0)
- Jamb stud section properties are based on a punched jamb stud.

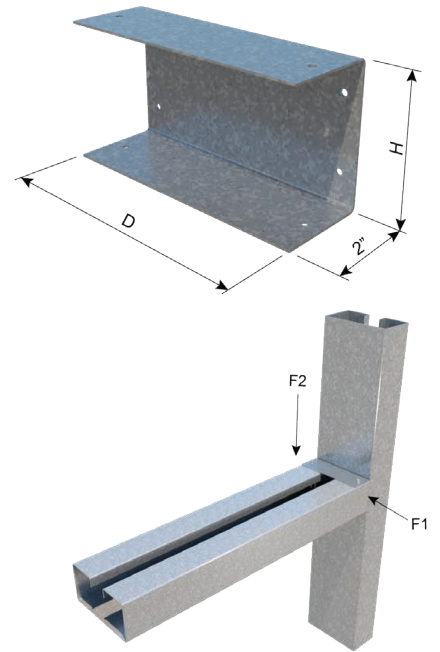
- I_x = Gross Moment of Inertia about x-axis
- S_{xx} = Gross Section Modulus about x-axis
- R_x = Gross Radius of Gyration about x-axis
- I_y = Gross Moment of Inertia about y-axis
- S_{yy} = Gross Section Modulus about y-axis
- R_y = Gross Radius of Gyration about y-axis
- A_e = Effective area
- I_{we} = Effective Moment of Inertia about x-axis
- I_{wy} = Effective Moment of Inertia about y-axis
- J = St. Venant torsional constant (J x 1000)
- S_{we} = Effective Section Modulus about x-axis
- S_{wy} = Effective Section Modulus about y-axis
- M_{xx,local} = Allowable local moment capacity about x-axis
- M_{yy,local} = Allowable local moment capacity about y-axis
- M_{xy,local} = Allowable local moment capacity about x-y axis
- M_{xx,dist} = Allowable distortional moment capacity about x-axis
- M_{yy,dist} = Allowable distortional moment capacity about y-axis
- V_{xx} = Shear strength capacity of section about x-axis
- V_{yy} = Shear strength capacity of section about y-axis
- I_x = Effective Moment of Inertia about x-axis
- I_{wy} = Effective Moment of Inertia about y-axis
- C_w = Warping constant
- X_o = Distance from shear center to the centroid along the principal axis
- m = Distance from shear center to web center line
- R_o = Radii of gyration
- Beta = Torsional flexural constant
- L_u = Maximum unbraced length
- P_{Solid} = Allowable Axial load for section without punchout.
- P_{Punchout} = Allowable Axial load for section with punchout.



HDSC 33mil (20ga) Header Brackets (3" & 3-1/2" Flange)

Product Code	Bracket Specs		Framing Member Specs		Designed to Support
	Depth (D)	Height (H)	Thickness Mils (Gauge)	Yield Strength, Fy (ksi)	
350HDSC300-33	3-1/2"	3"	33 (20)	33	3-5/8" RedHeader or HDS with 3" Flange
350HDSC350-33		3-1/2"			3-5/8" RedHeader with 3-1/2" Flange
387HDSC300-33	3-7/8"	3"	33 (20)	33	4" RedHeader or HDS with 3" Flange
387HDSC350-33		3-1/2"			4" RedHeader with 3-1/2" Flange
587HDSC300-33	5-7/8"	3"	33 (20)	33	6" RedHeader or HDS with 3" Flange
587HDSC350-33		3-1/2"			6" RedHeader with 3-1/2" Flange
787HDSC300-33	7-7/8"	3"	33 (20)	33	8" RedHeader or HDS with 3" Flange
787HDSC350-33		3-1/2"			8" RedHeader with 3-1/2" Flange

All material G90. Sold in pairs.



Allowable Loads (lbs) for 3" & 3-1/2" Flange Header Systems

Product Code	Bracket Specs		Framing Member Specs		Fasteners		Capacities (lbs)					
	Depth (D)	Height (H)	Thickness Mils (Gauge)	Yield Strength, Fy (ksi)	Jamb	Header	F1 Load (Lateral)			F2 Load (Vertical)		
							Nominal (lbs)	ASD Load (lbs)	LRFD Load (lbs)	Nominal (lbs)	ASD Load (lbs)	LRFD Load (lbs)
350HDSC300-33	3-1/2"	3"	33 (20)	33	4 x #10	4 x #10	1200	615	985	895	190	190
			43 (18)	33			1435	735	1180	1555	245	245
			54 (16)	50			2000	1025	1595	2540	300	300
			68 (14)	50			2290	1060	1595	1435	425	425
			97 (12)	50			2875	1060	1595	1750	450	450
350HDSC350-33	3-1/2"	3-1/2"	54 (16)	50	4 x #10	4 x #10	2095	1060	1595	1020	380	380
			68 (14)	50			2460	1060	1595	1280	395	395
			97 (12)	50			2675	1060	1595	1765	460	460
			33 (20)	33			1090	560	895	110	220	220
387HDSC300-33	3-7/8"	3"	43 (18)	33	4 x #10	4 x #10	1420	730	1165	1585	280	280
			54 (16)	50			2085	1060	1595	2130	310	310
			68 (14)	50			2290	1060	1595	1435	425	425
			97 (12)	50			2875	1060	1595	1750	450	450
			54 (16)	50			2095	1060	1595	1020	380	380
387HDSC350-33	3-7/8"	3-1/2"	68 (14)	50	4 x #10	4 x #10	2460	1060	1595	1280	395	395
			97 (12)	50			2560	1060	1595	1935	455	455
			33 (20)	33			1150	590	945	1050	205	205
			43 (18)	33			1410	720	1155	1765	320	320
587HDSC300-33	5-7/8"	3"	54 (16)	50	4 x #10	4 x #10	2085	1060	1595	2130	320	320
			68 (14)	50			2290	1060	1595	1435	425	425
			97 (12)	50			2875	1060	1595	1750	450	450
			54 (16)	50			2095	1060	1595	1020	380	380
			68 (14)	50			2460	1060	1595	1280	395	395
587HDSC350-33	5-7/8"	3-1/2"	97 (12)	50	4 x #10	4 x #10	2560	1060	1595	1935	455	455
			33 (20)	33			1210	620	995	990	190	190
			43 (18)	33			1540	790	1265	1630	270	270
			54 (16)	50			2045	1050	1595	2130	310	310
787HDSC300-33	7-7/8"	3"	68 (14)	50	4 x #10	4 x #10	2195	1060	1595	1395	385	385
			97 (12)	50			2875	1060	1595	1750	450	450
			54 (16)	50			2030	1040	1595	1075	320	320
			68 (14)	50			2460	1060	1595	1280	395	395
			97 (12)	50			2450	1060	1595	2105	455	455

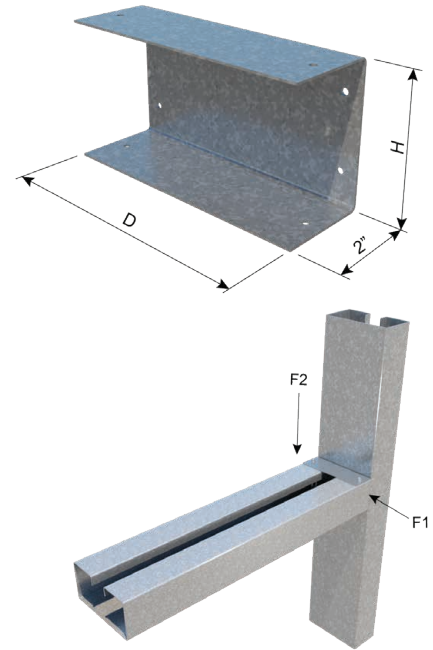
Notes:

- Listed Capacities were derived from calculations and structural tests in accordance with provisions of AISI S100 and ICC-ES AC261.
- The safety factor for ASD loads and resistance factor for LRFD loads are calculated in accordance with Chapter K.
- The capacity of a given HDSC connection is the minimum of the corresponding jamb and the header values. For example, for a 3-1/2" HDSC-33 bracket (3" Flange) used with a 54mil (16ga) 50 ksi jamb and a 97mil (12ga) 50 ksi header, the F2 allowable design load shall be the capacity corresponding to framing member with lesser thickness i.e., 16ga member. Thus, the ASD capacity is 300 lbs.
- #10-16 HWH Screws by ITW Buildex were used to attach Brackets to Jamb and Header. The screws shall have a minimum shear capacity of 1400 lbs and minimum tension capacity of 1158 lbs. Evidence shall be provided to the building official for approval that defines the fasteners meet the performance requirements of this report, ASTM C1513 and are for use with cold-formed steel.
- For simultaneous F1 and F2 loading, use the following interaction equation: $(f1/F1)^2 + (f2/F2)^2 \leq 1.0$ Where f1 and f2 are the applied loads and F1 and F2 are the appropriate allowable loads.
- It is the responsibility of the design professional to detail the project drawings for proper HDSC bracket installation.

HDSC 68mil (14ga) Header Brackets (3" & 3-1/2" Flange)

Product Code	Bracket Specs		Framing Member Specs		Designed to Support
	Depth (D)	Height (H)	Thickness Mils (Gauge)	Yield Strength, Fy (ksi)	
350HDSC300-68	3-1/2"	3"	68 (14)	50	3-5/8" RedHeader or HDS with 3" Flange
350HDSC350-68		3-1/2"			3-5/8" RedHeader with 3-1/2" Flange
387HDSC300-68	3-7/8"	3"	68 (14)	50	4" RedHeader or HDS with 3" Flange
387HDSC350-68		3-1/2"			4" RedHeader with 3-1/2" Flange
587HDSC300-68	5-7/8"	3"	68 (14)	50	6" RedHeader or HDS with 3" Flange
587HDSC350-68		3-1/2"			6" RedHeader with 3-1/2" Flange
787HDSC300-68	7-7/8"	3"	68 (14)	50	8" RedHeader or HDS with 3" Flange
787HDSC350-68		3-1/2"			8" RedHeader with 3-1/2" Flange

All material G90. Sold in pairs.



Allowable Loads (lbs) for 3" & 3-1/2" Flange Header Systems

Product Code	Bracket Specs		Framing Member Specs		Fasteners		Capacities (lbs)					
	Depth (D)	Height (H)	Thickness Mils (Gauge)	Yield Strength, Fy (ksi)	Jamb	Header	F1 Load (Lateral)			F2 Load (Vertical)		
							Nominal (lbs)	ASD Load (lbs)	LRFD Load (lbs)	Nominal (lbs)	ASD Load (lbs)	LRFD Load (lbs)
350HDSC300-68	3-1/2"	3"	33 (20)	33	4 x #10	4 x #10	1435	705	1060	880	300	480
			43 (18)	33			2365	1050	1575	1130	390	620
			54 (16)	50			3185	1095	1755	2380	820	940
			68 (14)	50			3415	1175	1880	2920	1005	1385
			97 (12)	50			3940	1355	2170	3645	1255	1875
350HDSC350-68	3-1/2"	3-1/2"	54 (16)	50	4 x #10	4 x #10	2975	1025	1640	2150	740	1145
			68 (14)	50			3375	1160	1855	2925	1005	1555
			97 (12)	50			3810	1310	2100	3555	1225	1730
387HDSC300-68	3-7/8"	3"	33 (20)	33	4 x #10	4 x #10	1405	705	1060	885	305	485
			43 (18)	33			2210	1050	1575	1225	420	670
			54 (16)	50			3185	1095	1755	2380	820	940
			68 (14)	50			3475	1195	1910	3130	1075	1450
			97 (12)	50			4000	1375	2200	3815	1310	1700
387HDSC350-68	3-7/8"	3-1/2"	54 (16)	50	4 x #10	4 x #10	3070	1055	1690	2300	790	1145
			68 (14)	50			3395	1165	1870	3065	1055	1490
			97 (12)	50			4365	1500	2400	3825	1315	1850
587HDSC300-68	5-7/8"	3"	33 (20)	33	4 x #10	4 x #10	1370	700	1060	895	305	490
			43 (18)	33			2055	1050	1575	1315	450	725
			54 (16)	50			3265	1120	1795	2460	845	1045
			68 (14)	50			3535	1215	1945	3345	1150	1515
			97 (12)	50			4000	1375	2200	3815	1310	1700
587HDSC350-68	5-7/8"	3-1/2"	54 (16)	50	4 x #10	4 x #10	3070	1055	1690	2300	790	1145
			68 (14)	50			3415	1175	1880	3210	1105	1430
			97 (12)	50			4110	1415	2265	3955	1360	1820
787HDSC300-68	7-7/8"	3"	33 (20)	33	4 x #10	4 x #10	1370	700	1060	895	305	490
			43 (18)	33			2115	1050	1575	1245	425	670
			54 (16)	50			3340	1150	1840	2535	870	1145
			68 (14)	50			3440	1180	1895	3425	1180	1575
			97 (12)	50			4060	1395	2235	3985	1370	1525
787HDSC350-68	7-7/8"	3-1/2"	54 (16)	50	4 x #10	4 x #10	3165	1090	1745	2455	845	1145
			68 (14)	50			3420	1175	1880	3360	1155	1370
			97 (12)	50			3860	1330	2125	4090	1405	1785

Notes:

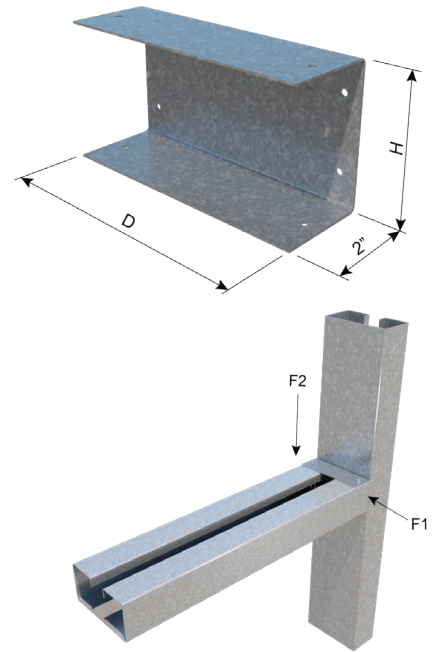
- Listed Capacities were derived from calculations and structural tests in accordance with provisions of AISI S100 and ICC-ES AC261.
- The safety factor for ASD loads and resistance factor for LRFD loads are calculated in accordance with Chapter K.
- The capacity of a given HDSC connection is the minimum of the corresponding jamb and the header values. For example, for a 3-1/2" HDSC-68 bracket (3" Flange) used with a 54mil (16ga) 50 ksi jamb and a 97mil (12ga) 50 ksi header, the F2 allowable design load shall be the capacity corresponding to framing member with lesser thickness i.e., 16ga member. Thus, the ASD capacity is 820 lbs.
- #10-16 HWH Screws by ITW Buildex were used to attach Brackets to Jamb and Header. The screws shall have a minimum shear capacity of 1400 lbs and minimum tension capacity of 1158 lbs. Evidence shall be provided to the building official for approval that defines the fasteners meet the performance requirements of this report, ASTM C1513 and are for use with cold-formed steel.
- For simultaneous F1 and F2 loading, use the following interaction equation: $(F1/F1)^2 + (F2/F2)^2 \leq 1.0$ Where f1 and f2 are the applied loads and F1 and F2 are the appropriate allowable loads.
- It is the responsibility of the design professional to detail the project drawings for proper HDSC bracket installation.



HDSC 97mil (12ga) Header Brackets (3" & 3-1/2" Flange)

Product Code	Bracket Specs		Framing Member Specs		Designed to Support
	Depth (D)	Height (H)	Thickness Mils (Gauge)	Yield Strength, Fy (ksi)	
350HDSC300-97	3-1/2"	3"	97 (12)	50	3-5/8" RedHeader or HDS with 3" Flange
350HDSC350-97		3-1/2"			3-5/8" RedHeader with 3-1/2" Flange
387HDSC300-97	3-7/8"	3"	97 (12)	50	4" RedHeader or HDS with 3" Flange
387HDSC350-97		3-1/2"			4" RedHeader with 3-1/2" Flange
587HDSC300-97	5-7/8"	3"	97 (12)	50	6" RedHeader or HDS with 3" Flange
587HDSC350-97		3-1/2"			6" RedHeader with 3-1/2" Flange
787HDSC300-97	7-7/8"	3"	97 (12)	50	8" RedHeader or HDS with 3" Flange
787HDSC350-97		3-1/2"			8" RedHeader with 3-1/2" Flange

All material G90. Sold in pairs.



Allowable Loads (lbs) for 3" & 3-1/2" Flange Header Systems

Product Code	Bracket Specs		Framing Member Specs		Fasteners		Capacities (lbs)					
	Depth (D)	Height (H)	Thickness Mils (Gauge)	Yield Strength, Fy (ksi)	Jamb	Header	F1 Load (Lateral)			F2 Load (Vertical)		
							Nominal (lbs)	ASD Load (lbs)	LRFD Load (lbs)	Nominal (lbs)	ASD Load (lbs)	LRFD Load (lbs)
350HDSC300-97	3-1/2"	3"	33 (20)	33	4 x #12	4 x #12	1435	735	1130	880	300	495
			43 (18)	33			2490	1120	1680	1375	470	865
			54 (16)	50			4025	1385	2215	2195	755	1410
			68 (14)	50			4340	1490	2390	3465	1190	2000
			97 (12)	50			6075	2090	3345	5610	1930	2380
350HDSC350-97	3-1/2"	3-1/2"	54 (16)	50	4 x #12	4 x #12	4080	1400	2245	2145	735	1545
			68 (14)	50			4265	1465	2350	3575	1230	2090
			97 (12)	50			6005	2065	3305	5385	1850	2405
			33 (20)	33			1405	720	1130	885	305	550
387HDSC300-97	3-7/8"	3"	43 (18)	33	4 x #12	4 x #12	2490	1120	1680	1375	470	865
			54 (16)	50			4105	1410	2260	2405	825	1455
			68 (14)	50			4105	1410	2260	3360	1155	1530
			97 (12)	50			6000	2065	3305	5840	2010	2560
			54 (16)	50			3975	1365	2185	2230	765	1620
387HDSC350-97	3-7/8"	3-1/2"	68 (14)	50	4 x #12	4 x #12	4195	1445	2310	3630	1250	2080
			97 (12)	50			6185	2130	3405	5500	1890	2455
			33 (20)	33			1370	700	1125	895	305	610
			43 (18)	33			2345	1120	1680	1400	480	820
587HDSC300-97	5-7/8"	3"	54 (16)	50	4 x #12	4 x #12	4340	1475	2390	2615	900	1500
			68 (14)	50			4340	1490	2390	3465	1190	2000
			97 (12)	50			5930	2040	3265	6065	2085	2740
			54 (16)	50			3870	1330	2130	2310	795	1690
			68 (14)	50			4195	1445	2310	3630	1250	2080
587HDSC350-97	5-7/8"	3-1/2"	97 (12)	50	4 x #12	4 x #12	6060	2085	3335	5840	2010	2400
			33 (20)	33			1370	700	1125	895	305	610
			43 (18)	33			2200	1120	1680	1420	485	770
			54 (16)	50			4125	1420	2270	2945	1015	1485
787HDSC300-97	7-7/8"	3"	68 (14)	50	4 x #12	4 x #12	4125	1420	2270	3685	1265	2070
			97 (12)	50			5770	1985	3175	6085	2090	2710
			54 (16)	50			4070	1400	2240	2625	905	1505
			68 (14)	50			4125	1420	2270	3685	1265	2070
			97 (12)	50			5935	2040	3265	6180	2125	2350

Notes:

- Listed Capacities were derived from calculations and structural tests in accordance with provisions of AISI S100 and ICC-ES AC261.
- The safety factor for ASD loads and resistance factor for LRFD loads are calculated in accordance with Chapter K.
- The capacity of a given HDSC connection is the minimum of the corresponding jamb and the header values. For example, for a 3-1/2" HDSC-97 bracket (3" Flange) used with a 54mil (16ga) 50 ksi jamb and a 97mil (12ga) 50 ksi header, the F2 allowable design load shall be the capacity corresponding to framing member with lesser thickness i.e., 16ga member. Thus, the ASD capacity is 755 lbs.
- #12-14 HWH Screws by ITW Buildex were used to attach Brackets to Jamb and Header. The screws shall have a minimum shear capacity of 2000 lbs and minimum tension capacity of 2325 lbs. Evidence shall be provided to the building official for approval that defines the fasteners meet the performance requirements of this report, ASTM C1513 and are for use with cold-formed steel.
- For simultaneous F1 and F2 loading, use the following interaction equation: $(f1/F1)^2 + (f2/F2)^2 \leq 1.0$ Where f1 and f2 are the applied loads and F1 and F2 are the appropriate allowable loads.
- It is the responsibility of the design professional to detail the project drawings for proper HDSC bracket installation.

Allowable HDS® Header Spans for Window and Door Openings Interior Span Chart

Wall Height (ft)	Wall Size (in)	Member	Mils (Gauge)	Yield Strength, Fy (ksi)	Flange (in)	Interior Allowable Spans: Lateral Load (psf) = 5, Dead Load (psf) = 10																	
						Strong Axis Deflection Targets																	
						L/120					L/240					L/360							
						Opening Heights																	
						7			8			9			7			8			9		
9	3-5/8	362HDS300-33	33 (20)	33	3	11'-3"	1	13'-0"	1	—	11'-3"	1	13'-0"	1	—	11'-3"	1	11'-9"	1	—			
		362HDS300-43	43 (18)	33	3	12'-8"	2	15'-1"	2	—	12'-8"	2	15'-0"	2	—	12'-8"	2	13'-1"	2	—			
		362HDS300-54	54 (16)	50	3	13'-5"	2	16'-0"	2	—	13'-5"	2	16'-0"	2	—	13'-5"	2	14'-1"	2	—			
		362HDS300-68	68 (14)	50	3	14'-1"	2	16'-0"	2	—	14'-1"	2	16'-0"	2	—	14'-1"	2	15'-3"	2	—			
		362HDS300-97	97 (12)	50	3	15'-2"	3	16'-0"	3	—	15'-2"	3	16'-0"	3	—	15'-2"	3	16'-0"	3	—			
	6	600HDS300-33	33 (20)	33	3	13'-3"	1	15'-9"	1	—	13'-3"	1	15'-9"	1	—	13'-3"	1	15'-9"	1	—			
		600HDS300-43	43 (18)	33	3	14'-3"	2	17'-0"	2	—	14'-3"	2	17'-0"	2	—	14'-3"	2	17'-0"	2	—			
		600HDS300-54	54 (16)	50	3	15'-0"	2	17'-11"	2	—	15'-0"	2	17'-11"	2	—	15'-0"	2	17'-11"	2	—			
11	3-5/8	362HDS300-33	33 (20)	33	3	9'-0"	1	9'-10"	1	11'-0"	1	9'-0"	1	9'-10"	1	11'-0"	1	9'-10"	1	11'-0"	1		
		362HDS300-43	43 (18)	33	3	10'-6"	2	11'-6"	2	12'-8"	2	10'-6"	2	11'-6"	2	12'-8"	2	10'-6"	2	12'-3"	2		
		362HDS300-54	54 (16)	50	3	11'-3"	2	12'-1"	2	13'-5"	2	11'-3"	2	12'-1"	2	13'-5"	2	11'-3"	2	13'-2"	2		
		362HDS300-68	68 (14)	50	3	11'-10"	2	12'-9"	2	14'-1"	2	11'-10"	2	12'-9"	2	14'-1"	2	11'-10"	2	12'-9"	2	14'-1"	2
		362HDS300-97	97 (12)	50	3	12'-9"	3	13'-8"	3	15'-2"	3	12'-9"	3	13'-8"	3	15'-2"	3	12'-9"	3	13'-8"	3	15'-2"	3
	6	600HDS300-33	33 (20)	33	3	11'-0"	2	12'-0"	1	13'-3"	1	11'-0"	2	12'-0"	1	13'-3"	1	11'-0"	2	12'-0"	1	13'-3"	1
		600HDS300-43	43 (18)	33	3	12'-0"	2	12'-10"	2	14'-3"	2	12'-0"	2	12'-10"	2	14'-3"	2	12'-0"	2	12'-10"	2	14'-3"	2
		600HDS300-54	54 (16)	50	3	12'-8"	2	13'-7"	2	15'-0"	2	12'-8"	2	13'-7"	2	15'-0"	2	12'-8"	2	13'-7"	2	15'-0"	2
13	3-5/8	362HDS300-33	33 (20)	33	3	7'-9"	2	8'-3"	2	9'-0"	1	7'-9"	2	8'-3"	2	9'-0"	1	7'-9"	2	8'-3"	2	9'-0"	1
		362HDS300-43	43 (18)	33	3	9'-0"	2	9'-7"	2	10'-4"	2	9'-0"	2	9'-7"	2	10'-4"	2	9'-0"	2	9'-7"	2	10'-4"	2
		362HDS300-54	54 (16)	50	3	10'-2"	2	10'-8"	2	11'-3"	2	10'-2"	2	10'-8"	2	11'-3"	2	10'-2"	2	10'-8"	2	11'-3"	2
		362HDS300-68	68 (14)	50	3	10'-8"	2	11'-2"	2	11'-10"	2	10'-8"	2	11'-2"	2	11'-10"	2	10'-8"	2	11'-2"	2	11'-10"	2
		362HDS300-97	97 (12)	50	3	11'-6"	3	12'-1"	3	12'-9"	3	11'-6"	3	12'-1"	3	12'-9"	3	11'-6"	3	12'-1"	3	12'-9"	3
	6	600HDS300-33	33 (20)	33	3	9'-4"	2	10'-0"	2	10'-10"	2	9'-4"	2	10'-0"	2	10'-10"	2	9'-4"	2	10'-0"	2	10'-10"	2
		600HDS300-43	43 (18)	33	3	10'-10"	2	11'-4"	2	12'-0"	2	10'-10"	2	11'-4"	2	12'-0"	2	10'-10"	2	11'-4"	2	12'-0"	2
		600HDS300-54	54 (16)	50	3	11'-5"	2	12'-0"	2	12'-8"	2	11'-5"	2	12'-0"	2	12'-8"	2	11'-5"	2	12'-0"	2	12'-8"	2
15	3-5/8	362HDS300-33	33 (20)	33	3	6'-10"	2	7'-3"	2	7'-8"	2	6'-10"	2	7'-3"	2	7'-8"	2	6'-10"	2	7'-3"	2	7'-8"	2
		362HDS300-43	43 (18)	33	3	8'-0"	2	8'-5"	2	8'-11"	2	8'-0"	2	8'-5"	2	8'-11"	2	8'-0"	2	8'-5"	2	8'-11"	2
		362HDS300-54	54 (16)	50	3	9'-3"	2	9'-9"	2	10'-2"	2	9'-3"	2	9'-9"	2	10'-2"	2	9'-3"	2	9'-9"	2	10'-2"	2
		362HDS300-68	68 (14)	50	3	10'-0"	2	10'-3"	2	10'-8"	2	10'-0"	2	10'-3"	2	10'-8"	2	10'-0"	2	10'-3"	2	10'-8"	2
		362HDS300-97	97 (12)	50	3	10'-8"	3	11'-1"	3	11'-6"	3	10'-8"	3	11'-1"	3	11'-6"	3	10'-8"	3	11'-1"	3	11'-6"	3
	6	600HDS300-33	33 (20)	33	3	7'-6"	3	8'-6"	3	9'-3"	2	7'-6"	3	8'-6"	3	9'-3"	2	7'-6"	3	8'-6"	3	9'-3"	2
		600HDS300-43	43 (18)	33	3	10'-1"	2	10'-5"	2	10'-10"	2	10'-1"	2	10'-5"	2	10'-10"	2	10'-1"	2	10'-5"	2	10'-10"	2
		600HDS300-54	54 (16)	50	3	10'-7"	2	11'-0"	2	11'-5"	2	10'-7"	2	11'-0"	2	11'-5"	2	10'-7"	2	11'-0"	2	11'-5"	2
15	600HDS300-68	68 (14)	50	3	11'-2"	2	11'-7"	2	12'-0"	2	11'-2"	2	11'-7"	2	12'-0"	2	11'-2"	2	11'-7"	2	12'-0"	2	
	600HDS300-97	97 (12)	50	3	12'-1"	3	12'-6"	3	13'-0"	3	12'-1"	3	12'-6"	3	13'-0"	3	12'-1"	3	12'-6"	3	13'-0"	3	

Span notes: (Reference number shown to the right of spans)

- 1 Use 20ga (33mil) HDSC™ Clip with a 4/4 screw pattern.
- 2 Use 14ga (68mil) HDSC™ Clip with a 4/4 screw pattern
- 3 Use 12ga (97mil) HDSC™ Clip with a 4/4 screw pattern.

Notes:

- 1 All headers require the attachment of the HDSC™ Clip at each end with headers installed open side up.
- 2 Recommended HDSC™ Clip attachments above are based on the jamb stud thickness being equal to or greater than header thickness.
- 3 Header framing was calculated with a sill height of 0" for worst case design.
- 4 Section properties are based on the AISI S100-16 (2020) w/S2-20.
- 5 Increase strength in cold work of forming was used per AISI S100 section A3.3.2
- 6 For deflection calculations, the effective moment of inertia was used. Reference the AISI S100 commentary B5
- 7 On interior framing, lateral deflection calculations are based on using 1.0 times the interior lateral load.
- 8 Dead load deflection calculations are limited to L/240 or 0.5" max. deflection.
- 9 For Wall Dead Load calculations, 10psf is used for interior framing and 12psf is used for exterior framing
- 10 Header lengths should be ordered 1/2" shorter to fit inside clips. Listed capacities are based on a maximum gap between the clip and the end of the header of 1/4".
- 11 Spans listed are based on unpunched members
- 12 Span tables are based on ASD load capacities for the HDSC clip.

Allowable HDS® Header Spans for Window and Door Openings

Exterior Span Chart

Wall Height (ft)	Wall Size (in)	Member	Mils (Gauge)	Yield Strength, Fy (ksi)	Flange (in)	Exterior Allowable Spans: Lateral Load (psf) = 25, Dead Load (psf) = 12																		
						Strong Axis Deflection Targets																		
						L/240						L/360						L/600						
						Opening Heights																		
7		8		9		7		8		9		7		8		9								
9	3-5/8	362HDS300-33	33 (20)	33	3	6'-10"	1	7'-6"	1	—	6'-10"	1	7'-6"	1	—	6'-6"	1	6'-6"	1	—				
		362HDS300-43	43 (18)	33	3	8'-0"	2	8'-9"	2	—	8'-0"	2	8'-7"	2	—	7'-3"	2	7'-3"	2	—				
		362HDS300-54	54(16)	50	3	10'-7"	2	10'-7"	2	—	9'-3"	2	9'-3"	2	—	7'-10"	2	7'-10"	2	—				
		362HDS300-68	68(14)	50	3	11'-6"	2	11'-6"	2	—	10'-0"	2	10'-0"	2	—	8'-5"	2	8'-5"	2	—				
		362HDS300-97	97 (12)	50	3	12'-9"	3	12'-9"	3	—	11'-1"	3	11'-1"	3	—	9'-4"	3	9'-4"	3	—				
	6	600HDS300-33	33 (20)	33	3	8'-7"	1	9'-5"	1	—	8'-7"	1	9'-5"	1	—	8'-7"	1	9'-5"	1	—				
		600HDS300-43	43 (18)	33	3	10'-6"	2	11'-4"	2	—	10'-6"	2	11'-4"	2	—	10'-6"	2	10'-9"	2	—				
		600HDS300-54	54(16)	50	3	14'-1"	2	15'-2"	2	—	13'-9"	2	13'-9"	2	—	11'-7"	2	11'-7"	2	—				
		600HDS300-68	68 (14)	50	3	15'-2"	2	17'-1"	2	—	14'-11"	2	14'-11"	2	—	12'-7"	2	12'-7"	2	—				
		600HDS300-97	97 (12)	50	3	16'-4"	3	19'-0"	3	—	16'-4"	3	16'-7"	3	—	14'-0"	3	14'-0"	3	—				
11	3-5/8	362HDS300-33	33 (20)	33	3	5'-10"	1	6'-3"	1	6'-10"	1	5'-10"	1	6'-3"	1	6'-10"	1	5'-10"	1	6'-1"	1	6'-1"	1	
		362HDS300-43	43 (18)	33	3	6'-10"	2	7'-4"	2	8'-0"	2	6'-10"	2	7'-4"	2	8'-0"	2	6'-9"	2	6'-9"	2	6'-9"	2	
		362HDS300-54	54(16)	50	3	9'-1"	2	9'-7"	2	9'-11"	2	8'-8"	2	8'-8"	2	7'-4"	2	7'-4"	2	7'-4"	2	7'-4"	2	
		362HDS300-68	68 (14)	50	3	10'-5"	2	10'-9"	2	10'-9"	2	9'-4"	2	9'-4"	2	9'-4"	2	7'-11"	2	7'-11"	2	7'-11"	2	
		362HDS300-97	97 (12)	50	3	11'-11"	3	11'-11"	3	11'-11"	3	10'-5"	3	10'-5"	3	10'-5"	3	8'-9"	3	8'-9"	3	8'-9"	3	
	6	600HDS300-33	33 (20)	33	3	7'-4"	2	7'-10"	1	8'-6"	1	7'-4"	2	7'-10"	1	8'-6"	1	7'-4"	2	7'-10"	1	8'-6"	1	
		600HDS300-43	43 (18)	33	3	8'-10"	2	9'-5"	2	10'-2"	2	8'-10"	2	9'-5"	2	10'-2"	2	8'-10"	2	9'-5"	2	10'-1"	2	
		600HDS300-54	54(16)	50	3	11'-11"	2	12'-7"	2	13'-4"	2	11'-11"	2	12'-7"	2	12'-11"	2	10'-10"	2	10'-10"	2	10'-10"	2	
		600HDS300-68	68 (14)	50	3	12'-9"	2	13'-8"	2	15'-2"	2	12'-9"	2	13'-8"	2	14'-0"	2	11'-9"	2	11'-9"	2	11'-9"	2	
		600HDS300-97	97 (12)	50	3	13'-9"	3	14'-9"	3	16'-4"	3	13'-9"	3	14'-9"	3	15'-6"	3	13'-1"	3	13'-1"	3	13'-1"	3	
13	3-5/8	362HDS300-33	33 (20)	33	3	5'-2"	2	5'-5"	1	5'-10"	1	5'-2"	2	5'-5"	1	5'-10"	1	5'-2"	2	5'-5"	1	5'-9"	1	
		362HDS300-43	43 (18)	33	3	6'-1"	2	6'-5"	2	6'-10"	2	6'-1"	2	6'-5"	2	6'-10"	2	6'-1"	2	6'-5"	2	6'-5"	2	
		362HDS300-54	54(16)	50	3	8'-1"	2	8'-5"	2	9'-0"	2	8'-1"	2	8'-2"	2	8'-2"	2	6'-11"	2	6'-11"	2	6'-11"	2	
		362HDS300-68	68 (14)	50	3	9'-2"	2	9'-8"	2	10'-2"	2	8'-10"	2	8'-10"	2	8'-10"	2	7'-5"	2	7'-5"	2	7'-5"	2	
		362HDS300-97	97 (12)	50	3	10'-8"	3	11'-1"	3	11'-3"	3	9'-10"	3	9'-10"	3	9'-10"	3	8'-3"	3	8'-3"	3	8'-3"	3	
	6	600HDS300-33	33 (20)	33	3	6'-5"	2	6'-10"	2	7'-4"	2	6'-5"	2	6'-10"	2	7'-4"	2	6'-5"	2	6'-10"	2	7'-4"	2	
		600HDS300-43	43 (18)	33	3	7'-10"	2	8'-3"	2	8'-9"	2	7'-10"	2	8'-3"	2	8'-9"	2	7'-10"	2	8'-3"	2	8'-9"	2	
		600HDS300-54	54(16)	50	3	10'-6"	2	11'-0"	2	11'-6"	2	10'-6"	2	11'-0"	2	11'-6"	2	10'-3"	2	10'-3"	2	10'-3"	2	
		600HDS300-68	68 (14)	50	3	11'-6"	2	12'-0"	2	12'-9"	2	11'-6"	2	12'-0"	2	12'-9"	2	11'-1"	2	11'-1"	2	11'-1"	2	
		600HDS300-97	97 (12)	50	3	12'-5"	3	13'-0"	3	13'-9"	3	12'-5"	3	13'-0"	3	13'-9"	3	12'-5"	3	12'-5"	3	12'-5"	3	
15	3-5/8	362HDS300-33	33 (20)	33	3	4'-7"	2	4'-10"	2	5'-2"	2	4'-7"	2	4'-10"	2	5'-2"	2	4'-7"	2	4'-10"	2	5'-2"	2	
		362HDS300-43	43 (18)	33	3	5'-6"	2	5'-9"	2	6'-1"	2	5'-6"	2	5'-9"	2	6'-1"	2	5'-6"	2	5'-9"	2	6'-1"	2	
		362HDS300-54	54(16)	50	3	7'-4"	2	7'-8"	2	8'-0"	2	7'-4"	2	7'-8"	2	7'-10"	2	6'-7"	2	6'-7"	2	6'-7"	2	
		362HDS300-68	68 (14)	50	3	8'-4"	2	8'-8"	2	9'-1"	2	8'-4"	2	8'-5"	2	8'-5"	2	7'-1"	2	7'-1"	2	7'-1"	2	
		362HDS300-97	97 (12)	50	3	9'-8"	3	10'-0"	3	10'-5"	3	9'-4"	3	9'-4"	3	9'-4"	3	7'-11"	3	7'-11"	3	7'-11"	3	
	6	600HDS300-33	33 (20)	33	3	5'-5"	3	6'-1"	3	6'-5"	2	5'-5"	3	6'-1"	3	6'-5"	2	5'-5"	2	6'-1"	3	6'-5"	2	
		600HDS300-43	43 (18)	33	3	7'-1"	2	7'-5"	2	7'-10"	2	7'-1"	2	7'-5"	2	7'-10"	2	7'-1"	3	7'-5"	2	7'-10"	2	
		600HDS300-54	54(16)	50	3	9'-6"	2	9'-10"	2	10'-4"	2	9'-6"	2	9'-10"	2	10'-4"	2	9'-6"	2	9'-9"	2	9'-9"	2	
		600HDS300-68	68 (14)	50	3	10'-8"	2	11'-1"	2	11'-6"	2	10'-8"	2	11'-1"	2	11'-6"	2	10'-7"	2	10'-7"	2	10'-7"	2	
		600HDS300-97	97 (12)	50	3	11'-7"	3	12'-0"	3	12'-5"	3	11'-7"	3	12'-0"	3	12'-5"	3	11'-7"	3	11'-10"	3	11'-10"	3	

Span notes: (Reference number shown to the right of spans)

- 1 Use 20ga (33mil) HDSC™ Clip with a 4/4 screw pattern.
- 2 Use 14ga (68mil) HDSC™ Clip with a 4/4 screw pattern.
- 3 Use 12ga (97mil) HDSC™ Clip with a 4/4 screw pattern.

Notes:

- 1 All headers require the attachment of the HDSC™ Clip at each end with headers installed open side up.
- 2 Recommended HDSC™ Clip attachments above are based on the jamb stud thickness being equal to or greater than header thickness.
- 3 Header framing was calculated with a sill height of 0" for worst case design.
- 4 Section properties are based on the AISI S100-16 (2020) w/S2-20.
- 5 Increase strength in cold work of forming was used per AISI S100 section A3.3.2
- 6 For deflection calculations, the effective moment of inertia was used. Reference the AISI S100 commentary B5
- 7 On exterior framing, lateral deflection calculations are using 0.7 times the wind load.
- 8 Dead load deflection calculations are limited to L/240 or 0.5" max. deflection.
- 9 Header lengths should be ordered 1/2" shorter to fit inside clips. Listed capacities are based on a maximum gap between the clip and the end of the header of 1/4".
- 10 Spans listed are based on unpunched members
- 11 Span tables are based on ASD load capacities for the HDSC clip.

Allowable Opening Width for Single HDS® Framing
Used As Jamb Studs For Window Opening

Windows: Interior and Exterior Span Chart

Wall Height (ft)	Wall Size (in)	Member	Mils (Gauge)	Yield Strength, F _y (ksi)	Flange (in)	Interior: Lateral Load (psf) = 5, Dead Load (psf) = 10						Exterior: Lateral Load (psf) = 25, Dead Load (psf) = 12					
						Strong Axis Deflection Targets						Strong Axis Deflection Targets					
						L/120		L/240		L/360		L/240		L/360		L/600	
						Sill Height (ft)						Sill Height (ft)					
2		3		2		3		2		3		2		3			
9	3-5/8	362HDS300-33	33 (20)	33	3	7'-8"	8'-6"	7'-8"	8'-6"	7'-8"	8'-6"	—	—	—	—	—	—
		362HDS300-43	43 (18)	33	3	14'-1"	16'-0"	14'-1"	16'-0"	14'-1"	16'-0"	—	—	—	—	—	—
		362HDS300-54	54 (16)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	5'-0"	5'-5"	5'-0"	5'-5"	4'-8"	4'-3"
		362HDS300-68	68 (14)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	8'-8"	9'-9"	8'-8"	9'-9"	6'-8"	6'-0"
	362HDS300-97	97 (12)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	10'-3"	9'-0"	
	6	600HDS300-33	33 (20)	33	3	7'-4"	8'-2"	7'-4"	8'-2"	7'-4"	8'-2"	—	—	—	—	—	—
		600HDS300-43	43 (18)	33	3	13'-7"	15'-5"	13'-7"	15'-5"	13'-7"	15'-5"	—	—	—	—	—	—
		600HDS300-54	54 (16)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	4'-10"	5'-2"	4'-10"	5'-2"	4'-10"	5'-2"
600HDS300-68		68 (14)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	8'-5"	9'-5"	8'-5"	9'-5"	8'-5"	9'-5"	
600HDS300-97	97 (12)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	18'-0"	20'-0"	18'-0"	20'-0"	18'-0"	20'-0"		
11	3-5/8	362HDS300-33	33 (20)	33	3	5'-8"	6'-1"	5'-8"	6'-1"	5'-8"	6'-1"	—	—	—	—	—	—
		362HDS300-43	43 (18)	33	3	10'-8"	11'-8"	10'-8"	11'-8"	10'-8"	11'-8"	—	—	—	—	—	—
		362HDS300-54	54 (16)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	3'-7"	3'-8"	3'-7"	3'-8"	—	—
		362HDS300-68	68 (14)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	6'-6"	6'-11"	5'-10"	5'-6"	—	—
	362HDS300-97	97 (12)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	12'-8"	12'-8"	9'-5"	8'-5"	4'-4"	4'-0"	
	6	600HDS300-33	33 (20)	33	3	5'-5"	5'-9"	5'-5"	5'-9"	5'-5"	5'-9"	—	—	—	—	—	—
		600HDS300-43	43 (18)	33	3	10'-3"	11'-3"	10'-3"	11'-3"	10'-3"	11'-3"	—	—	—	—	—	—
		600HDS300-54	54 (16)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	3'-5"	3'-6"	3'-5"	3'-6"	3'-5"	3'-6"
600HDS300-68		68 (14)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	6'-3"	6'-9"	6'-3"	6'-9"	6'-3"	6'-9"	
600HDS300-97	97 (12)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	13'-8"	15'-1"	13'-8"	15'-1"	13'-8"	15'-1"		
13	3-5/8	362HDS300-33	33 (20)	33	3	4'-5"	4'-7"	4'-5"	4'-7"	4'-5"	4'-7"	—	—	—	—	—	—
		362HDS300-43	43 (18)	33	3	8'-6"	9'-1"	8'-6"	9'-1"	8'-6"	8'-5"	—	—	—	—	—	—
		362HDS300-54	54 (16)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	12'-11"	11'-4"	—	—	—	—	—	—
		362HDS300-68	68 (14)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	15'-2"	5'-0"	4'-10"	—	—	—	—
	362HDS300-97	97 (12)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	8'-0"	7'-7"	4'-4"	4'-2"	—	—	
	6	600HDS300-33	33 (20)	33	3	4'-2"	4'-4"	4'-2"	4'-4"	4'-2"	4'-4"	—	—	—	—	—	—
		600HDS300-43	43 (18)	33	3	8'-2"	8'-9"	8'-2"	8'-9"	8'-2"	8'-9"	—	—	—	—	—	—
		600HDS300-54	54 (16)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	—	—	—	—	—	—
600HDS300-68		68 (14)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	4'-11"	5'-1"	4'-11"	5'-1"	4'-11"	5'-1"	
600HDS300-97	97 (12)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	11'-0"	11'-10"	11'-0"	11'-10"	11'-0"	11'-2"		
15	3-5/8	362HDS300-33	33 (20)	33	3	3'-6"	3'-7"	3'-6"	3'-7"	3'-0"	—	—	—	—	—	—	
		362HDS300-43	43 (18)	33	3	7'-0"	7'-4"	7'-0"	7'-4"	4'-9"	4'-7"	—	—	—	—	—	
		362HDS300-54	54 (16)	50	3	16'-0"	16'-0"	12'-3"	11'-3"	6'-6"	6'-3"	—	—	—	—	—	
		362HDS300-68	68 (14)	50	3	16'-0"	16'-0"	16'-0"	15'-3"	9'-2"	8'-9"	—	—	—	—	—	
	362HDS300-97	97 (12)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	15'-4"	13'-6"	4'-3"	4'-1"	—	—	—	—	
	6	600HDS300-33	33 (20)	33	3	3'-4"	3'-5"	3'-4"	3'-5"	3'-4"	3'-5"	—	—	—	—	—	
		600HDS300-43	43 (18)	33	3	6'-9"	7'-1"	6'-9"	7'-1"	6'-9"	7'-1"	—	—	—	—	—	
		600HDS300-54	54 (16)	50	3	17'-8"	18'-11"	17'-8"	18'-11"	17'-8"	18'-11"	—	—	—	—	—	
600HDS300-68		68 (14)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	3'-11"	4'-0"	3'-11"	4'-0"	3'-11"	3'-10"	
600HDS300-97	97 (12)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	9'-1"	9'-7"	9'-1"	9'-7"	6'-4"	6'-2"		

- Notes:**
- This table is based on the sill heights listed in the table and the condition where the opening is centered in the jamb span. Other conditions may result in differing results. Contact Technical Service for analysis of other conditions.
 - Opening widths are limited to 16'-0" for 3-5/8" & 4" members and 20'-0" for 6" & 8" members.
 - On interior framing, lateral deflection calculations are based on using 1.0 times the interior lateral load.
 - On exterior framing, lateral deflection calculations are using 0.7 times the wind load.
 - Physical properties and this table have been calculated in conformance with the AISI S100-2016 (2020) w/S2-20.
 - Effective properties incorporate the strength increase from the Cold Work of Forming as applicable per AISI S100-2016 (2020) w/S2-20 section A3.3.2.
 - The strength analysis included separate bending and shear checks plus the combined interaction of bending and shear effects per section H2 of AISI S100-2016 (2020) w/S2-20.
 - The strength analysis included separate bending and axial load checks plus the combined interaction of bending and axial load effects per section H1 of AISI S100-2016 (2020) w/S2-20.
 - Web crippling strength check includes both single stud per section G5 of AISI S100-2016 (2020) w/S2-20 and stud-to-track connection per section B3.2.5.1 of AISI S240-20.
 - Single stud web crippling strength is based on minimum of all conditions and load cases in Table G5-2 of AISI S100-2016 (2020) w/S2-20.
 - The tabulated values for flexural stress were based upon a fully braced side jamb.
 - This table is not applicable for axial load bearing walls but is applicable for non-axial load bearing walls.
 - Tables were prepared using a 16" o.c. spacing from the jamb stud to the first adjacent typical wall stud.
 - Wall base track is assumed to be 18ga (43mils) minimum thickness with one screw per stud flange. Wall top connection is assumed to have a minimum 1.25" bearing on the top track.

Allowable Opening Width for Single HDS® Framing
Used As Jamb Studs For Door Opening

Door Jamb: Interior Span Chart

Wall Height (ft)	Wall Size (in)	Member	Mils (Gauge)	Yield Strength, Fy (ksi)	Flange (in)	Interior Allowable Spans: Lateral Load (psf) = 5, Dead Load (psf) = 10												
						Strong Axis Deflection Targets												
						L/120			L/240			L/360						
						Opening Heights												
						7		8		9		7		8		9		
9	3-5/8	362HDS300-33	33 (20)	33	3	6'-6"	6'-7"	—	6'-6"	6'-7"	—	6'-6"	6'-7"	—				
		362HDS300-43	43 (18)	33	3	11'-6"	11'-6"	—	11'-6"	11'-6"	—	11'-6"	11'-6"	—				
		362HDS300-54	54 (16)	50	3	16'-0"	16'-0"	—	16'-0"	16'-0"	—	16'-0"	16'-0"	—				
		362HDS300-68	68 (14)	50	3	16'-0"	16'-0"	—	16'-0"	16'-0"	—	16'-0"	16'-0"	—				
	6	362HDS300-97	97 (12)	50	3	16'-0"	16'-0"	—	16'-0"	16'-0"	—	16'-0"	16'-0"	—				
		600HDS300-33	33 (20)	33	3	6'-3"	6'-4"	—	6'-3"	6'-4"	—	6'-3"	6'-4"	—				
		600HDS300-43	43 (18)	33	3	11'-1"	11'-2"	—	11'-1"	11'-2"	—	11'-1"	11'-2"	—				
		600HDS300-54	54 (16)	50	3	20'-0"	20'-0"	—	20'-0"	20'-0"	—	20'-0"	20'-0"	—				
11	3-5/8	362HDS300-33	33 (20)	33	3	5'-0"	5'-0"	5'-1"	5'-0"	5'-0"	5'-1"	5'-0"	5'-0"	5'-1"				
		362HDS300-43	43 (18)	33	3	9'-0"	9'-1"	9'-2"	9'-0"	9'-1"	9'-2"	9'-0"	9'-1"	9'-2"				
		362HDS300-54	54 (16)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"			
		362HDS300-68	68 (14)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"			
	6	362HDS300-97	97 (12)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"			
		600HDS300-33	33 (20)	33	3	4'-9"	4'-10"	4'-11"	4'-9"	4'-10"	4'-11"	4'-9"	4'-10"	4'-11"				
		600HDS300-43	43 (18)	33	3	8'-9"	8'-10"	8'-10"	8'-9"	8'-10"	8'-10"	8'-9"	8'-10"	8'-10"				
		600HDS300-54	54 (16)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"			
13	3-5/8	362HDS300-33	33 (20)	33	3	3'-10"	3'-11"	4'-0"	3'-10"	3'-11"	4'-0"	3'-10"	3'-11"	4'-0"				
		362HDS300-43	43 (18)	33	3	7'-4"	7'-5"	7'-6"	7'-4"	7'-5"	7'-6"	7'-4"	7'-5"	7'-6"				
		362HDS300-54	54 (16)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	15'-11"	10'-4"	10'-2"	10'-1"			
		362HDS300-68	68 (14)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	13'-7"	13'-3"	13'-2"			
	6	362HDS300-97	97 (12)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"		
		600HDS300-33	33 (20)	33	3	3'-8"	3'-9"	3'-10"	3'-8"	3'-9"	3'-10"	3'-8"	3'-9"	3'-10"				
		600HDS300-43	43 (18)	33	3	7'-0"	7'-2"	7'-2"	7'-0"	7'-2"	7'-2"	7'-0"	7'-2"	7'-2"				
		600HDS300-54	54 (16)	50	3	18'-0"	18'-1"	18'-2"	18'-0"	18'-1"	18'-2"	18'-0"	18'-1"	18'-2"				
15	3-5/8	362HDS300-33	33 (20)	33	3	3'-0"	3'-1"	3'-2"	3'-0"	3'-1"	3'-2"	—	—	—				
		362HDS300-43	43 (18)	33	3	6'-0"	6'-1"	6'-2"	6'-0"	6'-1"	6'-2"	4'-6"	4'-5"	4'-5"				
		362HDS300-54	54 (16)	50	3	14'-3"	14'-11"	15'-10"	10'-6"	10'-1"	9'-10"	6'-3"	6'-0"	6'-0"				
		362HDS300-68	68 (14)	50	3	16'-0"	16'-0"	16'-0"	13'-11"	13'-3"	12'-11"	8'-6"	8'-2"	8'-0"				
	6	362HDS300-97	97 (12)	50	3	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	16'-0"	12'-6"	11'-11"	11'-8"			
		600HDS300-33	33 (20)	33	3	—	—	3'-0"	—	—	3'-0"	—	—	3'-0"				
		600HDS300-43	43 (18)	33	3	5'-9"	5'-11"	6'-0"	5'-9"	5'-11"	6'-0"	5'-9"	5'-11"	6'-0"				
		600HDS300-54	54 (16)	50	3	15'-3"	15'-4"	15'-5"	15'-3"	15'-4"	15'-5"	15'-3"	15'-4"	15'-5"				
6	600HDS300-68	68 (14)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"				
	600HDS300-97	97 (12)	50	3	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"				

Notes:

- This table is based on the 0' sill heights and listed opening heights. Other conditions may result in differing results. Contact Technical Service for analysis of other conditions.
- Opening widths are limited to 16'-0" for 3-5/8" & 4" members and 20'-0" for 6" & 8" members.
- On interior framing, lateral deflection calculations are based on using 1.0 times the interior lateral load.
- Physical properties and this table have been calculated in conformance with the AISI S100-2016 (2020) w/S2-20.
- Effective properties incorporate the strength increase from the Cold Work of Forming as applicable per AISI S100-2016 (2020) w/S2-20 section A3.3.2.
- The strength analysis included separate bending and shear checks plus the combined interaction of bending and shear effects per section H2 of AISI S100-2016 (2020) w/S2-20.
- The strength analysis included separate bending and axial load checks plus the combined interaction of bending and axial load effects per section H1 of AISI S100-2016 (2020) w/S2-20.
- Web crippling strength check includes both single stud per section G5 of AISI S100-2016 (2020) w/S2-20 and stud-to-track connection per section B3.2.5.1 of AISI S240-20.
- Single stud web crippling strength is based on minimum of all conditions and load cases in Table G5-2 of AISI S100-2016 (2020) w/S2-20.
- The tabulated values for flexural stress were based upon a fully braced side jamb.
- This table is not applicable for axial load bearing walls but is applicable for non-axial load bearing walls.
- Tables were prepared using a 16" o.c. spacing from the jamb stud to the first adjacent typical wall stud.
- Wall base track is assumed to be 18ga (43mils) minimum thickness with one screw per stud flange. Wall top connection is assumed to have a minimum 1.25" bearing on the top track.

Allowable Opening Width for Single HDS® Framing
Used As Jamb Studs For Door Opening

Door Jamb: Exterior Span Chart

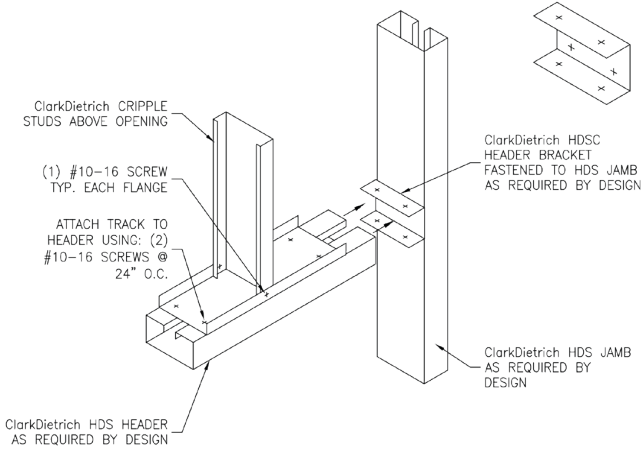
Wall Height (ft)	Wall Size (in)	Member	Mils (Gauge)	Yield Strength, Fy (ksi)	Flange (in)	Exterior Allowable Spans: Lateral Load (psf) = 25, Dead Load (psf) = 12									
						Strong Axis Deflection Targets									
						L/240			L360			L/600			
						Opening Heights									
						7	8	9	7	8	9	7	8	9	
9	3-5/8	362HDS300-33	33 (20)	33	3	—	—	—	—	—	—	—	—	—	—
		362HDS300-43	43 (18)	33	3	—	—	—	—	—	—	—	—	—	—
		362HDS300-54	54 (16)	50	3	4'-5"	4'-6"	—	4'-5"	4'-6"	—	4'-5"	4'-6"	—	
		362HDS300-68	68 (14)	50	3	7'-4"	7'-4"	—	7'-4"	7'-4"	—	6'-1"	6'-2"	—	
	362HDS300-97	97 (12)	50	3	14'-2"	14'-2"	—	14'-2"	14'-2"	—	8'-10"	8'-11"	—		
	6	600HDS300-33	33 (20)	33	3	—	—	—	—	—	—	—	—	—	
		600HDS300-43	43 (18)	33	3	—	—	—	—	—	—	—	—	—	
		600HDS300-54	54 (16)	50	3	4'-3"	4'-4"	—	4'-3"	4'-4"	—	4'-3"	4'-4"	—	
600HDS300-68		68 (14)	50	3	7'-1"	7'-2"	—	7'-1"	7'-2"	—	7'-1"	7'-2"	—		
600HDS300-97	97 (12)	50	3	14'-6"	14'-7"	—	14'-6"	14'-7"	—	14'-6"	14'-7"	—			
11	3-5/8	362HDS300-33	33 (20)	33	3	—	—	—	—	—	—	—	—	—	
		362HDS300-43	43 (18)	33	3	—	—	—	—	—	—	—	—	—	
		362HDS300-54	54 (16)	50	3	3'-3"	3'-4"	3'-5"	3'-3"	3'-4"	3'-5"	—	—	—	
		362HDS300-68	68 (14)	50	3	5'-7"	5'-8"	5'-9"	5'-3"	5'-4"	5'-5"	—	—	—	
	362HDS300-97	97 (12)	50	3	11'-3"	11'-3"	11'-4"	7'-11"	7'-11"	8'-0"	4'-0"	4'-1"	4'-2"		
	6	600HDS300-33	33 (20)	33	3	—	—	—	—	—	—	—	—	—	
		600HDS300-43	43 (18)	33	3	—	—	—	—	—	—	—	—	—	
		600HDS300-54	54 (16)	50	3	3'-1"	3'-2"	3'-3"	3'-1"	3'-2"	3'-3"	3'-1"	3'-2"	3'-3"	
600HDS300-68		68 (14)	50	3	5'-5"	5'-6"	5'-7"	5'-5"	5'-6"	5'-7"	5'-5"	5'-6"	5'-7"		
600HDS300-97	97 (12)	50	3	11'-6"	11'-7"	11'-8"	11'-6"	11'-7"	11'-8"	11'-6"	11'-7"	11'-8"			
13	3-5/8	362HDS300-33	33 (20)	33	3	—	—	—	—	—	—	—	—	—	
		362HDS300-43	43 (18)	33	3	—	—	—	—	—	—	—	—	—	
		362HDS300-54	54 (16)	50	3	—	—	—	—	—	—	—	—	—	
		362HDS300-68	68 (14)	50	3	4'-5"	4'-6"	4'-7"	—	—	—	—	—	—	
	362HDS300-97	97 (12)	50	3	7'-1"	7'-0"	7'-0"	4'-1"	4'-1"	4'-1"	—	—	—		
	6	600HDS300-33	33 (20)	33	3	—	—	—	—	—	—	—	—	—	
		600HDS300-43	43 (18)	33	3	—	—	—	—	—	—	—	—	—	
		600HDS300-54	54 (16)	50	3	—	—	—	—	—	—	—	—	—	
600HDS300-68		68 (14)	50	3	4'-3"	4'-4"	4'-5"	4'-3"	4'-4"	4'-5"	4'-3"	4'-4"	4'-5"		
600HDS300-97	97 (12)	50	3	9'-5"	9'-6"	9'-7"	9'-5"	9'-6"	9'-7"	9'-5"	9'-6"	9'-7"			
15	3-5/8	362HDS300-33	33 (20)	33	3	—	—	—	—	—	—	—	—		
		362HDS300-43	43 (18)	33	3	—	—	—	—	—	—	—	—		
		362HDS300-54	54 (16)	50	3	—	—	—	—	—	—	—	—		
		362HDS300-68	68 (14)	50	3	—	—	—	—	—	—	—	—		
	362HDS300-97	97 (12)	50	3	4'-0"	3'-11"	3'-11"	—	—	—	—	—	—		
	6	600HDS300-33	33 (20)	33	3	—	—	—	—	—	—	—	—	—	
		600HDS300-43	43 (18)	33	3	—	—	—	—	—	—	—	—	—	
		600HDS300-54	54 (16)	50	3	—	—	—	—	—	—	—	—	—	
600HDS300-68		68 (14)	50	3	3'-5"	3'-6"	3'-7"	3'-5"	3'-6"	3'-7"	3'-5"	3'-6"	3'-7"		
600HDS300-97	97 (12)	50	3	7'-10"	7'-11"	8'-0"	7'-10"	7'-11"	8'-0"	6'-1"	5'-11"	5'-10"			

Notes:

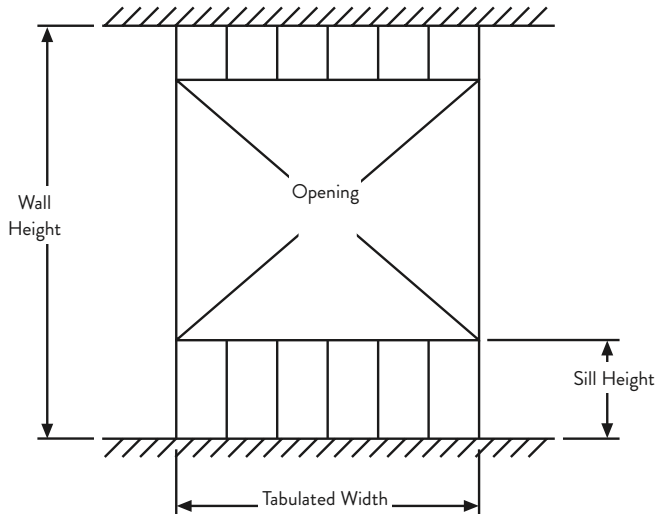
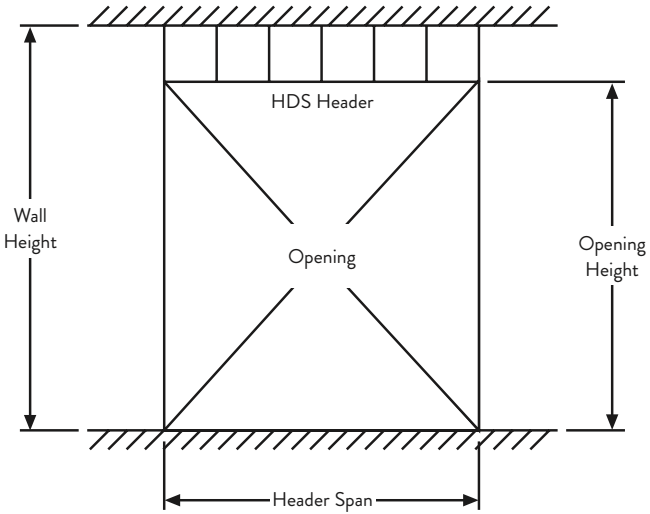
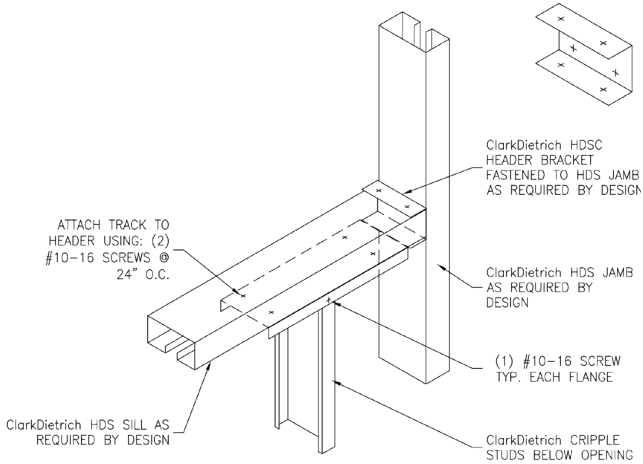
- This table is based on the 0' sill heights and listed opening heights. Other conditions may result in differing results. Contact Technical Service for analysis of other conditions.
- Opening widths are limited to 16'-0" for 3-5/8" & 4" members and 20'-0" for 6" & 8" members.
- On exterior framing, lateral deflection calculations are based on using 0.7 times the Components and Cladding wind load.
- Physical properties and this table have been calculated in conformance with the AISI S100-2016 (2020) w/S2-20.
- Effective properties incorporate the strength increase from the Cold Work of Forming as applicable per AISI S100-2016 (2020) w/S2-20 section A3.3.2.
- The strength analysis included separate bending and shear checks plus the combined interaction of bending and shear effects per section H2 of AISI S100-2016 (2020) w/S2-20.
- The strength analysis included separate bending and axial load checks plus the combined interaction of bending and axial load effects per section H1 of AISI S100-2016 (2020) w/S2-20.
- Web crippling strength check includes both single stud per section G5 of AISI S100-2016 (2020) w/S2-20 and stud-to-track connection per section B3.2.5.1 of AISI S240-20.
- Single stud web crippling strength is based on minimum of all conditions and load cases in Table G5-2 of AISI S100-2016 (2020) w/S2-20.
- The tabulated values for flexural stress were based upon a fully braced side jamb.
- This table is not applicable for axial load bearing walls but is applicable for non-axial load bearing walls.
- Tables were prepared using a 16" o.c. spacing from the jamb stud to the first adjacent typical wall stud.
- Wall base track is assumed to be 18ga (43mils) minimum thickness with one screw per stud flange. Wall top connection is assumed to have a minimum 1.25" bearing on the top track.

HDS® Framing Details

HDS® HEADER CONNECTIONS



HDS SILL CONNECTIONS



For use with the HDS® Framing System.

The ClarkDietrich HDS Framing System provides outstanding bending strength in two directions and superior axial strength. Plus, it reduces material, labor costs and installation time by up to 50%. The superior strength and carrying capacity of the HDS means higher performance with fewer members, like eliminating box beam headers, nesting track and stud for posts and jambs. It also means improved finish quality by eliminating excessive material and screw head buildup around doors and windows. The HDSC header bracket is a unique, prepunched clip that turns curtain wall header installation from a two-man job into a one-man job.

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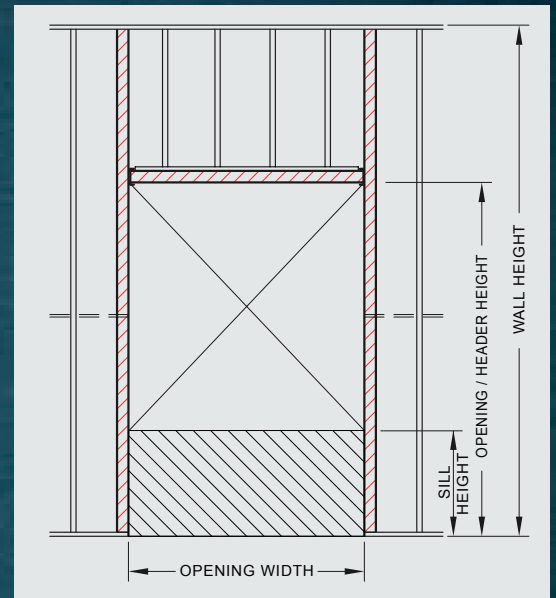
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HDS® FRAMING SYSTEM LOOKUP

- > HEADER SPANS
- > JAMB HEIGHTS
- > IBC 2021-AISI S100 COMPLIANT
- > INSTANT SUBMITTAL DOCUMENTS



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FAST AND SIMPLE OPENING SIZING WITH HDS® FRAMING SYSTEM.



Code approvals and performance standards

ClarkDietrich products meet or exceed these applicable performance standards.

HDS® Rough Opening System Standards

AISI S100-16 (2020) w/S2-20 - North American Specification for the Design of Cold-Formed Steel Structural Members
 AISI S240-20 - North American Standard for Cold-Formed Steel Structural Framing
 (Compliant to ASTM C955, but IBC replaced with AISI S220 in IBC 2015)
 Section A3 Material - Chemical & mechanical requirements (Referencing ASTM A1003/A1003M)
 Section A4 Corrosion Protection (Referencing ASTM A653/A653M)
 Section C Installation (Referencing ASTM C1007)

ClarkDietrich Structural Framing comply with:
 IBC-2021 - International Building Code
 IAPMO ES ER-723 HDS® Framing System & RedHeader PRO™

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ClarkDietrich has prepared this literature with the utmost diligence and care for accuracy and conformance to standards.

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