

Product Application

The NS notched stud backing is used for bracing and bridging of joists and wall studs in heavy load conditions. NS is also used in hospitals and schools as mechanical backing to provide support for equipment and cabinetry. Engineered section properties and allowable loads are provided.

Features and Benefits

- Available in widths of 4", 6", and 8"
- Available in 12", 16", and 24" stud spacing
- Excellent for heavy load conditions
- Pre-cut notches for flange attachment
- Pre-punched guide holes
- Eliminates field cutting
- Provides bracing and bridging support

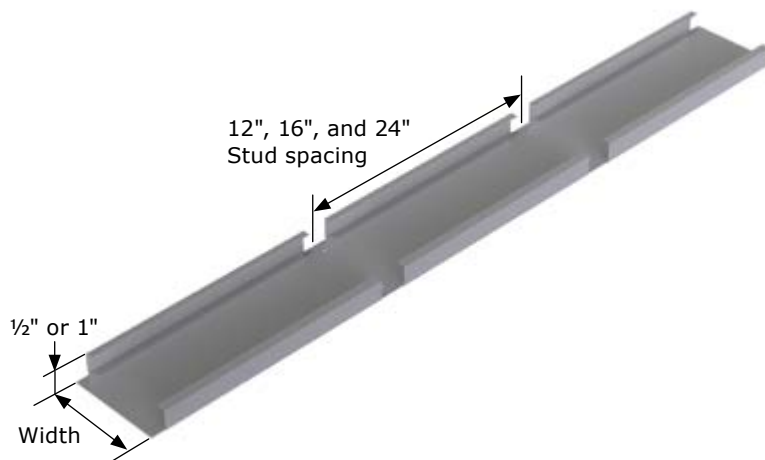


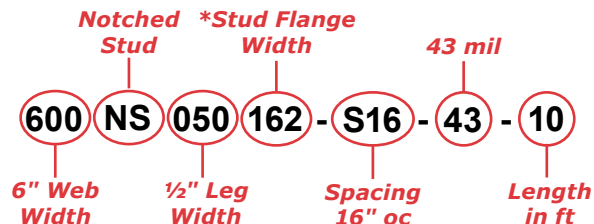
Image of Notched Stud Backing, demonstrating attachment to stud.

Material Composition

- Mill certified steel
- ASTM: A653/A653M
- 30 mil
 - 33 ksi yield strength
 - 45 ksi tensile strength
 - G40 galvanized coating
- 33 mil
 - 33 ksi yield strength
 - 45 ksi tensile strength
 - G60 galvanized coating
- 43 mil
 - 33 ksi yield strength
 - 45 ksi tensile strength
 - G60 galvanized coating
- 54 mil
 - 57 ksi yield strength
 - 65 ksi tensile strength
 - G60 galvanized coating
- 68 mil
 - 57 ksi yield strength
 - 65 ksi tensile strength
 - G90 galvanized coating

Nomenclature Example

Notched Stud System complies with standard SSMA nomenclature using the letters "NS" as the product identification. Follow example when ordering Notched Stud System.



**Notch opening will be 1/8" larger than the stud flange width.*

NS - Notched Stud Backing Section Properties

Part No.	Depth (in)	Flange (in)	* Vertical Stud Flange	Properties			
				I _{xe} (min) (in ⁴)	S _{xe} (min) (in ³)	I _{ye} (min) (in ⁴)	S _{ye} (min) (in ³)
400NS050*.-S??-33	4	0.50	125/162/200	0.386	0.193	0.007	0.018
400NS050*.-S??-43	4	0.50	125/162/200	0.495	0.248	0.008	0.022
400NS050*.-S??-54	4	0.50	125/162/200	0.603	0.301	0.009	0.025
400NS050*.-S??-68	4	0.50	125/162/200	0.728	0.364	0.011	0.029
600NS050*.-S??-33	6	0.50	125/162/200	1.085	0.357	0.007	0.018
600NS050*.-S??-43	6	0.50	125/162/200	1.416	0.472	0.009	0.022
600NS050*.-S??-54	6	0.50	125/162/200	1.736	0.579	0.010	0.026
600NS050*.-S??-68	6	0.50	125/162/200	2.116	0.705	0.012	0.030
800NS050*.-S??-33	8	0.50	125/162/200	2.214	0.526	0.007	0.018
800NS050*.-S??-43	8	0.50	125/162/200	2.989	0.738	0.009	0.022
800NS050*.-S??-54	8	0.50	125/162/200	3.727	0.932	0.011	0.026
800NS050*.-S??-68	8	0.50	125/162/200	4.569	1.142	0.012	0.030
400NS100*.-S??-33	4	1.00	125/162/200	0.522	0.261	0.033	0.046
400NS100*.-S??-43	4	1.00	125/162/200	0.672	0.336	0.041	0.058
400NS100*.-S??-54	4	1.00	125/162/200	0.823	0.411	0.050	0.070
400NS100*.-S??-68	4	1.00	125/162/200	1.003	0.501	0.059	0.082
600NS100*.-S??-33	6	1.00	125/162/200	1.371	0.445	0.036	0.047
600NS100*.-S??-43	6	1.00	125/162/200	1.816	0.605	0.046	0.060
600NS100*.-S??-54	6	1.00	125/162/200	2.236	0.745	0.056	0.072
600NS100*.-S??-68	6	1.00	125/162/200	2.742	0.914	0.066	0.085
800NS100*.-S??-33 ¹	8	1.00	125/162/200	2.687	0.626	0.037	0.047
800NS100*.-S??-43	8	1.00	125/162/200	3.610	0.872	0.048	0.060
800NS100*.-S??-54	8	1.00	125/162/200	4.492	1.092	0.058	0.072
800NS100*.-S??-68	8	1.00	125/162/200	5.690	1.423	0.070	0.086

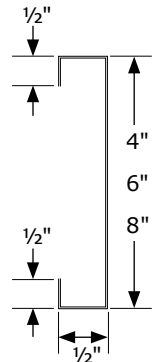
S?? Represents the vertical stud spacing.

Allowable Section Properties - Per AISI Design Criteria

Allowable Loads

Part No.	Stud Properties			M _x (lb*ft)	V _y (lb)	P _{max} ² (lb)	#10 Screw ³ (lb)	# Of Screw ⁴ Required for P _{max}
	Mil	Gauge	F _y (ksi)					
400NS050*.-S??-33	33	20	33	257	976	308	177	2
400NS050*.-S??-43	43	18	33	379	1739	455	263	2
400NS050*.-S??-54	54	16	50	495	3372	594	500	2
400NS050*.-S??-68	68	14	50	593	4871	712	500	2
600NS050*.-S??-33	33	20	33	406	638	487	177	3
600NS050*.-S??-43	43	18	33	557	1415	668	263	3
600NS050*.-S??-54	54	16	50	767	2822	920	500	2
600NS050*.-S??-68	68	14	50	901	5350	1081	500	3
800NS050*.-S??-33	33	20	33	540	474	474	177	3
800NS050*.-S??-43	43	18	33	752	1051	902	263	4
800NS050*.-S??-54	54	16	50	1008	2091	1210	500	3
800NS050*.-S??-68	68	14	50	1228	4220	1474	500	3
400NS100*.-S??-33	33	20	33	486	976	583	177	4
400NS100*.-S??-43	43	18	33	641	1739	769	263	3
400NS100*.-S??-54	54	16	50	1146	3372	1375	500	3
400NS100*.-S??-68	68	14	50	1432	4871	1718	500	4
600NS100*.-S??-33	33	20	33	683	638	638	177	4
600NS100*.-S??-43	43	18	33	939	1415	1127	263	5
600NS100*.-S??-54	54	16	50	1705	2822	2046	500	5
600NS100*.-S??-68	68	14	50	2183	5350	2620	500	6
800NS100*.-S??-33 ¹	33	20	33	944	474	474	177	3
800NS100*.-S??-43	43	18	33	1318	1051	1051	263	4
800NS100*.-S??-54	54	16	50	2375	2091	2091	500	5
800NS100*.-S??-68	68	14	50	3118	4220	3742	500	8

Notched Stud Backing With 1/2" Flange



Notched Stud Backing With 1 inch Flange

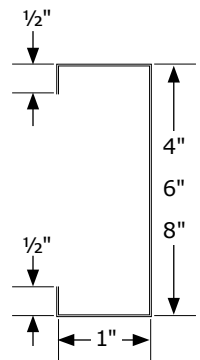


Table Notes

- ¹ Web-height to thickness ratio exceeds 200. Web stiffeners are required at all support points and concentrated loads.
- Maximum point load, P_{max}, is determined based on the minimum of the shear capacity or the bending capacity of the blocking/Part No., or the number of screws with proper edge distance/spacing that may be installed. Load assumed to act at mid-span through centroid of Part No., based on a span of 24". For stud spacing of 16" oc, above tables may conservatively be used.
- Number of screws determined by dividing P_{max} by capacity of #10 screw and rounding up. Screw manufacturer shall confirm that their screws meet the code allowable capacity indicated in the table.
- Screw capacity based on stud material with thickness and yields strength equal to the blocking/Part No. Minimum screw spacing and edge distance shall not be less than 3 times the nominal screw diameter (per SSMA). For #10 screw, 3 x d = 3 x 0.190" = 0.57".
- The properties indicated in the table have been calculated using CFS version 5.0.2 (RSG Software Inc.).
- Tabulated values do not consider stud capacity. Studs designed by others.
- All calculations based on 2004 AISI.