VertiTrack® VT

Interior Head of Wall

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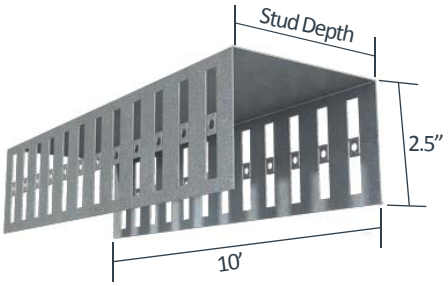
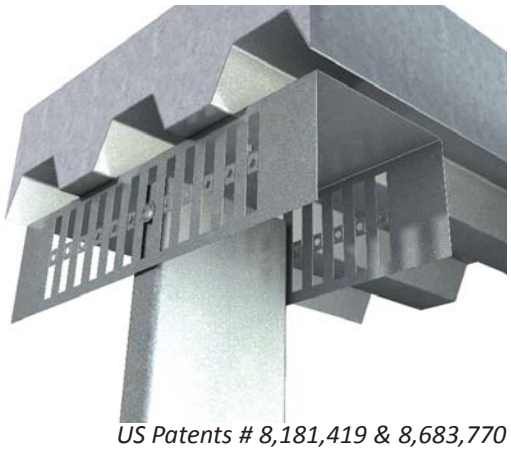
Material Composition

ASTM A1003/A1003M Structural Grade 50 (340) Type H, ST50H (ST340H): 50ksi (340MPa) minimum yield strength, 65ksi (450MPa) minimum tensile strength, 33mil minimum thickness (20 gauge, 0.0346" design thickness) with ASTM A653/A653M G60 (Z180) hot dipped galvanized coating.





US Patents # 8,181,419 & 8,683,770

VertiTrak VT Allowable Loads & Limiting Heights

Section	Wall Stud Thickness	Uniform Lateral Load (psf) and Stud Spacing (in)									Allowable Lateral Load
		5 psf			10 psf			15 psf			
		12" o.c.	16" o.c.	24" o.c.	12" o.c.	16" o.c.	24" o.c.	12" o.c.	16" o.c.	24" o.c.	(lbs)
XXXVT250-33 (50 ksi)	18 mil-25 ga to 33 mil-20 ga (or EQ Studs)	46' 5"	34' 10"	23' 2"	23' 2"	17' 5"	11' 7"	15' 6"	11' 7"	N/A	116

Table Notes:

- Allowable lateral load is based on lab tests with studs @ 12" from end of VertiTrack VT.
- Wall heights are calculated from allowable lateral load at top of the wall.
- Wall stud size should be determined independently. Wall heights based on stud strength and stiffness should be checked.
- Attach VertiTrack VT pieces together at splice locations with a piece of a stud.

Material Analysis

VertiTrak® VT Section Properties																
Section	Design Thickness	Yield Strength	Gross Properties								Torsional Properties					
			Area	Weight	I_x	S_x	R_x	I_y	S_y	R_y	Jx1000	C_w	X_o	R_o	β	m
	(in)	(ksi)	(in^2)	(lbs/ft)	(in^4)	(in^3)	(in)	(in^4)	(in^3)	(in)	(in^4)	(in^6)	(in)	(in)		(in)
250VT250-33	0.0346	50	0.259	0.883	0.339	0.256	1.144	0.178	0.107	0.827	0.103	0.212	-1.892	2.360	0.358	1.056
362VT250-33			0.298	1.015	0.740	0.392	1.575	0.200	0.113	0.820	0.119	0.482	-1.719	2.472	0.516	0.992
400VT250-33			0.311	1.059	0.914	0.441	1.714	0.207	0.115	0.815	0.124	0.602	-1.67	2.528	0.564	0.973
600VT250-33			0.380	1.295	2.236	0.728	2.424	0.233	0.121	0.783	0.152	1.520	-1.451	2.932	0.755	0.880

VertiTrak® VT Section Properties																				
Section	Design Thickness	Yield Strength	Effective Properties: Full Leg									Effective Properties: Net (Slotted) Leg								
			I_x	S_x	M_x	I_y^1	S_y^1	M_y^1	I_y^2	S_y^2	M_y^2	I_x	S_x	M_x	I_y^1	S_y^1	M_y^1	I_y^2	S_y^2	M_y^2
	(in)	(ksi)	(in^4)	(in^3)	(k-in)	(in^4)	(in^3)	(k-in)	(in^4)	(in^3)	(k-in)	(in^4)	(in^3)	(k-in)	(in^4)	(in^3)	(k-in)	(in^4)	(in^3)	(k-in)
250VT250-33	0.0346	50	0.236	0.172	5.160	0.170	0.101	3.024	0.010	0.009	0.065	0.118	0.089	2.915	0.082	0.038	1.144	0.082	0.038	1.144
362VT250-33			0.528	0.272	8.131	0.177	0.102	3.067	0.010	0.009	0.067	0.287	0.152	4.973	0.085	0.038	1.152	0.085	0.038	1.150
400VT250-33			0.658	0.308	9.218	0.178	0.103	3.075	0.010	0.009	0.068	0.366	0.177	5.764	0.086	0.039	1.153	0.086	0.038	1.151
600VT250-33			1.669	0.448	13.421	0.183	0.104	3.104	0.011	0.01	0.071	1.024	0.286	8.560	0.089	0.039	1.159	0.088	0.039	1.153

Notes:

- Section properties and capacities are calculated in accordance with AISI-S100-07 Specification.
- Tabulated gross properties are based on the full, unreduced cross section of the track away from slots.
- Effective section properties incorporate the strength increase from cold work of forming as applicable per AISI-S100-07, Sec. A7.2.
- Net effective section properties are calculated at a cross section through the slot.
- For deflection calculations, use the effective moment of inertia (I_x). This effective moment of inertia is calculated at a stress 0.6 F_y (service load level).
- Properties (I_y, S_y and M_y)^1 are based on the web element in compression while (I_y, S_y and M_y)^2 are based on the web element in tension.

Nomenclature

VertiTrack VT is manufactured in 10 ft. lengths. It is designated by inside track dimension, followed by type (VT), then leg height (250) and thickness (33 mil).

Example: *6" track*
Designate: *VertiTrack® 600VT250-33*

UL®-Classified Head of Wall Assemblies
HW-D-0043, HW-D-0044, HW-D-0054, HW-D-0088, HW-D-0099, HW-D-0154, HW-D-0184, HW-D-0194, HW-D-0218, HW-D-0252, HW-D-0259, HW-D-0264, HW-D-0324, HW-D-0363, HW-D-0377, HW-D-0388, HW-D-0456, HW-D-0538, HW-D-0539, HW-D-0540, HW-D-0548, HW-D-0606

*** For more information or to review a copy of each of these reports, please visit our website at http://www.steelnetwork.com/Site/TechnicalData*