Expanding Your Solutions

Viper-X Product Catalog

High Performance Interior Non-Load Bearing Wall Framing

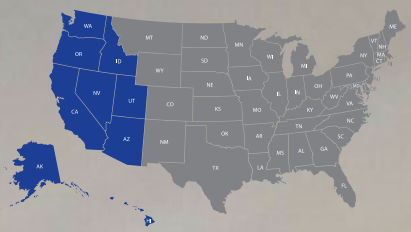
Effective 02/24/2025

Viper-X is the solution you've been waiting for:

BIGGER, BETTER, STRONGER!

YOU demand a better product, we DELIVER!

Available in:
Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Utah, and Washington



Code Information

Viper-X Drywall Framing has been verified by the following IAS Accredited Test Agencies and/or certified by the Product Evaluation Agencies listed here.

IBC/IRC 2012/2015 Compliant

The physical properties and web crippling load capacity in this catalog are recognized in IAPMO ER-0524 report. The values for the composite (pending) and non composite fully braced and 48"oc braced limiting heights in this catalog are for the members recognized in our IAPMO ER-0524 report. Please see the full versions of these reports at **www.cemcosteel.com.**

A Track Record You Can Count On, Verified Code Compliant

Viper-X Drywall Framing System is tested or conforms to these standards:

- **AISI S100** North American Specification for the Design of Cold-Formed Steel Structural Members, 2012.
- **AISI S240** North American Standard for Cold-Formed Steel Framing—Non-Structural Members.
- **ASTM A1003** Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic Coated for Cold-Formed Framing Members.
- **ASTM A653/A653M** Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- **ASTM C754** Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
- **ASTM E90** Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- **ASTM E119** Standard Test Methods for Fire Tests of Building construction and Materials. Fire rated for 1, 2, 3, and 4 hour rated walls.
- **ASTM E72** Standard Test Methods of Conducting Strength Tests of Panels for Building Construction.
- **ASTM C1629** Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels.

Viper-X is listed in the following:

- IAPMO ER-0524

IAPMO Code Compliant

The Viper-X products manufactured by CEMCO are currently under review at IAPMO-UES, providing evidence that the Viper-X Drywall Framing System meets code requirements. Building officials, architects, contractors, specifiers, designers and others utilize this Evaluation Report to provide a basis for using or approving metal framing in construction projects following the International Building Code.

LEED v4 for Building & Design Construction

- MR Prerequisite: Construction and Demolition Waste Management Planning.
- MR Credit: Construction and Demolition Waste Management.
- MR Credit: Building Product Disclosure and Optimization—Sourcing of Raw Materials, Option 2.
- MR Credit: Building Product Disclosure and Optimization—Material Ingredients, Option 1.
- MR Credit: Building Life-Cycle Impact Reduction, Option 4.

Recycled Content

- Total Recycled Content: 36.9%
- Post-Consumer: 19.8%
- Pre-Consumer: 14.4%

California's Proposition 65 Warning

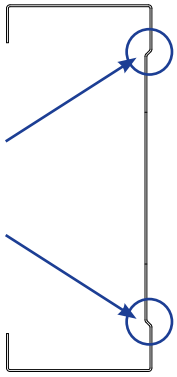
California's Safe Drinking Water and Toxic Enforcement Act of 1986 – commonly referred to as Proposition 65 ("Prop 65") (27 Cal. Code Reg.§ 25600, et seq.) – has recently changed, requiring manufacturers to provide a warning based on its knowledge about the presence of one or more of the almost 900 listed chemicals which are known to the State of California to cause cancer and birth defects, or other reproductive harm With a few exceptions, manufacturers operating in the state of California as well as those entities who distribute, import, package, and/or supply products into the State of California are now required provide a "clear and reasonable" warning to consumers that their products may contain one or more of these listed chemicals or compounds. The complete list is available at **www.P65Warnings.ca.gov**.

In compliance with the new requirements, we are notifying each of our customers that CEMCO products contain Nickel (metallic) and/or other chemicals listed which are known to the State of California to cause cancer and birth defects or other reproductive harm. Safety data sheets from our major suppliers are available from CEMCO on our website at **www.cemcosteel.com**.

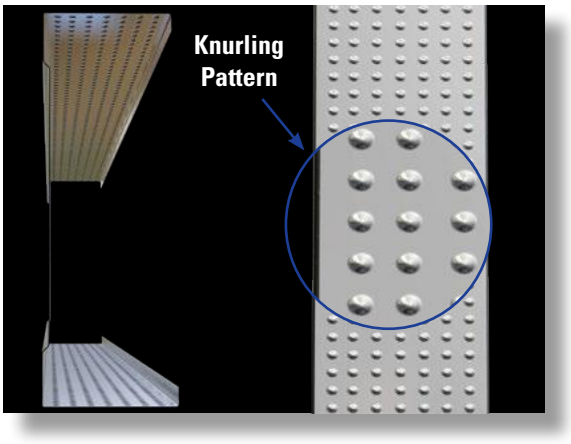
A High Performance, Safety Edged™ Flat Steel Drywall Framing System

CEMCO's newest product offering for interior non-load bearing wall framing; Viper-X!

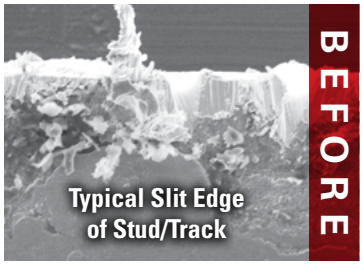
- 15% MORE STEEL in each flange (when compared to a typical interior non-load bearing stud).
- No Ribs, Flutes, Channels, Dimples, Pylons, Pyramids, or other unique facets on the flange.
- Higher limiting heights due to MORE STEEL in each stud.
- MORE STEEL equals BIGGER, BETTER, STRONGER!
- All Viper-X studs and tracks are Safety Edged™
- Fully tested wall assemblies.
- Available in Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Utah, and Washington.
- Complete typical details, BIM REVIT files.
- Fully 100% LEED v4 applicable.
- Made from the same high quality hot-dipped galvanized PRIME steel CEMCO has been supplying for over 40 years.

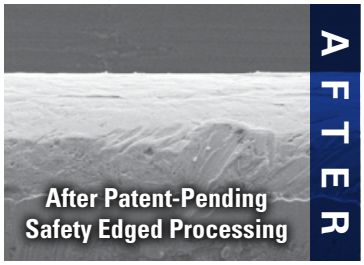


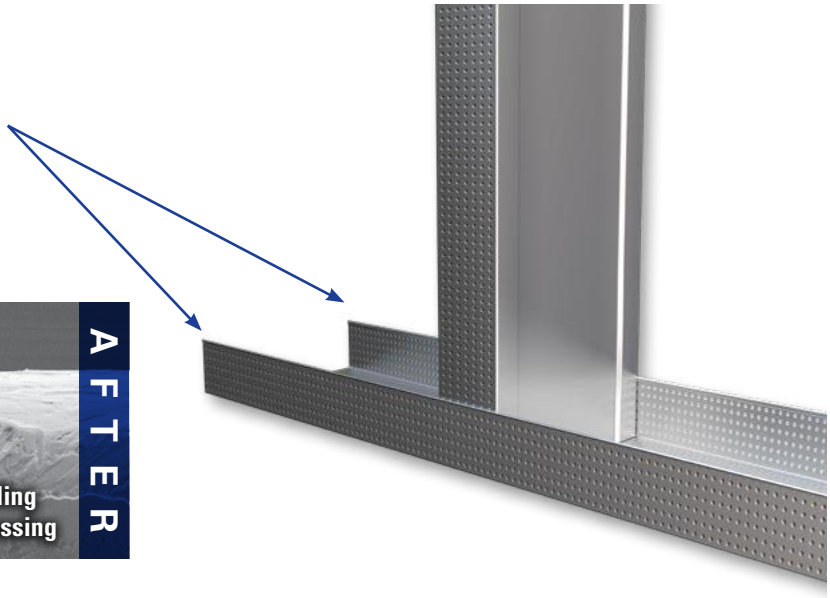
ViperRib® Technology
Makes Viper-X stronger and less prone to twist or buckle.



SAFETY EDGED™ BY CEMCO







For more information, please contact CEMCO's Technical Service Department at 800-416-2278.
This technical information reflects the most current information available and supersedes any and all previous publications effective February 24, 2025 #VSX-V1-8/2017

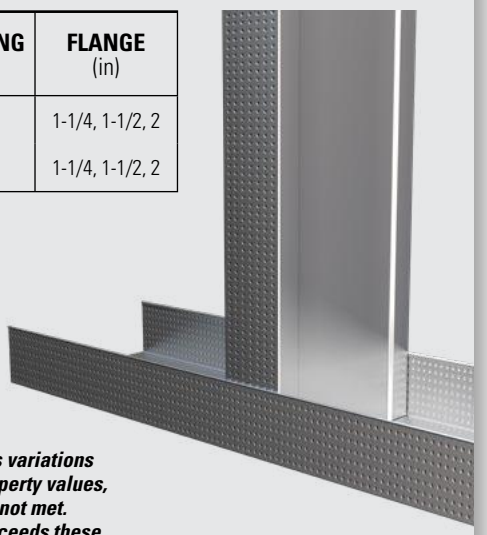
PHYSICAL PROPERTIES

Viper-X Stud®

MODEL NO.	DESIGN THICKNESS (in)	MINIMUM THICKNESS (in)	YIELD (ksi)	WEB SIZES (in)	COATING [1,2]	FLANGE (in)	RETURN LIP (in)
VIPER-X-18	0.0188	0.0179	57	1-5/8, 2-1/2, 3-1/2, 3-5/8, 4, 6	G40	1-7/16	3/8
VIPER-X-22	0.0235	0.0223	57	1-5/8, 2-1/2, 3-1/2, 3-5/8, 4, 6	G40	1-7/16	3/8

Viper-X Track®

MODEL NO.	DESIGN THICKNESS (in)	MINIMUM THICKNESS (in)	YIELD (ksi)	WEB SIZES (in)	COATING [1,2]	FLANGE (in)
VIPER-X-18 TRACK	0.0188	0.0179	57	1-5/8, 2-1/2, 3-1/2, 3-5/8, 4, 6	G40	1-1/4, 1-1/2, 2
VIPER-X-22 TRACK	0.0235	0.0223	57	1-5/8, 2-1/2, 3-1/2, 3-5/8, 4, 6	G40	1-1/4, 1-1/2, 2



Notes:

1. *Web height to thickness ratio (h/t) exceeds 200. Web stiffeners required at all support points and concentrated loads.*
2. *Members having a web height to thickness ratio (h/t) value exceeding 260 will not have effective properties listed, only gross properties will be listed.*
3. *Web height value (h) used for h/t calculation is the flat width of the web. For (S) members, this is the out to out member size, minus twice the thickness, minus twice the inside bend radius.*
4. *Members having a flange width to thickness ratio (b/t) value exceeding 60 must be considered for use with the limitations described in AISI S100.*
5. *Flange width value (b) used for b/t calculation is the flat width of the flange. For (S) members, this is the out to out member size, minus twice the thickness, minus twice the inside bend radius.*
6. *Per ASTM C645 & ASTM A1003 Table 1.*
7. *G60 and G90 available upon request.*

Viper-X High Performance Studs and Tracks are in compliance with ASTM C645. ASTM C645 Section 5.1 allows for permissible dimensional thickness variations, Section 8.2 allows for thickness variations and exemptions from minimum section property values, if specified performance requirements are not met. The Viper-X Framing product meets and exceeds these requirements.

GENERAL TABLE NOTES

1. The yield strength for all Viper-X Products is 57 ksi.
2. Tabulated gross properties are based on full, unreduced section away from punchouts.
3. Punch-out sizes are 0.75" x 2.00" for stud depths 1.625" and 2.50", and 1.50" x 2.75" for stud depths 3.50" and deeper.
4. Factory punchouts are in accordance with section C5 of AISI S201-12. The distance from the center of the last punchout to the end of the stud is 12 inches.
5. For Allowable Stress Design (ASD) method, factors of safety of 1.67 and 1.6 respectively, are used for moment and shear capacities as per AISI S100.
6. Design stiffening lip is 3/8" for all studs.

Notations

Ix	Moment of Inertia about the X axis of Gross Section
Iy	Moment of Inertia about the Y axis of Gross Section
Rx, Ry	Radius of Gyration about the X and Y axes, respectively of Gross Section
J	St. Venant Torsion Constant
Cw	Torsional Warping Constant
Xo	Distance from Shear Center to Centroid Along the X axis
Ro	Polar Radius of Gyration about the Shear Center
ß	Torsional-Flexural Constant
Ixe	Effective Moment of Inertia at Punch-out about the X axis (for deflection calculation)
Sxe	Effective Section Modulus about the X axis at Punch-out
Ma-l	Allowable Moment based on Local Buckling
Ma-d	Allowable Moment based on Distortional Buckling
Vag	Allowable Shear at Gross Section

For more information, please contact CEMCO's Technical Service Department at 800-416-2278.
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SECTION PROPERTIES

VIPER-X STUD®

VIPER-X MEMBER	YIELD STRESS (ksi)	WEB HEIGHT, h (in)	DESIGN THICKNESS[3], t (in)	GROSS PROPERTIES						EFFECTIVE PROPERTIES					TORSIONAL PROPERTIES					CRITICAL UNBRACED LENGTH, Lu (in)
				WEIGHT (lb/ft)	AREA (in^2)	Ix (in^4)	Rx (in)	Iy (in^4)	Ry (in)	Ixe (in^4)	Sxe (in^3)	Ma-I (k-in)	Ma-d (k-in)	Vag (k)	J ($x10^{-6}$) (in^4)	Cw (in^6)	Xo (in-k)	Ro (in-k)	ß	
162VXS144-18	57	1.625	0.0188	0.327	0.096	0.045	0.686	0.028	0.543	0.041	0.036	1.186	1.263	0.145	11.347	0.022	-1.328	1.590	0.302	28.8
250VXS144-18	57	2.500	0.0188	0.383	0.113	0.119	1.029	0.032	0.537	0.110	0.067	2.071	2.060	0.498	13.280	0.047	-1.163	1.643	0.499	27.6
350VXS144-18	57	3.500	0.0188	0.447	0.132	0.257	1.398	0.036	0.522	0.241	0.100	3.115	2.906	0.487	15.501	0.094	-1.029	1.813	0.678	27.12
362VXS144-18	57	3.625	0.0188	0.455	0.134	0.279	1.443	0.036	0.520	0.262	0.105	3.271	3.020	0.496	15.780	0.101	-1.015	1.839	0.695	27.00
400VXS144-18[1]	57	4.000	0.0188	0.479	0.141	0.350	1.576	0.037	0.514	0.329	0.118	3.738	3.359	0.519	16.611	0.125	-0.975	1.923	0.743	26.88
600VXS144-18[2]	57	6.000	0.0188	0.607	0.179	0.910	2.258	0.041	0.480	-	-	-	-	-	21.042	0.301	-0.812	2.447	0.890	26.04
162VXS144-22	57	1.625	0.0235	0.407	0.120	0.056	0.684	0.035	0.541	0.045	0.045	1.563	1.569	0.151	22.060	0.026	-1.322	1.584	0.303	28.80
250VXS144-22	57	2.500	0.0235	0.477	0.140	0.148	1.027	0.040	0.534	0.142	0.089	2.994	2.806	0.615	25.850	0.058	-1.158	1.637	0.500	27.60
350VXS144-22	57	3.500	0.0235	0.557	0.164	0.319	1.396	0.044	0.520	0.309	0.135	4.466	3.976	0.634	30.170	0.116	-1.024	1.807	0.679	27.00
362VXS144-22	57	3.625	0.0235	0.567	0.167	0.346	1.440	0.045	0.518	0.336	0.141	4.680	4.135	0.649	30.710	0.124	-1.009	1.834	0.697	26.88
400VXS144-22	57	4.000	0.0235	0.597	0.176	0.435	1.574	0.046	0.512	0.423	0.159	5.355	4.611	0.686	32.341	0.153	-0.970	1.918	0.744	26.76
600VXS144-22[1]	57	6.000	0.0235	0.757	0.223	1.132	2.255	0.051	0.478	1.097	0.261	7.605	6.887	0.662	40.991	0.371	-0.807	2.442	0.891	25.92

Notes:

1. *Web height to thickness ratio (h/t) exceeds 200. Web stiffeners required at all support points and concentrated loads.*

2. *Members having a web height to thickness ratio (h/t) value exceeding 260 will not have effective properties listed, only gross properties will be listed.*

3. *Web height value (h) used for h/t calculation is the flat width of the web. For (S) members, this is the out to out member size, minus twice the thickness, minus twice the inside bend radius.*

4. *Members having a flange width to thickness ratio (b/t) value exceeding 60 must be considered for use with the limitations described in AISI S100.*

5. *Flange width value (b) used for b/t calculation is the flat width of the flange. For (S) members, this is the out to out member size, minus twice the thickness, minus twice the inside bend radius.*

6. *See page 4 for additional general table notes.*

VIPER-X TRACK SECTION PROPERTIES

VIPER-X TRACK®

PRODUCT NAME	YIELD (ksi)	DESIGN THICKNESS (in)	GROSS PROPERTIES								EFFECTIVE PROPERTIES				TORSIONAL PROPERTIES				
			WEIGHT (lb/ft)	AREA (in^2)	Ix (in^4)	Sx (in^3)	Rx (in)	Sy (in^3)	Iy (in^4)	Ry (in)	Ixe (in^4)	Sxe (in^3)	Ma (k-in)	Vag (k)	J ($x10^{-3}$) (in^4)	Cw (in^6)	Xo (in)	Ro (in)	ß
VIPER-X TRACK 1-1/4" LEG																			
162VXT125-18	57	0.0188	0.263	0.077	0.038	0.046	0.701	0.033	0.013	0.405	0.020	0.017	0.489	0.819	9.129	0.006	-0.856	1.178	0.472
250VXT125-18	57	0.0188	0.319	0.094	0.098	0.078	1.023	0.043	0.014	0.389	0.055	0.033	0.945	0.779	11.067	0.017	-0.729	1.315	0.692
350VXT125-18	57	0.0188	0.383	0.113	0.211	0.120	1.369	0.054	0.015	0.369	0.119	0.051	1.458	0.630	13.280	0.036	-0.631	1.552	0.835
362VXT125-18	57	0.0188	0.392	0.115	0.229	0.125	1.412	0.055	0.016	0.367	0.129	0.053	1.522	0.443	13.560	0.039	-0.621	1.585	0.847
400VXT125-18[1]	57	0.0188	0.415	0.122	0.289	0.143	1.537	0.059	0.016	0.360	0.162	0.060	1.718	0.413	14.390	0.049	-0.592	1.686	0.877
600VXT125-18[2]	57	0.0188	0.543	0.160	0.761	0.253	2.183	0.078	0.017	0.327	-	-	-	-	18.820	0.123	-0.479	2.259	0.955
162VXT125-22	57	0.0235	0.329	0.097	0.048	0.057	0.702	0.040	0.016	0.404	0.027	0.025	0.703	0.728	17.819	0.008	-0.853	1.177	0.474
250VXT125-22	57	0.0235	0.399	0.117	0.123	0.097	1.024	0.053	0.018	0.388	0.076	0.048	1.358	1.092	21.600	0.021	-0.727	1.314	0.694
350VXT125-22	57	0.0235	0.479	0.141	0.265	0.149	1.370	0.066	0.019	0.368	0.167	0.075	2.138	0.955	25.930	0.045	-0.629	1.552	0.836
362VXT125-22	57	0.0235	0.490	0.144	0.287	0.157	1.413	0.068	0.019	0.366	0.181	0.078	2.235	0.931	26.470	0.049	-0.619	1.585	0.848
400VXT125-22	57	0.0235	0.519	0.153	0.361	0.179	1.538	0.073	0.020	0.359	0.227	0.089	2.528	0.871	28.090	0.061	-0.590	1.686	0.877
600VXT125-22[1]	57	0.0235	0.679	0.200	0.952	0.315	2.184	0.096	0.021	0.326	0.569	0.144	4.103	0.660	36.750	0.153	-0.477	2.259	0.955
VIPER-X TRACK 1-1/2" LEG																			
162VXT150-18	57	0.0188	0.295	0.087	0.044	0.053	0.715	0.042	0.021	0.491	0.021	0.018	0.502	0.585	10.236	0.010	-1.085	1.389	0.390
250VXT150-18	57	0.0188	0.351	0.103	0.113	0.089	1.046	0.055	0.024	0.477	0.058	0.034	0.964	0.779	12.170	0.027	-0.943	1.487	0.598
350VXT150-18	57	0.0188	0.415	0.122	0.240	0.136	1.403	0.069	0.026	0.459	0.125	0.052	1.479	0.630	14.390	0.059	-0.828	1.693	0.761
362VXT150-18	57	0.0188	0.42325	0.124	0.261	0.142	1.447	0.071	0.026	0.456	0.135	0.054	1.545	0.443	14.670	0.064	-0.816	1.723	0.775
400VXT150-18[1]	57	0.0188	0.447	0.132	0.326	0.162	1.575	0.076	0.027	0.449	0.169	0.061	1.742	0.413	15.500	0.080	-0.783	1.816	0.814
600VXT150-18[2]	57	0.0188	0.575	0.169	0.847	0.281	2.237	0.102	0.029	0.414	-	-	-	-	19.930	0.202	-0.645	2.365	0.926
162VXT150-22	57	0.0235	0.369	0.109	0.056	0.067	0.716	0.052	0.026	0.490	0.029	0.025	0.722	0.728	19.982	0.013	-1.082	1.387	0.391
250VXT150-22	57	0.0235	0.439	0.129	0.142	0.111	1.048	0.068	0.029	0.477	0.081	0.049	1.401	1.092	23.770	0.034	-0.941	1.486	0.600
350VXT150-22	57	0.0235	0.519	0.153	0.301	0.170	1.404	0.086	0.032	0.458	0.176	0.076	2.178	0.955	28.090	0.074	-0.826	1.693	0.762
362VXT150-22	57	0.0235	0.529	0.156	0.326	0.178	1.448	0.088	0.032	0.455	0.191	0.080	2.276	0.931	28.630	0.080	-0.814	1.722	0.776
400VXT150-22	57	0.0235	0.559	0.164	0.409	0.202	1.577	0.094	0.033	0.448	0.238	0.090	2.570	0.871	30.260	0.100	-0.781	1.816	0.815
600VXT150-22[1]	57	0.0235	0.719	0.211	1.059	0.351	2.238	0.126	0.036	0.413	0.592	0.146	4.156	0.660	38.910	0.252	-0.643	2.365	0.926
VIPER-X TRACK 2" LEG																			
162VXT200-18	57	0.0188	0.359	0.106	0.057	0.069	0.735	0.063	0.046	0.657	0.023	0.018	0.521	0.585	12.451	0.023	-1.554	1.840	0.287
250VXT200-18	57	0.0188	0.415	0.122	0.143	0.113	1.082	0.082	0.052	0.651	0.063	0.035	0.990	0.779	14.390	0.059	-1.388	1.876	0.453
350VXT200-18	57	0.0188	0.479	0.141	0.299	0.169	1.456	0.103	0.057	0.637	0.135	0.053	1.509	0.630	16.600	0.128	-1.247	2.020	0.619
362VXT200-18	57	0.0188	0.48717	0.143	0.323	0.177	1.501	0.106	0.058	0.634	0.146	0.055	1.574	0.443	16.880	0.139	-1.232	2.043	0.636
400VXT200-18[1]	57	0.0188	0.511	0.150	0.402	0.200	1.636	0.113	0.059	0.628	0.181	0.062	1.773	0.413	17.710	0.174	-1.189	2.117	0.685
600VXT200-18[2]	57	0.0188	0.639	0.188	1.017	0.337	2.326	0.153	0.066	0.591	-	-	-	-	22.140	0.441	-1.007	2.603	0.286
162VXT200-22	57	0.0235	0.449	0.132	0.072	0.086	0.737	0.079	0.057	0.656	0.032	0.026	0.750	0.728	24.308	0.028	-1.551	1.838	0.288
250VXT200-22	57	0.0235	0.519	0.153	0.179	0.141	1.084	0.102	0.065	0.650	0.089	0.051	1.452	1.092	28.090	0.074	-1.385	1.875	0.454
350VXT200-22	57	0.0235	0.599	0.176	0.374	0.211	1.457	0.128	0.071	0.636	0.191	0.078	2.232	0.955	32.420	0.160	-1.245	2.019	0.620
362VXT200-22	57	0.0235	0.609	0.179	0.404	0.220	1.503	0.131	0.072	0.634	0.206	0.082	2.330	0.931	32.960	0.173	-1.229	2.042	0.638
400VXT200-22	57	0.0235	0.639	0.188	0.504	0.249	1.637	0.141	0.074	0.627	0.257	0.092	2.628	0.871	34.580	0.217	-1.187	2.117	0.686
600VXT200-22[1]	57	0.0235	0.799	0.235	1.272	0.421	2.327	0.189	0.082	0.591	0.631	0.148	4.230	0.660	43.230	0.550	-1.005	2.603	0.286

Notes:

1. *Web height-to-thickness ratio exceeds 200. Web Stiffenners are required at all support points and concentrated loads.*
2. *Web height-to-thickness ratio exceeds 260. Section is not in compliance with AISI S100, so effective properties are not provided.*
3. *Section properties are in accordance with AISI S240.*
4. *Web depth for track sections is equal to the nominal height plus 2 times the design thickness plus the bend radius.*
5. *For deflection calculations, use the effective moment of inertia.*
6. *See page 4 for additional table notes.*

For more information, please contact CEMCO's Technical Service Department at 800-416-2278.
This technical information reflects the most current information available and supersedes any and all previous publications effective February 24, 2025 #VSX-V1-8/2017

NON-COMPOSITE LIMITING WALL HEIGHTS – FULLY BRACED

VIPER-X MEMBER	YIELD (ksi)	DESIGN THICKNESS (in)	SPACING O.C. (in)	5 PSF			7.5 PSF			10 PSF		
				L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162VXS144-18	57	0.0188	12	10' 3"	8' 2"	7' 2"	9' 0"	7' 2"	6' 3"	8' 2"	6' 6"	5' 8"
	57	0.0188	16	9' 5"	7' 6"	6' 6"	8' 3"	6' 6"	5' 9"	7' 6"	5' 11"	5' 2"
	57	0.0188	24	8' 2"	6' 6"	5' 8"	7' 2"	5' 8"	4' 11"	6' 3" f	5' 2"	4' 6"
250VXS144-18	57	0.0188	12	14' 2"	11' 4"	9' 10"	12' 5"	9' 10"	8' 8"	11' 4"	9' 0"	7' 10"
	57	0.0188	16	13' 1"	10' 4"	9' 1"	11' 5"	9' 1"	7' 11"	10' 1" f	8' 3"	7' 2"
	57	0.0188	24	11' 4"	9' 0"	7' 10"	9' 6" f	7' 10"	6' 10"	8' 3" f	7' 1"	6' 3"
350VXS144-18	57	0.0188	12	18' 6"	14' 8"	12' 10"	16' 0" f	12' 10"	11' 2"	13' 11"	11' 8"	10' 2"
	57	0.0188	16	16' 11"	13' 5"	11' 9"	13' 11" f	11' 9"	10' 3"	12' 0" f	10' 8"	9' 4"
	57	0.0188	24	13' 11" f	11' 8"	10' 2"	11' 4" f	10' 2"	8' 11"	9' 10" f	9' 3"	8' 1"
362VXS144-18	57	0.0188	12	19' 0"	15' 2"	13' 2"	16' 4" f	13' 2"	11' 6"	14' 2" f	12' 0"	10' 6"
	57	0.0188	16	17' 4" f	13' 10"	12' 1"	14' 2" f	12' 1"	10' 7"	12' 3" f	11' 0"	9' 7"
	57	0.0188	24	14' 2" f	12' 0"	10' 6"	11' 7" f	10' 6"	9' 2"	10' 0"	9' 6"	8' 4"
400VXS144-18[1]	57	0.0188	12	20' 6"	16' 3"	14' 3"	17' 3" f	14' 3"	12' 5"	14' 11" f	13' 0"	11' 4"
	57	0.0188	16	18' 4" f	14' 11"	13' 0"	14' 11" f	13' 0"	11' 5"	12' 11" f	11' 10"	10' 4"
	57	0.0188	24	14' 11" f	12' 11"	11' 4"	12' 2" f	11' 4"	9' 10"	10' 6" f	10' 3"	9' 0"
600VXS144-18[1]	57	0.0188	12	25' 9" f	22' 4"	19' 6"	21' 0" f	19' 6"	17' 0"	17' 7" w	17' 7" w	15' 6"
	57	0.0188	16	22' 3" f	20' 6"	17' 11"	17' 8" w	17' 8" w	15' 7"	13' 3" w	13' 3" w	13' 3" w
	57	0.0188	24	17' 7" w	17' 7" w	15' 6"	11' 9" w	11' 9" w	11' 9" w	8' 10" w	8' 10" w	8' 10" w
162VXS144-22	57	0.0235	12	10' 7"	8' 5"	7' 4"	9' 3"	7' 4"	6' 5"	8' 5"	6' 8"	5' 10"
	57	0.0235	16	9' 8"	7' 8"	6' 9"	8' 6"	6' 9"	5' 10"	7' 8"	6' 1"	5' 4"
	57	0.0235	24	8' 5"	6' 8"	5' 10"	7' 4"	5' 10"	5' 1"	6' 8"	5' 3"	4' 7"
250VXS144-22	57	0.0235	12	15' 6"	12' 4"	10' 9''	13' 6"	10' 9"	9' 5"	12' 4"	9' 9"	8' 6"
	57	0.0235	16	14' 2"	11' 3''	9' 10"	12' 5"	9' 10"	8' 7"	11' 3"	8' 11"	7' 10"
	57	0.0235	24	12' 4"	9' 9''	8' 6"	10' 9"	8' 6"	7' 5"	9' 8" f	7' 9"	6' 9"
350VXS144-22	57	0.0235	12	20' 1"	15' 11"	13' 11"	17' 7"	13' 11"	12' 2"	15' 11"	12' 8"	11' 1"
	57	0.0235	16	18' 5"	14' 7"	12' 9"	16' 1"	12' 9"	11' 2"	14' 1" f	11' 7"	10' 2"
	57	0.0235	24	15' 11"	12' 8"	11' 1"	13' 3" f	11' 1"	9' 8"	11' 6" f	10' 1"	8' 9"
362VXS144-22	57	0.0235	12	20' 8"	16' 5"	14' 4"	18' 0"	14' 4"	12' 6"	16' 5"	13' 0"	11' 4"
	57	0.0235	16	18' 11"	15' 0"	13' 1"	16' 6"	13' 1"	11' 6"	14' 4" f	11' 11"	10' 5"
	57	0.0235	24	16' 5"	13' 0"	11' 4"	13' 6" f	11' 4"	9' 11"	11' 8" f	10' 4"	9' 0"
400VXS144-22	57	0.0235	12	22' 4"	17' 8"	15' 6"	19' 6"	15' 6"	13' 6"	17' 6" f	14' 1"	12' 3"
	57	0.0235	16	20' 5"	16'3"	14' 2"	17' 6" f	14' 2"	12' 5"	15' 2" f	12' 11"	11' 3"
	57	0.0235	24	17' 6" f	14' 1"	12' 3"	14' 3" f	12' 3"	10' 9"	12' 4" f	11' 2"	9' 9"
600VXS144-22[1]	57	0.0235	12	30' 3" f	24' 4"	21' 3"	24' 8" f	21' 3"	18' 7"	21' 5" f	19' 4"	16' 10"
	57	0.0235	16	26' 3" f	22' 4"	19' 6"	21' 5" f	19' 6"	17' 0"	18' 7" f	17' 8"	15' 5"
	57	0.0235	24	21' 5" f	19' 4"	16' 10"	17' 5" f	16' 10"	14' 9"	15' 2" f	15' 2" f	13' 5"

Notes:

1. *Web height to thickness ratio (h/t) exceeds 200. Web stiffeners required at all support points and concentrated loads.*
2. *Lateral loads of 5 psf, 7.5 psf, and 10 psf have NOT been reduced for strength or deflection checks. Full lateral load is applied.*
3. *Limiting heights are in accordance with AISI S100 using all steel non-composite design.*
4. *Limiting heights are established by considering flexure (f), web crippling (w) and deflection.*
5. *Allowable moment is the lesser of Mal and Mad. Stud distortional buckling based on an assumed $K\Phi = 0$.*
6. *For bending, studs are assumed to be adequately braced to develop full allowable moment.*
7. *Studs are fully braced when unbraced length is less than Lu. See section properties table for Lu values.*
8. *Web crippling check is based on AISI S100 section C3.4.2 Condition 1: End One-Flange Loading with 1" end bearing.*
9. *See page 4 for additional table notes.*

NON-COMPOSITE LIMITING HEIGHTS – BRACED 48" O.C.

VIPER-X MEMBER	YIELD (ksi)	DESIGN THICKNESS (in)	SPACING O.C. (in)	5 PSF			7.5 PSF			10 PSF		
				L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162VXS144-18	57	0.0188	12	10' 4"	8' 2"	7' 2"	9' 0"	7' 2"	6' 3"	8' 2"	6'6"	5' 8"
	57	0.0188	16	9' 6"	7' 6"	6' 7"	8' 3"	6' 7"	5' 9"	7' 3" f	6' 0"	5' 3"
	57	0.0188	24	8' 2"	6' 6"	5' 8"	6' 10" f	5' 8"	5' 0"	5' 11" f	5' 2"	4' 6"
250VXS144-18	57	0.0188	12	14' 3"	11' 4"	9' 11"	12' 6"	9' 11"	8' 8"	11' 2" f	9' 0"	7' 10"
	57	0.0188	16	13' 1"	10' 5"	9' 1"	11' 2" f	9' 1"	7' 11"	9' 8" f	8' 3"	7' 2"
	57	0.0188	24	11' 2" f	9' 0"	7' 10"	9' 1" f	7' 10"	6' 10"	7' 11" f	7' 2"	6' 3"
350VXS144-18	57	0.0188	12	18' 6"	14' 8"	12' 9"	15' 8" f	12' 10"	11' 3"	13' 7" f	11' 8"	10' 2"
	57	0.0188	16	16' 8" f	13' 6"	11' 9"	13' 7" f	11' 9"	10' 3"	11' 9" f	10' 8"	9' 4"
	57	0.0188	24	13' 7" f	11' 8"	10' 2"	11' 1" f	10' 2"	8' 11"	9' 7" f	9' 3"	8' 1"
362VXS144-18	57	0.0188	12	19' 0"	15' 1"	13' 2"	16' 0" f	13' 2"	11' 6"	13' 10" f	12' 0"	10' 6"
	57	0.0188	16	17' 0" f	13' 10"	12' 1"	13' 11" f	12' 1"	10' 7"	12' 0" f	11' 0"	9' 7"
	57	0.0188	24	13' 10" f	12' 0"	10' 6"	11' 4" f	10' 6"	9' 2"	9' 10" f	9' 6"	8' 4"
400VXS144-18[1]	57	0.0188	12	20' 7"	16' 4"	14' 3"	16' 11" f	14' 3"	12' 5"	14' 8" f	12' 11"	11' 4"
	57	0.0188	16	18' 0" f	14' 11"	13' 1"	14' 8" f	13' 1"	11' 5"	12' 9" f	11' 10"	10' 4"
	57	0.0188	24	14' 8" f	12' 11"	11' 4"	12' 0" f	11' 4"	9' 11"	10' 0" w	10' 0" w	9' 0"
600VXS144-18[1]	57	0.0188	12	26' 4" f	22' 4"	19' 6"	21' 6" f	19' 7"	17' 0"	17' 7" w	17' 7" w	15' 6"
	57	0.0188	16	22' 10" f	20' 5"	17' 10"	17' 8" w	17' 8" w	15' 7"	13' 3" w	13' 3" w	13' 3" w
	57	0.0188	24	17' 7" w	17' 7" w	15' 6"	11' 9" w	11' 9" w	11' 9" w	8' 10" w	8' 10" w	8' 10" w
162VXS144-22	57	0.0235	12	10' 8"	8' 5"	7' 5"	9' 4"	7' 5"	6' 5"	8' 5"	6' 9"	5' 10"
	57	0.0235	16	9' 9"	7' 9"	6' 9"	8' 6"	6' 9"	5' 11"	7' 9"	6' 2"	5' 4"
	57	0.0235	24	8' 5"	6' 9"	5' 10"	7' 5"	5' 10"	5' 1"	6' 8" f	5' 4"	4' 8"
250VXS144-22	57	0.0235	12	15' 6"	12' 4"	10' 9"	13' 7"	10' 9 "	9' 5"	12' 4"	9' 9"	8' 7"
	57	0.0235	16	14' 3"	11' 4"	9' 10"	12' 5"	9' 10"	8' 7"	11' 3" f	8' 11"	7' 10"
	57	0.0235	24	12' 4"	9' 9"	8' 7"	10' 7" f	8' 7"	7' 6"	9' 2" f	7' 9"	6' 9"
350VXS144-22	57	0.0235	12	20' 2"	16' 0"	13' 11"	17' 7"	13' 11"	12' 2"	15' 10" f	12' 8"	11' 1"
	57	0.0235	16	18' 5"	14' 8"	12' 10"	15' 11" f	12' 10"	11' 2"	13' 9" f	11' 7"	10' 2"
	57	0.0235	24	15' 10" f	12' 8"	11' 1"	12' 11" f	11' 1"	9' 8'	11' 2" f	10' 1"	8' 10"
362VXS144-22	57	0.0235	12	20' 8"	16' 5"	14' 4"	18' 1'	14' 4"	12' 4"	16' 2" f	13' 0"	11' 5"
	57	0.0235	16	18' 11"	15' 0"	13' 2"	16' 3" f	13' 2"	11' 6"	14' 0" f	11' 11"	10' 5"
	57	0.0235	24	16' 2" f	13' 0"	11' 5"	13' 3" f	11' 5"	9' 11"	11' 5" f	10' 4"	9' 0"
400VXS144-22	57	0.0235	12	22' 4"	17' 9"	15' 6"	19' 6"	15' 6"	13' 6"	17' 2" f	14' 1"	12' 4"
	57	0.0235	16	20' 5"	16' 3"	14' 2"	17' 3" f	14' 2"	12' 5"	14' 11" f	12' 11"	11' 3"
	57	0.0235	24	17' 2" f	14' 1"	12' 4"	14' 0" f	12' 3"	10' 9"	12' 2" f	11' 2"	9' 9"
600VXS144-22[1]	57	0.0235	12	30' 7"	24' 3"	21' 3"	25' 3" f	21' 3"	18' 6"	21' 10" f	19' 3"	16' 10"
	57	0.0235	16	26' 9" f	22' 3"	19' 5"	21' 10" f	19' 5"	17' 0"	18' 11" f	17' 8"	15' 5"
	57	0.0235	24	21' 10" f	19' 3"	16' 10"	17' 10" f	16' 10"	14' 9"	13' 11" w	13' 11" w	13' 4"

Notes:

1. *Web height to thickness ratio (h/t) exceeds 200. Web stiffeners required at all support points and concentrated loads.*

2. *Lateral loads of 5 psf, 7.5 psf, and 10 psf have NOT been reduced for strength or deflection checks. Full lateral load is applied.*

3. *Limiting heights are in accordance with AISI S100 using all steel non-composite design.*

4. *Limiting heights are established by considering flexure (f), web crippling (w) and deflection.*

5. *Allowable moment is the lesser of Mal and Mad. Stud distortional buckling based on an assumed $K\Phi = 0$.*

6. *For bending, studs are assumed to be adequately braced to develop full allowable moment.*

7. *Web crippling check is based on AISI S100 section C3.4.2 Condition 1: End One-Flange Loading with 1" end bearing.*

8. *See page 4 for additional table notes.*

For more information, please contact CEMCO's Technical Service Department at 800-416-2278.
This technical information reflects the most current information available and supersedes any and all previous publications effective February 24, 2025 #VSX-V1-8/2017

ALLOWABLE COMPOSITE HEIGHTS – NON-LOAD BEARING WALLS

VIPER-X MEMBER	YIELD (ksi)	DESIGN THICKNESS (in)	SPACING O.C. (in)	5 PSF			7.5 PSF			10 PSF		
				L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
162VXS144-18	57	0.0188	12	14'-6"	11'-6"	10'-0"	12'-8"	10'-0"	8'-6"	11'-6"	8'-11"	7'-7"
	57	0.0188	16	13'-2"	10'-5"	8'-10"	11'-6"	8'-11"	7'-7"	10'-5"	7'-11"	-
	57	0.0188	24	11'-6"	8'-11"	7'-7"	10'-0"	7'-7"	-	8'-11"	-	-
250VXS144-18	57	0.0188	12	18'-5"	14'-7"	12'-9"	16'-1"	12'-9"	11'-2"	14'-7"	11'-7"	10'-2"
	57	0.0188	16	16'-9"	13'-4"	11'-7"	14'-8"	11'-7"	10'-2"	13'-4"	10'-7"	8'-10"
	57	0.0188	24	14'-7"	11'-7"	10'-2"	12'-9"	10'-2"	8'-6"	11'-6"	8'-11"	7'-6"
350VXS144-18	57	0.0188	12	22'-3"	17'-8"	15'-4"	19'-5"	15'-5"	13'-6"	17'-8"	14'-0"	12'-3"
	57	0.0188	16	20'-3"	16'-1"	14'-0"	17'-8"	14'-0"	12'-3"	15'-10"	12'-9"	11'-2"
	57	0.0188	24	17'-8"	13'-12"	12'-3"	14'-11"	12'-3"	10'-9"	12'-11"	11'-2"	9'-8"
362VXS144-18	57	0.0188	12	22'-6"	17'-11"	15'-8"	19'-8"	15'-8"	13'-8"	17'-11"	14'-3"	12'-5"
	57	0.0188	16	20'-5"	16'-3"	14'-3"	17'-11"	14'-3"	12'-5"	16'-0"	12'-11"	11'-4"
	57	0.0188	24	17'-10"	14'-3"	12'-5"	15'-2"	12'-5"	10'-9"	13'-1"	11'-3"	9'-10"
400VXS144-18[1]	57	0.0188	12	23'-7"	18'-8"	16'-4"	20'-7"	12'-11"	14'-3"	18'-8"	14'-10"	13'-0"
	57	0.0188	16	21'-5"	17'-0"	14'-10"	18'-9"	14'-10"	13'-0"	16'-9"	13'-6"	11'-10"
	57	0.0188	24	18'-8"	14'-10"	13'-0"	15'-10"	13'-0"	11'-4"	13'-9"	11'-10"	10'-0"
600VXS144-18[1]	57	0.0188	12	31'-5"	24'-11"	21'-9"	27'-0"	21'-9"	19'-0"	23'-5"	19'-10"	17'-4"
	57	0.0188	16	28'-7"	22'-8"	19'-10"	22'-6"	19'-10"	17'-4"	20'-3"	18'-0"	15'-9"
	57	0.0188	24	23'-5"	19'-10"	17'-4"	19'-1"	17'-4"	15'-1"	16'-7"	15'-9"	13'-7"
162VXS144-22	57	0.0235	12	14'-8"	11'-8"	10'-2"	12'-10"	10'-2"	8'-8"	11'-8"	9'-1"	7'-8"
	57	0.0235	16	13'-4"	10'-7"	10'-0"	11'-8"	9'-1"	7'-9"	10'-7"	8'-1"	-
	57	0.0235	24	11'-8"	9'-1"	-	10'-2"	-	-	9'-1"	-	-
250VXS144-22	57	0.0235	12	18'-11"	15'-0"	13'-1"	16'-6"	13'-1"	11'-5"	15'-0"	11'-11"	10'-5"
	57	0.0235	16	17'-2"	13'-8"	11'-11"	15'-0"	11'-11"	10'-6"	13'-8"	10'-10"	10'-0"
	57	0.0235	24	15'-0"	11'-11"	10'-5"	13'-1"	10'-5"	8'-10"	11'-10"	9'-3"	7'-9"
350VXS144-22	57	0.0235	12	23'-4"	18'-6"	16'-2"	20'-5"	16'-2"	14'-2"	18'-6"	14'-8"	12'-10"
	57	0.0235	16	21'-3"	16'-10"	14'-9"	18'-6"	14'-9"	12'-10"	16'-8"	13'-4"	11'-8"
	57	0.0235	24	18'-6"	14'-8"	12'-10"	15'-11"	12'-10"	11'-3"	14'-1"	11'-8"	10'-1"
362VXS144-22	57	0.0235	12	25'-0"	18'-9"	16'-5"	20'-8"	16'-5"	14'-4"	18'-9"	14'-11"	13'-0"
	57	0.0235	16	23'-8"	17'-1"	14'-11"	18'-10"	14'-11"	13'-1"	17'-0"	13'-7"	11'-10"
	57	0.0235	24	18'-9"	14'-11"	13'-0"	16'-2"	13'-0"	11'-5"	14'-4"	11'-10"	10'-3"
400VXS144-22	57	0.0235	12	24'-9"	19'-8"	17'-2"	21'-8"	19'-0"	15'-0"	19'-8"	15'-7"	13'-8"
	57	0.0235	16	22'-6"	17'-11"	15'-8"	19'-8"	15'-8"	13'-8"	17'-9"	14'-2"	12'-5"
	57	0.0235	24	19'-8"	15'-7"	13'-8"	16'-11"	13'-8"	11'-11"	15'-0"	12'-5"	10'-8"
600VXS144-22[1]	57	0.0235	12	33'-1"	26'-3"	22'-11"	28'-8"	22'-11"	20'-1"	25'-5"	20'-10"	18'-3"
	57	0.0235	16	30'-1"	23'-11"	20'-10"	31'-0"	20'-10"	18'-3"	22'-6"	18'-12"	16'-7"
	57	0.0235	24	25'-5"	20'-10"	18'-3"	21'-5"	18'-3"	15'-11"	19'-0"	16'-7"	14'-5"

Notes:

1. *Web height to thickness ratio (h/t) exceeds 200. Web stiffeners required at all support points and concentrated loads. Viper composite limiting heights are based on testing in accordance with ICC-ES acceptance criteria AC86.*
2. *Limiting heights are established by considering flexure, shear, web crippling, and deflection.*
3. *Mechanical fastening of gypsum panel to the stud and track is required, except when installing a minimum 30 mil slotted track with 2-1/2" legs in lieu of standard track.*
4. *Viper-X composite limiting heights based on a single layer of 5/8" Type X gypsum board applied vertically to both sides of the wall over full height. 5/8" Type X wallboard from the following manufacturers are acceptable: USG, National, Georgia- Pacific, PABCO, CertainTeed, & American.*
5. *See page 4 for additional table notes. For deflection track usage contact Technical Services.*
6. *For GWB installed horizontally, see table for "Non-Composite Limiting Heights- Fully Braced" (see above).*

ALLOWABLE CEILING SPANS

L/240		4 PSF LATERAL SUPPORT OF COMPRESSION FLANGE						6 PSF LATERAL SUPPORT OF COMPRESSION FLANGE						13 PSF LATERAL SUPPORT OF COMPRESSION FLANGE					
VIPER-X MEMBER	Fy ksi	Unsupported Joist Spacing (in) O.C.			Midspan Joist Spacing (in) O.C.			Unsupported Joist Spacing (in) O.C.			Midspan Joist Spacing (in) O.C.			Unsupported Joist Spacing (in) O.C.			Midspan Joist Spacing (in) O.C.		
		12	16	24	12	16	24	12	16	24	12	16	24	12	16	24	12	16	24
162VXS144-18	57	7' 4"	6' 8"	5' 10"	7' 4"	6' 8"	5' 10"	6' 5"	5' 10"	5' 1"	6' 5"	5' 10"	5' 1"	4' 11"	4' 6"	3' 11"	4' 11"	4' 6"	3' 11"
250VXS144-18	57	9' 5"	8' 9"	7' 10"	12' 2"	11' 1"	9' 8"	8' 6"	7' 10"	6' 11"	10' 7"	9' 8"	8' 5"	6' 9"	6' 2"	5' 6"	8' 2"	7' 5"	6' 6"
350VXS144-18	57	10' 5"	9' 8'	8' 8"	14' 7"	13' 4"	11' 10"	9' 4"	8' 8"	7' 9"	12' 10"	11' 10"	10' 4"	7' 6"	6' 11"	6' 1"	10' 0"	9' 0"	6' 6"
362VXS144-18	57	10' 6"	9' 9"	8' 10"	14' 8"	13' 6"	11' 11"	9' 6"	8' 10"	7' 10"	13' 0"	11' 11"	10' 5"	7' 7"	7' 0"	6' 2"	10' 2"	9' 2"	6' 6"
400VXS144-18*	57	10' 10"	10' 1"	9' 0"	15' 0"	13' 9"	12' 2"	9' 9"	9' 0"	8' 0"	13' 3"	12' 2"	10' 8"	7' 9"	7' 2"	6' 4"	10' 5"	9' 5"	8' 0"
162VXS144-22	57	9' 6"	8' 7"	7' 6"	9' 6"	8' 7"	7' 6"	8' 3"	7' 6"	6' 7"	8' 3"	7' 6"	6' 7"	6' 5"	5' 10"	5' 1"	6' 5"	5' 10"	5' 1"
250VXS144-22	57	10' 7"	9' 10"	8' 10"	13' 2"	11' 11"	10' 5"	9' 7"	8' 10"	7' 11"	11' 6"	10' 5"	9' 1"	7' 9"	7' 2"	6' 5"	8' 10"	8' 1"	7' 0"
350VXS144-22	57	11' 6"	10' 8"	9' 7"	16' 5"	15' 1"	13' 5"	10' 4"	9' 7"	8' 7"	14' 7"	13' 5"	11' 10"	8' 5"	7' 9"	6' 11"	11' 6"	10' 6"	9' 0"
362VXS144-22	57	11' 7"	10' 9"	9' 8"	16' 7"	15' 3"	13' 7"	10' 5"	9' 8"	8' 8"	14' 9"	13' 7"	12' 1"	8' 6"	7' 10"	7' 0"	11' 9"	10' 9"	9' 2"
400VXS144-22	57	11' 11"	11' 0"	9' 11"	17' 1"	15' 8"	14' 0"	10' 8"	9' 11"	8' 11"	15' 2"	14' 0"	12' 5"	8' 8"	8' 1"	7' 2"	12' 1"	11' 2"	9' 8"
600VXS144-22*	57	13' 8"	12' 8"	11' 4"	19' 6"	18' 0"	16' 2"	12' 3"	11' 4"	10' 2"	17' 5"	16' 2"	14' 4"	9' 11"	9' 3"	8' 3"	14' 0"	12' 11"	11' 5"

L/360		4 PSF LATERAL SUPPORT OF COMPRESSION FLANGE						6 PSF LATERAL SUPPORT OF COMPRESSION FLANGE						13 PSF LATERAL SUPPORT OF COMPRESSION FLANGE					
VIPER-X MEMBER	Fy ksi	Unsupported Joist Spacing (in) O.C.			Midspan Joist Spacing (in) O.C.			Unsupported Joist Spacing (in) O.C.			Midspan Joist Spacing (in) O.C.			Unsupported Joist Spacing (in) O.C.			Midspan Joist Spacing (in) O.C.		
		12	16	24	12	16	24	12	16	24	12	16	24	12	16	24	12	16	24
162VXS144-18	57	6' 5"	5' 10"	5' 1"	6' 5"	5' 10"	5' 1"	5' 7"	5' 1"	4' 5"	5' 7"	5' 1"	4' 5"	4' 4"	3' 11"	3' 5"	4' 4"	3' 11"	3' 5"
250VXS144-18	57	9' 5"	8' 9"	7' 10"	10' 7"	9' 8"	8' 5"	8' 6"	7' 10"	6' 11"	9' 3"	8' 5"	7' 4"	6' 9"	6' 2"	5' 6"	7' 2"	6' 6"	5' 8"
350VXS144-18	57	10' 5"	9' 8"	8' 8"	13' 8"	12' 5"	10' 10"	9' 4"	8' 8"	7' 9"	11' 11"	10' 10"	9' 6"	7' 6"	6' 11"	6' 1"	9' 3"	8' 5"	6' 6"
362VXS144-18	57	10' 6"	9' 9"	8' 10"	14' 0"	12' 9"	11' 2"	9' 6"	8' 10"	7' 10"	12' 3"	11' 2"	9' 9"	7' 7"	7' 0"	6' 2"	9' 6"	8' 7"	6' 6"
400VXS144-18*	57	10' 10"	10' 1"	9' 0"	14' 10"	13' 6"	11' 9"	9' 9"	9' 0"	8' 0"	13' 0"	11' 9"	10' 4"	7' 9"	7' 2"	6' 4"	10' 0"	9' 1"	8' 0"
162VXS144-22	57	8' 3"	7' 6"	6' 7"	8' 3"	7' 6"	6' 7"	7' 3"	6' 7"	5' 9"	7' 3"	6' 7"	5' 9"	5' 7"	5' 1"	4' 5"	5' 7"	5' 1"	4' 5"
250VXS144-22	57	10' 7"	9' 10"	8' 10"	11' 6"	10' 5"	9' 1"	9' 7"	8' 10"	7' 11"	10' 0"	9' 1"	7' 11"	7' 9"	7' 0"	6' 2"	7' 9"	7' 0"	6' 2"
350VXS144-22	57	11' 6"	10' 8"	9' 7"	14' 11"	13' 7"	11' 10"	10' 4"	9' 7"	8' 7"	13' 0"	11' 10"	10' 4"	8' 5"	7' 9"	6' 11"	10' 1"	9' 2"	8' 0"
362VXS144-22	57	11' 7"	10' 9"	9' 8"	15' 4"	13' 11"	12' 2"	10' 5"	9' 8"	8' 8"	13' 5"	12' 2"	10' 8"	8' 6"	7' 10"	7' 0"	10' 4"	9' 5"	8' 2"
400VXS144-22	57	11' 11"	11' 0"	9' 11"	16' 7"	15' 1"	13' 2"	10' 8"	9' 11"	8' 11"	14' 6"	13' 2"	11' 6"	8' 8"	8' 1"	7' 2"	11' 2"	10' 2"	8' 10"
600VXS144-22*	57	13' 8"	12' 8"	11' 4"	19' 6"	18' 0"	16' 2"	12' 3"	11' 4"	10' 2"	17' 6"	16' 2"	14' 5"	9' 11"	9' 2"	8' 3"	14' 0"	12' 8"	10' 6"

** h/t > 200, web stiffeners are required at end supports*

Notes:

1. *Ceiling Spans are established by considering flexure, shear, web crippling and deflection.*
2. *For web crippling, when h/t ≤ 200, the web crippling values are computed based on section C3.4.2 of AISI S100.*
3. *All values are for simple spans, with compression flange either unbraced or braced at midspan.*
4. *Ceiling spans are based on total load of assembly, not including storage or live load for accessible ceilings.*
5. *The factory punchouts are in accordance with section C5 of AISI S201. The distance from the center of the last punchout to the end of the stud is 12".*
6. *Web Crippling calculations are based on a bearing length of 1 inch.*
7. *If punchouts occur near supports, members must be checked for reduced shear and web crippling in accordance with AISI S100.*

For more information, please contact CEMCO's Technical Service Department at 800-416-2278.
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SCREW ALLOWABLE LOADS & UL ASSEMBLIES

SCREW ALLOWABLE LOADS (LBS.)

MODEL NO.	DESIGN THICKNESS (in)	MIN. THICKNESS (in)	FY YIELD (ksi)	FU TENSILE (ksi)	#6 SCREW (0.138" dia; 0.25" head)		#8 SCREW (0.164" Dia; 0.3125" Head)		#10 SCREW (0.190" Dia; 0.340" Head)		#12 SCREW (0.216" Dia; 0.340" Head)	
					SHEAR	TENSION	SHEAR	TENSION	SHEAR	TENSION	SHEAR	TENSION
VIPER-X-18	0.0188	0.0179	57	65	142[1]	48	150[1]	57	164[1]	66	109	75
VIPER-X-22	0.0235	0.0223	57	65	174[1]	60	184[1]	71	236[1]	82	152	93

Notes:

1 Shear values are tested per AISI S100 and S905 procedure.
2. Capacities are based on section E4 of the AISI S100 Specification.
3. Capacities are based on Allowable Strength Design (ASD).
4. Screw pull-out capacities are based on listed head diameter.
5. Two sheets of equal thickness and tensile strength are assumed in tabulated values.
6. When materials of different steel thickness and tensile strength are connected, use the lowest value for shear capacity (tilting and bearing), for pull-out capacity use sheet closest to screw tip and for pull-over capacity use sheet closest to screw head.
7. Where multiple fasteners are used, screws are assumed to have a center-to-center spacing of at least 3 times the nominal diameter.
8. Screws are assumed to have a center-of-screw to edge-of-steel dimension of at least 1.5 times the nominal diameter of the screw.
9. When screws are subjected to combination of shear and tension forces, interaction equation of AISI S100 Specification section E4.5 shall be used.

UL ASSEMBLIES – VIPER-X FIRE TESTING DATA (ASTM E119)

UL DESIGN NO.	VIPER-X (DESIGN THICKNESS)	WALL RATING
U411	18 MIL	2 HR
U412	18 MIL	2 HR
U419	18 MIL	1, 2, 3 or 4 HR
U435	18 MIL	3 or 4 HR
U465	18 MIL	1 HR Chase
V417	18 MIL	1 HR
V435	18 MIL	1 HR
V448	18 MIL	1 HR
V469	18 MIL	1 or 2 HR Chase
V486	18 MIL	1, 2, or 2-1/2 HR
V489	18 MIL	1, 2, 3 or 4 HR
V496	18 MIL	1 or 2 HR Chase
V498	18 MIL	1, 2, 3 or 4 HR
W411	18 MIL	1/2 or 1 HR
W424	18 MIL	1/2 or 1 HR
W433	18 MIL	1/2 HR
W440	18 MIL	1, 2, 3 or 4 HR

SOUND TESTED ASSEMBLIES

Viper-X Stud	Wall Framing	Gypsum Wallboard	Insulation	Resilient Channel	STC Rating	WEAL Report No.
3-5/8" Viper-X-18	24" on-center	1 layer 5/8" Type X on each side	-	-	41	TL17-357
3-5/8" Viper-X-18	24" on-center	1 layer 5/8" Type X on each side	R-13	-	44	TL17-358
3-5/8" Viper-X-18	24" on-center	2 Layers 5/8" Type X one side, 1 Layer 5/8" Type X other side	R-13	-	50	TL17-359
3-5/8" Viper-X-18	24" on-center	2 Layers 5/8" Type X one side, 2 Layers 5/8" Type X other side	R-13	-	54	TL17-360
3-5/8" Viper-X-18	24" on-center	2 Layers 5/8" Type X one side, 2 Layers 5/8" Type X other side	R-13	RC1-X	59	TL17-361
3-5/8" Viper-X-18	24" on-center	2 Layers 5/8" Type X one side, 1 Layer 5/8" Type X other side	R-13	RC1-X	56	TL17-362
3-5/8" Viper-X-18	24" on-center	1 layer 5/8" Type X on each side	R-13	RC1-X	53	TL17-363
3-5/8" Viper-X-18	16" on-center	2 layers 5/8" Type X one side, 1 layer 5/8" Type X other side	HOTROD 1/2" Head-of-Wall Gap on Both Sides, Joint Compound 1 side only		49	TL17-417
3-5/8" Viper-X-18	16" on-center	2 Layers 5/8" Type X one side, 2 Layers 5/8" Type X other side	HOTROD 1/2" Head-of-Wall Gap on Both Sides, Joint Compound 1 side only		51	TL17-418
3-5/8" Viper-X-22	24" on-center	1 layer 5/8" Type X on each side	-	-	41	TL17-365
3-5/8" Viper-X-22	24" on-center	1 layer 5/8" Type X on each side	R-13	-	46	TL17-367
3-5/8" Viper-X-22	24" on-center	2 Layers 5/8" Type X one side, 1 Layer 5/8" Type X other side	R-13	-	50	TL17-368
3-5/8" Viper-X-22	24" on-center	2 Layers 5/8" Type X one side, 2 Layers 5/8" Type X other side	R-13	-	52	TL17-369
3-5/8" Viper-X-22	24" on-center	2 Layers 5/8" Type X one side, 2 Layers 5/8" Type X other side	R-13	RC1-X	59	TL17-371
3-5/8" Viper-X-22	24" on-center	2 Layers 5/8" Type X one side, 1 Layer 5/8" Type X other side	R-13	RC1-X	57	TL17-372
3-5/8" Viper-X-22	24" on-center	1 layer 5/8" Type X on each side	R-13	RC1-X	53	TL17-373

Notes:

The Viper-X drywall framing system has been tested to determine the transmission of sound through walls. Acoustic tests were performed using 3-5/8" Viper-X steel studs. The tests were performed according to ASTM E 90 in different configurations. May use RC1-X. Sound testing performed by Western Electro-Acoustic Laboratory.

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CEMCO STRUCTURAL ENGINEERING

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2 Deliver shop drawings and structural solutions based on the client's needs.

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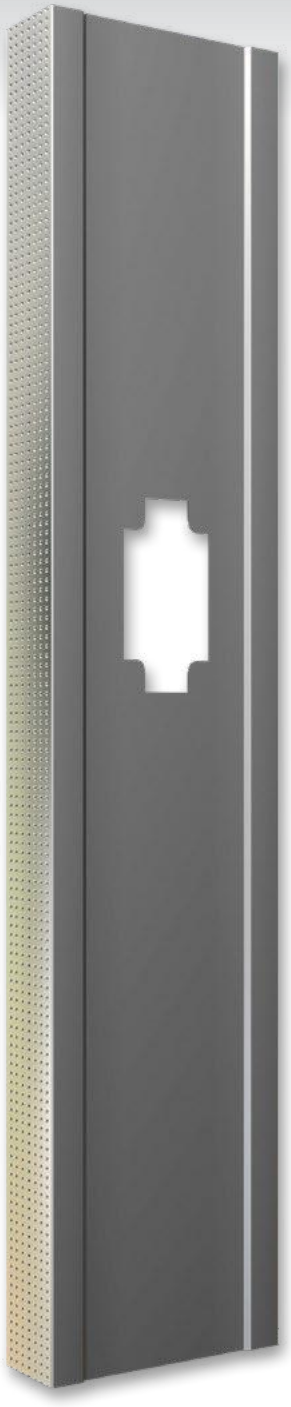
Viper-X®



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NOTES

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NOTES

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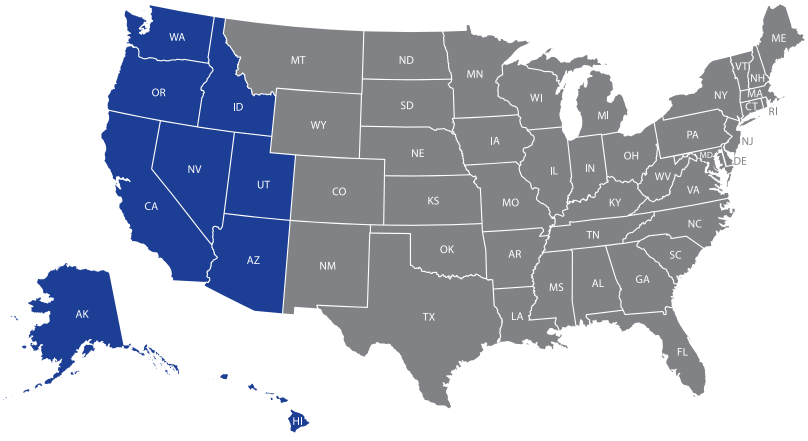

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