

STEEL STRONG-WALL®: Cold-Formed Steel on Concrete Foundations

ALLOWABLE OUT-OF-PLANE LOADS (PSF)^{1,3}

Model Width	Axial Load (lbs) ^{2,4}	Nominal Height of Panel (feet)		
		8	9	10
12" wide	1000	195	140	100
	4000	145	100	70
	7500	85	50	25
15" wide	1000	160	125	100
	4000	130	95	70
	7500	90	65	45
18" wide	7500	300	210	155
21" wide	7500	255	180	130
24" wide	7500	265	190	135

1. Loads shown are at ASD level in pounds per square foot (psf) of wall with no further increase allowed and are applicable to either the ASD Basic or Alternative Basic load combinations.
2. Axial load denotes maximum gravity load permitted on entire panel acting in combination with the out-of-plane load.
3. Load considers a deflection limit of $h/240$.
4. Allowable out-of-plane loads for the 12- and 15-inch walls may be linearly interpolated between the axial loads shown.

AXIAL CAPACITIES ON CONCRETE

Model Width	Compression Capacity (lbs) with No Lateral Load ^{1,2,3}			
	Nominal Height of Panel (feet)			
	7	8	9	10
12" wide	20200	16300	13700	11100
15" wide	25300	21800	19200	16600
18" wide	42500	36000	31400	27000
21" wide	43700	35800	30300	25100
24" wide	51600	42900	36900	31100

1. Compression capacity is lesser of wall buckling capacity or 2500 psi uniform concrete bearing.
2. Compression capacity of wall assumes concentric loading with no lateral loads present. See allowable in-plane or out-of-plane shear load tables for combined lateral and axial loading conditions.
3. Capacities are applicable to either the ASD Basic or Alternative Basic load combinations.

S/SSW SHEAR LOAD INTERPOLATION EXAMPLE

Given:

2006 IBC, Seismic, 2500 psi Concrete

Shear Load = 2000 lbs.

Axial = 4000 lbs.

S/SSW Wall Height Required: $8'-6" = 102"$

Interpolate (See table on page 30):

S/SSW18x8X $V_1 = 2140$ lbs., $h_1 = 97"$

S/SSW18x9X $V_2 = 1835$ lbs., $h_2 = 109"$

$$\text{Equation: } V_{\text{allow}} = \left(\frac{V_1 - V_2}{h_1 - h_2} \right) (h_{\text{required}} - h_1) + V_1$$

$$V_{\text{allow}} = \left(\frac{2140 \text{ lbs.} - 1835 \text{ lbs.}}{97" - 109"} \right) (102" - 97") + 2140 \text{ lbs.} = 2013 \text{ lbs. @ } 102"$$

$V_{\text{allow}} = 2013$ lbs. > 2000 lbs. **OK**

>>> Use S/SSW18x9X H = 102"