

Table 1 - Maximum Beam Size for SCWB and Flange Compatibility
(Story Height: 16 ft, Bay Width: 30 ft)

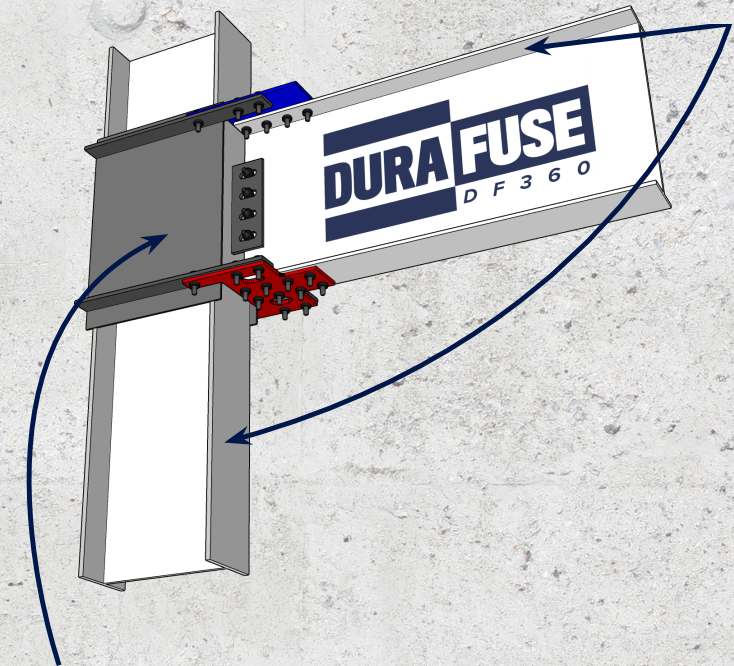
One-Sided Connections						
Column	Max Beam Size					
	W21	W24	W27	W30	W33	W36
W24x370	W21x275	W24x370	W27x539	W30x391	W33x387	W36x256
W24x335	W21x275	W24x370	W27x539	W30x391	W33x169	W36x256
W24x306	W21x275	W24x370	W27x539	W30x391	W33x169	W36x256
W24x279	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W24x250	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W24x229	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W24x207	W21x275	W24x370	W27x368	W30x357	W33x169	W36x256
W24x192	W21x275	W24x370	W27x336	W30x148	W33x169	W36x256
W24x176	W21x275	W24x335	W27x307	W30x148	W33x169	W36x256
W24x162	W21x275	W24x306	W27x281	W30x148	W33x169	W36x256
W24x146	W21x275	W24x279	W27x258	W30x148	W33x169	W36x232
W24x131	W21x275	W24x250	W27x235	W30x148	W33x169	W36x210
W24x103	W21x93	W24x103	W27x129			
W24x94	W21x93	W24x103	W27x129			
W24x84	W21x93	W24x103	W27x129			
W24x76	W21x93	W24x103				
W21x275	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W21x248	W21x275	W24x370	W27x368	W30x148	W33x169	W36x256
W21x223	W21x275	W24x370	W27x368	W30x148	W33x169	W36x256
W21x201	W21x275	W24x335	W27x336	W30x148	W33x169	W36x256
W21x182	W21x275	W24x306	W27x281	W30x148	W33x169	W36x256
W21x166	W21x275	W24x279	W27x258	W30x148	W33x169	W36x232
W21x147	W21x275	W24x250	W27x235	W30x148	W33x169	W36x210
W21x132	W21x248	W24x229	W27x129	W30x148	W33x169	W36x182
W21x122	W21x223	W24x207	W27x129	W30x148	W33x169	W36x170
W21x111	W21x201	W24x192	W27x129	W30x148	W33x152	W36x160
W21x93	W21x93	W24x103				
W21x83	W21x93	W24x103				
W21x73	W21x93	W24x103				
W21x68	W21x93	W24x103				
W21x62	W21x93	W24x76				
W14x873	W21x275	W24x370	W27x539	W30x391	W33x387	W36x925
W14x808	W21x275	W24x370	W27x539	W30x391	W33x387	W36x925
W14x730	W21x275	W24x370	W27x539	W30x391	W33x387	W36x802
W14x665	W21x275	W24x370	W27x539	W30x391	W33x387	W36x723
W14x605	W21x275	W24x370	W27x539	W30x391	W33x387	W36x652
W14x550	W21x275	W24x370	W27x539	W30x391	W33x387	W36x529
W14x500	W21x275	W24x370	W27x539	W30x391	W33x387	W36x529
W14x455	W21x275	W24x370	W27x539	W30x391	W33x387	W36x441
W14x426	W21x275	W24x370	W27x539	W30x391	W33x387	W36x441
W14x398	W21x275	W24x370	W27x368	W30x391	W33x387	W36x395
W14x370	W21x275	W24x370	W27x368	W30x391	W33x387	W36x361
W14x342	W21x275	W24x370	W27x368	W30x391	W33x354	W36x330
W14x311	W21x275	W24x370	W27x368	W30x326	W33x318	W36x302
W14x283	W21x275	W24x370	W27x336	W30x292	W33x291	W36x282
W14x257	W21x275	W24x335	W27x307	W30x261	W33x263	W36x231
W14x233	W21x275	W24x279	W27x258	W30x261	W33x241	W36x256
W14x211	W21x275	W24x250	W27x235	W30x211	W33x221	W36x210
W14x193	W21x248	W24x229	W27x217	W30x211	W33x201	W36x194
W14x176	W21x223	W24x207	W27x194	W30x191	W33x169	W36x170
W14x159	W21x201	W24x192	W27x178	W30x173	W33x169	W36x160
W14x145	W21x201	W24x176	W27x161	W30x148	W33x152	W36x135
W14x132	W21x182	W24x162	W27x146	W30x148	W33x130	W36x135
W14x82	W21x93	W24x103	W27x94	W30x90		
W14x74	W21x93	W24x94	W27x84			
W14x68	W21x93	W24x84				
W14x53	W21x73	W24x62				
W14x48	W21x62	W24x62				

STORY HEIGHT: 16 ft, BAY WIDTH: 30 ft

Table 2 - Maximum Beam Size for SCWB and Flange Compatibility
(Story Height: 16 ft, Bay Width: 20 ft)

One-Sided Connections						
Column	Max Beam Size					
	W21	W24	W27	W30	W33	W36
W24x370	W21x275	W24x370	W27x539	W30x391	W33x387	W36x256
W24x335	W21x275	W24x370	W27x539	W30x391	W33x169	W36x256
W24x306	W21x275	W24x370	W27x539	W30x391	W33x169	W36x256
W24x279	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W24x250	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W24x229	W21x275	W24x370	W27x368	W30x148	W33x169	W36x256
W24x207	W21x275	W24x370	W27x368	W30x148	W33x169	W36x256
W24x192	W21x275	W24x370	W27x336	W30x148	W33x169	W36x256
W24x176	W21x275	W24x335	W27x307	W30x148	W33x169	W36x256
W24x162	W21x275	W24x306	W27x281	W30x148	W33x169	W36x232
W24x146	W21x275	W24x279	W27x258	W30x148	W33x169	W36x210
W24x131	W21x248	W24x250	W27x217	W30x148	W33x169	W36x194
W24x103	W21x93	W24x103	W27x129			
W24x94	W21x93	W24x103	W27x129			
W24x84	W21x93	W24x103	W27x129			
W24x76	W21x93	W24x103				
W21x275	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W21x248	W21x275	W24x370	W27x368	W30x148	W33x169	W36x256
W21x223	W21x275	W24x370	W27x368	W30x148	W33x169	W36x256
W21x201	W21x275	W24x335	W27x307	W30x148	W33x169	W36x256
W21x182	W21x275	W24x306	W27x281	W30x148	W33x169	W36x232
W21x166	W21x275	W24x279	W27x258	W30x148	W33x169	W36x232
W21x147	W21x248	W24x250	W27x217	W30x148	W33x169	W36x194
W21x132	W21x223	W24x207	W27x129	W30x148	W33x169	W36x182
W21x122	W21x223	W24x207	W27x129	W30x148	W33x169	W36x160
W21x111	W21x201	W24x192	W27x129	W30x148	W33x152	W36x150
W21x93	W21x93	W24x103				
W21x83	W21x93	W24x103				
W21x73	W21x93	W24x103				
W21x68	W21x93	W24x103				
W21x62	W21x93	W24x76				
W14x873	W21x275	W24x370	W27x539	W30x391	W33x387	W36x925
W14x808	W21x275	W24x370	W27x539	W30x391	W33x387	W36x925
W14x730	W21x275	W24x370	W27x539	W30x391	W33x387	W36x802
W14x665	W21x275	W24x370	W27x539	W30x391	W33x387	W36x723
W14x605	W21x275	W24x370	W27x539	W30x391	W33x387	W36x652
W14x550	W21x275	W24x370	W27x539	W30x391	W33x387	W36x529
W14x500	W21x275	W24x370	W27x539	W30x391	W33x387	W36x529
W14x455	W21x275	W24x370	W27x539	W30x391	W33x387	W36x441
W14x426	W21x275	W24x370	W27x539	W30x391	W33x387	W36x441
W14x398	W21x275	W24x370	W27x368	W30x391	W33x387	W36x395
W14x370	W21x275	W24x370	W27x368	W30x391	W33x387	W36x361
W14x342	W21x275	W24x370	W27x368	W30x357	W33x354	W36x330
W14x311	W21x275	W24x370	W27x368	W30x326	W33x302	W36x302
W14x283	W21x275	W24x335	W27x336	W30x292	W33x291	W36x262
W14x257	W21x275	W24x306	W27x281	W30x261	W33x263	W36x247
W14x233	W21x275	W24x279	W27x258	W30x235	W33x221	W36x232
W14x211	W21x275	W24x250	W27x235	W30x211	W33x201	W36x210
W14x193	W21x248	W24x229	W27x217	W30x191	W33x169	W36x194
W14x176	W21x223	W24x207	W27x194	W30x173	W33x169	W36x170
W14x159	W21x201	W24x192	W27x178	W30x148	W33x152	W36x160
W14x145	W21x182	W24x176	W27x161	W30x148	W33x141	W36x135
W14x132	W21x166	W24x162	W27x146	W30x132	W33x130	W36x135
W14x82	W21x93	W24x103	W27x94	W30x90		
W14x74	W21x93	W24x94	W27x84			
W14x68	W21x93	W24x84				
W14x53	W21x73	W24x62				
W14x48	W21x62	W24x62				

STORY HEIGHT: 16 ft, BAY WIDTH: 20 ft



Tables 1 through 4:
Beam and column combinations in DuraFuse special moment frames must satisfy two requirements:

- 1) the strong-column weak-beam (SCWB) criteria
- 2) flange width compatibility

Tables 1 through 4 show the maximum beam sizes that are compatible with particular columns, considering both criteria. The SCWB criteria is somewhat sensitive to frame geometry. **Table 1** is for story height = 16 ft and bay width = 30 ft. **Tables 2-4** are similar but for other combinations of story height and bay width. It is conservative to use **Tables 1-4** for longer bay widths. For shorter bay widths, consult with a DuraFuse representative.

Table 5: Cover Plate Thickness

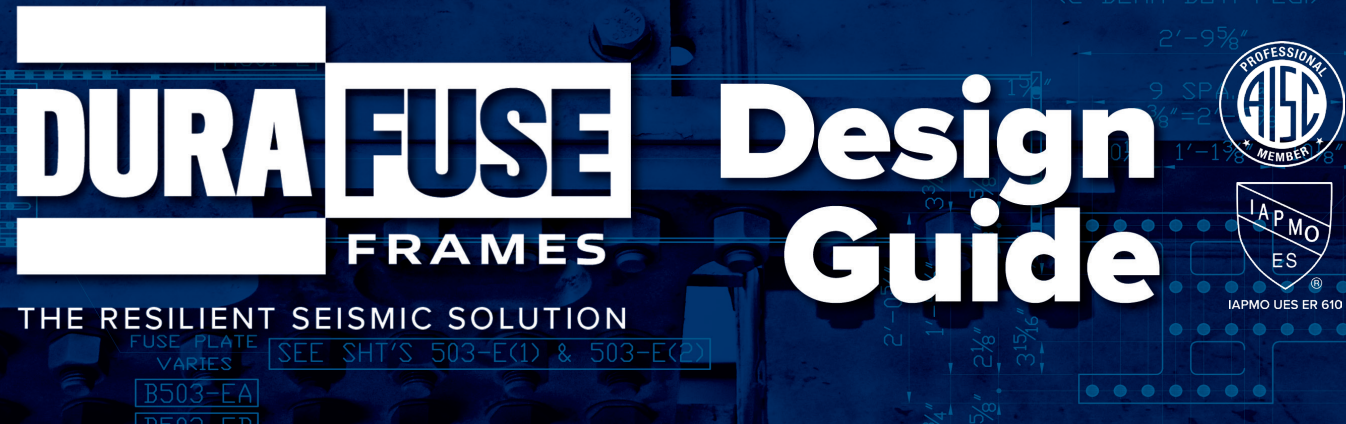
The thickness of the cover plates is based on two criteria:

- 1) required thickness for shear demand
- 2) minimum thickness to avoid local buckling

Table 5 shows the estimated cover plate thickness (in eights of an inch) for selected beams for particular column depths. For beams not shown, the expected thickness will be similar. Consult a DuraFuse representative for particular cases not shown.

Notes:

1. The maximum beam sizes listed in Tables 1 through 4 indicate beam-column combinations that are feasible. In many cases the maximum beam size will not be the most efficient design.
2. DuraFuse Frames are presently prequalified for beams up to 40 in. deep and 309 lb/ft. Contact us if you have a situation requiring heavier beams.
3. Larger beams sizes that those listed in Tables 1 through 4 can be accommodated if the cover plates are extended further beyond the panel zone area. Contact us if you have a situation where you need to make a column work for a heavier beam.



DuraFuse Frames offers free design assistance for those who are exploring the use of **DuraFuse Frames** in building designs. However, picking beam and column sizes for **DuraFuse Frames** can be done by the Engineer of Record without assistance. These tables help designers know which beam and column combinations are compatible with the connection and the estimated thickness of the cover plates.



THE RESILIENT SEISMIC SOLUTION

**For design assistance,
please contact DuraFuse:**

5801 West Wells Park Road
West Jordan, UT 84081
801.727.4060
contact@durafuseframes.com

Table 3 - Maximum Beam Size for SCWB and Flange Compatibility
(Story Height: 20 ft, Bay Width: 30 ft)

One-Sided Connections						
Column	Max Beam Size					
	W21	W24	W27	W30	W33	W36
W24x370	W21x275	W24x370	W27x539	W30x391	W33x387	W36x256
W24x335	W21x275	W24x370	W27x539	W30x391	W33x169	W36x256
W24x306	W21x275	W24x370	W27x539	W30x391	W33x169	W36x256
W24x279	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W24x250	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W24x229	W21x275	W24x370	W27x368	W30x148	W33x169	W36x256
W24x207	W21x275	W24x370	W27x336	W30x148	W33x169	W36x256
W24x192	W21x275	W24x335	W27x336	W30x148	W33x169	W36x256
W24x176	W21x275	W24x335	W27x307	W30x148	W33x169	W36x256
W24x162	W21x275	W24x306	W27x281	W30x148	W33x169	W36x232
W24x146	W21x275	W24x279	W27x235	W30x148	W33x169	W36x232
W24x131	W21x248	W24x229	W27x217	W30x148	W33x169	W36x194
W24x103	W21x93	W24x103	W27x129			
W24x94	W21x93	W24x103	W27x129			
W24x84	W21x93	W24x103	W27x129			
W24x76	W21x93	W24x103				
W21x275	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W21x248	W21x275	W24x370	W27x368	W30x148	W33x169	W36x256
W21x223	W21x275	W24x370	W27x336	W30x148	W33x169	W36x256
W21x201	W21x275	W24x335	W27x307	W30x148	W33x169	W36x256
W21x182	W21x275	W24x306	W27x281	W30x148	W33x169	W36x232
W21x166	W21x275	W24x279	W27x258	W30x148	W33x169	W36x210
W21x147	W21x248	W24x250	W27x217	W30x148	W33x169	W36x194
W21x132	W21x223	W24x207	W27x129	W30x148	W33x169	W36x170
W21x122	W21x223	W24x207	W27x129	W30x148	W33x169	W36x160
W21x111	W21x201	W24x176	W27x129	W30x148	W33x152	W36x150
W21x93	W21x93	W24x103				
W21x83	W21x93	W24x103				
W21x73	W21x93	W24x103				
W21x68	W21x93	W24x103				
W21x62	W21x93	W24x76				
W14x873	W21x275	W24x370	W27x539	W30x391	W33x387	W36x925
W14x808	W21x275	W24x370	W27x539	W30x391	W33x387	W36x853
W14x730	W21x275	W24x370	W27x539	W30x391	W33x387	W36x723
W14x665	W21x275	W24x370	W27x539	W30x391	W33x387	W36x652
W14x605	W21x275	W24x370	W27x539	W30x391	W33x387	W36x529
W14x550	W21x275	W24x370	W27x539	W30x391	W33x387	W36x529
W14x500	W21x275	W24x370	W27x539	W30x391	W33x387	W36x487
W14x455	W21x275	W24x370	W27x539	W30x391	W33x387	W36x441
W14x426	W21x275	W24x370	W27x368	W30x391	W33x387	W36x395
W14x398	W21x275	W24x370	W27x368	W30x391	W33x387	W36x361
W14x370	W21x275	W24x370	W27x368	W30x391	W33x354	W36x361
W14x342	W21x275	W24x370	W27x368	W30x357	W33x318	W36x330
W14x311	W21x275	W24x370	W27x336	W30x326	W33x291	W36x282
W14x283	W21x275	W24x335	W27x307	W30x292	W33x263	W36x262
W14x257	W21x275	W24x306	W27x281	W30x261	W33x241	W36x231
W14x233	W21x275	W24x279	W27x258	W30x235	W33x221	W36x210
W14x211	W21x275	W24x250	W27x235	W30x211	W33x201	W36x210
W14x193	W21x248	W24x229	W27x217	W30x191	W33x169	W36x182
W14x176	W21x223	W24x207	W27x194	W30x173	W33x169	W36x170
W14x159	W21x201	W24x192	W27x178	W30x148	W33x152	W36x150
W14x145	W21x182	W24x176	W27x161	W30x148	W33x141	W36x135
W14x132	W21x166	W24x146	W27x146	W30x132	W33x130	
W14x82	W21x93	W24x94	W27x94	W30x90		
W14x74	W21x93	W24x84	W27x84			
W14x68	W21x93	W24x84				
W14x53	W21x68	W24x62				
W14x48	W21x62	W24x62				

STORY HEIGHT: 20 ft, BAY WIDTH: 30 ft

Table 4 - Maximum Beam Size for SCWB and Flange Compatibility
(Story Height: 20 ft, Bay Width: 20 ft)

One-Sided Connections						
Column	Max Beam Size					
	W21	W24	W27	W30	W33	W36
W24x370	W21x275	W24x370	W27x539	W30x391	W33x387	W36x256
W24x335	W21x275	W24x370	W27x539	W30x391	W33x169	W36x256
W24x306	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W24x279	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W24x250	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W24x229	W21x275	W24x370	W27x368	W30x148	W33x169	W36x256
W24x207	W21x275	W24x370	W27x336	W30x148	W33x169	W36x256
W24x192	W21x275	W24x335	W27x307	W30x148	W33x169	W36x256
W24x176	W21x275	W24x306	W27x281	W30x148	W33x169	W36x232
W24x162	W21x275	W24x279	W27x258	W30x148	W33x169	W36x232
W24x146	W21x275	W24x250	W27x235	W30x148	W33x169	W36x210
W24x131	W21x248	W24x229	W27x217	W30x148	W33x169	W36x182
W24x103	W21x93	W24x103	W27x129			
W24x94	W21x93	W24x103	W27x129			
W24x84	W21x93	W24x103	W27x129			
W24x76	W21x93	W24x103				
W21x275	W21x275	W24x370	W27x368	W30x391	W33x169	W36x256
W21x248	W21x275	W24x370	W27x368	W30x148	W33x169	W36x256
W21x223	W21x275	W24x370	W27x336	W30x148	W33x169	W36x256
W21x201	W21x275	W24x335	W27x307	W30x148	W33x169	W36x256
W21x182	W21x275	W24x306	W27x258	W30x148	W33x169	W36x232
W21x166	W21x275	W24x279	W27x217	W30x148	W33x169	W36x210
W21x147	W21x248	W24x229	W27x217	W30x148	W33x169	W36x182
W21x132	W21x223	W24x207	W27x129	W30x148	W33x169	W36x170
W21x122	W21x201	W24x192	W27x129	W30x148	W33x152	W36x160
W21x111	W21x201	W24x176	W27x129	W30x148	W33x152	W36x135
W21x93	W21x93	W24x103				
W21x83	W21x93	W24x103				
W21x73	W21x93	W24x103				
W21x68	W21x93	W24x103				
W21x62	W21x93	W24x76				
W14x873	W21x275	W24x370	W27x539	W30x391	W33x387	W36x925
W14x808	W21x275	W24x370	W27x539	W30x391	W33x387	W36x802
W14x730	W21x275	W24x370	W27x539	W30x391	W33x387	W36x723
W14x665	W21x275	W24x370	W27x539	W30x391	W33x387	W36x652
W14x605	W21x275	W24x370	W27x539	W30x391	W33x387	W36x529
W14x550	W21x275	W24x370	W27x539	W30x391	W33x387	W36x529
W14x500	W21x275	W24x370	W27x539	W30x391	W33x387	W36x487
W14x455	W21x275	W24x370	W27x368	W30x391	W33x387	W36x441
W14x426	W21x275	W24x370	W27x368	W30x391	W33x387	W36x395
W14x398	W21x275	W24x370	W27x368	W30x391	W33x387	W36x361
W14x370	W21x275	W24x370	W27x368	W30x391	W33x354	W36x330
W14x342	W21x275	W24x370	W27x368	W30x357	W33x318	W36x302
W14x311	W21x275	W24x370	W27x336	W30x326	W33x291	W36x282
W14x283	W21x275	W24x335	W27x307	W30x292	W33x263	W36x262
W14x257	W21x275	W24x306	W27x281	W30x261	W33x241	W36x231
W14x233	W21x275	W24x279	W27x258	W30x235	W33x221	W36x210
W14x211	W21x275	W24x250	W27x235	W30x211	W33x201	W36x194
W14x193	W21x248	W24x229	W27x194	W30x191	W33x169	W36x182
W14x176	W21x223	W24x207	W27x194	W30x173	W33x169	W36x160
W14x159	W21x201	W24x192	W27x161	W30x148	W33x152	W36x150
W14x145	W21x182	W24x162	W27x146	W30x148	W33x141	W36x135
W14x132	W21x166	W24x146	W27x129	W30x132	W33x130	
W14x82	W21x93	W24x94	W27x84			
W14x74	W21x93	W24x84	W27x84			
W14x68	W21x93	W24x84				
W14x53	W21x68	W24x62				
W14x48	W21x62	W24x55				

STORY HEIGHT: 20 ft, BAY WIDTH: 20 ft

Table 5 - Required Thickness of Cover Plates
(in eighths of an inch)

Beam	One-Sided Connections																	Two-Sided Connections																
	Column Depth (in.)																	Column Depth (in.)																
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
W36x232	11	11	10	9	9	9	8	8	7	7	24	7	6	6	6	6	6	22	21	20	19	18	17	16	16	15	14	14	13	12	12	12	12	11
W36x210	10	10	9	9	8	8	7	7	7	7	6	6	6	6	6	6	6	20	19	18	17	16	15	15	14	14	13	12	12	12	11	11	10	10
W36x194	9	9	8	8	8	7	7	7	7	6	6	6	6	6	6	6	6	19	18	17	16	15	14	14	13	13	12	12	11	11	10	10	9	
W36x182	9	8	8	7	7	7	6	6	6	6	6	5	5	6	6	6	6	18	17	16	15	14	14	13	12	12	11	11	10	10	9	9	9	
W36x170	8	8	7	7	7	6	6	6	6	6	5	5	5	6	6	6	6	17	16	15	14	13	13	12	12	11	11	10	10	9	9	9	8	
W36x160	8	7	7	7	6	6	6	5	5	5	5	5	5	6	6	6	6	16	15	14	13	12	12	11	11	10	10	10	9	9	9	8	8	
W36x150	7	7	6	6	6	6	5	5	5	5	5	5	5	6	6	6	6	15	14	13	12	12	11	11	10	10	9	9	8	8	8	8	7	
W36x135	6	6	6	5	5	5	5	5	5	5	5	5	5	5	6	6	6	13	12	12	11	10	9	9	9	8	8	8	7	7	7	7	6	
W36x221	11	11	10	9	9	9	8	8	8	7	7	7	6	6	6	6	6	23	21	20	19	18	17	16	16	15	14	14	13	12	12	12	11	
W33x201	10	10	9	9	8	8	7	7	7	7	6	6	6	6	5	6	6	21	19	18	17	16	16	15	14	14	13	13	12	12	11	11	10	
W33x169	8	8	7	7	7	6	6	6	6	5	5	5	5	5	5	6	6	17	16	15	14	13	13	12	12	11	11	10	10	9	9	9	8	
W33x152	7	7	7	6	6	6	5	5	5	5	5	5	5	5	5	6	6	15	14	13	13	12	11	11	10	10	10	9	9	8	8	8	7	
W33x141	7	7	6	6	6	5	5	5	5	5	5	5	5	5	5	6	6	14	13	12	12	11	11	10	10	9	9	8	8	8	7	7	7	
W33x130	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	6	6	13	12	11	11	10	10	9	9	8	8	8	7	7	7	7	6	
W33x118	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	11	11	10	10	9	9	8	8	8	7	7	7	7	6	6	6	
W30x191	10	9	9	8	8	7	7	7	7	7	6	6	6	6	5	5	5	20	18	17	17	16	15	14	14	13	13	12	12	11	11	10	10	
W30x173	9	8	8	8	7	7	6	6	6	6	6	5	5	5	5	5	5	18	17	16	15	14	14	13	12	12	11	11	10	10	9	9	9	
W30x148	7	7	6	6	6	6	5	5	5	5	5	5	5	5	5	5	5	15	14	13	12	12	11	11	10	10	9	9	8	8	8	7	7	
W30x132	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	13	12	11	11	10	10	9	9	9	8	8	8	7	7	7	7	
W30x124	6	6	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	12	11	11	10	10	9	9	8	8	8	7	7	7	7	6	6	
W30x116	6	5	5	5	5	4	4	5	5	5	5	5	5	5	5	5	5	11	11	10	10	9	9	8	8	8	7	7	7	6	6	6	6	
W30x108	5	5	5	4	4	4	4	4	5	5	5	5	5	5	5	5	5	10	10	9	9	8	8	8	7	7	7	6	6	6	6	5	5	
W30x99	5	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5	10	9	8	8	8	7	7	7	6	6	6	5	5	5	5	5	
W30x90	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	9	8	8	7	7	7	6	6	6	5	5	5	5	5	5	5	
W27x161	8	8	7	7	7	6	6	6	6	6	5	5	5	5	5	5	5	17	16	15	14	13	13	12	12	11	11	10	10	10	9	9	8	
W27x146	8	7	7	6	6	6	6	5	5	5	5	5	5	5	5	5	5	15	14	13	13	12	12	11	11	10	10	9	9	8	8	8	8	
W27x129	6	6	6	5	5	5	5	4	4	4	4	5	5	5	5	5	5	13	12	11	11	10	10	9	9	8	8	8	7	7	7	7	6	
W27x114	6	5	5	5	5	4	4	4	4	4	4	5	5	5	5	5	5	11	11	10	9	9	9	8	8	8	7	7	7	6	6	6	6	
W27x102	5	5	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	10	10	9	9	8	8	7	7	7	6	6	6	6	5	5	5	
W27x94	5	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	9	9	8	8	7	7	7	6	6	6	6	5	5	5	5	5	
W27x84	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	8	8	7	7	7	6	6	6	5	5	5	5	5	5	5	5	
W24x131	7	6	6	6	5	5	5	5	4	4	4	4	4	4	5	5	5	13	13	12	11	11	10	10	9	9	9	8	8	8	7	7	7	7
W24x117	6	6	5	5	5	5	4	4	4	4	4	4	4	4	5	5	5	12	11	11	10	10	9	9	8	8	8	7	7	7	7	6	6	6
W24x104	5	5	5	5	4	4	4	4	4	4	4	4	4	4	5	5	5	11	10	10	9	9	8	8	7	7	7	7	6	6	6	6	5	5
W24x103	5	5	5	4	4	4	4	4	4	4	4	4	4	4	5	5	5	10	10	9	9	8	8	7	7	7	7	6	6	6	5	5	5	5
W24x94	5	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	9	9	8	8	7	7	7	6	6	6	6	5	5	5	5	5	5
W24x84	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	8	8	7	7	7	6	6	6	5	5	5	5	5	5	5	5	5
W24x76	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	8	7	7	6	6	6	5	5	5	5	5	4	4	5	5	5	5
W24x68	3	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	7	6	6	6	5	5	5	5	4	4	4	4	4	5	5	5	5
W24x62	3	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	6	5	5	5	5	4	4	4	4	4	4	4	4	5	5	5	5
W24x55	3	3	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	5	5	5
W21x73	4	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	5	7	7	6	6	6	6	5	5	5	5	4	4	4	4	4	4	5
W21x68	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	5	7	6	6	5	5	5	5	5	4	4	4	4	4	4	4	4	5
W21x62	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	5	6	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	5
W21x55	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	5
W21x48	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
W21x57	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	5
W21x50	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5
W21x44	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	5	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	5
W18x60	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	6	6	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4
W18x55	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	6	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4
W18x50	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
W18x46	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	4	4	4	4	4	4	4	4	4
W18x40	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	4	4	4	4	4	4	4	4	4
W18x35	3	3	3	3	3	3	3	3	4	4	4	4	4																					