

**X829 - Half-Flange Tip Option**  
**Wide Flange Structural Steel Columns**  
**CAFCO® BLAZE-SHIELD® II, HP & ISOLATEK® Type II, HP**

ASTM Desig.	W/D	Metric Desig.	M/D	Hp/A	1-Hour	1-1/2 Hour	2-Hour	3-Hour	4-Hour
W44 x 335	2.25	W1120 x 498	132.8	59.5	1/2	13/16	1-1/8	1-5/8	2-3/16
290	1.97	432	116.2	68.0	1/2	13/16	1-1/8	1-5/8	2-3/16
262	1.78	390	105.0	75.3	1/2	13/16	1-1/8	1-5/8	2-3/16
230	1.58	342	93.2	84.8	1/2	13/16	1-1/8	1-5/8	2-3/16
W40 x 593	4.03	W1000 x 883	237.8	33.2	7/16	9/16	9/16	1-1/16	1-1/2
503	3.49	748	205.9	38.4	7/16	9/16	9/16	1-1/16	1-1/2
431	3.04	641	179.4	44.1	7/16	9/16	9/16	1-1/16	1-1/2
397	2.80	591	165.2	47.9	7/16	9/16	9/16	1-1/16	1-1/2
392	3.06	583	180.5	43.8	7/16	9/16	9/16	1-1/16	1-1/2
372	2.64	554	155.8	50.8	7/16	9/16	9/16	1-1/16	1-1/2
362	2.57	539	151.6	52.1	7/16	9/16	9/16	1-1/16	1-1/2
331	2.63	493	155.2	50.9	7/16	9/16	9/16	1-1/16	1-1/2
327	2.62	487	154.6	51.1	7/16	9/16	9/16	1-1/16	1-1/2
324	2.31	482	136.3	58.0	1/2	13/16	1-1/8	1-5/8	2-3/16
297	2.14	442	126.3	62.6	1/2	13/16	1-1/8	1-5/8	2-3/16
278	2.24	414	132.2	59.8	1/2	13/16	1-1/8	1-5/8	2-3/16
277	1.99	412	117.4	67.3	1/2	13/16	1-1/8	1-5/8	2-3/16
264	2.13	393	125.7	62.9	1/2	13/16	1-1/8	1-5/8	2-3/16
249	1.79	371	105.6	74.9	1/2	13/16	1-1/8	1-5/8	2-3/16
235	1.90	350	112.1	70.5	1/2	13/16	1-1/8	1-5/8	2-3/16
215	1.56	320	92.0	85.9	1/2	13/16	1-1/8	1-5/8	2-3/16
211	1.72	314	101.5	77.9	1/2	13/16	1-1/8	1-5/8	2-3/16
199	1.45	296	85.6	92.4	13/16	1-1/8	1-7/16	1-15/16	2-7/16
183	1.50	272	88.5	89.3	1/2	13/16	1-1/8	1-5/8	2-3/16
167	1.38	249	81.4	97.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
149	1.23	222	72.6	108.9	13/16	1-1/8	1-7/16	1-15/16	2-7/16
W36 x 798	5.36	W920 x 1188	316.2	25.0	7/16	9/16	9/16	1-1/16	1-1/2
650	4.45	967	262.6	30.1	7/16	9/16	9/16	1-1/16	1-1/2
527	3.71	784	218.9	36.1	7/16	9/16	9/16	1-1/16	1-1/2
439	3.14	653	185.3	42.7	7/16	9/16	9/16	1-1/16	1-1/2
393	2.85	585	168.2	47.0	7/16	9/16	9/16	1-1/16	1-1/2
359	2.62	534	154.6	51.1	7/16	9/16	9/16	1-1/16	1-1/2
328	2.39	488	141.0	56.1	1/2	13/16	1-1/8	1-5/8	2-3/16
300	2.21	446	130.4	60.6	1/2	13/16	1-1/8	1-5/8	2-3/16
280	2.06	417	121.5	65.0	1/2	13/16	1-1/8	1-5/8	2-3/16
260	1.93	387	113.9	69.4	1/2	13/16	1-1/8	1-5/8	2-3/16
256	2.13	381	125.7	62.9	1/2	13/16	1-1/8	1-5/8	2-3/16
245	1.81	365	106.8	74.0	1/2	13/16	1-1/8	1-5/8	2-3/16
232	1.93	345	113.9	69.4	1/2	13/16	1-1/8	1-5/8	2-3/16
230	1.72	342	101.5	77.9	1/2	13/16	1-1/8	1-5/8	2-3/16
210	1.76	313	103.8	76.1	1/2	13/16	1-1/8	1-5/8	2-3/16
194	1.63	289	96.2	82.2	1/2	13/16	1-1/8	1-5/8	2-3/16
182	1.53	271	90.3	87.6	1/2	13/16	1-1/8	1-5/8	2-3/16
170	1.44	253	85.0	93.0	13/16	1-1/8	1-7/16	1-15/16	2-7/16
160	1.36	238	80.2	98.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
150	1.28	233	75.5	104.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16

Note: The thickness applied to the flange tips may be reduced to one-half the listed thickness in this design.

**X829 - Half-Flange Tip Option**  
**Wide Flange Structural Steel Columns**  
**CAFCO® BLAZE-SHIELD® II, HP & ISOLATEK® Type II, HP**

ASTM Desig.	W/D	Metric Desig.	M/D	Hp/A	1-Hour	1-1/2 Hour	2-Hour	3-Hour	4-Hour
W36 x 135	1.15	W920 x 201	67.9	116.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
					NR	NR	NR	NR	NR
					NR	NR	NR	NR	NR
W33 x 387	2.91	W840 x 576	171.7	46.0	7/16	9/16	9/16	1-1/16	1-1/2
354	2.68	527	158.1	50.0	7/16	9/16	9/16	1-1/16	1-1/2
318	2.43	473	143.4	55.1	1/2	13/16	1-1/8	1-5/8	2-3/16
291	2.24	433	132.2	59.8	1/2	13/16	1-1/8	1-5/8	2-3/16
263	2.04	392	120.4	65.7	1/2	13/16	1-1/8	1-5/8	2-3/16
241	1.87	359	110.3	71.6	1/2	13/16	1-1/8	1-5/8	2-3/16
221	1.73	329	102.1	77.4	1/2	13/16	1-1/8	1-5/8	2-3/16
201	1.58	299	93.2	84.8	1/2	13/16	1-1/8	1-5/8	2-3/16
169	1.52	251	89.7	88.1	1/2	13/16	1-1/8	1-5/8	2-3/16
152	1.37	226	80.8	97.8	13/16	1-1/8	1-7/16	1-15/16	2-7/16
141	1.28	210	75.5	104.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16
130	1.18	193	69.6	113.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
118	1.08	176	63.7	124.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
W30 x 391	3.13	W760 x 582	184.7	42.8	7/16	9/16	9/16	1-1/16	1-1/2
357	2.88	531	169.9	46.5	7/16	9/16	9/16	1-1/16	1-1/2
326	2.65	484	156.4	50.6	7/16	9/16	9/16	1-1/16	1-1/2
292	2.39	434	141.0	56.1	1/2	13/16	1-1/8	1-5/8	2-3/16
261	2.16	389	127.4	62.0	1/2	13/16	1-1/8	1-5/8	2-3/16
235	1.96	350	115.6	68.4	1/2	13/16	1-1/8	1-5/8	2-3/16
211	1.76	314	103.8	76.1	1/2	13/16	1-1/8	1-5/8	2-3/16
191	1.62	284	95.6	82.7	1/2	13/16	1-1/8	1-5/8	2-3/16
173	1.45	257	85.6	92.4	13/16	1-1/8	1-7/16	1-15/16	2-7/16
148	1.47	220	86.7	91.1	1/2	13/16	1-1/8	1-5/8	2-3/16
132	1.32	196	77.9	101.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
124	1.24	185	73.2	108.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
116	1.16	173	68.4	115.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
108	1.09	161	64.3	122.9	13/16	1-1/8	1-7/16	1-15/16	2-7/16
99	1	147	59.0	134.0	13/16	1-1/8	1-7/16	1-15/16	2-7/16
90	0.91	134	53.7	147.2	13/16	1-1/8	1-7/16	1-15/16	2-7/16
W27x539	4.45	W690 x 802	262.6	30.1	7/16	9/16	9/16	1-1/16	1-1/2
368	3.17	548	187.0	42.3	7/16	9/16	9/16	1-1/16	1-1/2
336	2.92	500	172.3	45.9	7/16	9/16	9/16	1-1/16	1-1/2
307	2.72	457	160.5	49.3	7/16	9/16	9/16	1-1/16	1-1/2
281	2.49	418	146.9	53.8	1/2	13/16	1-1/8	1-5/8	2-3/16
258	2.3	384	135.7	58.3	1/2	13/16	1-1/8	1-5/8	2-3/16
235	2.12	350	125.1	63.2	1/2	13/16	1-1/8	1-5/8	2-3/16
217	1.97	323	116.2	68.0	1/2	13/16	1-1/8	1-5/8	2-3/16
194	1.76	289	103.8	76.1	1/2	13/16	1-1/8	1-5/8	2-3/16
178	1.63	265	96.2	82.2	1/2	13/16	1-1/8	1-5/8	2-3/16
161	1.48	240	87.3	90.5	1/2	13/16	1-1/8	1-5/8	2-3/16
146	1.35	217	79.7	99.2	13/16	1-1/8	1-7/16	1-15/16	2-7/16
129	1.39	192	82.0	96.4	13/16	1-1/8	1-7/16	1-15/16	2-7/16

Note: The thickness applied to the flange tips may be reduced to one-half the listed thickness in this design.

**X829 - Half-Flange Tip Option**  
**Wide Flange Structural Steel Columns**  
**CAFCO® BLAZE-SHIELD® II, HP & ISOLATEK® Type II, HP**

ASTM Desig.	W/D	Metric Desig.	M/D	Hp/A	1-Hour	1-1/2 Hour	2-Hour	3-Hour	4-Hour
W27 x 114	1.23	W690 x 170	72.6	108.9	13/16	1-1/8	1-7/16	1-15/16	2-7/16
102	1.11	152	65.5	120.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16
94	1.03	140	60.8	130.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
84	0.92	125	54.3	145.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
W24 x 370	3.46	W610 x 551	204.1	38.7	7/16	9/16	9/16	1-1/16	1-1/2
335	3.19	498	188.2	42.0	7/16	9/16	9/16	1-1/16	1-1/2
306	2.94	455	173.5	45.6	7/16	9/16	9/16	1-1/16	1-1/2
279	2.71	415	159.9	49.4	7/16	9/16	9/16	1-1/16	1-1/2
250	2.45	372	144.6	54.7	1/2	13/16	1-1/8	1-5/8	2-3/16
229	2.27	341	133.9	59.0	1/2	13/16	1-1/8	1-5/8	2-3/16
207	2.05	307	121.0	65.4	1/2	13/16	1-1/8	1-5/8	2-3/16
192	1.92	285	113.3	69.8	1/2	13/16	1-1/8	1-5/8	2-3/16
176	1.77	262	104.4	75.7	1/2	13/16	1-1/8	1-5/8	2-3/16
162	1.63	241	96.2	82.2	1/2	13/16	1-1/8	1-5/8	2-3/16
146	1.48	217	87.3	90.5	1/2	13/16	1-1/8	1-5/8	2-3/16
131	1.33	195	78.5	100.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16
117	1.2	174	70.8	111.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16
104	1.07	155	63.1	125.2	13/16	1-1/8	1-7/16	1-15/16	2-7/16
103	1.25	153	73.8	107.2	13/16	1-1/8	1-7/16	1-15/16	2-7/16
94	1.14	140	67.3	117.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
84	1.02	125	60.2	131.4	13/16	1-1/8	1-7/16	1-15/16	2-7/16
76	0.93	113	54.9	144.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
68	0.83	101	49.0	161.4	13/16	1-5/16	1-11/16	2-9/16	3-7/16
62	0.84	92	49.6	159.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
55	0.74	82	43.7	181.1	13/16	1-5/16	1-11/16	2-9/16	3-7/16
W21 x 201	2.16	W530 x 300	127.4	62.0	1/2	13/16	1-1/8	1-5/8	2-3/16
182	1.97	272	116.2	68.0	1/2	13/16	1-1/8	1-5/8	2-3/16
166	1.81	248	106.8	74.0	1/2	13/16	1-1/8	1-5/8	2-3/16
147	1.61	219	95.0	83.2	1/2	13/16	1-1/8	1-5/8	2-3/16
132	1.45	196	85.6	92.4	13/16	1-1/8	1-7/16	1-15/16	2-7/16
122	1.35	182	79.7	99.2	13/16	1-1/8	1-7/16	1-15/16	2-7/16
111	1.24	165	73.2	108.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
101	1.13	150	66.7	118.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
93	1.24	138	73.2	108.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
83	1.12	123	66.1	119.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
73	0.98	109	57.8	136.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16
68	0.92	101	54.3	145.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
62	0.84	92	49.6	159.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
57	0.85	85	50.2	157.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
55	0.75	82	44.3	178.6	13/16	1-5/16	1-11/16	2-9/16	3-7/16
50	0.75	74	44.3	178.6	13/16	1-5/16	1-11/16	2-9/16	3-7/16
48	0.66	72	38.9	203.0	13/16	1-5/16	1-3/4	2-3/4	3-11/16
44	0.67	66	39.5	200.0	13/16	1-5/16	1-3/4	2-3/4	3-11/16
W18 x 175	2.12	W460 x 260	125.1	63.2	1/2	13/16	1-1/8	1-5/8	2-3/16
158	1.93	235	113.9	69.4	1/2	13/16	1-1/8	1-5/8	2-3/16

Note: The thickness applied to the flange tips may be reduced to one-half the listed thickness in this design.

**X829 - Half-Flange Tip Option**  
**Wide Flange Structural Steel Columns**  
**CAFCO® BLAZE-SHIELD® II, HP & ISOLATEK® Type II, HP**

ASTM Desig.	W/D	Metric Desig.	M/D	Hp/A	1-Hour	1-1/2 Hour	2-Hour	3-Hour	4-Hour
W18 x 143	1.77	W460 x 213	104.4	75.7	1/2	13/16	1-1/8	1-5/8	2-3/16
130	1.61	193	95.0	83.2	1/2	13/16	1-1/8	1-5/8	2-3/16
119	1.48	177	87.3	90.5	1/2	13/16	1-1/8	1-5/8	2-3/16
106	1.33	158	78.5	100.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16
97	1.22	144	72.0	109.8	13/16	1-1/8	1-7/16	1-15/16	2-7/16
86	1.09	128	64.3	122.9	13/16	1-1/8	1-7/16	1-15/16	2-7/16
76	0.97	113	57.2	138.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
71	1.08	106	63.7	124.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
65	0.99	97	58.4	135.3	13/16	1-1/8	1-7/16	1-15/16	2-7/16
60	0.92	89	54.3	145.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
55	0.85	82	50.2	157.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
50	0.77	74	45.4	174.0	13/16	1-5/16	1-11/16	2-9/16	3-7/16
46	0.78	68	46.0	171.8	13/16	1-5/16	1-11/16	2-9/16	3-7/16
40	0.68	60	40.1	197.0	13/16	1-5/16	1-11/16	2-9/16	3-7/16
35	0.6	52	35.4	223.3	13/16	1-5/16	1-3/4	2-3/4	3-11/16
W16 x 100	1.37	W410 x 149	80.8	97.8	13/16	1-1/8	1-7/16	1-15/16	2-7/16
89	1.22	132	72.0	109.8	13/16	1-1/8	1-7/16	1-15/16	2-7/16
77	1.07	114	63.1	125.2	13/16	1-1/8	1-7/16	1-15/16	2-7/16
67	0.93	100	54.9	144.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
57	0.96	85	56.6	139.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
50	0.84	74	49.6	159.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
45	0.76	67	44.8	176.3	13/16	1-5/16	1-11/16	2-9/16	3-7/16
40	0.68	60	40.1	197.0	13/16	1-5/16	1-11/16	2-9/16	3-7/16
36	0.61	53	36.0	219.6	13/16	1-5/16	1-3/4	2-3/4	3-11/16
31	0.59	46	34.8	227.1	13/16	1-5/16	1-3/4	2-3/4	3-11/16
26	0.49	39	28.9	273.4	1-3/8	2	2-5/8	NR	NR
W14 x 808	7.28	W360 x 1202	429.5	18.4	3/8	3/8	3/8	1/2	11/16
730	6.76	1086	398.8	19.8	3/8	3/8	3/8	1/2	11/16
665	6.21	990	366.4	21.6	7/16	9/16	9/16	1-1/16	1-1/2
605	5.82	900	343.4	23.0	7/16	9/16	9/16	1-1/16	1-1/2
550	5.34	818	315.1	25.1	7/16	9/16	9/16	1-1/16	1-1/2
500	4.95	744	292.1	27.1	7/16	9/16	9/16	1-1/16	1-1/2
455	4.59	677	270.8	29.2	7/16	9/16	9/16	1-1/16	1-1/2
426	4.32	634	254.9	31.0	7/16	9/16	9/16	1-1/16	1-1/2
398	4.09	592	241.3	32.8	7/16	9/16	9/16	1-1/16	1-1/2
370	3.84	551	226.6	34.9	7/16	9/16	9/16	1-1/16	1-1/2
342	3.58	509	211.2	37.4	7/16	9/16	9/16	1-1/16	1-1/2
311	3.3	463	194.7	40.6	7/16	9/16	9/16	1-1/16	1-1/2
283	3.03	421	178.8	44.2	7/16	9/16	9/16	1-1/16	1-1/2
257	2.78	382	164.0	48.2	7/16	9/16	9/16	1-1/16	1-1/2
233	2.55	347	150.5	52.5	7/16	9/16	9/16	1-1/16	1-1/2
211	2.32	314	136.9	57.8	1/2	13/16	1-1/8	1-5/8	2-3/16
193	2.14	287	126.3	62.6	1/2	13/16	1-1/8	1-5/8	2-3/16
176	1.96	262	115.6	68.4	1/2	13/16	1-1/8	1-5/8	2-3/16
159	1.78	237	105.0	75.3	1/2	13/16	1-1/8	1-5/8	2-3/16
145	1.64	216	96.8	81.7	1/2	13/16	1-1/8	1-5/8	2-3/16
132	1.56	196	92.0	85.9	1/2	13/16	1-1/8	1-5/8	2-3/16

Note: The thickness applied to the flange tips may be reduced to one-half the listed thickness in this design.

**X829 - Half-Flange Tip Option**  
**Wide Flange Structural Steel Columns**  
**CAFCO® BLAZE-SHIELD® II, HP & ISOLATEK® Type II, HP**

ASTM Desig.	W/D	Metric Desig.	M/D	Hp/A	1-Hour	1-1/2 Hour	2-Hour	3-Hour	4-Hour
W14 x 120	1.42	W360 x 179	83.8	94.4	13/16	1-1/8	1-7/16	1-15/16	2-7/16
109	1.29	162	76.1	103.9	13/16	1-1/8	1-7/16	1-15/16	2-7/16
99	1.18	147	69.6	113.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
90	1.08	134	63.7	124.1	13/16	1-1/8	1-7/16	1-15/16	2-7/16
82	1.23	122	72.6	108.9	13/16	1-1/8	1-7/16	1-15/16	2-7/16
74	1.12	110	66.1	119.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
68	1.04	101	61.4	128.8	13/16	1-1/8	1-7/16	1-15/16	2-7/16
61	0.92	91	54.3	145.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
53	0.91	79	53.7	147.2	13/16	1-1/8	1-7/16	1-15/16	2-7/16
48	0.83	72	49.0	161.4	13/16	1-5/16	1-11/16	2-9/16	3-7/16
43	0.75	64	44.3	178.6	13/16	1-5/16	1-11/16	2-9/16	3-7/16
38	0.7	57	41.3	191.4	13/16	1-5/16	1-11/16	2-9/16	3-7/16
34	0.63	51	37.2	212.7	13/16	1-5/16	1-3/4	2-3/4	3-11/16
30	0.56	45	33.0	239.3	1-3/8	2	2-5/8	NR	NR
26	0.55	39	32.5	243.6	1-3/8	2	2-5/8	NR	NR
22	0.47	33	27.7	285.1	1-3/8	2	2-5/8	NR	NR
W12 x 336	4.06	W310 x 500	239.5	33.0	7/16	9/16	9/16	1-1/16	1-1/2
305	3.76	454	221.8	35.6	7/16	9/16	9/16	1-1/16	1-1/2
279	3.5	415	206.5	38.3	7/16	9/16	9/16	1-1/16	1-1/2
252	3.2	375	188.8	41.9	7/16	9/16	9/16	1-1/16	1-1/2
230	2.96	342	174.6	45.3	7/16	9/16	9/16	1-1/16	1-1/2
210	2.73	313	161.1	49.1	7/16	9/16	9/16	1-1/16	1-1/2
190	2.5	283	147.5	53.6	1/2	13/16	1-1/8	1-5/8	2-3/16
170	2.26	253	133.3	59.3	1/2	13/16	1-1/8	1-5/8	2-3/16
152	2.04	225	120.4	65.7	1/2	13/16	1-1/8	1-5/8	2-3/16
136	1.86	202	109.7	72.0	1/2	13/16	1-1/8	1-5/8	2-3/16
120	1.65	179	97.4	81.2	1/2	13/16	1-1/8	1-5/8	2-3/16
106	1.47	158	86.7	91.1	1/2	13/16	1-1/8	1-5/8	2-3/16
96	1.34	143	79.1	100.0	13/16	1-1/8	1-7/16	1-15/16	2-7/16
87	1.22	129	72.0	109.8	13/16	1-1/8	1-7/16	1-15/16	2-7/16
79	1.11	117	65.5	120.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16
72	1.02	107	60.2	131.4	13/16	1-1/8	1-7/16	1-15/16	2-7/16
65	0.92	97	54.3	145.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
58	0.92	86	54.3	145.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
53	0.85	79	50.2	157.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
50	0.9	74	53.1	148.9	13/16	1-1/8	1-7/16	1-15/16	2-7/16
45	0.82	67	48.4	163.4	13/16	1-5/16	1-11/16	2-9/16	3-7/16
40	0.73	60	43.1	183.5	13/16	1-5/16	1-11/16	2-9/16	3-7/16
35	0.7	52	41.3	191.4	13/16	1-5/16	1-11/16	2-9/16	3-7/16
30	0.6	45	35.4	223.3	13/16	1-5/16	1-3/4	2-3/4	3-11/16
26	0.53	39	31.3	252.8	1-3/8	2	2-5/8	NR	NR
22	0.56	33	33.0	239.3	1-3/8	2	2-5/8	NR	NR
19	0.48	28	28.3	279.1	1-3/8	2	2-5/8	NR	NR
16	0.41	24	24.2	326.8	1-3/8	2	2-5/8	NR	NR
14	0.36	25	21.2	372.2	1-3/8	2	2-5/8	NR	NR
W10 x 112	1.81	W250 x 167	106.8	74.0	1/2	13/16	1-1/8	1-5/8	2-3/16
100	1.64	149	96.8	81.7	1/2	13/16	1-1/8	1-5/8	2-3/16

Note: The thickness applied to the flange tips may be reduced to one-half the listed thickness in this design.

**X829 - Half-Flange Tip Option**  
**Wide Flange Structural Steel Columns**  
**CAFECO® BLAZE-SHIELD® II, HP & ISOLATEK® Type II, HP**

ASTM Desig.	W/D	Metric Desig.	M/D	Hp/A	1-Hour	1-1/2 Hour	2-Hour	3-Hour	4-Hour
W10 x 88	1.45	W250 x 131	85.6	92.4	13/16	1-1/8	1-7/16	1-15/16	2-7/16
77	1.28	115	75.5	104.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16
68	1.15	101	67.9	116.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
60	1.01	89	59.6	132.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16
54	0.92	80	54.3	145.6	13/16	1-1/8	1-7/16	1-15/16	2-7/16
49	0.84	73	49.6	159.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
45	0.88	67	51.9	152.3	13/16	1-1/8	1-7/16	1-15/16	2-7/16
39	0.78	58	46.0	171.8	13/16	1-5/16	1-11/16	2-9/16	3-7/16
33	0.66	49	38.9	203.0	13/16	1-5/16	1-3/4	2-3/4	3-11/16
30	0.69	45	40.7	194.2	13/16	1-5/16	1-11/16	2-9/16	3-7/16
26	0.61	39	36.0	219.6	13/16	1-5/16	1-3/4	2-3/4	3-11/16
22	0.52	33	30.7	257.7	1-3/8	2	2-5/8	NR	NR
19	0.53	28	31.3	252.8	1-3/8	2	2-5/8	NR	NR
17	0.48	25	28.3	279.1	1-3/8	2	2-5/8	NR	NR
15	0.42	22	24.8	319.0	1-3/8	2	2-5/8	NR	NR
12	0.34	18	20.1	394.1	1-3/8	2	2-5/8	NR	NR
W8 x 67	1.37	W200 x 100	80.8	97.8	13/16	1-1/8	1-7/16	1-15/16	2-7/16
58	1.2	86	70.8	111.7	13/16	1-1/8	1-7/16	1-15/16	2-7/16
48	1	71	59.0	134.0	13/16	1-1/8	1-7/16	1-15/16	2-7/16
40	0.84	59	49.6	159.5	13/16	1-1/8	1-7/16	1-15/16	2-7/16
35	0.74	52	43.7	181.1	13/16	1-5/16	1-11/16	2-9/16	3-7/16
31	0.66	46	38.9	203.0	13/16	1-5/16	1-3/4	2-3/4	3-11/16
28	0.68	42	40.1	197.0	13/16	1-5/16	1-11/16	2-9/16	3-7/16
24	0.59	36	34.8	227.1	13/16	1-5/16	1-3/4	2-3/4	3-11/16
21	0.57	31	33.6	235.1	1-3/8	2	2-5/8	NR	NR
18	0.49	27	28.9	273.4	1-3/8	2	2-5/8	NR	NR
15	0.48	22	28.3	279.1	1-3/8	2	2-5/8	NR	NR
13	0.42	19	24.8	319.0	1-3/8	2	2-5/8	NR	NR
10	0.33	15	19.5	406.0	1-3/8	2	2-5/8	NR	NR
W6 x 25	0.69	W150 x 37	40.7	194.2	13/16	1-5/16	1-11/16	2-9/16	3-7/16
20	0.56	30	33.0	239.3	1-3/8	2	2-5/8	NR	NR
16	0.58	24	34.2	231.0	13/16	1-5/16	1-3/4	2-3/4	3-11/16
15	0.43	22	25.4	311.6	1-3/8	2	2-5/8	NR	NR
12	0.44	18	26.0	304.5	1-3/8	2	2-5/8	NR	NR
9	0.33	14	19.5	406.0	1-3/8	2	2-5/8	NR	NR
W5 x 19	0.64	W130 x 28	37.8	209.3	13/16	1-5/16	1-3/4	2-3/4	3-11/16
16	0.55	24	32.5	243.6	1-3/8	2	2-5/8	NR	NR
W4 x 13	0.55	W100 x 19	32.5	243.6	1-3/8	2	2-5/8	NR	NR

Note: The thickness applied to the flange tips may be reduced to one-half the listed thickness in this design.