



SC901 & SC902

Loading Tables

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Table I: I/H Sections - 3 Sided Beams
Fire Resistance Period: 15 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
60	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
65	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
70	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
75	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
80	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
85	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
90	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
95	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
100	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
105	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
110	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
115	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
120	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
125	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
130	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
135	0.463	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
140	0.477	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
145	0.492	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
150	0.507	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
155	0.522	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
160	0.537	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
165	0.551	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
170	0.566	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
175	0.581	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
180	0.596	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
185	0.611	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
190	0.625	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
195	0.640	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
200	0.655	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	0.670	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
210	0.685	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
215	0.699	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
220	0.714	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
225	0.729	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
230	0.744	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
235	0.758	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
240	0.773	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
245	0.788	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
250	0.803	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
255	0.818	0.465	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
260	0.832	0.476	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
265	0.847	0.487	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
270	0.862	0.498	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
275	0.877	0.509	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
280	0.892	0.519	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
285	0.906	0.530	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
290	0.921	0.541	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
295	0.936	0.552	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
300	0.951	0.563	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
305	0.966	0.574	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
310	0.980	0.585	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
315	0.995	0.596	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
320	1.010	0.607	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
325	1.025	0.618	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
330	1.039	0.628	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
335	1.054	0.639	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
340	1.069	0.650	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
345	1.084	0.661	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
350	1.099	0.672	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Table 2: I/H Sections - 3 Sided Beams
Fire Resistance Period: 30 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
60	0.470	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
65	0.539	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
70	0.607	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
75	0.676	0.467	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
80	0.745	0.485	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
85	0.813	0.503	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
90	0.882	0.521	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
95	0.951	0.539	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
100	1.019	0.557	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
105	1.088	0.575	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
110	1.157	0.593	0.467	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
115	1.225	0.611	0.482	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
120	1.271	0.629	0.498	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
125	1.301	0.648	0.514	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
130	1.331	0.666	0.529	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
135	1.361	0.684	0.545	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
140	1.391	0.702	0.560	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
145	1.421	0.720	0.576	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
150	1.451	0.738	0.592	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
155	1.481	0.756	0.607	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
160	1.511	0.774	0.623	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
165	1.541	0.792	0.639	0.464	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
170	1.571	0.810	0.654	0.479	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
175	1.601	0.828	0.670	0.494	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
180	1.631	0.846	0.686	0.509	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
185	1.661	0.864	0.701	0.524	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
190	1.691	0.882	0.717	0.539	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
195	1.721	0.900	0.733	0.554	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
200	1.751	0.919	0.748	0.569	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460

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Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	1.781	0.937	0.764	0.583	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
210	1.811	0.955	0.779	0.598	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
215	1.841	0.973	0.795	0.613	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
220	1.870	0.991	0.811	0.628	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
225	1.900	1.009	0.826	0.643	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
230	1.930	1.027	0.842	0.658	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
235	1.960	1.045	0.858	0.673	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
240	2.002	1.063	0.873	0.688	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
245	2.053	1.081	0.889	0.703	0.463	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
250	2.104	1.099	0.905	0.718	0.478	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
255	2.155	1.117	0.920	0.732	0.493	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
260	2.205	1.135	0.936	0.747	0.508	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
265	2.256	1.153	0.951	0.762	0.524	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
270	2.307	1.171	0.967	0.777	0.539	0.471	0.469	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
275	2.358	1.190	0.983	0.792	0.554	0.485	0.482	0.465	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
280	2.409	1.208	0.998	0.807	0.569	0.499	0.496	0.478	0.463	0.460	0.460	0.460	0.460	0.460	0.460	0.460
285	2.460	1.226	1.014	0.822	0.584	0.513	0.510	0.492	0.477	0.460	0.460	0.460	0.460	0.460	0.460	0.460
290	2.510	1.244	1.030	0.837	0.599	0.527	0.524	0.505	0.490	0.464	0.460	0.460	0.460	0.460	0.460	0.460
295	2.561	1.273	1.045	0.852	0.614	0.541	0.538	0.518	0.503	0.477	0.469	0.464	0.460	0.460	0.460	0.460
300	2.612	1.313	1.061	0.867	0.629	0.555	0.551	0.532	0.516	0.489	0.481	0.476	0.460	0.460	0.460	0.460
305	2.663	1.354	1.077	0.881	0.644	0.568	0.565	0.545	0.529	0.502	0.494	0.489	0.460	0.460	0.460	0.460
310	2.714	1.395	1.092	0.896	0.659	0.582	0.579	0.559	0.542	0.515	0.507	0.501	0.465	0.460	0.460	0.460
315	2.764	1.435	1.108	0.911	0.674	0.596	0.593	0.572	0.556	0.527	0.519	0.513	0.477	0.460	0.460	0.460
320	2.815	1.476	1.124	0.926	0.689	0.610	0.607	0.586	0.569	0.540	0.532	0.526	0.489	0.460	0.460	0.460
325	2.866	1.516	1.139	0.941	0.705	0.624	0.620	0.599	0.582	0.553	0.544	0.538	0.501	0.460	0.460	0.460
330	2.917	1.557	1.155	0.956	0.720	0.638	0.634	0.613	0.595	0.566	0.557	0.551	0.512	0.460	0.460	0.460
335	2.968	1.597	1.170	0.971	0.735	0.651	0.648	0.626	0.608	0.578	0.569	0.563	0.524	0.460	0.460	0.460
340	3.019	1.638	1.186	0.986	0.750	0.665	0.662	0.640	0.621	0.591	0.582	0.576	0.536	0.460	0.460	0.460
345	3.069	1.678	1.202	1.001	0.765	0.679	0.676	0.653	0.635	0.604	0.594	0.588	0.548	0.465	0.460	0.460
350	3.120	1.719	1.217	1.015	0.780	0.693	0.689	0.667	0.648	0.616	0.607	0.601	0.560	0.475	0.460	0.460

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



SC901 & SC902

Loading Tables

Nullifire
Smart Protection

Table 3: I/H Sections - 3 Sided Beams
Fire Resistance Period: 45 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	0.870	0.561	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
60	1.037	0.647	0.495	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
65	1.203	0.733	0.521	0.465	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
70	1.300	0.820	0.548	0.484	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
75	1.367	0.906	0.574	0.503	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
80	1.435	0.993	0.600	0.521	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
85	1.502	1.079	0.626	0.540	0.474	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
90	1.569	1.165	0.653	0.559	0.490	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
95	1.636	1.252	0.679	0.577	0.507	0.467	0.465	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
100	1.703	1.277	0.705	0.596	0.523	0.483	0.481	0.468	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
105	1.771	1.302	0.731	0.614	0.540	0.498	0.497	0.484	0.474	0.460	0.460	0.460	0.460	0.460	0.460	0.460
110	1.838	1.327	0.757	0.633	0.556	0.514	0.512	0.499	0.489	0.471	0.465	0.461	0.460	0.460	0.460	0.460
115	1.905	1.352	0.784	0.652	0.573	0.530	0.528	0.515	0.505	0.486	0.480	0.476	0.460	0.460	0.460	0.460
120	1.972	1.377	0.810	0.670	0.590	0.546	0.544	0.530	0.520	0.501	0.495	0.491	0.461	0.460	0.460	0.460
125	2.037	1.402	0.836	0.689	0.606	0.561	0.559	0.546	0.535	0.516	0.510	0.506	0.475	0.460	0.460	0.460
130	2.103	1.426	0.862	0.708	0.623	0.577	0.575	0.561	0.551	0.531	0.525	0.521	0.490	0.460	0.460	0.460
135	2.168	1.451	0.889	0.726	0.639	0.593	0.591	0.577	0.566	0.546	0.540	0.536	0.504	0.460	0.460	0.460
140	2.233	1.476	0.915	0.745	0.656	0.608	0.606	0.592	0.581	0.561	0.555	0.550	0.519	0.460	0.460	0.460
145	2.298	1.501	0.941	0.763	0.672	0.624	0.622	0.608	0.596	0.576	0.570	0.565	0.534	0.460	0.460	0.460
150	2.364	1.526	0.967	0.782	0.689	0.640	0.638	0.623	0.612	0.591	0.585	0.580	0.548	0.467	0.460	0.460
155	2.429	1.551	0.994	0.801	0.705	0.655	0.653	0.639	0.627	0.606	0.600	0.595	0.563	0.481	0.460	0.460
160	2.494	1.575	1.020	0.819	0.722	0.671	0.669	0.654	0.642	0.621	0.615	0.610	0.577	0.495	0.460	0.460
165	2.559	1.600	1.046	0.838	0.738	0.687	0.685	0.670	0.658	0.636	0.629	0.625	0.592	0.509	0.460	0.460
170	2.625	1.625	1.072	0.857	0.755	0.703	0.700	0.685	0.673	0.651	0.644	0.640	0.606	0.523	0.460	0.460
175	2.690	1.650	1.098	0.875	0.771	0.718	0.716	0.701	0.688	0.666	0.659	0.655	0.621	0.537	0.460	0.460
180	2.755	1.675	1.125	0.894	0.788	0.734	0.732	0.716	0.703	0.681	0.674	0.669	0.635	0.551	0.460	0.460
185	2.820	1.700	1.151	0.912	0.805	0.750	0.747	0.732	0.719	0.696	0.689	0.684	0.650	0.565	0.460	0.460
190	2.886	1.724	1.177	0.931	0.821	0.765	0.763	0.747	0.734	0.711	0.704	0.699	0.665	0.579	0.460	0.460
195	2.951	1.749	1.203	0.950	0.838	0.781	0.779	0.762	0.749	0.726	0.719	0.714	0.679	0.594	0.460	0.460
200	3.016	1.774	1.230	0.968	0.854	0.797	0.794	0.778	0.765	0.741	0.734	0.729	0.694	0.608	0.460	0.460

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



SC901 & SC902

Loading Tables

Nullifire
Smart Protection

Table 3: I/H Sections - 3 Sided Beams
Fire Resistance Period: 45 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	3.081	1.799	1.257	0.987	0.871	0.812	0.810	0.793	0.780	0.756	0.749	0.744	0.708	0.622	0.460	0.460
210	3.146	1.824	1.295	1.006	0.887	0.828	0.826	0.809	0.795	0.771	0.764	0.759	0.723	0.636	0.460	0.460
215	3.212	1.849	1.334	1.024	0.904	0.844	0.841	0.824	0.810	0.786	0.779	0.774	0.737	0.650	0.460	0.460
220	3.277	1.873	1.372	1.043	0.920	0.860	0.857	0.840	0.826	0.801	0.794	0.788	0.752	0.664	0.460	0.460
225	3.342	1.898	1.410	1.061	0.937	0.875	0.873	0.855	0.841	0.816	0.809	0.803	0.766	0.678	0.460	0.460
230	3.407	1.923	1.449	1.080	0.953	0.891	0.888	0.871	0.856	0.831	0.824	0.818	0.781	0.692	0.460	0.460
235	3.473	1.948	1.487	1.099	0.970	0.907	0.904	0.886	0.872	0.846	0.839	0.833	0.796	0.706	0.460	0.460
240	3.530	1.973	1.525	1.117	0.987	0.922	0.920	0.902	0.887	0.861	0.853	0.848	0.810	0.720	0.474	0.460
245	3.567	2.015	1.564	1.136	1.003	0.938	0.935	0.917	0.902	0.876	0.868	0.863	0.825	0.734	0.488	0.460
250	3.604	2.058	1.602	1.155	1.020	0.954	0.951	0.933	0.918	0.891	0.883	0.878	0.839	0.748	0.502	0.460
255	3.641	2.101	1.640	1.173	1.036	0.969	0.967	0.948	0.933	0.906	0.898	0.893	0.854	0.762	0.517	0.460
260	3.678	2.144	1.679	1.192	1.053	0.985	0.982	0.964	0.948	0.921	0.913	0.908	0.868	0.776	0.531	0.460
265	3.716	2.187	1.717	1.210	1.069	1.001	0.998	0.979	0.963	0.936	0.928	0.922	0.883	0.790	0.545	0.460
270	3.753	2.230	1.755	1.229	1.086	1.017	1.014	0.995	0.979	0.951	0.943	0.937	0.897	0.804	0.559	0.460
275	3.790	2.273	1.793	1.248	1.102	1.032	1.029	1.010	0.994	0.966	0.958	0.952	0.912	0.818	0.573	0.460
280	3.827	2.316	1.832	1.289	1.119	1.048	1.045	1.026	1.009	0.981	0.973	0.967	0.927	0.832	0.587	0.460
285	3.864	2.359	1.870	1.340	1.135	1.064	1.061	1.041	1.025	0.996	0.988	0.982	0.941	0.846	0.601	0.464
290	3.901	2.402	1.908	1.391	1.152	1.079	1.076	1.057	1.040	1.011	1.003	0.997	0.956	0.860	0.615	0.474
295	3.938	2.445	1.947	1.441	1.168	1.095	1.092	1.072	1.055	1.026	1.018	1.012	0.970	0.874	0.629	0.485
300	3.975	2.488	1.985	1.492	1.185	1.111	1.108	1.087	1.070	1.041	1.033	1.027	0.985	0.888	0.643	0.496
305	4.012	2.531	2.025	1.543	1.202	1.126	1.123	1.103	1.086	1.057	1.048	1.041	0.999	0.902	0.657	0.507
310	4.049	2.574	2.065	1.594	1.218	1.142	1.139	1.118	1.101	1.072	1.063	1.056	1.014	0.916	0.671	0.517
315	4.086	2.617	2.104	1.644	1.235	1.158	1.155	1.134	1.116	1.087	1.077	1.071	1.028	0.930	0.685	0.528
320	4.123	2.660	2.144	1.695	1.251	1.174	1.170	1.149	1.132	1.102	1.092	1.086	1.043	0.944	0.699	0.539
325	4.161	2.703	2.183	1.746	1.266	1.189	1.186	1.165	1.147	1.117	1.107	1.101	1.058	0.958	0.714	0.550
330	4.198	2.746	2.223	1.796	1.343	1.205	1.202	1.180	1.162	1.132	1.122	1.116	1.072	0.972	0.728	0.561
335	4.235	2.789	2.262	1.847	1.391	1.221	1.217	1.196	1.177	1.147	1.137	1.131	1.087	0.986	0.742	0.571
340	4.272	2.832	2.302	1.898	1.439	1.236	1.233	1.211	1.193	1.162	1.152	1.146	1.101	1.000	0.756	0.582
345	4.309	2.875	2.342	1.949	1.487	1.252	1.249	1.227	1.208	1.177	1.167	1.160	1.116	1.014	0.770	0.593
350	4.346	2.919	2.381	1.993	1.535	1.295	1.285	1.242	1.223	1.192	1.182	1.175	1.130	1.028	0.784	0.604

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 4: I/H Sections - 3 Sided Beams
Fire Resistance Period: 60 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	2.453	0.939	0.712	0.559	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460	0.460
60	2.453	1.074	0.809	0.605	0.525	0.503	0.502	0.497	0.492	0.484	0.481	0.480	0.467	0.460	0.460	0.460
65	2.453	1.210	0.906	0.652	0.551	0.523	0.522	0.516	0.511	0.502	0.500	0.498	0.485	0.460	0.460	0.460
70	2.453	1.292	1.003	0.699	0.577	0.544	0.543	0.535	0.530	0.521	0.518	0.516	0.502	0.472	0.460	0.460
75	2.453	1.348	1.100	0.746	0.603	0.565	0.563	0.555	0.549	0.539	0.537	0.535	0.520	0.489	0.460	0.460
80	2.453	1.405	1.196	0.792	0.629	0.586	0.584	0.574	0.568	0.558	0.555	0.553	0.538	0.505	0.460	0.460
85	2.453	1.462	1.266	0.839	0.655	0.606	0.605	0.593	0.587	0.576	0.573	0.571	0.556	0.522	0.460	0.460
90	2.581	1.518	1.299	0.886	0.680	0.627	0.625	0.612	0.606	0.595	0.592	0.589	0.573	0.538	0.469	0.460
95	2.681	1.575	1.331	0.933	0.706	0.648	0.646	0.632	0.625	0.613	0.610	0.608	0.591	0.555	0.483	0.460
100	2.780	1.631	1.363	0.979	0.732	0.669	0.666	0.651	0.644	0.632	0.628	0.626	0.609	0.572	0.498	0.460
105	2.880	1.688	1.395	1.026	0.758	0.689	0.687	0.670	0.663	0.650	0.647	0.644	0.627	0.588	0.513	0.460
110	2.980	1.745	1.427	1.073	0.784	0.710	0.707	0.689	0.682	0.669	0.665	0.663	0.644	0.605	0.528	0.460
115	3.080	1.801	1.459	1.120	0.810	0.731	0.728	0.709	0.701	0.688	0.684	0.681	0.662	0.621	0.542	0.460
120	3.180	1.858	1.491	1.166	0.836	0.752	0.748	0.728	0.720	0.706	0.702	0.699	0.680	0.638	0.557	0.460
125	3.280	1.914	1.524	1.213	0.861	0.772	0.769	0.747	0.739	0.725	0.720	0.717	0.697	0.654	0.572	0.460
130	3.380	1.971	1.556	1.257	0.887	0.793	0.789	0.766	0.758	0.743	0.739	0.736	0.715	0.671	0.586	0.472
135	3.479	2.024	1.588	1.286	0.913	0.814	0.810	0.786	0.777	0.762	0.757	0.754	0.733	0.688	0.601	0.486
140	3.541	2.077	1.620	1.314	0.939	0.834	0.830	0.805	0.796	0.780	0.775	0.772	0.751	0.704	0.616	0.499
145	3.578	2.129	1.652	1.343	0.965	0.855	0.851	0.824	0.815	0.799	0.794	0.791	0.768	0.721	0.631	0.512
150	3.614	2.182	1.684	1.371	0.991	0.876	0.872	0.843	0.833	0.817	0.812	0.809	0.786	0.737	0.645	0.525
155	3.650	2.235	1.717	1.400	1.017	0.897	0.892	0.863	0.852	0.836	0.831	0.827	0.804	0.754	0.660	0.538
160	3.686	2.287	1.749	1.428	1.042	0.917	0.913	0.882	0.871	0.854	0.849	0.845	0.821	0.770	0.675	0.551
165	3.722	2.340	1.781	1.457	1.068	0.938	0.933	0.901	0.890	0.873	0.867	0.864	0.839	0.787	0.689	0.564
170	3.758	2.393	1.813	1.486	1.094	0.959	0.954	0.920	0.909	0.891	0.886	0.882	0.857	0.804	0.704	0.577
175	3.794	2.446	1.845	1.514	1.120	0.980	0.974	0.940	0.928	0.910	0.904	0.900	0.875	0.820	0.719	0.590
180	3.830	2.498	1.877	1.543	1.146	1.000	0.995	0.959	0.947	0.928	0.922	0.918	0.892	0.837	0.733	0.603
185	3.867	2.551	1.910	1.571	1.172	1.021	1.015	0.978	0.966	0.947	0.941	0.937	0.910	0.853	0.748	0.616
190	3.903	2.604	1.942	1.600	1.197	1.042	1.036	0.997	0.985	0.965	0.959	0.955	0.928	0.870	0.763	0.629
195	3.939	2.657	1.974	1.628	1.223	1.063	1.056	1.017	1.004	0.984	0.978	0.973	0.946	0.887	0.778	0.642
200	3.975	2.709	2.019	1.657	1.249	1.083	1.077	1.036	1.023	1.002	0.996	0.992	0.963	0.903	0.792	0.656

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 4: I/H Sections - 3 Sided Beams
Fire Resistance Period: 60 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	4.011	2.762	2.064	1.685	1.288	1.104	1.097	1.055	1.042	1.021	1.014	1.010	0.981	0.920	0.807	0.669
210	4.047	2.815	2.110	1.714	1.328	1.125	1.118	1.074	1.061	1.039	1.033	1.028	0.999	0.936	0.822	0.682
215	4.083	2.867	2.155	1.743	1.369	1.146	1.139	1.094	1.080	1.058	1.051	1.046	1.016	0.953	0.836	0.695
220	4.119	2.920	2.200	1.771	1.409	1.166	1.159	1.113	1.099	1.076	1.069	1.065	1.034	0.969	0.851	0.708
225	4.156	2.973	2.245	1.800	1.450	1.187	1.180	1.132	1.118	1.095	1.088	1.083	1.052	0.986	0.866	0.721
230	4.192	3.026	2.291	1.828	1.491	1.208	1.200	1.151	1.137	1.113	1.106	1.101	1.070	1.003	0.881	0.734
235	4.228	3.078	2.336	1.857	1.531	1.228	1.221	1.171	1.156	1.132	1.125	1.120	1.087	1.019	0.895	0.747
240	4.264	3.131	2.381	1.885	1.572	1.249	1.241	1.190	1.174	1.150	1.143	1.138	1.105	1.036	0.910	0.760
245	4.300	3.184	2.426	1.914	1.612	1.296	1.275	1.209	1.193	1.169	1.161	1.156	1.123	1.052	0.925	0.773
250	4.336	3.236	2.471	1.942	1.653	1.347	1.328	1.228	1.212	1.187	1.180	1.174	1.141	1.069	0.939	0.786
255	4.372	3.289	2.517	1.971	1.694	1.399	1.381	1.248	1.231	1.206	1.198	1.193	1.158	1.085	0.954	0.799
260	4.408	3.342	2.562	2.021	1.734	1.451	1.434	1.296	1.250	1.224	1.216	1.211	1.176	1.102	0.969	0.812
265	4.445	3.395	2.607	2.073	1.775	1.503	1.487	1.355	1.303	1.243	1.235	1.229	1.194	1.119	0.983	0.826
270	4.481	3.447	2.652	2.126	1.815	1.555	1.540	1.415	1.363	1.279	1.254	1.248	1.211	1.135	0.998	0.839
275	4.517	3.500	2.697	2.178	1.856	1.607	1.593	1.475	1.422	1.336	1.311	1.293	1.229	1.152	1.013	0.852
280	4.553	3.552	2.743	2.231	1.897	1.659	1.646	1.534	1.481	1.394	1.369	1.351	1.247	1.168	1.028	0.865
285	4.589	3.603	2.788	2.283	1.937	1.711	1.698	1.594	1.540	1.452	1.426	1.408	1.290	1.185	1.042	0.878
290	4.625	3.654	2.833	2.335	1.979	1.763	1.751	1.653	1.599	1.510	1.483	1.466	1.345	1.201	1.057	0.891
295	4.661	3.705	2.878	2.388	2.029	1.815	1.804	1.713	1.658	1.568	1.541	1.523	1.401	1.218	1.072	0.904
300	4.697	3.756	2.924	2.440	2.078	1.867	1.857	1.772	1.717	1.625	1.598	1.580	1.456	1.235	1.086	0.917
305	4.734	3.808	2.969	2.492	2.128	1.919	1.910	1.832	1.776	1.683	1.656	1.638	1.512	1.251	1.101	0.930
310	4.770	3.859	3.014	2.545	2.178	1.971	1.963	1.892	1.835	1.741	1.713	1.695	1.568	1.299	1.116	0.943
315	4.806	3.910	3.059	2.597	2.228	2.020	2.012	1.951	1.894	1.799	1.771	1.753	1.623	1.351	1.130	0.956
320	4.842	3.961	3.104	2.649	2.278	2.069	2.061	2.004	1.953	1.856	1.828	1.810	1.679	1.402	1.145	0.969
325	4.878	4.012	3.150	2.702	2.327	2.118	2.110	2.052	2.005	1.914	1.886	1.868	1.734	1.454	1.160	0.982
330	4.914	4.063	3.195	2.754	2.377	2.167	2.159	2.100	2.052	1.972	1.943	1.925	1.790	1.506	1.175	0.996
335	4.950	4.115	3.240	2.806	2.427	2.216	2.207	2.149	2.100	2.019	1.996	1.981	1.846	1.557	1.189	1.009
340	4.986	4.166	3.285	2.859	2.477	2.264	2.256	2.197	2.148	2.066	2.043	2.027	1.901	1.609	1.204	1.022
345	5.023	4.217	3.330	2.911	2.527	2.313	2.305	2.245	2.196	2.113	2.089	2.074	1.957	1.661	1.219	1.035
350	5.059	4.268	3.376	2.963	2.576	2.362	2.354	2.294	2.244	2.160	2.136	2.121	2.005	1.712	1.233	1.048

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 5: I/H Sections - 3 Sided Beams
Fire Resistance Period: 75 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	3.168	1.776	1.039	0.846	0.712	0.660	0.658	0.645	0.634	0.570	0.565	0.562	0.541	0.511	0.460	0.460
60	3.168	1.776	1.167	0.946	0.791	0.714	0.710	0.692	0.677	0.610	0.603	0.598	0.572	0.536	0.488	0.460
65	3.168	1.776	1.273	1.045	0.871	0.767	0.763	0.739	0.720	0.649	0.640	0.635	0.602	0.561	0.506	0.460
70	3.168	1.776	1.332	1.145	0.950	0.820	0.816	0.787	0.763	0.688	0.678	0.671	0.633	0.586	0.524	0.465
75	3.480	1.776	1.392	1.245	1.029	0.874	0.868	0.834	0.806	0.728	0.716	0.708	0.664	0.611	0.542	0.480
80	3.511	1.776	1.452	1.290	1.109	0.927	0.921	0.881	0.849	0.767	0.754	0.744	0.695	0.635	0.560	0.496
85	3.541	1.891	1.511	1.330	1.188	0.981	0.973	0.928	0.892	0.807	0.791	0.781	0.726	0.660	0.578	0.512
90	3.572	1.987	1.571	1.370	1.259	1.034	1.026	0.975	0.934	0.846	0.829	0.817	0.757	0.685	0.596	0.528
95	3.603	2.083	1.631	1.409	1.289	1.088	1.078	1.022	0.977	0.886	0.867	0.854	0.788	0.710	0.614	0.544
100	3.634	2.179	1.690	1.449	1.319	1.141	1.131	1.070	1.020	0.925	0.905	0.891	0.819	0.735	0.632	0.560
105	3.665	2.275	1.750	1.489	1.349	1.194	1.184	1.117	1.063	0.964	0.942	0.927	0.850	0.759	0.650	0.575
110	3.696	2.371	1.810	1.529	1.379	1.248	1.236	1.164	1.106	1.004	0.980	0.964	0.881	0.784	0.669	0.591
115	3.727	2.466	1.869	1.569	1.410	1.279	1.273	1.211	1.149	1.043	1.018	1.000	0.912	0.809	0.687	0.607
120	3.757	2.562	1.929	1.609	1.440	1.309	1.302	1.256	1.191	1.083	1.056	1.037	0.943	0.834	0.705	0.623
125	3.788	2.658	1.990	1.649	1.470	1.338	1.332	1.286	1.234	1.122	1.093	1.073	0.974	0.859	0.723	0.639
130	3.819	2.754	2.057	1.689	1.500	1.368	1.361	1.315	1.270	1.161	1.131	1.110	1.005	0.883	0.741	0.655
135	3.850	2.850	2.123	1.729	1.530	1.397	1.391	1.345	1.299	1.201	1.169	1.146	1.036	0.908	0.759	0.670
140	3.881	2.946	2.189	1.769	1.560	1.426	1.420	1.374	1.329	1.240	1.206	1.183	1.067	0.933	0.777	0.686
145	3.912	3.042	2.255	1.809	1.591	1.456	1.449	1.403	1.359	1.274	1.244	1.219	1.098	0.958	0.795	0.702
150	3.943	3.138	2.322	1.849	1.621	1.485	1.479	1.433	1.389	1.305	1.277	1.256	1.129	0.983	0.813	0.718
155	3.973	3.234	2.388	1.888	1.651	1.514	1.508	1.462	1.418	1.336	1.309	1.288	1.159	1.008	0.831	0.734
160	4.004	3.330	2.454	1.928	1.681	1.544	1.537	1.492	1.448	1.366	1.340	1.320	1.190	1.032	0.849	0.749
165	4.035	3.426	2.521	1.968	1.711	1.573	1.567	1.521	1.478	1.397	1.372	1.352	1.221	1.057	0.867	0.765
170	4.066	3.521	2.587	2.018	1.742	1.603	1.596	1.551	1.507	1.428	1.403	1.384	1.252	1.082	0.885	0.781
175	4.097	3.564	2.653	2.070	1.772	1.632	1.626	1.580	1.537	1.459	1.435	1.417	1.288	1.107	0.903	0.797
180	4.128	3.607	2.720	2.121	1.802	1.661	1.655	1.609	1.567	1.490	1.467	1.449	1.324	1.132	0.921	0.813
185	4.159	3.650	2.786	2.173	1.832	1.691	1.684	1.639	1.597	1.520	1.498	1.481	1.360	1.156	0.939	0.829
190	4.190	3.692	2.852	2.224	1.862	1.720	1.714	1.668	1.626	1.551	1.530	1.513	1.396	1.181	0.957	0.844
195	4.220	3.735	2.918	2.275	1.893	1.749	1.743	1.698	1.656	1.582	1.561	1.545	1.432	1.206	0.975	0.860
200	4.251	3.778	2.985	2.327	1.923	1.779	1.772	1.727	1.686	1.613	1.593	1.578	1.468	1.231	0.993	0.876

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 5: I/H Sections - 3 Sided Beams
Fire Resistance Period: 75 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	4.282	3.821	3.051	2.378	1.953	1.808	1.802	1.756	1.715	1.644	1.624	1.610	1.504	1.257	1.011	0.892
210	4.313	3.864	3.117	2.430	1.991	1.837	1.831	1.786	1.745	1.675	1.656	1.642	1.540	1.299	1.029	0.908
215	4.344	3.907	3.184	2.481	2.045	1.867	1.861	1.815	1.775	1.705	1.687	1.674	1.576	1.341	1.047	0.923
220	4.375	3.950	3.250	2.533	2.100	1.896	1.890	1.845	1.805	1.736	1.719	1.706	1.612	1.382	1.065	0.939
225	4.406	3.993	3.316	2.584	2.154	1.926	1.919	1.874	1.834	1.767	1.751	1.739	1.648	1.424	1.083	0.955
230	4.436	4.036	3.383	2.636	2.208	1.955	1.949	1.904	1.864	1.798	1.782	1.771	1.683	1.466	1.101	0.971
235	4.467	4.079	3.449	2.687	2.263	1.994	1.982	1.933	1.894	1.829	1.814	1.803	1.719	1.507	1.119	0.987
240	4.498	4.122	3.515	2.738	2.317	2.052	2.040	1.962	1.923	1.860	1.845	1.835	1.755	1.549	1.137	1.003
245	4.529	4.165	3.570	2.790	2.372	2.109	2.097	2.010	1.953	1.890	1.877	1.867	1.791	1.591	1.155	1.018
250	4.560	4.207	3.625	2.841	2.426	2.166	2.155	2.068	1.992	1.921	1.908	1.900	1.827	1.632	1.173	1.034
255	4.591	4.250	3.679	2.893	2.480	2.223	2.212	2.127	2.051	1.952	1.940	1.932	1.863	1.674	1.191	1.050
260	4.622	4.293	3.733	2.944	2.535	2.281	2.269	2.185	2.110	1.992	1.972	1.964	1.899	1.716	1.209	1.066
265	4.652	4.336	3.788	2.996	2.589	2.338	2.327	2.243	2.169	2.052	2.029	2.015	1.935	1.757	1.227	1.082
270	4.683	4.379	3.842	3.047	2.644	2.395	2.384	2.302	2.229	2.112	2.089	2.075	1.971	1.799	1.245	1.098
275	4.714	4.422	3.897	3.099	2.698	2.452	2.441	2.360	2.288	2.172	2.149	2.135	2.028	1.841	1.285	1.113
280	4.745	4.465	3.951	3.150	2.752	2.510	2.499	2.418	2.347	2.232	2.209	2.194	2.086	1.882	1.346	1.129
285	4.776	4.508	4.005	3.202	2.807	2.567	2.556	2.477	2.406	2.292	2.269	2.254	2.144	1.924	1.406	1.145
290	4.807	4.551	4.060	3.253	2.861	2.624	2.614	2.535	2.465	2.352	2.329	2.314	2.203	1.966	1.466	1.161
295	4.838	4.594	4.114	3.304	2.916	2.682	2.671	2.594	2.524	2.412	2.389	2.373	2.261	2.019	1.527	1.177
300	4.869	4.637	4.168	3.356	2.970	2.739	2.728	2.652	2.583	2.472	2.448	2.433	2.319	2.074	1.587	1.192
305	4.899	4.680	4.223	3.407	3.024	2.796	2.786	2.710	2.642	2.532	2.508	2.493	2.378	2.130	1.647	1.208
310	4.930	4.722	4.277	3.459	3.079	2.853	2.843	2.769	2.701	2.592	2.568	2.553	2.436	2.186	1.707	1.224
315	4.961	4.765	4.331	3.510	3.133	2.911	2.900	2.827	2.761	2.653	2.628	2.612	2.494	2.241	1.768	1.240
320	4.992	4.808	4.386	3.597	3.188	2.968	2.958	2.886	2.820	2.713	2.688	2.672	2.553	2.297	1.828	1.261
325	-	4.851	4.440	3.691	3.242	3.025	3.015	2.944	2.879	2.773	2.748	2.732	2.611	2.353	1.888	1.310
330	-	4.894	4.495	3.786	3.296	3.082	3.072	3.002	2.938	2.833	2.808	2.791	2.669	2.408	1.949	1.359
335	-	4.937	4.549	3.880	3.351	3.140	3.130	3.061	2.997	2.893	2.868	2.851	2.728	2.464	2.003	1.408
340	-	4.980	4.603	3.975	3.405	3.197	3.187	3.119	3.056	2.953	2.927	2.911	2.786	2.519	2.054	1.457
345	-	5.023	4.658	4.069	3.460	3.254	3.245	3.178	3.115	3.013	2.987	2.970	2.845	2.575	2.105	1.505
350	-	5.066	4.712	4.164	3.514	3.311	3.302	3.236	3.174	3.073	3.047	3.030	2.903	2.631	2.156	1.554

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 6: I/H Sections - 3 Sided Beams
Fire Resistance Period: 90 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	-	3.168	1.776	1.127	0.959	0.882	0.878	0.862	0.846	0.821	0.813	0.807	0.771	0.702	0.545	0.460
60	-	3.168	1.776	1.254	1.062	0.976	0.972	0.953	0.935	0.906	0.897	0.891	0.851	0.762	0.577	0.513
65	-	3.168	1.776	1.320	1.165	1.070	1.066	1.044	1.024	0.992	0.982	0.976	0.931	0.822	0.608	0.532
70	-	3.168	1.776	1.386	1.260	1.164	1.159	1.135	1.113	1.078	1.067	1.060	1.011	0.882	0.640	0.552
75	-	3.168	1.776	1.452	1.308	1.255	1.253	1.226	1.202	1.163	1.151	1.144	1.091	0.942	0.671	0.572
80	-	3.168	1.776	1.518	1.356	1.296	1.293	1.280	1.269	1.249	1.236	1.228	1.171	1.002	0.703	0.591
85	-	3.474	1.865	1.584	1.404	1.336	1.334	1.319	1.306	1.286	1.280	1.277	1.251	1.062	0.734	0.611
90	-	3.506	1.982	1.650	1.452	1.377	1.374	1.357	1.343	1.321	1.315	1.311	1.284	1.121	0.766	0.630
95	-	3.538	2.099	1.716	1.500	1.418	1.415	1.396	1.379	1.355	1.349	1.345	1.316	1.181	0.798	0.650
100	-	3.570	2.216	1.782	1.548	1.458	1.455	1.434	1.416	1.390	1.383	1.379	1.348	1.241	0.829	0.670
105	-	3.602	2.333	1.847	1.596	1.499	1.496	1.473	1.453	1.425	1.417	1.413	1.380	1.277	0.861	0.689
110	-	3.634	2.450	1.913	1.643	1.540	1.536	1.511	1.490	1.459	1.451	1.446	1.412	1.306	0.892	0.709
115	-	3.666	2.567	1.981	1.691	1.581	1.576	1.550	1.527	1.494	1.486	1.480	1.444	1.336	0.924	0.728
120	-	3.697	2.684	2.067	1.739	1.621	1.617	1.588	1.564	1.529	1.520	1.514	1.475	1.365	0.956	0.748
125	-	3.729	2.801	2.152	1.787	1.662	1.657	1.627	1.601	1.563	1.554	1.548	1.507	1.395	0.987	0.767
130	-	3.761	2.918	2.238	1.835	1.703	1.698	1.665	1.638	1.598	1.588	1.582	1.539	1.424	1.019	0.787
135	-	3.793	3.034	2.323	1.883	1.743	1.738	1.704	1.675	1.633	1.622	1.616	1.571	1.454	1.050	0.807
140	-	3.825	3.151	2.408	1.931	1.784	1.779	1.742	1.712	1.667	1.657	1.650	1.603	1.483	1.082	0.826
145	-	3.857	3.268	2.494	1.981	1.825	1.819	1.781	1.749	1.702	1.691	1.684	1.635	1.513	1.114	0.846
150	-	3.889	3.385	2.579	2.046	1.865	1.859	1.819	1.786	1.737	1.725	1.718	1.667	1.543	1.145	0.865
155	-	3.921	3.502	2.665	2.112	1.906	1.900	1.858	1.823	1.771	1.759	1.752	1.699	1.572	1.177	0.885
160	-	3.952	3.555	2.750	2.178	1.947	1.940	1.896	1.860	1.806	1.793	1.786	1.731	1.602	1.208	0.905
165	-	3.984	3.597	2.836	2.243	1.995	1.985	1.935	1.897	1.841	1.828	1.820	1.763	1.631	1.240	0.924
170	-	4.016	3.639	2.921	2.309	2.057	2.046	1.973	1.934	1.875	1.862	1.854	1.795	1.661	1.274	0.944
175	-	4.048	3.680	3.007	2.375	2.119	2.108	2.034	1.971	1.910	1.896	1.888	1.826	1.690	1.309	0.963
180	-	4.080	3.722	3.092	2.440	2.181	2.170	2.095	2.029	1.944	1.930	1.922	1.858	1.720	1.345	0.983
185	-	4.112	3.764	3.178	2.506	2.243	2.232	2.156	2.089	1.983	1.964	1.956	1.890	1.749	1.380	1.003
190	-	4.144	3.805	3.263	2.571	2.305	2.294	2.217	2.149	2.042	2.016	2.001	1.922	1.779	1.416	1.022
195	-	4.176	3.847	3.348	2.637	2.367	2.356	2.278	2.210	2.101	2.075	2.059	1.954	1.808	1.451	1.042
200	-	4.208	3.889	3.434	2.703	2.429	2.418	2.339	2.270	2.160	2.134	2.117	1.996	1.838	1.487	1.061

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Loading Tables

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Table 6: I/H Sections - 3 Sided Beams
Fire Resistance Period: 90 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	-	4.239	3.931	3.519	2.768	2.491	2.480	2.400	2.330	2.219	2.192	2.175	2.055	1.867	1.522	1.081
210	-	4.271	3.972	3.576	2.834	2.553	2.542	2.461	2.390	2.278	2.251	2.233	2.113	1.897	1.558	1.100
215	-	4.303	4.014	3.632	2.900	2.615	2.604	2.522	2.451	2.337	2.309	2.292	2.172	1.926	1.593	1.120
220	-	4.335	4.056	3.689	2.965	2.678	2.666	2.583	2.511	2.396	2.368	2.350	2.230	1.956	1.629	1.140
225	-	4.367	4.097	3.745	3.031	2.740	2.728	2.644	2.571	2.455	2.426	2.408	2.289	1.998	1.664	1.159
230	-	4.399	4.139	3.802	3.096	2.802	2.789	2.705	2.631	2.515	2.485	2.466	2.347	2.058	1.700	1.179
235	-	4.431	4.181	3.858	3.162	2.864	2.851	2.766	2.692	2.574	2.543	2.524	2.405	2.119	1.735	1.198
240	-	4.463	4.222	3.914	3.228	2.926	2.913	2.827	2.752	2.633	2.602	2.582	2.464	2.179	1.771	1.218
245	-	4.495	4.264	3.971	3.293	2.988	2.975	2.888	2.812	2.692	2.660	2.640	2.522	2.239	1.806	1.238
250	-	4.526	4.306	4.027	3.359	3.050	3.037	2.949	2.872	2.751	2.719	2.699	2.581	2.300	1.842	1.265
255	-	4.558	4.347	4.084	3.425	3.112	3.099	3.010	2.933	2.810	2.777	2.757	2.639	2.360	1.877	1.321
260	-	4.590	4.389	4.140	3.490	3.174	3.161	3.071	2.993	2.869	2.836	2.815	2.698	2.421	1.913	1.377
265	-	4.622	4.431	4.196	3.568	3.236	3.223	3.131	3.053	2.928	2.895	2.873	2.756	2.481	1.948	1.433
270	-	4.654	4.472	4.253	3.655	3.298	3.285	3.192	3.113	2.987	2.953	2.931	2.815	2.541	1.992	1.490
275	-	4.686	4.514	4.309	3.743	3.360	3.347	3.253	3.174	3.046	3.012	2.989	2.873	2.602	2.054	1.546
280	-	4.718	4.556	4.366	3.831	3.423	3.409	3.314	3.234	3.105	3.070	3.047	2.932	2.662	2.117	1.602
285	-	4.750	4.597	4.422	3.918	3.485	3.471	3.375	3.294	3.164	3.129	3.106	2.990	2.723	2.180	1.658
290	-	4.781	4.639	4.478	4.006	3.567	3.542	3.436	3.354	3.223	3.187	3.164	3.049	2.783	2.243	1.714
295	-	4.813	4.681	4.535	4.093	3.676	3.652	3.497	3.415	3.282	3.246	3.222	3.107	2.843	2.306	1.770
300	-	4.845	4.722	4.591	4.181	3.785	3.762	3.594	3.475	3.341	3.304	3.280	3.166	2.904	2.369	1.827
305	-	4.877	4.764	4.647	4.268	3.894	3.873	3.713	3.552	3.400	3.363	3.338	3.224	2.964	2.432	1.883
310	-	4.909	4.806	4.704	4.356	4.003	3.983	3.832	3.678	3.460	3.421	3.396	3.283	3.024	2.494	1.939
315	-	4.941	4.848	4.760	4.443	4.112	4.093	3.951	3.804	3.519	3.480	3.454	3.341	3.085	2.557	1.996
320	-	4.973	4.889	4.817	4.531	4.221	4.203	4.070	3.931	3.660	3.567	3.513	3.399	3.145	2.620	2.055
325	-	5.005	4.931	4.873	4.619	4.329	4.313	4.188	4.057	3.803	3.714	3.652	3.458	3.206	2.683	2.113
330	-	5.037	4.973	4.929	4.706	4.438	4.423	4.307	4.184	3.946	3.862	3.803	3.516	3.266	2.746	2.172
335	-	-	5.014	4.986	4.794	4.547	4.533	4.426	4.310	4.090	4.010	3.955	3.668	3.326	2.809	2.230
340	-	-	5.056	5.042	4.881	4.656	4.643	4.545	4.437	4.233	4.158	4.106	3.826	3.387	2.872	2.289
345	-	-	5.098	5.099	4.969	4.765	4.753	4.663	4.563	4.376	4.306	4.257	3.984	3.447	2.934	2.347
350	-	-	-	5.155	5.056	4.874	4.864	4.782	4.690	4.519	4.453	4.409	4.143	3.508	2.997	2.406

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Loading Tables

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Table 7: I/H Sections - 3 Sided Beams
Fire Resistance Period: IO5 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	-	-	3.168	1.776	1.229	1.118	1.114	1.095	1.076	1.046	1.036	1.030	0.989	0.899	0.750	0.573
60	-	-	3.168	1.776	1.301	1.235	1.230	1.209	1.187	1.153	1.142	1.136	1.090	0.990	0.825	0.613
65	-	-	3.168	1.776	1.372	1.305	1.302	1.289	1.276	1.257	1.249	1.241	1.190	1.081	0.901	0.653
70	-	-	3.168	1.776	1.443	1.367	1.364	1.348	1.333	1.310	1.304	1.299	1.271	1.172	0.977	0.693
75	-	-	3.168	1.776	1.514	1.429	1.425	1.407	1.390	1.364	1.356	1.351	1.319	1.257	1.052	0.733
80	-	-	3.168	1.776	1.586	1.491	1.487	1.465	1.447	1.418	1.409	1.404	1.367	1.297	1.128	0.773
85	-	-	3.477	1.885	1.657	1.553	1.549	1.524	1.504	1.471	1.462	1.456	1.415	1.337	1.204	0.813
90	-	-	3.510	2.059	1.728	1.615	1.610	1.583	1.561	1.525	1.514	1.508	1.463	1.378	1.264	0.854
95	-	-	3.542	2.232	1.799	1.677	1.672	1.642	1.618	1.578	1.567	1.560	1.511	1.418	1.295	0.894
100	-	-	3.575	2.406	1.871	1.738	1.733	1.701	1.674	1.632	1.620	1.612	1.558	1.458	1.327	0.934
105	-	-	3.607	2.580	1.942	1.800	1.795	1.760	1.731	1.686	1.673	1.664	1.606	1.498	1.358	0.974
110	-	-	3.640	2.753	2.032	1.862	1.856	1.819	1.788	1.739	1.725	1.717	1.654	1.538	1.390	1.014
115	-	-	3.673	2.927	2.138	1.924	1.918	1.878	1.845	1.793	1.778	1.769	1.702	1.578	1.421	1.054
120	-	-	3.705	3.101	2.244	1.992	1.982	1.937	1.902	1.846	1.831	1.821	1.750	1.618	1.453	1.094
125	-	-	3.738	3.274	2.349	2.084	2.073	2.006	1.959	1.900	1.883	1.873	1.798	1.658	1.484	1.134
130	-	-	3.771	3.448	2.455	2.175	2.164	2.092	2.035	1.954	1.936	1.925	1.846	1.698	1.516	1.174
135	-	-	3.803	3.542	2.561	2.267	2.255	2.179	2.118	2.022	1.996	1.979	1.894	1.738	1.547	1.214
140	-	-	3.836	3.581	2.666	2.358	2.346	2.265	2.201	2.100	2.072	2.054	1.942	1.778	1.579	1.254
145	-	-	3.868	3.619	2.772	2.450	2.437	2.352	2.284	2.177	2.148	2.129	1.997	1.819	1.610	1.284
150	-	-	3.901	3.657	2.878	2.541	2.528	2.438	2.367	2.255	2.224	2.204	2.067	1.859	1.642	1.314
155	-	-	3.934	3.695	2.983	2.633	2.619	2.525	2.450	2.332	2.300	2.279	2.137	1.899	1.673	1.344
160	-	-	3.966	3.733	3.089	2.725	2.710	2.612	2.533	2.410	2.376	2.354	2.207	1.939	1.705	1.374
165	-	-	3.999	3.772	3.195	2.816	2.801	2.698	2.616	2.488	2.452	2.429	2.277	1.982	1.736	1.403
170	-	-	4.032	3.810	3.300	2.908	2.892	2.785	2.699	2.565	2.528	2.504	2.347	2.049	1.768	1.433
175	-	-	4.064	3.848	3.406	2.999	2.983	2.871	2.782	2.643	2.604	2.580	2.417	2.116	1.799	1.463
180	-	-	4.097	3.886	3.512	3.091	3.074	2.958	2.865	2.720	2.680	2.655	2.487	2.182	1.831	1.493
185	-	-	4.129	3.925	3.566	3.182	3.165	3.044	2.948	2.798	2.756	2.730	2.558	2.249	1.862	1.523
190	-	-	4.162	3.963	3.616	3.274	3.256	3.131	3.031	2.875	2.832	2.805	2.628	2.316	1.894	1.553
195	-	-	4.195	4.001	3.666	3.365	3.347	3.217	3.114	2.953	2.908	2.880	2.698	2.383	1.925	1.583
200	-	-	4.227	4.039	3.716	3.457	3.438	3.304	3.197	3.031	2.984	2.955	2.768	2.449	1.957	1.613

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Loading Tables

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Table 7: I/H Sections - 3 Sided Beams
Fire Resistance Period: IO5 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	-	-	4.260	4.077	3.767	3.538	3.526	3.391	3.280	3.108	3.060	3.030	2.838	2.516	2.003	1.643
210	-	-	4.293	4.116	3.817	3.597	3.585	3.477	3.363	3.186	3.137	3.105	2.908	2.583	2.064	1.673
215	-	-	4.325	4.154	3.867	3.656	3.644	3.552	3.445	3.263	3.213	3.180	2.978	2.649	2.125	1.703
220	-	-	4.358	4.192	3.917	3.715	3.704	3.615	3.527	3.341	3.289	3.255	3.048	2.716	2.187	1.733
225	-	-	4.390	4.230	3.967	3.774	3.763	3.679	3.594	3.418	3.365	3.330	3.118	2.783	2.248	1.763
230	-	-	4.423	4.268	4.017	3.833	3.823	3.742	3.662	3.496	3.441	3.405	3.189	2.849	2.309	1.793
235	-	-	4.456	4.307	4.067	3.892	3.882	3.806	3.729	3.572	3.517	3.480	3.259	2.916	2.370	1.823
240	-	-	4.488	4.345	4.117	3.951	3.942	3.869	3.797	3.648	3.595	3.558	3.329	2.983	2.432	1.853
245	-	-	4.521	4.383	4.167	4.010	4.001	3.933	3.864	3.724	3.674	3.639	3.399	3.049	2.493	1.883
250	-	-	4.554	4.421	4.217	4.069	4.060	3.996	3.931	3.800	3.753	3.720	3.469	3.116	2.554	1.913
255	-	-	4.586	4.460	4.268	4.128	4.120	4.060	3.999	3.876	3.832	3.801	3.547	3.183	2.616	1.942
260	-	-	4.619	4.498	4.318	4.187	4.179	4.123	4.066	3.951	3.911	3.881	3.645	3.249	2.677	1.972
265	-	-	4.651	4.536	4.368	4.246	4.239	4.186	4.134	4.027	3.989	3.962	3.743	3.316	2.738	2.041
270	-	-	4.684	4.574	4.418	4.304	4.298	4.250	4.201	4.103	4.068	4.043	3.841	3.383	2.800	2.112
275	-	-	4.717	4.612	4.468	4.363	4.358	4.313	4.269	4.179	4.147	4.124	3.939	3.449	2.861	2.182
280	-	-	4.749	4.651	4.518	4.422	4.417	4.377	4.336	4.255	4.226	4.205	4.038	3.516	2.922	2.252
285	-	-	4.782	4.689	4.568	4.481	4.477	4.440	4.403	4.331	4.304	4.286	4.136	3.645	2.984	2.323
290	-	-	4.815	4.727	4.618	4.540	4.536	4.504	4.471	4.406	4.383	4.367	4.234	3.777	3.045	2.393
295	-	-	4.847	4.765	4.668	4.599	4.595	4.567	4.538	4.482	4.462	4.448	4.332	3.910	3.106	2.464
300	-	-	4.880	4.803	4.719	4.658	4.655	4.631	4.606	4.558	4.541	4.529	4.430	4.042	3.168	2.534
305	-	-	4.912	4.842	4.769	4.717	4.714	4.694	4.673	4.634	4.619	4.609	4.529	4.175	3.229	2.604
310	-	-	4.945	4.880	4.819	4.776	4.774	4.757	4.741	4.710	4.698	4.690	4.627	4.307	3.290	2.675
315	-	-	4.978	4.918	4.869	4.835	4.833	4.821	4.808	4.785	4.777	4.771	4.725	4.440	3.352	2.745
320	-	-	5.010	4.956	4.919	4.894	4.893	4.884	4.875	4.861	4.856	4.852	4.823	4.572	3.413	2.816
325	-	-	-	4.995	4.969	4.953	4.952	4.948	4.943	4.937	4.934	4.933	4.921	4.705	3.474	2.886
330	-	-	-	5.033	5.019	5.012	5.011	5.011	5.020	5.020	5.020	5.020	5.020	4.837	3.575	2.956
335	-	-	-	5.071	5.075	5.075	5.075	5.075	5.118	5.118	5.118	5.118	5.118	4.970	3.792	3.027
340	-	-	-	-	5.138	5.138	5.138	5.138	5.176	5.176	5.176	5.176	5.216	5.102	4.008	3.097
345	-	-	-	-	5.170	5.188	5.190	5.202	5.250	5.250	-	-	-	-	4.224	3.168
350	-	-	-	-	-	-	-	5.265	-	-	-	-	-	-	4.440	3.238

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 8: I/H Sections - 3 Sided Beams
Fire Resistance Period: 120 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	-	-	-	3.168	1.776	1.776	1.776	1.776	1.776	1.266	1.259	1.255	1.210	1.106	0.935	0.774
60	-	-	-	3.168	1.776	1.776	1.776	1.776	1.776	1.340	1.333	1.328	1.297	1.216	1.028	0.856
65	-	-	-	3.168	1.776	1.776	1.776	1.776	1.776	1.415	1.406	1.401	1.364	1.291	1.122	0.938
70	-	-	-	3.168	1.776	1.776	1.776	1.776	1.776	1.490	1.480	1.474	1.432	1.349	1.215	1.020
75	-	-	-	3.168	1.776	1.776	1.776	1.776	1.776	1.564	1.554	1.547	1.499	1.407	1.279	1.102
80	-	-	-	3.449	1.776	1.776	1.776	1.776	1.776	1.639	1.627	1.620	1.566	1.464	1.323	1.184
85	-	-	-	3.494	1.962	1.776	1.776	1.776	1.776	1.714	1.701	1.693	1.634	1.522	1.367	1.259
90	-	-	-	3.538	2.190	1.857	1.846	1.783	1.788	1.788	1.774	1.766	1.701	1.579	1.411	1.294
95	-	-	-	3.582	2.417	2.019	2.007	1.929	1.877	1.863	1.848	1.838	1.769	1.637	1.456	1.329
100	-	-	-	3.627	2.644	2.182	2.167	2.075	2.010	1.937	1.922	1.911	1.836	1.694	1.500	1.364
105	-	-	-	3.671	2.871	2.344	2.327	2.220	2.142	2.035	2.008	1.991	1.903	1.752	1.544	1.400
110	-	-	-	3.715	3.098	2.506	2.487	2.366	2.275	2.155	2.126	2.107	1.971	1.809	1.588	1.435
115	-	-	-	3.760	3.325	2.669	2.647	2.511	2.408	2.275	2.244	2.224	2.077	1.867	1.632	1.470
120	-	-	-	3.804	3.525	2.831	2.807	2.657	2.540	2.395	2.362	2.341	2.185	1.924	1.676	1.505
125	-	-	-	3.849	3.562	2.993	2.967	2.803	2.673	2.515	2.480	2.458	2.292	1.987	1.720	1.541
130	-	-	-	3.893	3.599	3.156	3.127	2.948	2.806	2.635	2.598	2.575	2.400	2.077	1.764	1.576
135	-	-	-	3.937	3.636	3.318	3.287	3.094	2.938	2.754	2.716	2.691	2.508	2.168	1.808	1.611
140	-	-	-	3.982	3.672	3.480	3.447	3.240	3.071	2.874	2.834	2.808	2.616	2.258	1.852	1.647
145	-	-	-	4.026	3.709	3.551	3.542	3.385	3.204	2.994	2.952	2.925	2.723	2.349	1.896	1.682
150	-	-	-	4.070	3.746	3.592	3.583	3.523	3.336	3.114	3.070	3.042	2.831	2.439	1.940	1.717
155	-	-	-	4.115	3.783	3.633	3.624	3.566	3.469	3.234	3.188	3.158	2.939	2.530	1.991	1.752
160	-	-	-	4.159	3.820	3.673	3.666	3.609	3.547	3.354	3.306	3.275	3.047	2.620	2.062	1.788
165	-	-	-	4.203	3.856	3.714	3.707	3.651	3.592	3.473	3.424	3.392	3.154	2.711	2.132	1.823
170	-	-	-	4.248	3.893	3.755	3.748	3.694	3.636	3.549	3.529	3.509	3.262	2.801	2.203	1.858
175	-	-	-	4.292	3.930	3.796	3.789	3.737	3.681	3.596	3.577	3.563	3.370	2.892	2.273	1.893
180	-	-	-	4.336	3.967	3.837	3.830	3.779	3.725	3.643	3.624	3.612	3.478	2.982	2.344	1.929
185	-	-	-	4.381	4.004	3.878	3.871	3.822	3.770	3.690	3.672	3.660	3.551	3.073	2.414	1.964
190	-	-	-	4.425	4.041	3.918	3.912	3.865	3.814	3.738	3.720	3.708	3.603	3.163	2.485	2.018
195	-	-	-	4.469	4.077	3.959	3.953	3.908	3.859	3.785	3.768	3.756	3.655	3.254	2.555	2.079
200	-	-	-	4.514	4.114	4.000	3.994	3.950	3.903	3.832	3.815	3.804	3.706	3.344	2.625	2.140

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 8: I/H Sections - 3 Sided Beams
Fire Resistance Period: 120 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	550°C	575°C	576°C	583°C	590°C	600°C	603°C	605°C	620°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	-	-	-	4.558	4.151	4.041	4.035	3.993	3.948	3.879	3.863	3.852	3.758	3.435	2.696	2.201
210	-	-	-	4.602	4.188	4.082	4.076	4.036	3.992	3.926	3.911	3.900	3.809	3.524	2.766	2.262
215	-	-	-	4.647	4.225	4.123	4.117	4.078	4.037	3.974	3.959	3.948	3.861	3.587	2.837	2.324
220	-	-	-	4.691	4.261	4.163	4.158	4.121	4.081	4.021	4.006	3.997	3.913	3.650	2.907	2.385
225	-	-	-	4.735	4.298	4.204	4.199	4.164	4.126	4.068	4.054	4.045	3.964	3.714	2.978	2.446
230	-	-	-	4.780	4.335	4.245	4.240	4.206	4.170	4.115	4.102	4.093	4.016	3.777	3.048	2.507
235	-	-	-	4.824	4.372	4.286	4.282	4.249	4.215	4.162	4.150	4.141	4.068	3.840	3.119	2.568
240	-	-	-	4.868	4.409	4.327	4.323	4.292	4.259	4.209	4.197	4.189	4.119	3.904	3.189	2.629
245	-	-	-	4.913	4.445	4.368	4.364	4.335	4.304	4.257	4.245	4.237	4.171	3.967	3.260	2.690
250	-	-	-	4.957	4.482	4.408	4.405	4.377	4.348	4.304	4.293	4.285	4.222	4.030	3.330	2.751
255	-	-	-	5.002	4.519	4.449	4.446	4.420	4.393	4.351	4.341	4.333	4.274	4.093	3.401	2.812
260	-	-	-	5.046	4.556	4.490	4.487	4.463	4.437	4.398	4.388	4.382	4.326	4.157	3.471	2.873
265	-	-	-	-	4.593	4.531	4.528	4.505	4.482	4.445	4.436	4.430	4.377	4.220	3.556	2.935
270	-	-	-	-	4.629	4.572	4.569	4.548	4.526	4.493	4.484	4.478	4.429	4.283	3.674	2.996
275	-	-	-	-	4.666	4.613	4.610	4.591	4.571	4.540	4.532	4.526	4.481	4.347	3.791	3.057
280	-	-	-	-	4.703	4.653	4.651	4.633	4.615	4.587	4.579	4.574	4.532	4.410	3.909	3.118
285	-	-	-	-	4.740	4.694	4.692	4.676	4.660	4.634	4.627	4.622	4.584	4.473	4.026	3.179
290	-	-	-	-	4.777	4.735	4.733	4.719	4.704	4.681	4.675	4.670	4.635	4.536	4.143	3.240
295	-	-	-	-	4.814	4.776	4.774	4.762	4.749	4.728	4.722	4.718	4.687	4.600	4.261	3.301
300	-	-	-	-	4.850	4.817	4.815	4.804	4.793	4.776	4.770	4.767	4.739	4.663	4.378	3.362
305	-	-	-	-	4.887	4.858	4.856	4.847	4.838	4.823	4.818	4.815	4.790	4.726	4.496	3.423
310	-	-	-	-	4.924	4.898	4.897	4.890	4.882	4.870	4.866	4.863	4.842	4.790	4.613	3.484
315	-	-	-	-	4.961	4.939	4.939	4.932	4.927	4.917	4.913	4.911	4.894	4.853	4.730	3.614
320	-	-	-	-	4.998	4.980	4.980	4.975	4.971	4.964	4.961	4.959	4.945	4.916	4.848	3.838
325	-	-	-	-	5.034	5.021	5.021	5.018	5.016	5.012	5.009	5.007	4.997	4.980	4.965	4.062
330	-	-	-	-	5.071	5.062	5.062	5.061	5.060	5.059	5.057	5.055	0.000	5.083	5.083	4.286
335	-	-	-	-	-	5.103	5.103	5.103	0.000	0.000	0.000	0.000	0.000	5.200	5.200	4.510
340	-	-	-	-	-	-	-	-	0.000	0.000	0.000	0.000	0.000	0.000	-	4.734
345	-	-	-	-	-	-	-	-	-	-	-	-	0.000	0.000	-	4.958
350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.182

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 9: I/H Sections - 4 Sided Columns
Fire Resistance Period: 15 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
60	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
65	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
70	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
75	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
80	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
85	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
90	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
95	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
100	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
105	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
110	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
115	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
120	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
125	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
130	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
135	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
140	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
145	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
150	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
155	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
160	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
165	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
170	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
175	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
180	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
185	0.464	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
190	0.481	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
195	0.498	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
200	0.515	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 9: I/H Sections - 4 Sided Columns
Fire Resistance Period: 15 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ⁻¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	0.532	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
210	0.549	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
215	0.566	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
220	0.583	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
225	0.600	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
230	0.618	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
235	0.635	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
240	0.652	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
245	0.669	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
250	0.686	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
255	0.703	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
260	0.720	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
265	0.737	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
270	0.754	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
275	0.771	0.461	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
280	0.788	0.472	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
285	0.805	0.483	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
290	0.823	0.494	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
295	0.840	0.505	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
300	0.857	0.515	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
305	0.874	0.526	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
310	0.891	0.537	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
315	0.908	0.548	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
320	0.925	0.559	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
325	0.942	0.569	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
330	0.959	0.580	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
335	0.976	0.591	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
340	0.993	0.602	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
345	1.010	0.613	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
350	1.028	0.623	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table IO: I/H Sections - 4 Sided Columns
Fire Resistance Period: 30 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
60	0.494	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
65	0.533	0.473	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
70	0.572	0.489	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
75	0.610	0.505	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
80	0.649	0.522	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
85	0.688	0.538	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
90	0.727	0.554	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
95	0.765	0.570	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
100	0.804	0.587	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
105	0.843	0.603	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
110	0.881	0.619	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
115	0.920	0.636	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
120	0.959	0.652	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
125	0.997	0.668	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
130	1.036	0.684	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
135	1.075	0.701	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
140	1.114	0.717	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
145	1.152	0.733	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
150	1.191	0.749	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
155	1.230	0.766	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
160	1.268	0.782	0.464	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
165	1.307	0.798	0.482	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
170	1.345	0.814	0.500	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
175	1.384	0.831	0.517	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
180	1.423	0.847	0.535	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
185	1.461	0.863	0.553	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
190	1.500	0.880	0.571	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
195	1.538	0.896	0.589	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
200	1.577	0.912	0.606	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table IO: I/H Sections - 4 Sided Columns
Fire Resistance Period: 30 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	1.615	0.928	0.624	0.473	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
210	1.654	0.945	0.642	0.489	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
215	1.693	0.961	0.660	0.504	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
220	1.731	0.977	0.678	0.519	0.466	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
225	1.770	0.993	0.696	0.534	0.481	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
230	1.808	1.010	0.713	0.550	0.495	0.469	0.459	0.459	0.459	0.459	0.459	0.459	0.459
235	1.847	1.026	0.731	0.565	0.509	0.483	0.462	0.459	0.459	0.459	0.459	0.459	0.459
240	1.885	1.042	0.749	0.580	0.524	0.497	0.475	0.459	0.459	0.459	0.459	0.459	0.459
245	1.924	1.058	0.767	0.595	0.538	0.511	0.488	0.463	0.459	0.459	0.459	0.459	0.459
250	1.963	1.075	0.785	0.611	0.552	0.524	0.502	0.476	0.459	0.459	0.459	0.459	0.459
255	2.001	1.091	0.802	0.626	0.566	0.538	0.515	0.489	0.459	0.459	0.459	0.459	0.459
260	2.039	1.107	0.820	0.641	0.581	0.552	0.529	0.502	0.470	0.459	0.459	0.459	0.459
265	2.077	1.124	0.838	0.656	0.595	0.566	0.542	0.515	0.483	0.459	0.459	0.459	0.459
270	2.115	1.140	0.856	0.672	0.609	0.580	0.556	0.528	0.495	0.459	0.459	0.459	0.459
275	2.153	1.156	0.874	0.687	0.624	0.594	0.569	0.541	0.508	0.459	0.459	0.459	0.459
280	2.191	1.172	0.892	0.702	0.638	0.608	0.583	0.554	0.520	0.459	0.459	0.459	0.459
285	2.229	1.189	0.909	0.717	0.652	0.622	0.596	0.567	0.532	0.459	0.459	0.459	0.459
290	2.267	1.205	0.927	0.733	0.667	0.635	0.610	0.580	0.545	0.459	0.459	0.459	0.459
295	2.305	1.221	0.945	0.748	0.681	0.649	0.623	0.593	0.557	0.463	0.459	0.459	0.459
300	2.342	1.237	0.963	0.763	0.695	0.663	0.637	0.606	0.569	0.474	0.459	0.459	0.459
305	2.380	1.259	0.981	0.778	0.710	0.677	0.650	0.619	0.582	0.485	0.459	0.459	0.459
310	2.418	1.298	0.999	0.794	0.724	0.691	0.663	0.632	0.594	0.495	0.459	0.459	0.459
315	2.456	1.337	1.016	0.809	0.738	0.705	0.677	0.645	0.607	0.506	0.459	0.459	0.459
320	2.494	1.375	1.034	0.824	0.753	0.719	0.690	0.658	0.619	0.517	0.459	0.459	0.459
325	2.532	1.414	1.052	0.840	0.767	0.733	0.704	0.671	0.631	0.528	0.459	0.459	0.459
330	2.570	1.453	1.070	0.855	0.781	0.746	0.717	0.683	0.644	0.539	0.459	0.459	0.459
335	2.608	1.492	1.088	0.870	0.795	0.760	0.731	0.696	0.656	0.550	0.459	0.459	0.459
340	2.646	1.531	1.105	0.885	0.810	0.774	0.744	0.709	0.668	0.561	0.459	0.459	0.459
345	2.684	1.570	1.123	0.901	0.824	0.788	0.758	0.722	0.681	0.572	0.459	0.459	0.459
350	2.722	1.609	1.141	0.916	0.838	0.802	0.771	0.735	0.693	0.582	0.459	0.459	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table II: I/H Sections - 4 Sided Columns
Fire Resistance Period: 45 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	0.855	0.514	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
60	0.929	0.556	0.494	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
65	1.004	0.597	0.516	0.466	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
70	1.078	0.639	0.538	0.483	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
75	1.153	0.680	0.559	0.500	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
80	1.227	0.722	0.581	0.517	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
85	1.285	0.764	0.603	0.534	0.472	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
90	1.336	0.805	0.625	0.551	0.489	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
95	1.386	0.847	0.647	0.568	0.506	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
100	1.437	0.888	0.669	0.585	0.523	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
105	1.487	0.930	0.691	0.602	0.540	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
110	1.538	0.972	0.713	0.619	0.557	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
115	1.588	1.013	0.735	0.636	0.574	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
120	1.639	1.055	0.756	0.653	0.590	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
125	1.689	1.096	0.778	0.670	0.607	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
130	1.740	1.138	0.800	0.687	0.624	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
135	1.791	1.180	0.822	0.704	0.641	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
140	1.841	1.221	0.844	0.721	0.658	0.474	0.459	0.459	0.459	0.459	0.459	0.459	0.459
145	1.892	1.260	0.866	0.738	0.675	0.495	0.462	0.459	0.459	0.459	0.459	0.459	0.459
150	1.942	1.291	0.888	0.755	0.691	0.515	0.483	0.459	0.459	0.459	0.459	0.459	0.459
155	1.993	1.323	0.910	0.772	0.708	0.536	0.503	0.478	0.459	0.459	0.459	0.459	0.459
160	2.049	1.355	0.932	0.789	0.725	0.557	0.524	0.498	0.469	0.459	0.459	0.459	0.459
165	2.109	1.386	0.954	0.806	0.742	0.578	0.545	0.518	0.488	0.459	0.459	0.459	0.459
170	2.168	1.418	0.975	0.823	0.759	0.599	0.565	0.538	0.508	0.459	0.459	0.459	0.459
175	2.228	1.450	0.997	0.840	0.776	0.620	0.586	0.559	0.527	0.459	0.459	0.459	0.459
180	2.287	1.482	1.019	0.857	0.793	0.641	0.607	0.579	0.546	0.462	0.459	0.459	0.459
185	2.346	1.513	1.041	0.874	0.809	0.662	0.627	0.599	0.566	0.479	0.459	0.459	0.459
190	2.406	1.545	1.063	0.891	0.826	0.682	0.648	0.619	0.585	0.497	0.459	0.459	0.459
195	2.465	1.577	1.085	0.908	0.843	0.703	0.669	0.639	0.604	0.514	0.459	0.459	0.459
200	2.525	1.608	1.107	0.925	0.860	0.724	0.690	0.659	0.624	0.532	0.459	0.459	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table II: I/H Sections - 4 Sided Columns
Fire Resistance Period: 45 Minutes
Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	2.584	1.640	1.129	0.942	0.877	0.745	0.710	0.679	0.643	0.549	0.459	0.459	0.459
210	2.643	1.672	1.151	0.959	0.894	0.766	0.731	0.699	0.662	0.567	0.459	0.459	0.459
215	2.703	1.703	1.173	0.976	0.910	0.787	0.752	0.719	0.682	0.584	0.465	0.459	0.459
220	2.762	1.735	1.194	0.993	0.927	0.808	0.772	0.739	0.701	0.602	0.480	0.459	0.459
225	2.822	1.767	1.216	1.010	0.944	0.828	0.793	0.759	0.720	0.619	0.495	0.459	0.459
230	2.881	1.798	1.238	1.027	0.961	0.849	0.814	0.779	0.740	0.637	0.510	0.459	0.459
235	2.940	1.830	1.271	1.044	0.978	0.870	0.834	0.800	0.759	0.654	0.526	0.459	0.459
240	3.000	1.862	1.315	1.061	0.995	0.891	0.855	0.820	0.779	0.672	0.541	0.459	0.459
245	3.059	1.893	1.360	1.078	1.012	0.912	0.876	0.840	0.798	0.689	0.556	0.459	0.459
250	3.119	1.925	1.404	1.095	1.028	0.933	0.897	0.860	0.817	0.707	0.571	0.459	0.459
255	3.178	1.957	1.449	1.112	1.045	0.954	0.917	0.880	0.837	0.724	0.586	0.459	0.459
260	3.237	1.988	1.493	1.129	1.062	0.974	0.938	0.900	0.856	0.742	0.601	0.469	0.459
265	3.297	2.025	1.538	1.146	1.079	0.995	0.959	0.920	0.875	0.759	0.616	0.481	0.459
270	3.356	2.071	1.582	1.163	1.096	1.016	0.979	0.940	0.895	0.777	0.631	0.494	0.459
275	3.416	2.117	1.627	1.180	1.113	1.037	1.000	0.960	0.914	0.794	0.646	0.507	0.459
280	3.475	2.163	1.672	1.197	1.129	1.058	1.021	0.980	0.933	0.812	0.662	0.519	0.459
285	3.534	2.209	1.716	1.214	1.146	1.079	1.041	1.000	0.953	0.830	0.677	0.532	0.459
290	3.584	2.255	1.761	1.231	1.163	1.100	1.062	1.021	0.972	0.847	0.692	0.544	0.459
295	3.634	2.301	1.805	1.248	1.180	1.121	1.083	1.041	0.992	0.865	0.707	0.557	0.459
300	3.683	2.347	1.850	1.292	1.197	1.141	1.104	1.061	1.011	0.882	0.722	0.569	0.459
305	3.733	2.393	1.894	1.339	1.214	1.162	1.124	1.081	1.030	0.900	0.737	0.582	0.459
310	3.783	2.439	1.939	1.387	1.231	1.183	1.145	1.101	1.050	0.917	0.752	0.594	0.459
315	3.833	2.485	1.983	1.434	1.247	1.204	1.166	1.121	1.069	0.935	0.767	0.607	0.459
320	3.883	2.531	2.026	1.482	1.288	1.225	1.186	1.141	1.088	0.952	0.783	0.619	0.459
325	3.933	2.577	2.066	1.529	1.334	1.246	1.207	1.161	1.108	0.970	0.798	0.632	0.459
330	3.983	2.623	2.106	1.577	1.380	1.285	1.228	1.181	1.127	0.987	0.813	0.644	0.463
335	4.032	2.669	2.147	1.624	1.425	1.330	1.248	1.201	1.146	1.005	0.828	0.657	0.473
340	4.082	2.714	2.187	1.671	1.471	1.375	1.290	1.221	1.166	1.022	0.843	0.669	0.483
345	4.132	2.760	2.227	1.719	1.516	1.419	1.334	1.241	1.185	1.040	0.858	0.682	0.493
350	4.182	2.806	2.267	1.766	1.562	1.464	1.378	1.275	1.205	1.057	0.873	0.694	0.503

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table I2: I/H Sections - 4 Sided Columns
Fire Resistance Period: 60 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	2.470	0.903	0.660	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
60	2.470	0.967	0.703	0.542	0.521	0.511	0.504	0.497	0.485	0.459	0.459	0.459	0.459
65	2.470	1.032	0.747	0.575	0.548	0.536	0.527	0.517	0.504	0.459	0.459	0.459	0.459
70	2.470	1.096	0.790	0.607	0.574	0.560	0.549	0.537	0.522	0.476	0.459	0.459	0.459
75	2.470	1.161	0.833	0.639	0.601	0.585	0.571	0.557	0.541	0.493	0.459	0.459	0.459
80	2.470	1.225	0.877	0.671	0.628	0.609	0.594	0.577	0.560	0.510	0.459	0.459	0.459
85	2.470	1.275	0.920	0.703	0.654	0.633	0.616	0.597	0.579	0.528	0.459	0.459	0.459
90	2.641	1.317	0.964	0.735	0.681	0.658	0.638	0.617	0.598	0.545	0.459	0.459	0.459
95	2.723	1.358	1.007	0.767	0.708	0.682	0.660	0.637	0.616	0.563	0.459	0.459	0.459
100	2.805	1.399	1.051	0.800	0.735	0.706	0.683	0.657	0.635	0.580	0.459	0.459	0.459
105	2.887	1.441	1.094	0.832	0.761	0.731	0.705	0.677	0.654	0.597	0.459	0.459	0.459
110	2.970	1.482	1.137	0.864	0.788	0.755	0.727	0.697	0.673	0.615	0.459	0.459	0.459
115	3.052	1.523	1.181	0.896	0.815	0.779	0.750	0.717	0.691	0.632	0.459	0.459	0.459
120	3.134	1.565	1.224	0.928	0.841	0.804	0.772	0.737	0.710	0.649	0.459	0.459	0.459
125	3.216	1.606	1.265	0.960	0.868	0.828	0.794	0.757	0.729	0.667	0.459	0.459	0.459
130	3.298	1.647	1.302	0.992	0.895	0.852	0.817	0.777	0.748	0.684	0.459	0.459	0.459
135	3.380	1.689	1.339	1.024	0.921	0.877	0.839	0.797	0.766	0.702	0.459	0.459	0.459
140	3.462	1.730	1.376	1.057	0.948	0.901	0.861	0.817	0.785	0.719	0.459	0.459	0.459
145	3.538	1.771	1.413	1.089	0.975	0.926	0.884	0.837	0.804	0.736	0.459	0.459	0.459
150	3.579	1.812	1.450	1.121	1.002	0.950	0.906	0.857	0.823	0.754	0.459	0.459	0.459
155	3.620	1.854	1.487	1.153	1.028	0.974	0.928	0.877	0.841	0.771	0.477	0.459	0.459
160	3.661	1.895	1.524	1.185	1.055	0.999	0.951	0.897	0.860	0.788	0.498	0.459	0.459
165	3.703	1.936	1.561	1.217	1.082	1.023	0.973	0.917	0.879	0.806	0.519	0.459	0.459
170	3.744	1.978	1.598	1.249	1.108	1.047	0.995	0.937	0.898	0.823	0.540	0.459	0.459
175	3.785	2.022	1.635	1.285	1.135	1.072	1.018	0.957	0.917	0.841	0.562	0.459	0.459
180	3.826	2.076	1.672	1.320	1.162	1.096	1.040	0.977	0.935	0.858	0.583	0.470	0.459
185	3.867	2.129	1.709	1.356	1.189	1.120	1.062	0.997	0.954	0.875	0.604	0.488	0.459
190	3.909	2.182	1.745	1.392	1.215	1.145	1.085	1.017	0.973	0.893	0.625	0.506	0.459
195	3.950	2.236	1.782	1.427	1.242	1.169	1.107	1.037	0.992	0.910	0.647	0.525	0.459
200	3.991	2.289	1.819	1.463	1.277	1.193	1.129	1.057	1.010	0.927	0.668	0.543	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table I2: I/H Sections - 4 Sided Columns
Fire Resistance Period: 60 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	4.032	2.343	1.856	1.498	1.317	1.218	1.152	1.077	1.029	0.945	0.689	0.561	0.459
210	4.074	2.396	1.893	1.534	1.356	1.242	1.174	1.097	1.048	0.962	0.710	0.579	0.459
215	4.115	2.450	1.930	1.569	1.395	1.279	1.196	1.117	1.067	0.980	0.732	0.597	0.459
220	4.156	2.503	1.967	1.605	1.434	1.321	1.219	1.137	1.085	0.997	0.753	0.615	0.472
225	4.197	2.557	2.004	1.640	1.473	1.363	1.241	1.157	1.104	1.014	0.774	0.634	0.488
230	4.238	2.610	2.053	1.676	1.512	1.405	1.277	1.177	1.123	1.032	0.795	0.652	0.503
235	4.280	2.663	2.104	1.711	1.552	1.447	1.323	1.197	1.142	1.049	0.817	0.670	0.518
240	4.321	2.717	2.154	1.747	1.591	1.489	1.370	1.217	1.160	1.066	0.838	0.688	0.533
245	4.362	2.770	2.205	1.783	1.630	1.531	1.416	1.237	1.179	1.084	0.859	0.706	0.548
250	4.403	2.824	2.256	1.818	1.669	1.574	1.462	1.268	1.198	1.101	0.880	0.724	0.564
255	4.444	2.877	2.306	1.854	1.708	1.616	1.508	1.324	1.217	1.119	0.901	0.743	0.579
260	4.486	2.931	2.357	1.889	1.748	1.658	1.554	1.379	1.235	1.136	0.923	0.761	0.594
265	4.527	2.984	2.408	1.925	1.787	1.700	1.600	1.434	1.263	1.153	0.944	0.779	0.609
270	4.568	3.037	2.458	1.960	1.826	1.742	1.646	1.489	1.320	1.171	0.965	0.797	0.624
275	4.609	3.091	2.509	1.996	1.865	1.784	1.692	1.545	1.378	1.188	0.986	0.815	0.640
280	4.650	3.144	2.559	2.043	1.904	1.826	1.738	1.600	1.435	1.205	1.008	0.833	0.655
285	4.692	3.198	2.610	2.096	1.943	1.868	1.784	1.655	1.492	1.223	1.029	0.852	0.670
290	4.733	3.251	2.661	2.149	1.983	1.911	1.831	1.710	1.549	1.240	1.050	0.870	0.685
295	4.774	3.305	2.711	2.202	2.026	1.953	1.877	1.765	1.607	1.273	1.071	0.888	0.700
300	4.815	3.358	2.762	2.255	2.078	1.995	1.923	1.821	1.664	1.326	1.093	0.906	0.715
305	4.856	3.412	2.812	2.308	2.130	2.043	1.969	1.876	1.721	1.379	1.114	0.924	0.731
310	4.898	3.465	2.863	2.361	2.183	2.095	2.016	1.931	1.778	1.431	1.135	0.942	0.746
315	4.939	3.518	2.914	2.414	2.235	2.146	2.066	1.986	1.836	1.484	1.156	0.961	0.761
320	4.980	3.585	2.964	2.467	2.287	2.198	2.117	2.038	1.893	1.537	1.178	0.979	0.776
325	5.021	3.655	3.015	2.520	2.339	2.249	2.168	2.088	1.950	1.590	1.199	0.997	0.791
330	5.062	3.726	3.065	2.573	2.391	2.300	2.219	2.138	2.007	1.643	1.220	1.015	0.807
335	5.104	3.797	3.116	2.626	2.443	2.352	2.270	2.187	2.057	1.695	1.241	1.033	0.822
340	5.145	3.868	3.167	2.680	2.495	2.403	2.321	2.237	2.107	1.748	1.278	1.051	0.837
345	5.186	3.938	3.217	2.733	2.548	2.455	2.372	2.287	2.156	1.801	1.325	1.070	0.852
350	5.227	4.009	3.268	2.786	2.600	2.506	2.423	2.337	2.206	1.854	1.372	1.088	0.867

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 1B: I/H Sections - 4 Sided Columns
Fire Resistance Period: 75 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	3.178	2.322	0.977	0.772	0.710	0.680	0.655	0.570	0.554	0.459	0.459	0.459	0.459
60	3.178	2.322	1.037	0.815	0.750	0.719	0.693	0.609	0.590	0.542	0.490	0.459	0.459
65	3.178	2.322	1.098	0.858	0.790	0.758	0.730	0.648	0.625	0.569	0.509	0.459	0.459
70	3.178	2.322	1.159	0.902	0.830	0.796	0.768	0.687	0.661	0.597	0.528	0.459	0.459
75	3.178	2.322	1.220	0.945	0.871	0.835	0.805	0.726	0.697	0.624	0.547	0.462	0.459
80	3.476	2.322	1.274	0.988	0.911	0.874	0.842	0.765	0.733	0.652	0.566	0.479	0.459
85	3.534	2.322	1.321	1.031	0.951	0.913	0.880	0.804	0.769	0.679	0.585	0.496	0.459
90	3.593	2.507	1.368	1.075	0.991	0.951	0.917	0.843	0.805	0.707	0.603	0.514	0.459
95	3.651	2.563	1.415	1.118	1.032	0.990	0.955	0.882	0.841	0.735	0.622	0.531	0.459
100	3.710	2.618	1.462	1.161	1.072	1.029	0.992	0.921	0.876	0.762	0.641	0.549	0.459
105	3.769	2.674	1.509	1.204	1.112	1.068	1.029	0.960	0.912	0.790	0.660	0.566	0.459
110	3.827	2.729	1.556	1.248	1.152	1.106	1.067	0.999	0.948	0.817	0.679	0.584	0.459
115	3.886	2.785	1.603	1.289	1.193	1.145	1.104	1.038	0.984	0.845	0.698	0.601	0.459
120	3.944	2.840	1.650	1.330	1.233	1.184	1.142	1.077	1.020	0.872	0.717	0.618	0.459
125	4.003	2.896	1.697	1.371	1.272	1.223	1.179	1.116	1.056	0.900	0.736	0.636	0.459
130	4.061	2.951	1.744	1.412	1.311	1.261	1.216	1.155	1.091	0.927	0.754	0.653	0.459
135	4.120	3.007	1.791	1.453	1.350	1.299	1.254	1.194	1.127	0.955	0.773	0.671	0.459
140	4.178	3.062	1.838	1.494	1.388	1.336	1.291	1.233	1.163	0.982	0.792	0.688	0.459
145	4.237	3.118	1.886	1.535	1.427	1.374	1.327	1.271	1.199	1.010	0.811	0.705	0.459
150	4.295	3.173	1.933	1.576	1.466	1.412	1.364	1.307	1.235	1.037	0.830	0.723	0.459
155	4.354	3.229	1.980	1.617	1.504	1.449	1.401	1.344	1.270	1.065	0.849	0.740	0.459
160	4.412	3.284	2.034	1.658	1.543	1.487	1.438	1.380	1.306	1.092	0.868	0.758	0.460
165	4.471	3.340	2.099	1.699	1.582	1.525	1.474	1.416	1.341	1.120	0.887	0.775	0.480
170	4.530	3.395	2.165	1.740	1.620	1.562	1.511	1.453	1.376	1.147	0.905	0.793	0.500
175	4.588	3.451	2.230	1.781	1.659	1.600	1.548	1.489	1.411	1.175	0.924	0.810	0.521
180	4.647	3.506	2.296	1.822	1.698	1.637	1.585	1.525	1.446	1.202	0.943	0.827	0.541
185	4.705	3.557	2.361	1.863	1.736	1.675	1.621	1.562	1.482	1.230	0.962	0.845	0.561
190	4.764	3.605	2.427	1.903	1.775	1.713	1.658	1.598	1.517	1.261	0.981	0.862	0.582
195	4.822	3.652	2.492	1.944	1.814	1.750	1.695	1.634	1.552	1.300	1.000	0.880	0.602
200	4.881	3.699	2.558	1.985	1.852	1.788	1.732	1.671	1.587	1.339	1.019	0.897	0.622

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table IB: I/H Sections - 4 Sided Columns
Fire Resistance Period: 75 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	4.939	3.747	2.623	2.034	1.891	1.826	1.768	1.707	1.622	1.378	1.037	0.914	0.643
210	4.998	3.794	2.689	2.093	1.930	1.863	1.805	1.744	1.658	1.417	1.056	0.932	0.663
215	5.056	3.842	2.754	2.151	1.968	1.901	1.842	1.780	1.693	1.456	1.075	0.949	0.683
220	5.115	3.889	2.820	2.210	2.007	1.939	1.879	1.816	1.728	1.495	1.094	0.967	0.703
225	5.173	3.936	2.885	2.269	2.066	1.976	1.915	1.853	1.763	1.535	1.113	0.984	0.724
230	5.232	3.984	2.950	2.327	2.126	2.018	1.952	1.889	1.799	1.574	1.132	1.002	0.744
235	-	4.031	3.016	2.386	2.186	2.078	1.989	1.925	1.834	1.613	1.151	1.019	0.764
240	-	4.078	3.081	2.444	2.246	2.139	2.037	1.962	1.869	1.652	1.170	1.036	0.785
245	-	4.126	3.147	2.503	2.306	2.199	2.098	1.998	1.904	1.691	1.188	1.054	0.805
250	-	4.173	3.212	2.562	2.366	2.260	2.159	2.052	1.939	1.730	1.207	1.071	0.825
255	-	4.221	3.278	2.620	2.426	2.320	2.221	2.114	1.975	1.769	1.226	1.089	0.846
260	-	4.268	3.343	2.679	2.485	2.381	2.282	2.175	2.011	1.809	1.245	1.106	0.866
265	-	4.315	3.409	2.737	2.545	2.441	2.343	2.236	2.074	1.848	1.295	1.123	0.886
270	-	4.363	3.474	2.796	2.605	2.502	2.404	2.298	2.137	1.887	1.356	1.141	0.907
275	-	4.410	3.541	2.855	2.665	2.562	2.465	2.359	2.200	1.926	1.416	1.158	0.927
280	-	4.457	3.614	2.913	2.725	2.623	2.526	2.420	2.263	1.965	1.477	1.176	0.947
285	-	4.505	3.686	2.972	2.785	2.683	2.587	2.482	2.326	2.004	1.538	1.193	0.967
290	-	4.552	3.759	3.030	2.845	2.744	2.648	2.543	2.389	2.062	1.599	1.211	0.988
295	-	4.600	3.832	3.089	2.905	2.804	2.710	2.604	2.451	2.123	1.659	1.228	1.008
300	-	4.647	3.905	3.147	2.965	2.865	2.771	2.666	2.514	2.183	1.720	1.245	1.028
305	-	4.694	3.977	3.206	3.024	2.925	2.832	2.727	2.577	2.243	1.781	1.290	1.049
310	-	4.742	4.050	3.265	3.084	2.986	2.893	2.788	2.640	2.304	1.842	1.345	1.069
315	-	4.789	4.123	3.323	3.144	3.046	2.954	2.850	2.703	2.364	1.903	1.400	1.089
320	-	4.836	4.196	3.382	3.204	3.107	3.015	2.911	2.766	2.424	1.963	1.455	1.110
325	-	4.884	4.269	3.440	3.264	3.167	3.076	2.972	2.829	2.485	2.023	1.509	1.130
330	-	4.931	4.341	3.499	3.324	3.228	3.137	3.034	2.892	2.545	2.079	1.564	1.150
335	-	4.979	4.414	3.577	3.384	3.288	3.199	3.095	2.955	2.605	2.135	1.619	1.171
340	-	5.026	4.487	3.678	3.444	3.349	3.260	3.156	3.018	2.665	2.192	1.674	1.191
345	-	5.073	4.560	3.780	3.504	3.409	3.321	3.218	3.081	2.726	2.248	1.728	1.211
350	-	5.121	4.633	3.882	3.588	3.470	3.382	3.279	3.143	2.786	2.304	1.783	1.231

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table I4: I/H Sections - 4 Sided Columns
Fire Resistance Period: 90 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	-	3.123	2.356	1.040	0.966	0.931	0.901	0.867	0.826	0.722	0.557	0.459	0.459
60	-	3.123	2.356	1.099	1.016	0.977	0.943	0.908	0.866	0.759	0.591	0.519	0.459
65	-	3.123	2.356	1.159	1.066	1.022	0.985	0.949	0.906	0.796	0.624	0.542	0.468
70	-	3.123	2.356	1.219	1.116	1.067	1.027	0.990	0.947	0.833	0.657	0.565	0.486
75	-	3.123	2.356	1.299	1.166	1.112	1.069	1.031	0.987	0.870	0.691	0.588	0.503
80	-	3.123	2.356	1.401	1.216	1.158	1.111	1.072	1.027	0.907	0.724	0.611	0.521
85	-	3.123	2.356	1.503	1.264	1.203	1.153	1.113	1.068	0.944	0.758	0.635	0.539
90	-	3.372	2.538	1.605	1.309	1.248	1.195	1.154	1.108	0.981	0.791	0.658	0.557
95	-	3.468	2.600	1.707	1.353	1.293	1.236	1.195	1.149	1.018	0.824	0.681	0.575
100	-	3.548	2.662	1.809	1.398	1.338	1.281	1.236	1.189	1.055	0.858	0.704	0.593
105	-	3.598	2.724	1.911	1.443	1.383	1.326	1.280	1.229	1.092	0.891	0.727	0.611
110	-	3.649	2.786	2.011	1.487	1.428	1.371	1.324	1.271	1.129	0.925	0.750	0.629
115	-	3.699	2.848	2.075	1.532	1.472	1.416	1.368	1.313	1.166	0.958	0.773	0.647
120	-	3.750	2.910	2.140	1.577	1.517	1.462	1.413	1.356	1.203	0.991	0.796	0.665
125	-	3.800	2.972	2.204	1.621	1.562	1.507	1.457	1.398	1.240	1.025	0.819	0.683
130	-	3.851	3.034	2.268	1.666	1.607	1.552	1.502	1.441	1.279	1.058	0.842	0.701
135	-	3.901	3.096	2.332	1.710	1.652	1.597	1.546	1.483	1.317	1.091	0.865	0.719
140	-	3.951	3.158	2.397	1.755	1.697	1.643	1.590	1.526	1.356	1.125	0.888	0.737
145	-	4.002	3.220	2.461	1.800	1.741	1.688	1.635	1.569	1.395	1.158	0.912	0.755
150	-	4.052	3.282	2.525	1.844	1.786	1.733	1.679	1.611	1.433	1.192	0.935	0.773
155	-	4.103	3.344	2.590	1.889	1.831	1.778	1.723	1.654	1.472	1.225	0.958	0.791
160	-	4.153	3.406	2.654	1.934	1.876	1.824	1.768	1.696	1.511	1.259	0.981	0.809
165	-	4.203	3.468	2.718	1.978	1.921	1.869	1.812	1.739	1.549	1.295	1.004	0.827
170	-	4.254	3.530	2.782	2.036	1.966	1.914	1.856	1.781	1.588	1.331	1.027	0.845
175	-	4.304	3.587	2.847	2.122	2.012	1.959	1.901	1.824	1.627	1.367	1.050	0.863
180	-	4.355	3.644	2.911	2.208	2.094	2.005	1.945	1.867	1.665	1.403	1.073	0.881
185	-	4.405	3.700	2.975	2.294	2.175	2.080	1.989	1.909	1.704	1.439	1.096	0.899
190	-	4.455	3.757	3.039	2.379	2.257	2.158	2.051	1.952	1.743	1.475	1.119	0.917
195	-	4.506	3.813	3.104	2.465	2.339	2.236	2.124	1.994	1.781	1.510	1.142	0.935
200	-	4.556	3.870	3.168	2.551	2.420	2.314	2.198	2.055	1.820	1.546	1.165	0.953

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table I4: I/H Sections - 4 Sided Columns
Fire Resistance Period: 90 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	-	4.607	3.926	3.232	2.637	2.502	2.392	2.271	2.124	1.859	1.582	1.189	0.971
210	-	4.657	3.983	3.296	2.723	2.583	2.469	2.345	2.194	1.897	1.618	1.212	0.989
215	-	4.708	4.040	3.361	2.809	2.665	2.547	2.418	2.263	1.936	1.654	1.235	1.007
220	-	4.758	4.096	3.425	2.894	2.747	2.625	2.492	2.332	1.975	1.690	1.266	1.025
225	-	4.808	4.153	3.489	2.980	2.828	2.703	2.565	2.402	2.017	1.726	1.312	1.043
230	-	4.859	4.209	3.555	3.066	2.910	2.781	2.639	2.471	2.084	1.762	1.359	1.061
235	-	4.909	4.266	3.622	3.152	2.991	2.859	2.713	2.540	2.151	1.798	1.406	1.079
240	-	4.960	4.323	3.689	3.238	3.073	2.937	2.786	2.610	2.218	1.834	1.452	1.097
245	-	5.010	4.379	3.757	3.324	3.155	3.015	2.860	2.679	2.284	1.870	1.499	1.115
250	-	5.060	4.436	3.824	3.409	3.236	3.093	2.933	2.749	2.351	1.906	1.545	1.133
255	-	5.111	4.492	3.892	3.495	3.318	3.171	3.007	2.818	2.418	1.941	1.592	1.151
260	-	5.161	4.549	3.959	3.579	3.399	3.249	3.080	2.887	2.485	1.977	1.639	1.169
265	-	-	4.605	4.027	3.662	3.481	3.327	3.154	2.957	2.551	2.018	1.685	1.187
270	-	-	4.662	4.094	3.745	3.565	3.405	3.228	3.026	2.618	2.087	1.732	1.205
275	-	-	4.719	4.161	3.827	3.654	3.483	3.301	3.096	2.685	2.156	1.778	1.223
280	-	-	4.775	4.229	3.910	3.743	3.567	3.375	3.165	2.752	2.225	1.825	1.241
285	-	-	4.832	4.296	3.993	3.833	3.663	3.448	3.234	2.819	2.294	1.872	1.280
290	-	-	4.888	4.364	4.075	3.922	3.759	3.522	3.304	2.885	2.362	1.918	1.340
295	-	-	4.945	4.431	4.158	4.011	3.855	3.623	3.373	2.952	2.431	1.965	1.401
300	-	-	5.001	4.499	4.241	4.100	3.951	3.729	3.443	3.019	2.500	2.012	1.461
305	-	-	5.058	4.566	4.323	4.189	4.047	3.835	3.512	3.086	2.569	2.076	1.521
310	-	-	5.115	4.634	4.406	4.278	4.143	3.941	3.620	3.153	2.638	2.140	1.582
315	-	-	5.171	4.701	4.488	4.367	4.239	4.047	3.744	3.219	2.707	2.204	1.642
320	-	-	5.228	4.768	4.571	4.456	4.335	4.153	3.867	3.286	2.776	2.268	1.702
325	-	-	-	4.836	4.654	4.545	4.431	4.259	3.990	3.353	2.845	2.332	1.763
330	-	-	-	4.903	4.736	4.634	4.526	4.364	4.114	3.420	2.914	2.396	1.823
335	-	-	-	4.971	4.819	4.723	4.622	4.470	4.237	3.487	2.983	2.460	1.883
340	-	-	-	5.038	4.902	4.812	4.718	4.576	4.361	3.582	3.052	2.524	1.944
345	-	-	-	5.106	4.984	4.901	4.814	4.682	4.484	3.735	3.121	2.588	2.004
350	-	-	-	5.173	5.067	4.990	4.910	4.788	4.607	3.889	3.189	2.652	2.062

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 15: I/H Sections - 4 Sided Columns
Fire Resistance Period: IO5 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	-	4.366	3.098	2.430	1.219	1.178	1.141	1.101	1.055	0.938	0.787	0.642	0.459
60	-	4.366	3.098	2.430	1.306	1.246	1.206	1.160	1.109	0.978	0.825	0.676	0.537
65	-	4.366	3.098	2.430	1.403	1.337	1.277	1.220	1.163	1.018	0.862	0.710	0.563
70	-	4.366	3.098	2.430	1.499	1.429	1.366	1.291	1.217	1.058	0.900	0.744	0.589
75	-	4.366	3.098	2.430	1.595	1.521	1.454	1.375	1.283	1.098	0.938	0.778	0.615
80	-	4.366	3.098	2.430	1.692	1.613	1.542	1.460	1.371	1.138	0.975	0.812	0.641
85	-	4.366	3.098	2.430	1.788	1.705	1.631	1.544	1.458	1.178	1.013	0.847	0.667
90	-	4.366	3.336	2.607	1.885	1.797	1.719	1.628	1.546	1.218	1.050	0.881	0.693
95	-	4.366	3.440	2.680	1.981	1.889	1.807	1.712	1.633	1.259	1.088	0.915	0.719
100	-	4.366	3.538	2.753	2.078	1.982	1.896	1.796	1.721	1.304	1.126	0.949	0.745
105	-	4.366	3.599	2.825	2.174	2.074	1.984	1.880	1.808	1.350	1.163	0.983	0.771
110	-	4.366	3.659	2.898	2.271	2.166	2.073	1.964	1.896	1.395	1.201	1.017	0.797
115	-	4.366	3.720	2.971	2.367	2.258	2.161	2.048	1.983	1.440	1.238	1.052	0.823
120	-	4.366	3.781	3.044	2.464	2.350	2.249	2.132	2.062	1.485	1.278	1.086	0.849
125	-	4.366	3.841	3.116	2.560	2.442	2.338	2.216	2.138	1.530	1.319	1.120	0.875
130	-	4.366	3.902	3.189	2.657	2.534	2.426	2.300	2.214	1.575	1.359	1.154	0.901
135	-	4.366	3.962	3.262	2.753	2.626	2.514	2.384	2.290	1.621	1.400	1.188	0.927
140	-	4.366	4.023	3.335	2.850	2.718	2.603	2.469	2.365	1.666	1.441	1.222	0.953
145	-	4.744	4.083	3.407	2.946	2.810	2.691	2.553	2.441	1.711	1.481	1.257	0.979
150	-	4.787	4.144	3.480	3.043	2.902	2.779	2.637	2.517	1.756	1.522	1.293	1.005
155	-	4.830	4.204	3.552	3.139	2.994	2.868	2.721	2.593	1.801	1.562	1.329	1.031
160	-	4.873	4.265	3.621	3.236	3.086	2.956	2.805	2.668	1.846	1.603	1.365	1.057
165	-	4.916	4.325	3.690	3.332	3.179	3.044	2.889	2.744	1.892	1.644	1.401	1.083
170	-	4.959	4.386	3.760	3.429	3.271	3.133	2.973	2.820	1.937	1.684	1.437	1.109
175	-	5.002	4.446	3.829	3.525	3.363	3.221	3.057	2.895	1.982	1.725	1.473	1.135
180	-	5.045	4.507	3.898	3.602	3.455	3.309	3.141	2.971	2.047	1.765	1.509	1.161
185	-	5.087	4.567	3.968	3.677	3.544	3.398	3.225	3.047	2.139	1.806	1.545	1.187
190	-	-	4.628	4.037	3.753	3.621	3.486	3.309	3.123	2.231	1.847	1.581	1.213
195	-	-	4.688	4.106	3.828	3.698	3.570	3.393	3.198	2.324	1.887	1.617	1.239
200	-	-	4.749	4.176	3.904	3.775	3.648	3.478	3.274	2.416	1.928	1.653	1.274

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table I5: I/H Sections - 4 Sided Columns
Fire Resistance Period: IO5 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	-	-	4.810	4.245	3.979	3.852	3.727	3.560	3.350	2.509	1.969	1.689	1.317
210	-	-	4.870	4.314	4.055	3.929	3.806	3.641	3.426	2.601	2.010	1.725	1.359
215	-	-	4.931	4.384	4.130	4.006	3.884	3.722	3.501	2.693	2.084	1.761	1.401
220	-	-	4.991	4.453	4.206	4.083	3.963	3.803	3.583	2.786	2.158	1.797	1.443
225	-	-	5.052	4.522	4.281	4.160	4.041	3.884	3.668	2.878	2.233	1.833	1.485
230	-	-	5.112	4.592	4.357	4.237	4.120	3.965	3.753	2.970	2.307	1.869	1.527
235	-	-	5.173	4.661	4.432	4.314	4.199	4.045	3.838	3.063	2.381	1.905	1.570
240	-	-	5.233	4.730	4.508	4.391	4.277	4.126	3.923	3.155	2.456	1.941	1.612
245	-	-	-	4.800	4.583	4.468	4.356	4.207	4.008	3.247	2.530	1.977	1.654
250	-	-	-	4.869	4.659	4.545	4.434	4.288	4.093	3.340	2.604	2.019	1.696
255	-	-	-	4.938	4.734	4.622	4.513	4.369	4.178	3.432	2.678	2.093	1.738
260	-	-	-	5.008	4.810	4.699	4.592	4.450	4.263	3.524	2.753	2.168	1.780
265	-	-	-	5.077	4.885	4.776	4.670	4.530	4.348	3.631	2.827	2.242	1.823
270	-	-	-	5.146	4.961	4.853	4.749	4.611	4.434	3.738	2.901	2.317	1.865
275	-	-	-	5.215	5.036	4.930	4.827	4.692	4.519	3.845	2.976	2.391	1.907
280	-	-	-	5.285	5.112	5.007	4.906	4.773	4.604	3.952	3.050	2.466	1.949
285	-	-	-	5.354	5.187	5.084	4.985	4.854	4.689	4.060	3.124	2.540	1.991
290	-	-	-	-	5.263	5.161	5.063	4.935	4.774	4.167	3.199	2.615	2.050
295	-	-	-	-	5.338	5.238	5.142	5.016	4.859	4.274	3.273	2.689	2.119
300	-	-	-	-	-	5.315	5.220	5.096	4.944	4.381	3.347	2.764	2.189
305	-	-	-	-	-	-	5.299	5.177	5.029	4.489	3.421	2.838	2.258
310	-	-	-	-	-	-	5.378	5.258	5.114	4.596	3.496	2.912	2.328
315	-	-	-	-	-	-	-	5.339	5.199	4.703	3.624	2.987	2.397
320	-	-	-	-	-	-	-	-	5.284	4.811	3.804	3.061	2.467
325	-	-	-	-	-	-	-	-	-	4.918	3.983	3.136	2.536
330	-	-	-	-	-	-	-	-	-	5.025	4.162	3.210	2.606
335	-	-	-	-	-	-	-	-	-	5.132	4.342	3.285	2.675
340	-	-	-	-	-	-	-	-	-	5.240	4.521	3.359	2.744
345	-	-	-	-	-	-	-	-	-	5.347	4.700	3.434	2.814
350	-	-	-	-	-	-	-	-	-	-	4.880	3.508	2.883

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table IG: I/H Sections - 4 Sided Columns
Fire Resistance Period: 120 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.148	0.983	0.819	0.663
60	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.207	1.025	0.857	0.698
65	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.276	1.067	0.896	0.732
70	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.367	1.109	0.934	0.767
75	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.458	1.151	0.973	0.801
80	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.549	1.193	1.011	0.836
85	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.640	1.235	1.050	0.870
90	-	-	4.344	3.334	3.037	2.903	2.784	2.650	2.480	1.731	1.279	1.088	0.905
95	-	-	4.344	3.449	3.139	2.999	2.874	2.734	2.558	1.822	1.323	1.127	0.939
100	-	-	4.344	3.551	3.240	3.094	2.965	2.818	2.636	1.912	1.367	1.165	0.974
105	-	-	4.344	3.622	3.341	3.190	3.055	2.902	2.713	2.003	1.411	1.204	1.008
110	-	-	4.344	3.692	3.443	3.285	3.146	2.986	2.791	2.094	1.456	1.242	1.043
115	-	-	4.344	3.762	3.541	3.381	3.236	3.070	2.869	2.185	1.500	1.283	1.077
120	-	-	4.344	3.833	3.614	3.476	3.326	3.154	2.946	2.276	1.544	1.324	1.112
125	-	-	4.344	3.903	3.687	3.563	3.417	3.238	3.024	2.367	1.588	1.366	1.146
130	-	-	4.344	3.974	3.760	3.639	3.507	3.323	3.101	2.458	1.633	1.407	1.180
135	-	-	4.344	4.044	3.834	3.714	3.588	3.407	3.179	2.549	1.677	1.449	1.215
140	-	-	4.344	4.114	3.907	3.789	3.666	3.491	3.257	2.640	1.721	1.490	1.249
145	-	-	4.728	4.185	3.980	3.864	3.744	3.573	3.334	2.731	1.765	1.531	1.293
150	-	-	4.774	4.255	4.053	3.940	3.821	3.655	3.412	2.821	1.810	1.573	1.336
155	-	-	4.821	4.326	4.127	4.015	3.899	3.737	3.489	2.912	1.854	1.614	1.379
160	-	-	4.868	4.396	4.200	4.090	3.977	3.818	3.572	3.003	1.898	1.656	1.422
165	-	-	4.915	4.466	4.273	4.165	4.054	3.900	3.661	3.094	1.942	1.697	1.466
170	-	-	4.962	4.537	4.347	4.241	4.132	3.981	3.750	3.185	1.987	1.739	1.509
175	-	-	5.009	4.607	4.420	4.316	4.210	4.063	3.839	3.276	2.068	1.780	1.552
180	-	-	5.056	4.678	4.493	4.391	4.288	4.145	3.928	3.367	2.185	1.821	1.596
185	-	-	5.103	4.748	4.566	4.466	4.365	4.226	4.017	3.458	2.302	1.863	1.639
190	-	-	-	4.818	4.640	4.542	4.443	4.308	4.106	3.550	2.419	1.904	1.682
195	-	-	-	4.889	4.713	4.617	4.521	4.389	4.195	3.648	2.536	1.946	1.726
200	-	-	-	4.959	4.786	4.692	4.598	4.471	4.284	3.747	2.653	1.987	1.769

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table IG: I/H Sections - 4 Sided Columns
Fire Resistance Period: 120 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	-	-	-	5.030	4.860	4.767	4.676	4.553	4.373	3.845	2.770	2.051	1.812
210	-	-	-	5.100	4.933	4.843	4.754	4.634	4.462	3.944	2.888	2.138	1.856
215	-	-	-	5.170	5.006	4.918	4.831	4.716	4.551	4.042	3.005	2.225	1.899
220	-	-	-	5.241	5.079	4.993	4.909	4.797	4.639	4.140	3.122	2.312	1.942
225	-	-	-	-	5.153	5.069	4.987	4.879	4.728	4.239	3.239	2.399	1.986
230	-	-	-	-	5.226	5.144	5.065	4.960	4.817	4.337	3.356	2.486	2.041
235	-	-	-	-	5.299	5.219	5.142	5.042	4.906	4.436	3.473	2.574	2.109
240	-	-	-	-	-	5.294	5.220	5.124	4.995	4.534	3.593	2.661	2.177
245	-	-	-	-	-	-	5.298	5.205	5.084	4.632	3.715	2.748	2.245
250	-	-	-	-	-	-	-	5.287	5.173	4.731	3.838	2.835	2.313
255	-	-	-	-	-	-	-	-	5.262	4.829	3.961	2.922	2.382
260	-	-	-	-	-	-	-	-	5.351	4.928	4.084	3.009	2.450
265	-	-	-	-	-	-	-	-	-	5.026	4.207	3.096	2.518
270	-	-	-	-	-	-	-	-	-	5.125	4.330	3.184	2.586
275	-	-	-	-	-	-	-	-	-	5.223	4.452	3.271	2.654
280	-	-	-	-	-	-	-	-	-	5.321	4.575	3.358	2.723
285	-	-	-	-	-	-	-	-	-	-	4.698	3.445	2.791
290	-	-	-	-	-	-	-	-	-	-	4.821	3.533	2.859
295	-	-	-	-	-	-	-	-	-	-	4.944	3.706	2.927
300	-	-	-	-	-	-	-	-	-	-	5.066	3.880	2.995
305	-	-	-	-	-	-	-	-	-	-	5.189	4.053	3.064
310	-	-	-	-	-	-	-	-	-	-	-	4.226	3.132
315	-	-	-	-	-	-	-	-	-	-	-	4.400	3.200
320	-	-	-	-	-	-	-	-	-	-	-	4.573	3.268
325	-	-	-	-	-	-	-	-	-	-	-	4.746	3.336
330	-	-	-	-	-	-	-	-	-	-	-	4.920	3.405
335	-	-	-	-	-	-	-	-	-	-	-	5.093	3.473
340	-	-	-	-	-	-	-	-	-	-	-	5.266	3.567
345	-	-	-	-	-	-	-	-	-	-	-	-	3.827
350	-	-	-	-	-	-	-	-	-	-	-	-	4.087

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Loading Tables

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Table I7: I/H Sections - 4 Sided Beams
Fire Resistance Period: 15 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
60	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
65	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
70	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
75	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
80	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
85	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
90	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
95	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
100	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
105	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
110	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
115	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
120	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
125	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
130	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
135	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
140	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
145	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
150	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
155	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
160	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
165	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
170	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
175	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
180	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
185	0.464	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
190	0.481	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
195	0.498	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
200	0.515	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459

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Smart Protection

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Fire Resistance Period: 15 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	0.532	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
210	0.549	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
215	0.566	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
220	0.583	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
225	0.600	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
230	0.618	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
235	0.635	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
240	0.652	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
245	0.669	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
250	0.686	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
255	0.703	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
260	0.720	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
265	0.737	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
270	0.754	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
275	0.771	0.461	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
280	0.788	0.472	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
285	0.805	0.483	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
290	0.823	0.494	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
295	0.840	0.505	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
300	0.857	0.515	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
305	0.874	0.526	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
310	0.891	0.537	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
315	0.908	0.548	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
320	0.925	0.559	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
325	0.942	0.569	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
330	0.959	0.580	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
335	0.976	0.591	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
340	0.993	0.602	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
345	1.010	0.613	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
350	1.028	0.623	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 18: I/H Sections - 4 Sided Beams
Fire Resistance Period: 30 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
60	0.494	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
65	0.533	0.473	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
70	0.572	0.489	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
75	0.610	0.505	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
80	0.649	0.522	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
85	0.688	0.538	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
90	0.727	0.554	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
95	0.765	0.570	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
100	0.804	0.587	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
105	0.843	0.603	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
110	0.881	0.619	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
115	0.920	0.636	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
120	0.959	0.652	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
125	0.997	0.668	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
130	1.036	0.684	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
135	1.075	0.701	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
140	1.114	0.717	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
145	1.152	0.733	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
150	1.191	0.749	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
155	1.230	0.766	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
160	1.268	0.782	0.464	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
165	1.307	0.798	0.482	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
170	1.345	0.814	0.500	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
175	1.384	0.831	0.517	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
180	1.423	0.847	0.535	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
185	1.461	0.863	0.553	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
190	1.500	0.880	0.571	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
195	1.538	0.896	0.589	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
200	1.577	0.912	0.606	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 18: I/H Sections - 4 Sided Beams
Fire Resistance Period: 30 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	1.615	0.928	0.624	0.473	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
210	1.654	0.945	0.642	0.489	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
215	1.693	0.961	0.660	0.504	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
220	1.731	0.977	0.678	0.519	0.466	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
225	1.770	0.993	0.696	0.534	0.481	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
230	1.808	1.010	0.713	0.550	0.495	0.469	0.459	0.459	0.459	0.459	0.459	0.459	0.459
235	1.847	1.026	0.731	0.565	0.509	0.483	0.462	0.459	0.459	0.459	0.459	0.459	0.459
240	1.885	1.042	0.749	0.580	0.524	0.497	0.475	0.459	0.459	0.459	0.459	0.459	0.459
245	1.924	1.058	0.767	0.595	0.538	0.511	0.488	0.463	0.459	0.459	0.459	0.459	0.459
250	1.963	1.075	0.785	0.611	0.552	0.524	0.502	0.476	0.459	0.459	0.459	0.459	0.459
255	2.001	1.091	0.802	0.626	0.566	0.538	0.515	0.489	0.459	0.459	0.459	0.459	0.459
260	2.039	1.107	0.820	0.641	0.581	0.552	0.529	0.502	0.470	0.459	0.459	0.459	0.459
265	2.077	1.124	0.838	0.656	0.595	0.566	0.542	0.515	0.483	0.459	0.459	0.459	0.459
270	2.115	1.140	0.856	0.672	0.609	0.580	0.556	0.528	0.495	0.459	0.459	0.459	0.459
275	2.153	1.156	0.874	0.687	0.624	0.594	0.569	0.541	0.508	0.459	0.459	0.459	0.459
280	2.191	1.172	0.892	0.702	0.638	0.608	0.583	0.554	0.520	0.459	0.459	0.459	0.459
285	2.229	1.189	0.909	0.717	0.652	0.622	0.596	0.567	0.532	0.459	0.459	0.459	0.459
290	2.267	1.205	0.927	0.733	0.667	0.635	0.610	0.580	0.545	0.459	0.459	0.459	0.459
295	2.305	1.221	0.945	0.748	0.681	0.649	0.623	0.593	0.557	0.463	0.459	0.459	0.459
300	2.342	1.237	0.963	0.763	0.695	0.663	0.637	0.606	0.569	0.474	0.459	0.459	0.459
305	2.380	1.259	0.981	0.778	0.710	0.677	0.650	0.619	0.582	0.485	0.459	0.459	0.459
310	2.418	1.298	0.999	0.794	0.724	0.691	0.663	0.632	0.594	0.495	0.459	0.459	0.459
315	2.456	1.337	1.016	0.809	0.738	0.705	0.677	0.645	0.607	0.506	0.459	0.459	0.459
320	2.494	1.375	1.034	0.824	0.753	0.719	0.690	0.658	0.619	0.517	0.459	0.459	0.459
325	2.532	1.414	1.052	0.840	0.767	0.733	0.704	0.671	0.631	0.528	0.459	0.459	0.459
330	2.570	1.453	1.070	0.855	0.781	0.746	0.717	0.683	0.644	0.539	0.459	0.459	0.459
335	2.608	1.492	1.088	0.870	0.795	0.760	0.731	0.696	0.656	0.550	0.459	0.459	0.459
340	2.646	1.531	1.105	0.885	0.810	0.774	0.744	0.709	0.668	0.561	0.459	0.459	0.459
345	2.684	1.570	1.123	0.901	0.824	0.788	0.758	0.722	0.681	0.572	0.459	0.459	0.459
350	2.722	1.609	1.141	0.916	0.838	0.802	0.771	0.735	0.693	0.582	0.459	0.459	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table I9: I/H Sections - 4 Sided Beams
Fire Resistance Period: 45 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	0.855	0.514	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
60	0.929	0.556	0.494	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
65	1.004	0.597	0.516	0.466	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
70	1.078	0.639	0.538	0.483	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
75	1.153	0.680	0.559	0.500	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
80	1.227	0.722	0.581	0.517	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
85	1.285	0.764	0.603	0.534	0.472	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
90	1.336	0.805	0.625	0.551	0.489	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
95	1.386	0.847	0.647	0.568	0.506	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
100	1.437	0.888	0.669	0.585	0.523	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
105	1.487	0.930	0.691	0.602	0.540	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
110	1.538	0.972	0.713	0.619	0.557	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
115	1.588	1.013	0.735	0.636	0.574	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
120	1.639	1.055	0.756	0.653	0.590	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
125	1.689	1.096	0.778	0.670	0.607	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
130	1.740	1.138	0.800	0.687	0.624	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
135	1.791	1.180	0.822	0.704	0.641	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
140	1.841	1.221	0.844	0.721	0.658	0.474	0.459	0.459	0.459	0.459	0.459	0.459	0.459
145	1.892	1.260	0.866	0.738	0.675	0.495	0.462	0.459	0.459	0.459	0.459	0.459	0.459
150	1.942	1.291	0.888	0.755	0.691	0.515	0.483	0.459	0.459	0.459	0.459	0.459	0.459
155	1.993	1.323	0.910	0.772	0.708	0.536	0.503	0.478	0.459	0.459	0.459	0.459	0.459
160	2.049	1.355	0.932	0.789	0.725	0.557	0.524	0.498	0.469	0.459	0.459	0.459	0.459
165	2.109	1.386	0.954	0.806	0.742	0.578	0.545	0.518	0.488	0.459	0.459	0.459	0.459
170	2.168	1.418	0.975	0.823	0.759	0.599	0.565	0.538	0.508	0.459	0.459	0.459	0.459
175	2.228	1.450	0.997	0.840	0.776	0.620	0.586	0.559	0.527	0.459	0.459	0.459	0.459
180	2.287	1.482	1.019	0.857	0.793	0.641	0.607	0.579	0.546	0.462	0.459	0.459	0.459
185	2.346	1.513	1.041	0.874	0.809	0.662	0.627	0.599	0.566	0.479	0.459	0.459	0.459
190	2.406	1.545	1.063	0.891	0.826	0.682	0.648	0.619	0.585	0.497	0.459	0.459	0.459
195	2.465	1.577	1.085	0.908	0.843	0.703	0.669	0.639	0.604	0.514	0.459	0.459	0.459
200	2.525	1.608	1.107	0.925	0.860	0.724	0.690	0.659	0.624	0.532	0.459	0.459	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table I9: I/H Sections - 4 Sided Beams
Fire Resistance Period: 45 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	2.584	1.640	1.129	0.942	0.877	0.745	0.710	0.679	0.643	0.549	0.459	0.459	0.459
210	2.643	1.672	1.151	0.959	0.894	0.766	0.731	0.699	0.662	0.567	0.459	0.459	0.459
215	2.703	1.703	1.173	0.976	0.910	0.787	0.752	0.719	0.682	0.584	0.465	0.459	0.459
220	2.762	1.735	1.194	0.993	0.927	0.808	0.772	0.739	0.701	0.602	0.480	0.459	0.459
225	2.822	1.767	1.216	1.010	0.944	0.828	0.793	0.759	0.720	0.619	0.495	0.459	0.459
230	2.881	1.798	1.238	1.027	0.961	0.849	0.814	0.779	0.740	0.637	0.510	0.459	0.459
235	2.940	1.830	1.271	1.044	0.978	0.870	0.834	0.800	0.759	0.654	0.526	0.459	0.459
240	3.000	1.862	1.315	1.061	0.995	0.891	0.855	0.820	0.779	0.672	0.541	0.459	0.459
245	3.059	1.893	1.360	1.078	1.012	0.912	0.876	0.840	0.798	0.689	0.556	0.459	0.459
250	3.119	1.925	1.404	1.095	1.028	0.933	0.897	0.860	0.817	0.707	0.571	0.459	0.459
255	3.178	1.957	1.449	1.112	1.045	0.954	0.917	0.880	0.837	0.724	0.586	0.459	0.459
260	3.237	1.988	1.493	1.129	1.062	0.974	0.938	0.900	0.856	0.742	0.601	0.469	0.459
265	3.297	2.025	1.538	1.146	1.079	0.995	0.959	0.920	0.875	0.759	0.616	0.481	0.459
270	3.356	2.071	1.582	1.163	1.096	1.016	0.979	0.940	0.895	0.777	0.631	0.494	0.459
275	3.416	2.117	1.627	1.180	1.113	1.037	1.000	0.960	0.914	0.794	0.646	0.507	0.459
280	3.475	2.163	1.672	1.197	1.129	1.058	1.021	0.980	0.933	0.812	0.662	0.519	0.459
285	3.534	2.209	1.716	1.214	1.146	1.079	1.041	1.000	0.953	0.830	0.677	0.532	0.459
290	3.584	2.255	1.761	1.231	1.163	1.100	1.062	1.021	0.972	0.847	0.692	0.544	0.459
295	3.634	2.301	1.805	1.248	1.180	1.121	1.083	1.041	0.992	0.865	0.707	0.557	0.459
300	3.683	2.347	1.850	1.292	1.197	1.141	1.104	1.061	1.011	0.882	0.722	0.569	0.459
305	3.733	2.393	1.894	1.339	1.214	1.162	1.124	1.081	1.030	0.900	0.737	0.582	0.459
310	3.783	2.439	1.939	1.387	1.231	1.183	1.145	1.101	1.050	0.917	0.752	0.594	0.459
315	3.833	2.485	1.983	1.434	1.247	1.204	1.166	1.121	1.069	0.935	0.767	0.607	0.459
320	3.883	2.531	2.026	1.482	1.288	1.225	1.186	1.141	1.088	0.952	0.783	0.619	0.459
325	3.933	2.577	2.066	1.529	1.334	1.246	1.207	1.161	1.108	0.970	0.798	0.632	0.459
330	3.983	2.623	2.106	1.577	1.380	1.285	1.228	1.181	1.127	0.987	0.813	0.644	0.463
335	4.032	2.669	2.147	1.624	1.425	1.330	1.248	1.201	1.146	1.005	0.828	0.657	0.473
340	4.082	2.714	2.187	1.671	1.471	1.375	1.290	1.221	1.166	1.022	0.843	0.669	0.483
345	4.132	2.760	2.227	1.719	1.516	1.419	1.334	1.241	1.185	1.040	0.858	0.682	0.493
350	4.182	2.806	2.267	1.766	1.562	1.464	1.378	1.275	1.205	1.057	0.873	0.694	0.503

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 20: I/H Sections - 4 Sided Beams
Fire Resistance Period: 60 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	2.470	0.903	0.660	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
60	2.470	0.967	0.703	0.542	0.521	0.511	0.504	0.497	0.485	0.459	0.459	0.459	0.459
65	2.470	1.032	0.747	0.575	0.548	0.536	0.527	0.517	0.504	0.459	0.459	0.459	0.459
70	2.470	1.096	0.790	0.607	0.574	0.560	0.549	0.537	0.522	0.476	0.459	0.459	0.459
75	2.470	1.161	0.833	0.639	0.601	0.585	0.571	0.557	0.541	0.493	0.459	0.459	0.459
80	2.470	1.225	0.877	0.671	0.628	0.609	0.594	0.577	0.560	0.510	0.459	0.459	0.459
85	2.470	1.275	0.920	0.703	0.654	0.633	0.616	0.597	0.579	0.528	0.459	0.459	0.459
90	2.641	1.317	0.964	0.735	0.681	0.658	0.638	0.617	0.598	0.545	0.459	0.459	0.459
95	2.723	1.358	1.007	0.767	0.708	0.682	0.660	0.637	0.616	0.563	0.459	0.459	0.459
100	2.805	1.399	1.051	0.800	0.735	0.706	0.683	0.657	0.635	0.580	0.459	0.459	0.459
105	2.887	1.441	1.094	0.832	0.761	0.731	0.705	0.677	0.654	0.597	0.459	0.459	0.459
110	2.970	1.482	1.137	0.864	0.788	0.755	0.727	0.697	0.673	0.615	0.459	0.459	0.459
115	3.052	1.523	1.181	0.896	0.815	0.779	0.750	0.717	0.691	0.632	0.459	0.459	0.459
120	3.134	1.565	1.224	0.928	0.841	0.804	0.772	0.737	0.710	0.649	0.459	0.459	0.459
125	3.216	1.606	1.265	0.960	0.868	0.828	0.794	0.757	0.729	0.667	0.459	0.459	0.459
130	3.298	1.647	1.302	0.992	0.895	0.852	0.817	0.777	0.748	0.684	0.459	0.459	0.459
135	3.380	1.689	1.339	1.024	0.921	0.877	0.839	0.797	0.766	0.702	0.459	0.459	0.459
140	3.462	1.730	1.376	1.057	0.948	0.901	0.861	0.817	0.785	0.719	0.459	0.459	0.459
145	3.538	1.771	1.413	1.089	0.975	0.926	0.884	0.837	0.804	0.736	0.459	0.459	0.459
150	3.579	1.812	1.450	1.121	1.002	0.950	0.906	0.857	0.823	0.754	0.459	0.459	0.459
155	3.620	1.854	1.487	1.153	1.028	0.974	0.928	0.877	0.841	0.771	0.477	0.459	0.459
160	3.661	1.895	1.524	1.185	1.055	0.999	0.951	0.897	0.860	0.788	0.498	0.459	0.459
165	3.703	1.936	1.561	1.217	1.082	1.023	0.973	0.917	0.879	0.806	0.519	0.459	0.459
170	3.744	1.978	1.598	1.249	1.108	1.047	0.995	0.937	0.898	0.823	0.540	0.459	0.459
175	3.785	2.022	1.635	1.285	1.135	1.072	1.018	0.957	0.917	0.841	0.562	0.459	0.459
180	3.826	2.076	1.672	1.320	1.162	1.096	1.040	0.977	0.935	0.858	0.583	0.470	0.459
185	3.867	2.129	1.709	1.356	1.189	1.120	1.062	0.997	0.954	0.875	0.604	0.488	0.459
190	3.909	2.182	1.745	1.392	1.215	1.145	1.085	1.017	0.973	0.893	0.625	0.506	0.459
195	3.950	2.236	1.782	1.427	1.242	1.169	1.107	1.037	0.992	0.910	0.647	0.525	0.459
200	3.991	2.289	1.819	1.463	1.277	1.193	1.129	1.057	1.010	0.927	0.668	0.543	0.459

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 20: I/H Sections - 4 Sided Beams
Fire Resistance Period: 60 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	4.032	2.343	1.856	1.498	1.317	1.218	1.152	1.077	1.029	0.945	0.689	0.561	0.459
210	4.074	2.396	1.893	1.534	1.356	1.242	1.174	1.097	1.048	0.962	0.710	0.579	0.459
215	4.115	2.450	1.930	1.569	1.395	1.279	1.196	1.117	1.067	0.980	0.732	0.597	0.459
220	4.156	2.503	1.967	1.605	1.434	1.321	1.219	1.137	1.085	0.997	0.753	0.615	0.472
225	4.197	2.557	2.004	1.640	1.473	1.363	1.241	1.157	1.104	1.014	0.774	0.634	0.488
230	4.238	2.610	2.053	1.676	1.512	1.405	1.277	1.177	1.123	1.032	0.795	0.652	0.503
235	4.280	2.663	2.104	1.711	1.552	1.447	1.323	1.197	1.142	1.049	0.817	0.670	0.518
240	4.321	2.717	2.154	1.747	1.591	1.489	1.370	1.217	1.160	1.066	0.838	0.688	0.533
245	4.362	2.770	2.205	1.783	1.630	1.531	1.416	1.237	1.179	1.084	0.859	0.706	0.548
250	4.403	2.824	2.256	1.818	1.669	1.574	1.462	1.268	1.198	1.101	0.880	0.724	0.564
255	4.444	2.877	2.306	1.854	1.708	1.616	1.508	1.324	1.217	1.119	0.901	0.743	0.579
260	4.486	2.931	2.357	1.889	1.748	1.658	1.554	1.379	1.235	1.136	0.923	0.761	0.594
265	4.527	2.984	2.408	1.925	1.787	1.700	1.600	1.434	1.263	1.153	0.944	0.779	0.609
270	4.568	3.037	2.458	1.960	1.826	1.742	1.646	1.489	1.320	1.171	0.965	0.797	0.624
275	4.609	3.091	2.509	1.996	1.865	1.784	1.692	1.545	1.378	1.188	0.986	0.815	0.640
280	4.650	3.144	2.559	2.043	1.904	1.826	1.738	1.600	1.435	1.205	1.008	0.833	0.655
285	4.692	3.198	2.610	2.096	1.943	1.868	1.784	1.655	1.492	1.223	1.029	0.852	0.670
290	4.733	3.251	2.661	2.149	1.983	1.911	1.831	1.710	1.549	1.240	1.050	0.870	0.685
295	4.774	3.305	2.711	2.202	2.026	1.953	1.877	1.765	1.607	1.273	1.071	0.888	0.700
300	4.815	3.358	2.762	2.255	2.078	1.995	1.923	1.821	1.664	1.326	1.093	0.906	0.715
305	4.856	3.412	2.812	2.308	2.130	2.043	1.969	1.876	1.721	1.379	1.114	0.924	0.731
310	4.898	3.465	2.863	2.361	2.183	2.095	2.016	1.931	1.778	1.431	1.135	0.942	0.746
315	4.939	3.518	2.914	2.414	2.235	2.146	2.066	1.986	1.836	1.484	1.156	0.961	0.761
320	4.980	3.585	2.964	2.467	2.287	2.198	2.117	2.038	1.893	1.537	1.178	0.979	0.776
325	5.021	3.655	3.015	2.520	2.339	2.249	2.168	2.088	1.950	1.590	1.199	0.997	0.791
330	5.062	3.726	3.065	2.573	2.391	2.300	2.219	2.138	2.007	1.643	1.220	1.015	0.807
335	5.104	3.797	3.116	2.626	2.443	2.352	2.270	2.187	2.057	1.695	1.241	1.033	0.822
340	5.145	3.868	3.167	2.680	2.495	2.403	2.321	2.237	2.107	1.748	1.278	1.051	0.837
345	5.186	3.938	3.217	2.733	2.548	2.455	2.372	2.287	2.156	1.801	1.325	1.070	0.852
350	5.227	4.009	3.268	2.786	2.600	2.506	2.423	2.337	2.206	1.854	1.372	1.088	0.867

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 21: I/H Sections - 4 Sided Beams
Fire Resistance Period: 75 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	3.178	2.322	0.977	0.772	0.710	0.680	0.655	0.570	0.554	0.459	0.459	0.459	0.459
60	3.178	2.322	1.037	0.815	0.750	0.719	0.693	0.609	0.590	0.542	0.490	0.459	0.459
65	3.178	2.322	1.098	0.858	0.790	0.758	0.730	0.648	0.625	0.569	0.509	0.459	0.459
70	3.178	2.322	1.159	0.902	0.830	0.796	0.768	0.687	0.661	0.597	0.528	0.459	0.459
75	3.178	2.322	1.220	0.945	0.871	0.835	0.805	0.726	0.697	0.624	0.547	0.462	0.459
80	3.476	2.322	1.274	0.988	0.911	0.874	0.842	0.765	0.733	0.652	0.566	0.479	0.459
85	3.534	2.322	1.321	1.031	0.951	0.913	0.880	0.804	0.769	0.679	0.585	0.496	0.459
90	3.593	2.507	1.368	1.075	0.991	0.951	0.917	0.843	0.805	0.707	0.603	0.514	0.459
95	3.651	2.563	1.415	1.118	1.032	0.990	0.955	0.882	0.841	0.735	0.622	0.531	0.459
100	3.710	2.618	1.462	1.161	1.072	1.029	0.992	0.921	0.876	0.762	0.641	0.549	0.459
105	3.769	2.674	1.509	1.204	1.112	1.068	1.029	0.960	0.912	0.790	0.660	0.566	0.459
110	3.827	2.729	1.556	1.248	1.152	1.106	1.067	0.999	0.948	0.817	0.679	0.584	0.459
115	3.886	2.785	1.603	1.289	1.193	1.145	1.104	1.038	0.984	0.845	0.698	0.601	0.459
120	3.944	2.840	1.650	1.330	1.233	1.184	1.142	1.077	1.020	0.872	0.717	0.618	0.459
125	4.003	2.896	1.697	1.371	1.272	1.223	1.179	1.116	1.056	0.900	0.736	0.636	0.459
130	4.061	2.951	1.744	1.412	1.311	1.261	1.216	1.155	1.091	0.927	0.754	0.653	0.459
135	4.120	3.007	1.791	1.453	1.350	1.299	1.254	1.194	1.127	0.955	0.773	0.671	0.459
140	4.178	3.062	1.838	1.494	1.388	1.336	1.291	1.233	1.163	0.982	0.792	0.688	0.459
145	4.237	3.118	1.886	1.535	1.427	1.374	1.327	1.271	1.199	1.010	0.811	0.705	0.459
150	4.295	3.173	1.933	1.576	1.466	1.412	1.364	1.307	1.235	1.037	0.830	0.723	0.459
155	4.354	3.229	1.980	1.617	1.504	1.449	1.401	1.344	1.270	1.065	0.849	0.740	0.459
160	4.412	3.284	2.034	1.658	1.543	1.487	1.438	1.380	1.306	1.092	0.868	0.758	0.460
165	4.471	3.340	2.099	1.699	1.582	1.525	1.474	1.416	1.341	1.120	0.887	0.775	0.480
170	4.530	3.395	2.165	1.740	1.620	1.562	1.511	1.453	1.376	1.147	0.905	0.793	0.500
175	4.588	3.451	2.230	1.781	1.659	1.600	1.548	1.489	1.411	1.175	0.924	0.810	0.521
180	4.647	3.506	2.296	1.822	1.698	1.637	1.585	1.525	1.446	1.202	0.943	0.827	0.541
185	4.705	3.557	2.361	1.863	1.736	1.675	1.621	1.562	1.482	1.230	0.962	0.845	0.561
190	4.764	3.605	2.427	1.903	1.775	1.713	1.658	1.598	1.517	1.261	0.981	0.862	0.582
195	4.822	3.652	2.492	1.944	1.814	1.750	1.695	1.634	1.552	1.300	1.000	0.880	0.602
200	4.881	3.699	2.558	1.985	1.852	1.788	1.732	1.671	1.587	1.339	1.019	0.897	0.622

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 2I: I/H Sections - 4 Sided Beams
Fire Resistance Period: 75 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	4.939	3.747	2.623	2.034	1.891	1.826	1.768	1.707	1.622	1.378	1.037	0.914	0.643
210	4.998	3.794	2.689	2.093	1.930	1.863	1.805	1.744	1.658	1.417	1.056	0.932	0.663
215	5.056	3.842	2.754	2.151	1.968	1.901	1.842	1.780	1.693	1.456	1.075	0.949	0.683
220	5.115	3.889	2.820	2.210	2.007	1.939	1.879	1.816	1.728	1.495	1.094	0.967	0.703
225	5.173	3.936	2.885	2.269	2.066	1.976	1.915	1.853	1.763	1.535	1.113	0.984	0.724
230	5.232	3.984	2.950	2.327	2.126	2.018	1.952	1.889	1.799	1.574	1.132	1.002	0.744
235	-	4.031	3.016	2.386	2.186	2.078	1.989	1.925	1.834	1.613	1.151	1.019	0.764
240	-	4.078	3.081	2.444	2.246	2.139	2.037	1.962	1.869	1.652	1.170	1.036	0.785
245	-	4.126	3.147	2.503	2.306	2.199	2.098	1.998	1.904	1.691	1.188	1.054	0.805
250	-	4.173	3.212	2.562	2.366	2.260	2.159	2.052	1.939	1.730	1.207	1.071	0.825
255	-	4.221	3.278	2.620	2.426	2.320	2.221	2.114	1.975	1.769	1.226	1.089	0.846
260	-	4.268	3.343	2.679	2.485	2.381	2.282	2.175	2.011	1.809	1.245	1.106	0.866
265	-	4.315	3.409	2.737	2.545	2.441	2.343	2.236	2.074	1.848	1.295	1.123	0.886
270	-	4.363	3.474	2.796	2.605	2.502	2.404	2.298	2.137	1.887	1.356	1.141	0.907
275	-	4.410	3.541	2.855	2.665	2.562	2.465	2.359	2.200	1.926	1.416	1.158	0.927
280	-	4.457	3.614	2.913	2.725	2.623	2.526	2.420	2.263	1.965	1.477	1.176	0.947
285	-	4.505	3.686	2.972	2.785	2.683	2.587	2.482	2.326	2.004	1.538	1.193	0.967
290	-	4.552	3.759	3.030	2.845	2.744	2.648	2.543	2.389	2.062	1.599	1.211	0.988
295	-	4.600	3.832	3.089	2.905	2.804	2.710	2.604	2.451	2.123	1.659	1.228	1.008
300	-	4.647	3.905	3.147	2.965	2.865	2.771	2.666	2.514	2.183	1.720	1.245	1.028
305	-	4.694	3.977	3.206	3.024	2.925	2.832	2.727	2.577	2.243	1.781	1.290	1.049
310	-	4.742	4.050	3.265	3.084	2.986	2.893	2.788	2.640	2.304	1.842	1.345	1.069
315	-	4.789	4.123	3.323	3.144	3.046	2.954	2.850	2.703	2.364	1.903	1.400	1.089
320	-	4.836	4.196	3.382	3.204	3.107	3.015	2.911	2.766	2.424	1.963	1.455	1.110
325	-	4.884	4.269	3.440	3.264	3.167	3.076	2.972	2.829	2.485	2.023	1.509	1.130
330	-	4.931	4.341	3.499	3.324	3.228	3.137	3.034	2.892	2.545	2.079	1.564	1.150
335	-	4.979	4.414	3.577	3.384	3.288	3.199	3.095	2.955	2.605	2.135	1.619	1.171
340	-	5.026	4.487	3.678	3.444	3.349	3.260	3.156	3.018	2.665	2.192	1.674	1.191
345	-	5.073	4.560	3.780	3.504	3.409	3.321	3.218	3.081	2.726	2.248	1.728	1.211
350	-	5.121	4.633	3.882	3.588	3.470	3.382	3.279	3.143	2.786	2.304	1.783	1.231

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 22: I/H Sections - 4 Sided Beams
Fire Resistance Period: 90 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	-	3.123	2.356	1.040	0.966	0.931	0.901	0.867	0.826	0.722	0.557	0.459	0.459
60	-	3.123	2.356	1.099	1.016	0.977	0.943	0.908	0.866	0.759	0.591	0.519	0.459
65	-	3.123	2.356	1.159	1.066	1.022	0.985	0.949	0.906	0.796	0.624	0.542	0.468
70	-	3.123	2.356	1.219	1.116	1.067	1.027	0.990	0.947	0.833	0.657	0.565	0.486
75	-	3.123	2.356	1.299	1.166	1.112	1.069	1.031	0.987	0.870	0.691	0.588	0.503
80	-	3.123	2.356	1.401	1.216	1.158	1.111	1.072	1.027	0.907	0.724	0.611	0.521
85	-	3.123	2.356	1.503	1.264	1.203	1.153	1.113	1.068	0.944	0.758	0.635	0.539
90	-	3.372	2.538	1.605	1.309	1.248	1.195	1.154	1.108	0.981	0.791	0.658	0.557
95	-	3.468	2.600	1.707	1.353	1.293	1.236	1.195	1.149	1.018	0.824	0.681	0.575
100	-	3.548	2.662	1.809	1.398	1.338	1.281	1.236	1.189	1.055	0.858	0.704	0.593
105	-	3.598	2.724	1.911	1.443	1.383	1.326	1.280	1.229	1.092	0.891	0.727	0.611
110	-	3.649	2.786	2.011	1.487	1.428	1.371	1.324	1.271	1.129	0.925	0.750	0.629
115	-	3.699	2.848	2.075	1.532	1.472	1.416	1.368	1.313	1.166	0.958	0.773	0.647
120	-	3.750	2.910	2.140	1.577	1.517	1.462	1.413	1.356	1.203	0.991	0.796	0.665
125	-	3.800	2.972	2.204	1.621	1.562	1.507	1.457	1.398	1.240	1.025	0.819	0.683
130	-	3.851	3.034	2.268	1.666	1.607	1.552	1.502	1.441	1.279	1.058	0.842	0.701
135	-	3.901	3.096	2.332	1.710	1.652	1.597	1.546	1.483	1.317	1.091	0.865	0.719
140	-	3.951	3.158	2.397	1.755	1.697	1.643	1.590	1.526	1.356	1.125	0.888	0.737
145	-	4.002	3.220	2.461	1.800	1.741	1.688	1.635	1.569	1.395	1.158	0.912	0.755
150	-	4.052	3.282	2.525	1.844	1.786	1.733	1.679	1.611	1.433	1.192	0.935	0.773
155	-	4.103	3.344	2.590	1.889	1.831	1.778	1.723	1.654	1.472	1.225	0.958	0.791
160	-	4.153	3.406	2.654	1.934	1.876	1.824	1.768	1.696	1.511	1.259	0.981	0.809
165	-	4.203	3.468	2.718	1.978	1.921	1.869	1.812	1.739	1.549	1.295	1.004	0.827
170	-	4.254	3.530	2.782	2.036	1.966	1.914	1.856	1.781	1.588	1.331	1.027	0.845
175	-	4.304	3.587	2.847	2.122	2.012	1.959	1.901	1.824	1.627	1.367	1.050	0.863
180	-	4.355	3.644	2.911	2.208	2.094	2.005	1.945	1.867	1.665	1.403	1.073	0.881
185	-	4.405	3.700	2.975	2.294	2.175	2.080	1.989	1.909	1.704	1.439	1.096	0.899
190	-	4.455	3.757	3.039	2.379	2.257	2.158	2.051	1.952	1.743	1.475	1.119	0.917
195	-	4.506	3.813	3.104	2.465	2.339	2.236	2.124	1.994	1.781	1.510	1.142	0.935
200	-	4.556	3.870	3.168	2.551	2.420	2.314	2.198	2.055	1.820	1.546	1.165	0.953

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 22: I/H Sections - 4 Sided Beams
Fire Resistance Period: 90 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	-	4.607	3.926	3.232	2.637	2.502	2.392	2.271	2.124	1.859	1.582	1.189	0.971
210	-	4.657	3.983	3.296	2.723	2.583	2.469	2.345	2.194	1.897	1.618	1.212	0.989
215	-	4.708	4.040	3.361	2.809	2.665	2.547	2.418	2.263	1.936	1.654	1.235	1.007
220	-	4.758	4.096	3.425	2.894	2.747	2.625	2.492	2.332	1.975	1.690	1.266	1.025
225	-	4.808	4.153	3.489	2.980	2.828	2.703	2.565	2.402	2.017	1.726	1.312	1.043
230	-	4.859	4.209	3.555	3.066	2.910	2.781	2.639	2.471	2.084	1.762	1.359	1.061
235	-	4.909	4.266	3.622	3.152	2.991	2.859	2.713	2.540	2.151	1.798	1.406	1.079
240	-	4.960	4.323	3.689	3.238	3.073	2.937	2.786	2.610	2.218	1.834	1.452	1.097
245	-	5.010	4.379	3.757	3.324	3.155	3.015	2.860	2.679	2.284	1.870	1.499	1.115
250	-	5.060	4.436	3.824	3.409	3.236	3.093	2.933	2.749	2.351	1.906	1.545	1.133
255	-	5.111	4.492	3.892	3.495	3.318	3.171	3.007	2.818	2.418	1.941	1.592	1.151
260	-	5.161	4.549	3.959	3.579	3.399	3.249	3.080	2.887	2.485	1.977	1.639	1.169
265	-	-	4.605	4.027	3.662	3.481	3.327	3.154	2.957	2.551	2.018	1.685	1.187
270	-	-	4.662	4.094	3.745	3.565	3.405	3.228	3.026	2.618	2.087	1.732	1.205
275	-	-	4.719	4.161	3.827	3.654	3.483	3.301	3.096	2.685	2.156	1.778	1.223
280	-	-	4.775	4.229	3.910	3.743	3.567	3.375	3.165	2.752	2.225	1.825	1.241
285	-	-	4.832	4.296	3.993	3.833	3.663	3.448	3.234	2.819	2.294	1.872	1.280
290	-	-	4.888	4.364	4.075	3.922	3.759	3.522	3.304	2.885	2.362	1.918	1.340
295	-	-	4.945	4.431	4.158	4.011	3.855	3.623	3.373	2.952	2.431	1.965	1.401
300	-	-	5.001	4.499	4.241	4.100	3.951	3.729	3.443	3.019	2.500	2.012	1.461
305	-	-	5.058	4.566	4.323	4.189	4.047	3.835	3.512	3.086	2.569	2.076	1.521
310	-	-	5.115	4.634	4.406	4.278	4.143	3.941	3.620	3.153	2.638	2.140	1.582
315	-	-	5.171	4.701	4.488	4.367	4.239	4.047	3.744	3.219	2.707	2.204	1.642
320	-	-	5.228	4.768	4.571	4.456	4.335	4.153	3.867	3.286	2.776	2.268	1.702
325	-	-	-	4.836	4.654	4.545	4.431	4.259	3.990	3.353	2.845	2.332	1.763
330	-	-	-	4.903	4.736	4.634	4.526	4.364	4.114	3.420	2.914	2.396	1.823
335	-	-	-	4.971	4.819	4.723	4.622	4.470	4.237	3.487	2.983	2.460	1.883
340	-	-	-	5.038	4.902	4.812	4.718	4.576	4.361	3.582	3.052	2.524	1.944
345	-	-	-	5.106	4.984	4.901	4.814	4.682	4.484	3.735	3.121	2.588	2.004
350	-	-	-	5.173	5.067	4.990	4.910	4.788	4.607	3.889	3.189	2.652	2.062

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 23: I/H Sections - 4 Sided Beams
Fire Resistance Period: IO5 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	-	4.366	3.098	2.430	1.219	1.178	1.141	1.101	1.055	0.938	0.787	0.642	0.459
60	-	4.366	3.098	2.430	1.306	1.246	1.206	1.160	1.109	0.978	0.825	0.676	0.537
65	-	4.366	3.098	2.430	1.403	1.337	1.277	1.220	1.163	1.018	0.862	0.710	0.563
70	-	4.366	3.098	2.430	1.499	1.429	1.366	1.291	1.217	1.058	0.900	0.744	0.589
75	-	4.366	3.098	2.430	1.595	1.521	1.454	1.375	1.283	1.098	0.938	0.778	0.615
80	-	4.366	3.098	2.430	1.692	1.613	1.542	1.460	1.371	1.138	0.975	0.812	0.641
85	-	4.366	3.098	2.430	1.788	1.705	1.631	1.544	1.458	1.178	1.013	0.847	0.667
90	-	4.366	3.336	2.607	1.885	1.797	1.719	1.628	1.546	1.218	1.050	0.881	0.693
95	-	4.366	3.440	2.680	1.981	1.889	1.807	1.712	1.633	1.259	1.088	0.915	0.719
100	-	4.366	3.538	2.753	2.078	1.982	1.896	1.796	1.721	1.304	1.126	0.949	0.745
105	-	4.366	3.599	2.825	2.174	2.074	1.984	1.880	1.808	1.350	1.163	0.983	0.771
110	-	4.366	3.659	2.898	2.271	2.166	2.073	1.964	1.896	1.395	1.201	1.017	0.797
115	-	4.366	3.720	2.971	2.367	2.258	2.161	2.048	1.983	1.440	1.238	1.052	0.823
120	-	4.366	3.781	3.044	2.464	2.350	2.249	2.132	2.062	1.485	1.278	1.086	0.849
125	-	4.366	3.841	3.116	2.560	2.442	2.338	2.216	2.138	1.530	1.319	1.120	0.875
130	-	4.366	3.902	3.189	2.657	2.534	2.426	2.300	2.214	1.575	1.359	1.154	0.901
135	-	4.366	3.962	3.262	2.753	2.626	2.514	2.384	2.290	1.621	1.400	1.188	0.927
140	-	4.366	4.023	3.335	2.850	2.718	2.603	2.469	2.365	1.666	1.441	1.222	0.953
145	-	4.744	4.083	3.407	2.946	2.810	2.691	2.553	2.441	1.711	1.481	1.257	0.979
150	-	4.787	4.144	3.480	3.043	2.902	2.779	2.637	2.517	1.756	1.522	1.293	1.005
155	-	4.830	4.204	3.552	3.139	2.994	2.868	2.721	2.593	1.801	1.562	1.329	1.031
160	-	4.873	4.265	3.621	3.236	3.086	2.956	2.805	2.668	1.846	1.603	1.365	1.057
165	-	4.916	4.325	3.690	3.332	3.179	3.044	2.889	2.744	1.892	1.644	1.401	1.083
170	-	4.959	4.386	3.760	3.429	3.271	3.133	2.973	2.820	1.937	1.684	1.437	1.109
175	-	5.002	4.446	3.829	3.525	3.363	3.221	3.057	2.895	1.982	1.725	1.473	1.135
180	-	5.045	4.507	3.898	3.602	3.455	3.309	3.141	2.971	2.047	1.765	1.509	1.161
185	-	5.087	4.567	3.968	3.677	3.544	3.398	3.225	3.047	2.139	1.806	1.545	1.187
190	-	-	4.628	4.037	3.753	3.621	3.486	3.309	3.123	2.231	1.847	1.581	1.213
195	-	-	4.688	4.106	3.828	3.698	3.570	3.393	3.198	2.324	1.887	1.617	1.239
200	-	-	4.749	4.176	3.904	3.775	3.648	3.478	3.274	2.416	1.928	1.653	1.274

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 23: I/H Sections - 4 Sided Beams
Fire Resistance Period: IO5 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	-	-	4.810	4.245	3.979	3.852	3.727	3.560	3.350	2.509	1.969	1.689	1.317
210	-	-	4.870	4.314	4.055	3.929	3.806	3.641	3.426	2.601	2.010	1.725	1.359
215	-	-	4.931	4.384	4.130	4.006	3.884	3.722	3.501	2.693	2.084	1.761	1.401
220	-	-	4.991	4.453	4.206	4.083	3.963	3.803	3.583	2.786	2.158	1.797	1.443
225	-	-	5.052	4.522	4.281	4.160	4.041	3.884	3.668	2.878	2.233	1.833	1.485
230	-	-	5.112	4.592	4.357	4.237	4.120	3.965	3.753	2.970	2.307	1.869	1.527
235	-	-	5.173	4.661	4.432	4.314	4.199	4.045	3.838	3.063	2.381	1.905	1.570
240	-	-	5.233	4.730	4.508	4.391	4.277	4.126	3.923	3.155	2.456	1.941	1.612
245	-	-	-	4.800	4.583	4.468	4.356	4.207	4.008	3.247	2.530	1.977	1.654
250	-	-	-	4.869	4.659	4.545	4.434	4.288	4.093	3.340	2.604	2.019	1.696
255	-	-	-	4.938	4.734	4.622	4.513	4.369	4.178	3.432	2.678	2.093	1.738
260	-	-	-	5.008	4.810	4.699	4.592	4.450	4.263	3.524	2.753	2.168	1.780
265	-	-	-	5.077	4.885	4.776	4.670	4.530	4.348	3.631	2.827	2.242	1.823
270	-	-	-	5.146	4.961	4.853	4.749	4.611	4.434	3.738	2.901	2.317	1.865
275	-	-	-	5.215	5.036	4.930	4.827	4.692	4.519	3.845	2.976	2.391	1.907
280	-	-	-	5.285	5.112	5.007	4.906	4.773	4.604	3.952	3.050	2.466	1.949
285	-	-	-	5.354	5.187	5.084	4.985	4.854	4.689	4.060	3.124	2.540	1.991
290	-	-	-	-	5.263	5.161	5.063	4.935	4.774	4.167	3.199	2.615	2.050
295	-	-	-	-	5.338	5.238	5.142	5.016	4.859	4.274	3.273	2.689	2.119
300	-	-	-	-	-	5.315	5.220	5.096	4.944	4.381	3.347	2.764	2.189
305	-	-	-	-	-	-	5.299	5.177	5.029	4.489	3.421	2.838	2.258
310	-	-	-	-	-	-	5.378	5.258	5.114	4.596	3.496	2.912	2.328
315	-	-	-	-	-	-	-	5.339	5.199	4.703	3.624	2.987	2.397
320	-	-	-	-	-	-	-	-	5.284	4.811	3.804	3.061	2.467
325	-	-	-	-	-	-	-	-	-	4.918	3.983	3.136	2.536
330	-	-	-	-	-	-	-	-	-	5.025	4.162	3.210	2.606
335	-	-	-	-	-	-	-	-	-	5.132	4.342	3.285	2.675
340	-	-	-	-	-	-	-	-	-	5.240	4.521	3.359	2.744
345	-	-	-	-	-	-	-	-	-	5.347	4.700	3.434	2.814
350	-	-	-	-	-	-	-	-	-	-	4.880	3.508	2.883

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 24: I/H Sections - 4 Sided Beams
Fire Resistance Period: 120 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
55	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.148	0.983	0.819	0.663
60	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.207	1.025	0.857	0.698
65	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.276	1.067	0.896	0.732
70	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.367	1.109	0.934	0.767
75	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.458	1.151	0.973	0.801
80	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.549	1.193	1.011	0.836
85	-	-	4.344	3.107	2.836	2.713	2.604	2.480	2.324	1.640	1.235	1.050	0.870
90	-	-	4.344	3.334	3.037	2.903	2.784	2.650	2.480	1.731	1.279	1.088	0.905
95	-	-	4.344	3.449	3.139	2.999	2.874	2.734	2.558	1.822	1.323	1.127	0.939
100	-	-	4.344	3.551	3.240	3.094	2.965	2.818	2.636	1.912	1.367	1.165	0.974
105	-	-	4.344	3.622	3.341	3.190	3.055	2.902	2.713	2.003	1.411	1.204	1.008
110	-	-	4.344	3.692	3.443	3.285	3.146	2.986	2.791	2.094	1.456	1.242	1.043
115	-	-	4.344	3.762	3.541	3.381	3.236	3.070	2.869	2.185	1.500	1.283	1.077
120	-	-	4.344	3.833	3.614	3.476	3.326	3.154	2.946	2.276	1.544	1.324	1.112
125	-	-	4.344	3.903	3.687	3.563	3.417	3.238	3.024	2.367	1.588	1.366	1.146
130	-	-	4.344	3.974	3.760	3.639	3.507	3.323	3.101	2.458	1.633	1.407	1.180
135	-	-	4.344	4.044	3.834	3.714	3.588	3.407	3.179	2.549	1.677	1.449	1.215
140	-	-	4.344	4.114	3.907	3.789	3.666	3.491	3.257	2.640	1.721	1.490	1.249
145	-	-	4.728	4.185	3.980	3.864	3.744	3.573	3.334	2.731	1.765	1.531	1.293
150	-	-	4.774	4.255	4.053	3.940	3.821	3.655	3.412	2.821	1.810	1.573	1.336
155	-	-	4.821	4.326	4.127	4.015	3.899	3.737	3.489	2.912	1.854	1.614	1.379
160	-	-	4.868	4.396	4.200	4.090	3.977	3.818	3.572	3.003	1.898	1.656	1.422
165	-	-	4.915	4.466	4.273	4.165	4.054	3.900	3.661	3.094	1.942	1.697	1.466
170	-	-	4.962	4.537	4.347	4.241	4.132	3.981	3.750	3.185	1.987	1.739	1.509
175	-	-	5.009	4.607	4.420	4.316	4.210	4.063	3.839	3.276	2.068	1.780	1.552
180	-	-	5.056	4.678	4.493	4.391	4.288	4.145	3.928	3.367	2.185	1.821	1.596
185	-	-	5.103	4.748	4.566	4.466	4.365	4.226	4.017	3.458	2.302	1.863	1.639
190	-	-	-	4.818	4.640	4.542	4.443	4.308	4.106	3.550	2.419	1.904	1.682
195	-	-	-	4.889	4.713	4.617	4.521	4.389	4.195	3.648	2.536	1.946	1.726
200	-	-	-	4.959	4.786	4.692	4.598	4.471	4.284	3.747	2.653	1.987	1.769

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 24: I/H Sections - 4 Sided Beams
Fire Resistance Period: 120 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	520°C	530°C	539°C	550°C	563°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
205	-	-	-	5.030	4.860	4.767	4.676	4.553	4.373	3.845	2.770	2.051	1.812
210	-	-	-	5.100	4.933	4.843	4.754	4.634	4.462	3.944	2.888	2.138	1.856
215	-	-	-	5.170	5.006	4.918	4.831	4.716	4.551	4.042	3.005	2.225	1.899
220	-	-	-	5.241	5.079	4.993	4.909	4.797	4.639	4.140	3.122	2.312	1.942
225	-	-	-	-	5.153	5.069	4.987	4.879	4.728	4.239	3.239	2.399	1.986
230	-	-	-	-	5.226	5.144	5.065	4.960	4.817	4.337	3.356	2.486	2.041
235	-	-	-	-	5.299	5.219	5.142	5.042	4.906	4.436	3.473	2.574	2.109
240	-	-	-	-	-	5.294	5.220	5.124	4.995	4.534	3.593	2.661	2.177
245	-	-	-	-	-	-	5.298	5.205	5.084	4.632	3.715	2.748	2.245
250	-	-	-	-	-	-	-	5.287	5.173	4.731	3.838	2.835	2.313
255	-	-	-	-	-	-	-	-	5.262	4.829	3.961	2.922	2.382
260	-	-	-	-	-	-	-	-	5.351	4.928	4.084	3.009	2.450
265	-	-	-	-	-	-	-	-	-	5.026	4.207	3.096	2.518
270	-	-	-	-	-	-	-	-	-	5.125	4.330	3.184	2.586
275	-	-	-	-	-	-	-	-	-	5.223	4.452	3.271	2.654
280	-	-	-	-	-	-	-	-	-	5.321	4.575	3.358	2.723
285	-	-	-	-	-	-	-	-	-	-	4.698	3.445	2.791
290	-	-	-	-	-	-	-	-	-	-	4.821	3.533	2.859
295	-	-	-	-	-	-	-	-	-	-	4.944	3.706	2.927
300	-	-	-	-	-	-	-	-	-	-	5.066	3.880	2.995
305	-	-	-	-	-	-	-	-	-	-	5.189	4.053	3.064
310	-	-	-	-	-	-	-	-	-	-	-	4.226	3.132
315	-	-	-	-	-	-	-	-	-	-	-	4.400	3.200
320	-	-	-	-	-	-	-	-	-	-	-	4.573	3.268
325	-	-	-	-	-	-	-	-	-	-	-	4.746	3.336
330	-	-	-	-	-	-	-	-	-	-	-	4.920	3.405
335	-	-	-	-	-	-	-	-	-	-	-	5.093	3.473
340	-	-	-	-	-	-	-	-	-	-	-	5.266	3.567
345	-	-	-	-	-	-	-	-	-	-	-	-	3.827
350	-	-	-	-	-	-	-	-	-	-	-	-	4.087

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 25: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 15 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
55	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
60	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
65	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
70	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
75	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
80	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
85	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
90	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
95	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
100	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
105	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
110	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
115	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
120	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
125	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
130	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
135	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
140	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
145	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
150	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
155	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
160	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
165	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
170	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
175	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
180	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
185	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
190	0.953	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
195	1.077	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
200	1.200	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
205	1.323	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
210	1.446	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
215	1.570	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
220	1.693	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
225	1.816	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 25: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 15 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
230	1.939	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
235	2.063	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
240	2.186	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
245	2.309	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
250	2.432	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
255	2.556	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
260	2.679	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
265	2.802	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
270	2.926	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
275	3.045	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
280	3.057	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
285	3.069	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
290	3.082	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
295	3.094	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
300	3.106	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
305	3.119	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
310	3.131	0.992	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
315	3.143	1.126	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
320	3.155	1.260	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
325	3.168	1.393	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
330	3.180	1.527	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
335	3.192	1.661	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
340	3.204	1.795	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
345	3.217	1.928	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
350	3.229	2.062	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
355	3.241	2.196	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
360	3.254	2.329	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
365	3.266	2.463	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
370	3.278	2.597	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
375	3.290	2.731	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
380	3.303	2.864	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
385	3.315	2.998	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
390	3.327	3.058	0.870	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
395	3.339	3.078	0.990	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
400	3.352	3.099	1.110	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
405	3.364	3.120	1.229	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Smart Protection

Table 26: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 30 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
55	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
60	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
65	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
70	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
75	0.937	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
80	1.047	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
85	1.158	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
90	1.268	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
95	1.379	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
100	1.489	0.922	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
105	1.600	1.049	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
110	1.710	1.176	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
115	1.821	1.303	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
120	1.931	1.430	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
125	2.042	1.557	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
130	2.152	1.685	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
135	2.756	1.812	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
140	3.066	1.939	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
145	3.096	2.066	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
150	3.126	2.193	0.942	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
155	3.156	2.320	1.087	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
160	3.186	2.447	1.232	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
165	3.216	2.574	1.377	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
170	3.245	2.701	1.522	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
175	3.275	2.828	1.667	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
180	3.305	2.955	1.812	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
185	3.335	3.057	1.957	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
190	3.365	3.101	2.102	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
195	3.395	3.144	2.247	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
200	3.425	3.187	2.392	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
205	3.455	3.231	2.537	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
210	3.485	3.274	2.682	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
215	3.515	3.317	2.827	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
220	3.545	3.360	2.972	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
225	3.575	3.404	3.066	1.066	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 26: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 30 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
230	3.604	3.447	3.111	1.299	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
235	3.634	3.490	3.155	1.532	1.076	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
240	3.664	3.534	3.199	1.765	1.298	1.021	0.983	0.868	0.868	0.868	0.868	0.868	0.868
245	3.694	3.577	3.243	1.997	1.520	1.234	1.195	0.868	0.868	0.868	0.868	0.868	0.868
250	3.724	3.620	3.287	2.230	1.741	1.446	1.407	0.868	0.868	0.868	0.868	0.868	0.868
255	3.754	3.664	3.331	2.463	1.963	1.658	1.619	0.868	0.868	0.868	0.868	0.868	0.868
260	3.784	3.707	3.375	2.696	2.185	1.871	1.831	0.905	0.868	0.868	0.868	0.868	0.868
265	3.814	3.750	3.419	2.929	2.406	2.083	2.042	1.092	0.982	0.868	0.868	0.868	0.868
270	3.844	3.794	3.463	3.067	2.628	2.296	2.254	1.280	1.167	0.868	0.868	0.868	0.868
275	3.874	3.837	3.507	3.113	2.849	2.508	2.466	1.468	1.352	0.868	0.868	0.868	0.868
280	3.904	3.880	3.552	3.159	3.050	2.720	2.678	1.655	1.536	0.868	0.868	0.868	0.868
285	3.934	3.923	3.596	3.204	3.096	2.933	2.890	1.843	1.721	0.868	0.868	0.868	0.868
290	3.967	3.967	3.640	3.250	3.142	3.066	3.057	2.030	1.906	0.868	0.868	0.868	0.868
295	4.010	4.010	3.684	3.296	3.188	3.113	3.103	2.218	2.091	0.868	0.868	0.868	0.868
300	4.066	4.053	3.728	3.341	3.234	3.159	3.149	2.405	2.276	0.868	0.868	0.868	0.868
305	4.159	4.097	3.772	3.387	3.280	3.205	3.195	2.593	2.461	0.868	0.868	0.868	0.868
310	4.253	4.140	3.816	3.432	3.326	3.251	3.242	2.780	2.646	0.868	0.868	0.868	0.868
315	4.346	4.183	3.860	3.478	3.372	3.297	3.288	2.968	2.831	0.959	0.868	0.868	0.868
320	4.440	4.227	3.904	3.524	3.418	3.343	3.334	3.100	3.016	1.113	0.868	0.868	0.868
325	4.533	4.270	3.949	3.569	3.464	3.390	3.380	3.195	3.084	1.267	0.868	0.868	0.868
330	4.627	4.313	3.993	3.615	3.510	3.436	3.426	3.290	3.132	1.421	0.868	0.868	0.868
335	4.720	4.357	4.037	3.660	3.556	3.482	3.472	3.385	3.179	1.576	0.868	0.868	0.868
340	4.814	4.400	4.081	3.706	3.602	3.528	3.518	3.479	3.226	1.730	0.868	0.868	0.868
345	4.907	4.443	4.125	3.752	3.648	3.574	3.574	3.574	3.273	1.884	0.868	0.868	0.868
350	5.001	4.486	4.169	3.797	3.693	3.669	3.669	3.669	3.320	2.039	0.868	0.868	0.868
355	5.094	4.530	4.213	3.843	3.764	3.764	3.764	3.764	3.367	2.193	0.868	0.868	0.868
360	5.179	4.573	4.257	3.889	3.858	3.858	3.858	3.858	3.415	2.347	0.868	0.868	0.868
365	5.263	4.616	4.301	3.953	3.953	3.953	3.953	3.953	3.462	2.501	0.868	0.868	0.868
370	5.348	4.660	4.345	4.048	4.048	4.048	4.048	4.048	3.509	2.656	0.868	0.868	0.868
375	5.432	4.703	4.390	4.143	4.143	4.143	4.143	4.143	3.556	2.810	0.868	0.868	0.868
380	5.517	4.746	4.434	4.237	4.237	4.237	4.237	4.237	3.603	2.964	0.868	0.868	0.868
385	5.601	4.790	4.478	4.332	4.332	4.332	4.332	4.332	3.650	3.067	1.004	0.868	0.868
390	5.686	4.833	4.522	4.427	4.427	4.427	4.427	4.427	3.698	3.114	1.144	0.868	0.868
395	5.770	4.876	4.566	4.521	4.521	4.521	4.521	4.521	3.745	3.161	1.284	0.868	0.868
400	5.855	4.920	4.616	4.616	4.616	4.616	4.616	4.616	3.792	3.208	1.425	0.868	0.868
405	5.939	4.963	4.711	4.711	4.711	4.711	4.711	4.711	3.839	3.255	1.565	0.868	0.868

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 27: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 45 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	1.897	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
55	1.897	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
60	1.897	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
65	2.003	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
70	2.232	1.092	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
75	2.325	1.355	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
80	2.418	1.618	0.888	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
85	2.511	1.881	1.051	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
90	2.604	2.144	1.213	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
95	2.697	2.289	1.376	0.874	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
100	2.790	2.401	1.539	1.015	0.888	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
105	2.883	2.512	1.701	1.156	1.024	0.909	0.899	0.868	0.868	0.868	0.868	0.868	0.868
110	2.976	2.624	1.864	1.297	1.160	1.045	1.034	0.868	0.868	0.868	0.868	0.868	0.868
115	3.063	2.735	2.026	1.437	1.297	1.180	1.168	0.868	0.868	0.868	0.868	0.868	0.868
120	3.131	2.847	2.189	1.578	1.433	1.315	1.303	0.877	0.868	0.868	0.868	0.868	0.868
125	3.199	2.959	2.361	1.719	1.569	1.450	1.438	1.011	0.963	0.868	0.868	0.868	0.868
130	3.267	3.057	2.534	1.860	1.706	1.586	1.573	1.145	1.097	0.868	0.868	0.868	0.868
135	3.335	3.111	2.707	2.001	1.842	1.721	1.708	1.280	1.230	0.868	0.868	0.868	0.868
140	3.403	3.165	2.880	2.141	1.978	1.856	1.843	1.414	1.364	0.868	0.868	0.868	0.868
145	3.471	3.219	3.047	2.282	2.115	1.991	1.978	1.548	1.497	0.868	0.868	0.868	0.868
150	3.539	3.273	3.093	2.423	2.251	2.127	2.113	1.682	1.631	0.868	0.868	0.868	0.868
155	3.607	3.327	3.140	2.564	2.387	2.262	2.248	1.816	1.765	0.868	0.868	0.868	0.868
160	3.676	3.381	3.186	2.705	2.523	2.397	2.383	1.950	1.898	0.868	0.868	0.868	0.868
165	3.744	3.434	3.232	2.846	2.660	2.532	2.518	2.084	2.032	0.901	0.868	0.868	0.868
170	3.812	3.488	3.279	2.986	2.796	2.668	2.652	2.218	2.165	1.052	0.868	0.868	0.868
175	3.880	3.542	3.325	3.086	2.932	2.803	2.787	2.352	2.299	1.203	0.868	0.868	0.868
180	3.948	3.596	3.371	3.157	3.057	2.938	2.922	2.486	2.432	1.354	0.868	0.868	0.868
185	4.024	3.650	3.418	3.228	3.129	3.060	3.051	2.621	2.566	1.505	0.868	0.868	0.868
190	4.133	3.704	3.464	3.299	3.201	3.132	3.123	2.755	2.699	1.657	0.868	0.868	0.868
195	4.243	3.758	3.510	3.370	3.272	3.204	3.196	2.889	2.833	1.808	0.868	0.868	0.868
200	4.352	3.812	3.557	3.441	3.344	3.276	3.268	3.023	2.967	1.959	0.868	0.868	0.868
205	4.461	3.866	3.603	3.512	3.416	3.349	3.340	3.170	3.076	2.110	0.868	0.868	0.868
210	4.571	3.920	3.649	3.583	3.487	3.421	3.412	3.319	3.150	2.261	0.868	0.868	0.868
215	4.680	3.974	3.696	3.654	3.559	3.493	3.484	3.469	3.225	2.412	0.868	0.868	0.868
220	4.790	4.046	3.742	3.724	3.631	3.619	3.619	3.619	3.299	2.563	0.868	0.868	0.868
225	4.899	4.141	3.795	3.795	3.768	3.768	3.768	3.768	3.374	2.714	0.868	0.868	0.868

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 27: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 45 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
230	5.008	4.235	3.918	3.918	3.918	3.918	3.918	3.918	3.448	2.866	1.105	0.868	0.868
235	5.121	4.329	4.067	4.067	4.067	4.067	4.067	4.067	3.523	3.017	1.343	0.868	0.868
240	5.249	4.424	4.217	4.217	4.217	4.217	4.217	4.217	3.597	3.107	1.580	0.868	0.868
245	5.377	4.518	4.366	4.366	4.366	4.366	4.366	4.366	3.672	3.183	1.817	0.868	0.868
250	5.506	4.613	4.516	4.516	4.516	4.516	4.516	4.516	3.747	3.259	2.055	0.868	0.868
255	5.634	4.707	4.666	4.666	4.666	4.666	4.666	4.666	3.821	3.336	2.292	0.868	0.868
260	5.762	4.815	4.815	4.815	4.815	4.815	4.815	4.815	3.896	3.412	2.529	0.868	0.868
265	5.890	4.965	4.965	4.965	4.965	4.965	4.965	4.965	3.970	3.488	2.766	0.868	0.868
270	6.018	5.100	5.100	5.100	5.100	5.100	5.100	5.100	4.045	3.565	3.004	0.966	0.868
275	6.146	5.119	5.119	5.119	5.119	5.119	5.119	5.119	4.119	3.641	3.105	1.149	0.868
280	6.275	5.169	5.139	5.139	5.139	5.139	5.139	5.139	4.194	3.717	3.179	1.333	0.868
285	-	5.253	5.159	5.159	5.159	5.159	5.159	5.159	4.269	3.794	3.252	1.517	0.868
290	-	5.336	5.179	5.179	5.179	5.179	5.179	5.179	4.343	3.870	3.325	1.701	0.868
295	-	5.419	5.198	5.198	5.198	5.198	5.198	5.198	4.418	3.946	3.399	1.885	0.868
300	-	5.503	5.218	5.218	5.218	5.218	5.218	5.218	4.492	4.023	3.472	2.068	0.868
305	-	5.586	5.238	5.238	5.238	5.238	5.238	5.238	4.567	4.099	3.545	2.252	0.868
310	-	5.669	5.258	5.258	5.258	5.258	5.258	5.258	4.641	4.175	3.619	2.436	0.868
315	-	5.753	5.304	5.278	5.278	5.278	5.278	5.278	4.716	4.252	3.692	2.620	0.868
320	-	5.836	5.358	5.297	5.297	5.297	5.297	5.297	4.790	4.328	3.766	2.803	0.868
325	-	5.919	5.413	5.317	5.317	5.317	5.317	5.317	4.865	4.404	3.839	2.987	0.868
330	-	6.002	5.468	5.337	5.337	5.337	5.337	5.337	4.940	4.481	3.912	3.094	0.868
335	-	6.086	5.522	5.357	5.357	5.357	5.357	5.357	5.014	4.557	3.986	3.165	0.868
340	-	6.169	5.577	5.377	5.377	5.377	5.377	5.377	5.089	4.633	4.059	3.236	0.872
345	-	6.252	5.632	5.396	5.396	5.396	5.396	5.396	5.124	4.710	4.132	3.308	0.925
350	-	6.336	5.687	5.416	5.416	5.416	5.416	5.416	5.155	4.786	4.206	3.379	0.978
355	-	6.419	5.741	5.436	5.436	5.436	5.436	5.436	5.186	4.862	4.279	3.450	1.031
360	-	-	5.796	5.456	5.456	5.456	5.456	5.456	5.216	4.939	4.352	3.522	1.084
365	-	-	5.851	5.483	5.475	5.475	5.475	5.475	5.247	5.015	4.426	3.593	1.137
370	-	-	5.905	5.523	5.495	5.495	5.495	5.495	5.278	5.091	4.499	3.664	1.190
375	-	-	5.960	5.563	5.515	5.515	5.515	5.515	5.308	5.119	4.572	3.736	1.243
380	-	-	6.015	5.603	5.535	5.535	5.535	5.535	5.339	5.143	4.646	3.807	1.296
385	-	-	6.070	5.643	5.564	5.555	5.555	5.555	5.370	5.167	4.719	3.878	1.349
390	-	-	6.124	5.683	5.601	5.574	5.574	5.574	5.400	5.191	4.793	3.950	1.403
395	-	-	6.179	5.723	5.639	5.594	5.594	5.594	5.431	5.215	4.866	4.021	1.456
400	-	-	6.234	5.763	5.676	5.624	5.618	5.614	5.462	5.239	4.939	4.092	1.509
405	-	-	6.288	5.802	5.713	5.659	5.654	5.634	5.493	5.263	5.013	4.164	1.562

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 28: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 60 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	2.291	1.982	0.925	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
55	2.430	2.172	0.925	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
60	2.541	2.253	0.925	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
65	2.653	2.334	1.428	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
70	2.764	2.416	2.124	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
75	2.876	2.497	2.280	1.120	0.946	0.868	0.868	0.868	0.868	0.868	0.868	0.868	0.868
80	2.987	2.578	2.367	1.457	1.227	1.112	1.100	0.871	0.868	0.868	0.868	0.868	0.868
85	3.132	2.659	2.454	1.793	1.508	1.360	1.344	1.037	1.016	0.868	0.868	0.868	0.868
90	3.312	2.741	2.541	2.130	1.789	1.607	1.589	1.203	1.174	0.868	0.868	0.868	0.868
95	3.492	2.822	2.628	2.285	2.070	1.855	1.833	1.369	1.332	0.958	0.868	0.868	0.868
100	3.673	2.903	2.715	2.391	2.263	2.103	2.077	1.535	1.491	1.096	0.868	0.868	0.868
105	3.853	2.984	2.802	2.497	2.377	2.276	2.262	1.700	1.649	1.234	0.868	0.868	0.868
110	4.020	3.089	2.890	2.603	2.492	2.398	2.386	1.866	1.807	1.372	0.868	0.868	0.868
115	4.118	3.262	2.977	2.709	2.606	2.521	2.510	2.032	1.965	1.510	0.967	0.868	0.868
120	4.216	3.436	3.063	2.814	2.721	2.643	2.633	2.198	2.124	1.648	1.102	0.868	0.868
125	4.315	3.609	3.146	2.920	2.835	2.766	2.757	2.355	2.284	1.786	1.236	0.868	0.868
130	4.413	3.782	3.229	3.026	2.950	2.888	2.880	2.512	2.447	1.925	1.370	0.868	0.868
135	4.512	3.955	3.312	3.109	3.058	3.011	3.004	2.670	2.609	2.063	1.504	0.868	0.868
140	4.610	4.074	3.395	3.187	3.135	3.100	3.096	2.827	2.772	2.201	1.639	0.868	0.868
145	4.708	4.172	3.478	3.265	3.213	3.177	3.172	2.984	2.934	2.339	1.773	0.868	0.868
150	4.807	4.270	3.561	3.343	3.290	3.254	3.249	3.167	3.070	2.477	1.907	0.891	0.868
155	4.905	4.369	3.644	3.421	3.367	3.367	3.367	3.367	3.149	2.615	2.042	1.034	0.868
160	5.003	4.467	3.727	3.567	3.567	3.567	3.567	3.567	3.229	2.753	2.176	1.177	0.868
165	5.115	4.565	3.809	3.767	3.767	3.767	3.767	3.767	3.308	2.891	2.310	1.320	0.868
170	5.510	4.663	3.967	3.967	3.967	3.967	3.967	3.967	3.387	3.030	2.444	1.462	0.868
175	5.904	4.761	4.167	4.167	4.167	4.167	4.167	4.167	3.467	3.121	2.579	1.605	0.868
180	-	4.859	4.367	4.367	4.367	4.367	4.367	4.367	3.546	3.206	2.713	1.748	0.868
185	-	4.957	4.567	4.567	4.567	4.567	4.567	4.567	3.625	3.291	2.847	1.891	0.868
190	-	5.055	4.767	4.767	4.767	4.767	4.767	4.767	3.705	3.376	2.981	2.033	0.868
195	-	5.144	4.967	4.967	4.967	4.967	4.967	4.967	3.784	3.462	3.099	2.176	0.868
200	-	5.225	5.107	5.107	5.107	5.107	5.107	5.107	3.864	3.547	3.203	2.319	0.868
205	-	5.306	5.134	5.134	5.134	5.134	5.134	5.134	3.943	3.632	3.306	2.462	0.868
210	-	5.387	5.161	5.161	5.161	5.161	5.161	5.161	4.036	3.718	3.409	2.604	0.868
215	-	5.468	5.189	5.189	5.189	5.189	5.189	5.189	4.172	3.803	3.512	2.747	0.868
220	-	5.549	5.216	5.216	5.216	5.216	5.216	5.216	4.308	3.888	3.616	2.890	0.868
225	-	5.630	5.250	5.243	5.243	5.243	5.243	5.243	4.443	3.974	3.719	3.033	0.895

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 28: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 60 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
230	-	5.712	5.316	5.270	5.270	5.270	5.270	5.270	4.579	4.090	3.822	3.139	0.976
235	-	5.793	5.382	5.298	5.298	5.298	5.298	5.298	4.715	4.224	3.926	3.243	1.057
240	-	5.874	5.449	5.325	5.325	5.325	5.325	5.325	4.851	4.357	4.029	3.346	1.137
245	-	5.955	5.515	5.352	5.352	5.352	5.352	5.352	4.987	4.490	4.132	3.449	1.218
250	-	6.036	5.581	5.379	5.379	5.379	5.379	5.379	5.105	4.624	4.236	3.553	1.299
255	-	6.117	5.647	5.407	5.407	5.407	5.407	5.407	5.147	4.757	4.339	3.656	1.379
260	-	6.198	5.713	5.434	5.434	5.434	5.434	5.434	5.189	4.891	4.442	3.759	1.460
265	-	-	5.779	5.461	5.461	5.461	5.461	5.461	5.231	5.024	4.546	3.863	1.541
270	-	-	5.845	5.494	5.488	5.488	5.488	5.488	5.273	5.112	4.649	3.966	1.621
275	-	-	5.911	5.548	5.516	5.516	5.516	5.516	5.315	5.145	4.752	4.069	1.702
280	-	-	5.977	5.602	5.543	5.543	5.543	5.543	5.357	5.179	4.855	4.173	1.783
285	-	-	6.043	5.657	5.581	5.570	5.570	5.570	5.399	5.212	4.959	4.276	1.863
290	-	-	6.109	5.711	5.632	5.597	5.597	5.597	5.441	5.245	5.062	4.379	1.944
295	-	-	6.176	5.765	5.682	5.633	5.628	5.625	5.483	5.278	5.115	4.483	2.025
300	-	-	6.242	5.819	5.733	5.682	5.677	5.652	5.525	5.312	5.142	4.586	2.106
305	-	-	-	5.873	5.784	5.730	5.725	5.679	5.566	5.345	5.169	4.689	2.186
310	-	-	-	5.927	5.834	5.778	5.774	5.706	5.608	5.378	5.196	4.793	2.267
315	-	-	-	5.981	5.885	5.827	5.822	5.734	5.650	5.411	5.223	4.896	2.348
320	-	-	-	6.035	5.935	5.875	5.870	5.761	5.692	5.444	5.250	5.000	2.428
325	-	-	-	6.089	5.986	5.924	5.919	5.788	5.734	5.478	5.277	5.098	2.509
330	-	-	-	6.143	6.036	5.972	5.967	5.815	5.776	5.511	5.304	5.120	2.590
335	-	-	-	6.197	6.087	6.021	6.016	5.843	5.818	5.544	5.331	5.141	2.670
340	-	-	-	-	6.138	6.069	6.064	5.870	5.860	5.577	5.358	5.163	2.751
345	-	-	-	-	6.188	6.117	6.112	5.902	5.902	5.610	5.384	5.184	2.832
350	-	-	-	-	-	6.166	6.161	5.944	5.944	5.644	5.411	5.205	2.912
355	-	-	-	-	-	-	-	5.986	5.986	5.677	5.438	5.227	2.993
360	-	-	-	-	-	-	-	6.028	6.028	5.710	5.465	5.248	3.222
365	-	-	-	-	-	-	-	-	6.070	5.743	5.492	5.270	3.712
370	-	-	-	-	-	-	-	-	6.112	5.777	5.519	5.291	4.201
375	-	-	-	-	-	-	-	-	-	5.810	5.546	5.312	4.691
380	-	-	-	-	-	-	-	-	-	5.843	5.573	5.334	5.100
385	-	-	-	-	-	-	-	-	-	5.876	5.600	5.355	5.118
390	-	-	-	-	-	-	-	-	-	5.909	5.627	5.377	5.137
395	-	-	-	-	-	-	-	-	-	5.943	5.654	5.398	5.155
400	-	-	-	-	-	-	-	-	-	5.976	5.681	5.419	5.173
405	-	-	-	-	-	-	-	-	-	6.009	5.708	5.441	5.191

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



SC901 & SC902 Loading Tables

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**Table 29: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 75 Minutes**

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	2.750	2.435	2.251	1.982	1.982	1.982	1.982	0.925	0.868	0.868	0.868	0.868	0.868
55	2.924	2.647	2.403	2.117	1.982	1.982	1.982	0.925	0.868	0.868	0.868	0.868	0.868
60	3.141	2.762	2.484	2.199	2.152	2.119	2.114	0.925	0.868	0.868	0.868	0.868	0.868
65	3.456	2.878	2.566	2.281	2.234	2.202	2.197	0.925	0.868	0.868	0.868	0.868	0.868
70	3.772	2.993	2.648	2.363	2.317	2.285	2.281	1.652	1.515	0.868	0.868	0.868	0.868
75	4.039	3.150	2.730	2.445	2.400	2.368	2.364	2.239	2.224	0.905	0.868	0.868	0.868
80	4.172	3.340	2.812	2.527	2.482	2.451	2.447	2.325	2.310	1.220	0.868	0.868	0.868
85	4.305	3.530	2.894	2.609	2.565	2.534	2.530	2.411	2.396	1.536	0.974	0.868	0.868
90	4.438	3.720	2.976	2.691	2.648	2.617	2.613	2.497	2.483	1.852	1.087	0.868	0.868
95	4.571	3.910	3.077	2.773	2.730	2.700	2.696	2.583	2.569	2.168	1.200	0.913	0.868
100	4.704	4.076	3.276	2.856	2.813	2.784	2.780	2.669	2.655	2.298	1.312	1.051	0.868
105	4.837	4.218	3.475	2.938	2.896	2.867	2.863	2.755	2.741	2.405	1.425	1.189	0.868
110	4.971	4.360	3.674	3.020	2.978	2.950	2.946	2.841	2.828	2.512	1.538	1.328	0.868
115	5.124	4.502	3.873	3.206	3.087	3.033	3.029	2.927	2.914	2.619	1.651	1.466	0.868
120	5.675	4.644	4.053	3.438	3.300	3.209	3.197	3.013	3.000	2.726	1.764	1.604	0.878
125	6.226	4.786	4.197	3.669	3.512	3.400	3.383	3.133	3.110	2.832	1.877	1.742	0.952
130	-	4.929	4.340	3.901	3.725	3.591	3.570	3.272	3.245	2.939	1.990	1.880	1.026
135	-	5.071	4.484	4.078	3.937	3.782	3.757	3.410	3.381	3.046	2.102	2.019	1.100
140	-	5.233	4.628	4.212	4.096	3.973	3.943	3.549	3.516	3.149	2.252	2.157	1.173
145	-	5.399	4.771	4.346	4.230	4.120	4.099	3.688	3.652	3.252	2.686	2.295	1.247
150	-	5.566	4.915	4.479	4.364	4.260	4.239	3.826	3.787	3.355	3.062	2.433	1.321
155	-	5.732	5.059	4.613	4.498	4.399	4.380	3.965	3.922	3.457	3.159	2.571	1.395
160	-	5.899	5.168	5.109	5.109	5.109	5.109	5.109	4.072	3.560	3.256	2.710	1.469
165	-	6.065	5.265	5.144	5.144	5.144	5.144	5.144	4.242	3.663	3.353	2.848	1.542
170	-	6.231	5.362	5.179	5.179	5.179	5.179	5.179	4.412	3.766	3.450	2.986	1.616
175	-	-	5.459	5.214	5.214	5.214	5.214	5.214	4.583	3.868	3.547	3.102	1.690
180	-	-	5.555	5.250	5.250	5.250	5.250	5.250	4.753	3.971	3.644	3.203	1.764
185	-	-	5.652	5.285	5.285	5.285	5.285	5.285	4.924	4.146	3.741	3.303	1.837
190	-	-	5.749	5.320	5.320	5.320	5.320	5.320	5.094	4.352	3.838	3.404	1.911
195	-	-	5.846	5.355	5.355	5.355	5.355	5.355	5.145	4.559	3.935	3.504	1.985
200	-	-	5.943	5.401	5.390	5.390	5.390	5.390	5.194	4.765	4.060	3.604	2.059
205	-	-	6.040	5.458	5.426	5.426	5.426	5.426	5.243	4.972	4.255	3.705	2.133
210	-	-	6.137	5.514	5.461	5.461	5.461	5.461	5.292	5.114	4.450	3.805	2.206
215	-	-	6.233	5.571	5.508	5.496	5.496	5.496	5.341	5.155	4.646	3.906	2.280
220	-	-	6.330	5.627	5.562	5.531	5.531	5.531	5.390	5.197	4.841	4.009	2.354
225	-	-	-	5.684	5.617	5.575	5.571	5.567	5.439	5.239	5.036	4.203	2.428

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



SC901 & SC902

Loading Tables

Nullifire
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Table 29: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 75 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
230	-	-	-	5.740	5.671	5.629	5.624	5.602	5.488	5.280	5.121	4.398	2.501
235	-	-	-	5.797	5.726	5.682	5.678	5.637	5.537	5.322	5.156	4.593	2.575
240	-	-	-	5.853	5.780	5.735	5.731	5.672	5.586	5.364	5.191	4.788	2.649
245	-	-	-	5.910	5.835	5.788	5.784	5.707	5.635	5.405	5.226	4.983	2.723
250	-	-	-	5.966	5.890	5.841	5.837	5.743	5.684	5.447	5.261	5.109	2.796
255	-	-	-	6.023	5.944	5.894	5.891	5.778	5.733	5.489	5.296	5.137	2.870
260	-	-	-	6.079	5.999	5.948	5.944	5.813	5.782	5.530	5.331	5.165	2.944
265	-	-	-	6.135	6.053	6.001	5.997	5.848	5.831	5.572	5.365	5.193	3.018
270	-	-	-	-	6.108	6.054	6.050	5.884	5.879	5.614	5.400	5.221	3.464
275	-	-	-	-	6.162	6.107	6.103	5.928	5.928	5.655	5.435	5.249	4.121
280	-	-	-	-	-	6.160	6.157	5.977	5.977	5.697	5.470	5.277	4.778
285	-	-	-	-	-	-	-	6.026	6.026	5.739	5.505	5.305	5.110
290	-	-	-	-	-	-	-	0.000	6.075	5.780	5.540	5.333	5.134
295	-	-	-	-	-	-	-	0.000	6.124	5.822	5.575	5.361	5.158
300	-	-	-	-	-	-	-	-	-	5.864	5.610	5.389	5.183
305	-	-	-	-	-	-	-	-	-	5.905	5.644	5.417	5.207
310	-	-	-	-	-	-	-	-	-	5.947	5.679	5.445	5.231
315	-	-	-	-	-	-	-	-	-	5.989	5.714	5.473	5.256
320	-	-	-	-	-	-	-	-	-	6.030	5.749	5.501	5.280
325	-	-	-	-	-	-	-	-	-	6.072	5.784	5.529	5.304
330	-	-	-	-	-	-	-	-	-	6.114	5.819	5.557	5.328
335	-	-	-	-	-	-	-	-	-	-	5.854	5.585	5.353
340	-	-	-	-	-	-	-	-	-	-	5.889	5.613	5.377
345	-	-	-	-	-	-	-	-	-	-	5.924	5.641	5.401
350	-	-	-	-	-	-	-	-	-	-	5.958	5.669	5.426
355	-	-	-	-	-	-	-	-	-	-	5.993	5.697	5.450
360	-	-	-	-	-	-	-	-	-	-	6.028	5.725	5.474
365	-	-	-	-	-	-	-	-	-	-	6.063	5.753	5.499
370	-	-	-	-	-	-	-	-	-	-	6.098	5.781	5.523
375	-	-	-	-	-	-	-	-	-	-	-	5.809	5.547
380	-	-	-	-	-	-	-	-	-	-	-	5.837	5.571
385	-	-	-	-	-	-	-	-	-	-	-	5.865	5.596
390	-	-	-	-	-	-	-	-	-	-	-	5.893	5.620
395	-	-	-	-	-	-	-	-	-	-	-	5.921	5.644
400	-	-	-	-	-	-	-	-	-	-	-	5.949	5.669
405	-	-	-	-	-	-	-	-	-	-	-	5.977	5.693

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



SC901 & SC902

Loading Tables

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Smart Protection

Table 30: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 90 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	4.409	2.872	2.700	2.370	2.322	2.292	2.288	2.194	2.185	1.982	0.868	0.868	0.868
55	4.542	3.257	2.835	2.559	2.496	2.457	2.452	2.194	2.185	1.982	0.868	0.868	0.868
60	4.675	3.641	2.970	2.658	2.588	2.543	2.538	2.409	2.395	2.129	0.868	0.868	0.868
65	4.809	4.012	3.166	2.758	2.679	2.630	2.624	2.479	2.466	2.211	0.868	0.868	0.868
70	4.942	4.157	3.434	2.857	2.770	2.716	2.709	2.549	2.537	2.292	0.868	0.868	0.868
75	5.076	4.303	3.703	2.956	2.861	2.802	2.795	2.619	2.607	2.373	1.340	0.868	0.868
80	5.336	4.448	3.971	3.064	2.953	2.888	2.880	2.689	2.678	2.455	1.922	0.939	0.868
85	5.621	4.594	4.129	3.238	3.044	2.975	2.966	2.759	2.749	2.536	2.252	1.093	0.868
90	5.906	4.739	4.272	3.412	3.224	3.082	3.061	2.830	2.819	2.617	2.347	1.248	0.893
95	-	4.885	4.416	3.587	3.404	3.278	3.259	2.900	2.890	2.699	2.442	1.402	1.029
100	-	5.030	4.559	3.761	3.585	3.474	3.457	2.970	2.961	2.780	2.538	1.557	1.165
105	-	5.271	4.702	3.935	3.766	3.671	3.656	3.040	3.032	2.861	2.633	1.711	1.301
110	-	5.593	4.845	4.107	3.946	3.867	3.854	3.350	3.310	2.943	2.728	1.865	1.438
115	-	5.915	4.989	4.276	4.123	4.055	4.046	3.676	3.636	3.024	2.824	2.020	1.574
120	-	-	5.146	4.446	4.298	4.227	4.218	4.002	3.961	3.254	2.919	2.174	1.710
125	-	-	5.347	4.615	4.473	4.424	4.424	4.424	4.147	3.535	3.014	2.391	1.846
130	-	-	5.549	4.847	4.847	4.847	4.847	4.847	4.312	3.816	3.149	2.621	1.983
135	-	-	5.750	5.120	5.120	5.120	5.120	5.120	4.477	4.054	3.303	2.851	2.119
140	-	-	5.952	5.175	5.175	5.175	5.175	5.175	4.642	4.207	3.456	3.061	2.255
145	-	-	6.153	5.269	5.231	5.231	5.231	5.231	4.806	4.361	3.610	3.166	2.391
150	-	-	-	5.417	5.286	5.286	5.286	5.286	4.971	4.514	3.763	3.270	2.528
155	-	-	-	5.565	5.401	5.342	5.342	5.342	5.115	4.667	3.916	3.375	2.664
160	-	-	-	5.714	5.526	5.427	5.418	5.397	5.191	4.820	4.085	3.480	2.800
165	-	-	-	5.862	5.651	5.539	5.528	5.453	5.267	4.974	4.274	3.584	2.936
170	-	-	-	6.011	5.776	5.651	5.639	5.508	5.343	5.107	4.462	3.689	3.073
175	-	-	-	6.159	5.901	5.763	5.750	5.564	5.418	5.156	4.651	3.793	3.209
180	-	-	-	-	6.026	5.875	5.861	5.619	5.494	5.206	4.839	3.898	3.345
185	-	-	-	-	6.150	5.987	5.971	5.674	5.570	5.255	5.027	4.002	3.481
190	-	-	-	-	6.275	6.099	6.082	5.730	5.646	5.305	5.125	4.286	3.618
195	-	-	-	-	-	6.211	6.193	5.785	5.722	5.354	5.168	4.571	3.754
200	-	-	-	-	-	-	-	5.841	5.798	5.404	5.212	4.856	3.890
205	-	-	-	-	-	-	-	5.896	5.873	5.453	5.256	5.103	4.046
210	-	-	-	-	-	-	-	5.952	5.949	5.502	5.299	5.139	4.298
215	-	-	-	-	-	-	-	6.025	6.025	5.552	5.343	5.175	4.549
220	-	-	-	-	-	-	-	6.101	6.101	5.601	5.387	5.210	4.801
225	-	-	-	-	-	-	-	6.118	6.177	5.651	5.430	5.246	5.053

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 30: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 90 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
230	-	-	-	-	-	-	-	-	-	5.700	5.474	5.282	5.123
235	-	-	-	-	-	-	-	-	-	5.750	5.518	5.318	5.153
240	-	-	-	-	-	-	-	-	-	5.799	5.561	5.354	5.184
245	-	-	-	-	-	-	-	-	-	5.849	5.605	5.390	5.215
250	-	-	-	-	-	-	-	-	-	5.898	5.648	5.426	5.245
255	-	-	-	-	-	-	-	-	-	5.947	5.692	5.461	5.276
260	-	-	-	-	-	-	-	-	-	5.997	5.736	5.497	5.307
265	-	-	-	-	-	-	-	-	-	6.046	5.779	5.533	5.338
270	-	-	-	-	-	-	-	-	-	6.096	5.823	5.569	5.368
275	-	-	-	-	-	-	-	-	-	6.145	5.867	5.605	5.399
280	-	-	-	-	-	-	-	-	-	-	5.910	5.641	5.430
285	-	-	-	-	-	-	-	-	-	-	5.954	5.677	5.460
290	-	-	-	-	-	-	-	-	-	-	5.997	5.712	5.491
295	-	-	-	-	-	-	-	-	-	-	6.041	5.748	5.522
300	-	-	-	-	-	-	-	-	-	-	6.085	5.784	5.552
305	-	-	-	-	-	-	-	-	-	-	-	5.820	5.583
310	-	-	-	-	-	-	-	-	-	-	-	5.856	5.614
315	-	-	-	-	-	-	-	-	-	-	-	5.892	5.645
320	-	-	-	-	-	-	-	-	-	-	-	5.928	5.675
325	-	-	-	-	-	-	-	-	-	-	-	5.963	5.706
330	-	-	-	-	-	-	-	-	-	-	-	5.999	5.737
335	-	-	-	-	-	-	-	-	-	-	-	6.035	5.767
340	-	-	-	-	-	-	-	-	-	-	-	6.071	5.798
345	-	-	-	-	-	-	-	-	-	-	-	6.107	5.829
350	-	-	-	-	-	-	-	-	-	-	-	-	5.860
355	-	-	-	-	-	-	-	-	-	-	-	-	5.890
360	-	-	-	-	-	-	-	-	-	-	-	-	5.921
365	-	-	-	-	-	-	-	-	-	-	-	-	5.952
370	-	-	-	-	-	-	-	-	-	-	-	-	5.982
375	-	-	-	-	-	-	-	-	-	-	-	-	6.013
380	-	-	-	-	-	-	-	-	-	-	-	-	6.044
385	-	-	-	-	-	-	-	-	-	-	-	-	6.074
390	-	-	-	-	-	-	-	-	-	-	-	-	-
395	-	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	-
405	-	-	-	-	-	-	-	-	-	-	-	-	-

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

Nullifire
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Table 3I: RHS/SHS - 4 Sided Columns
Fire Resistance Period: IO5 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	-	4.123	3.037	2.848	2.773	2.726	2.721	2.470	2.460	2.265	1.982	0.868	0.868
55	-	4.322	3.695	3.000	2.915	2.862	2.856	2.700	2.686	2.427	2.137	0.868	0.868
60	-	4.521	4.091	3.308	3.076	2.998	2.991	2.815	2.798	2.506	2.217	0.868	0.868
65	-	4.720	4.255	3.678	3.421	3.260	3.240	2.931	2.911	2.584	2.297	0.868	0.868
70	-	4.919	4.420	4.022	3.765	3.586	3.564	3.048	3.024	2.663	2.376	0.868	0.868
75	-	5.133	4.585	4.176	4.051	3.913	3.888	3.312	3.254	2.741	2.456	1.756	0.868
80	-	5.480	4.749	4.329	4.204	4.114	4.102	3.577	3.512	2.820	2.536	2.252	0.982
85	-	5.827	4.914	4.483	4.357	4.267	4.255	3.841	3.770	2.898	2.616	2.346	1.166
90	-	6.174	5.079	4.636	4.510	4.420	4.408	4.086	4.018	2.977	2.695	2.439	1.350
95	-	-	5.429	4.790	4.662	4.572	4.561	4.299	4.172	3.078	2.775	2.533	1.534
100	-	-	5.803	4.943	4.815	4.725	4.714	4.511	4.327	3.326	2.855	2.626	1.718
105	-	-	6.177	5.097	4.968	4.878	4.867	4.724	4.481	3.574	2.935	2.720	1.903
110	-	-	-	5.345	5.133	5.031	5.020	4.937	4.636	3.822	3.015	2.813	2.087
115	-	-	-	5.593	5.358	5.218	5.201	5.128	4.791	4.052	3.260	2.907	2.257
120	-	-	-	5.841	5.583	5.429	5.411	5.253	4.945	4.237	3.605	3.000	2.403
125	-	-	-	6.089	5.809	5.641	5.621	5.378	5.100	4.421	3.950	3.173	2.550
130	-	-	-	6.338	6.034	5.853	5.831	5.503	5.283	4.605	4.144	3.417	2.696
135	-	-	-	-	6.259	6.065	6.041	5.627	5.467	4.790	4.310	3.661	2.842
140	-	-	-	-	-	6.277	6.250	5.752	5.650	4.974	4.476	3.905	2.989
145	-	-	-	-	-	-	-	5.877	5.834	5.134	4.642	4.103	3.135
150	-	-	-	-	-	-	-	6.017	6.017	5.243	4.808	4.272	3.281
155	-	-	-	-	-	-	-	6.127	6.201	5.353	4.973	4.440	3.428
160	-	-	-	-	-	-	-	-	6.384	5.463	5.111	4.608	3.574
165	-	-	-	-	-	-	-	-	-	5.572	5.167	4.776	3.720
170	-	-	-	-	-	-	-	-	-	5.682	5.222	4.944	3.867
175	-	-	-	-	-	-	-	-	-	5.792	5.278	5.101	4.026
180	-	-	-	-	-	-	-	-	-	5.902	5.333	5.146	4.365
185	-	-	-	-	-	-	-	-	-	6.011	5.389	5.190	4.704
190	-	-	-	-	-	-	-	-	-	6.121	5.444	5.234	5.043
195	-	-	-	-	-	-	-	-	-	6.231	5.500	5.278	5.129
200	-	-	-	-	-	-	-	-	-	-	5.555	5.323	5.167
205	-	-	-	-	-	-	-	-	-	-	5.611	5.367	5.205
210	-	-	-	-	-	-	-	-	-	-	5.666	5.411	5.244
215	-	-	-	-	-	-	-	-	-	-	5.722	5.455	5.282
220	-	-	-	-	-	-	-	-	-	-	5.777	5.500	5.320
225	-	-	-	-	-	-	-	-	-	-	5.833	5.544	5.358

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 3I: RHS/SHS - 4 Sided Columns
Fire Resistance Period: IO5 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
230	-	-	-	-	-	-	-	-	-	-	5.888	5.588	5.396
235	-	-	-	-	-	-	-	-	-	-	5.944	5.632	5.434
240	-	-	-	-	-	-	-	-	-	-	5.999	5.677	5.472
245	-	-	-	-	-	-	-	-	-	-	6.054	5.721	5.510
250	-	-	-	-	-	-	-	-	-	-	6.110	5.765	5.548
255	-	-	-	-	-	-	-	-	-	-	-	5.810	5.586
260	-	-	-	-	-	-	-	-	-	-	-	5.854	5.624
265	-	-	-	-	-	-	-	-	-	-	-	5.898	5.663
270	-	-	-	-	-	-	-	-	-	-	-	5.942	5.701
275	-	-	-	-	-	-	-	-	-	-	-	5.987	5.739
280	-	-	-	-	-	-	-	-	-	-	-	6.031	5.777
285	-	-	-	-	-	-	-	-	-	-	-	6.075	5.815
290	-	-	-	-	-	-	-	-	-	-	-	6.119	5.853
295	-	-	-	-	-	-	-	-	-	-	-	-	5.891
300	-	-	-	-	-	-	-	-	-	-	-	-	5.929
305	-	-	-	-	-	-	-	-	-	-	-	-	5.967
310	-	-	-	-	-	-	-	-	-	-	-	-	6.005
315	-	-	-	-	-	-	-	-	-	-	-	-	6.043
320	-	-	-	-	-	-	-	-	-	-	-	-	6.081
325	-	-	-	-	-	-	-	-	-	-	-	-	-
330	-	-	-	-	-	-	-	-	-	-	-	-	-
335	-	-	-	-	-	-	-	-	-	-	-	-	-
340	-	-	-	-	-	-	-	-	-	-	-	-	-
345	-	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-	-
355	-	-	-	-	-	-	-	-	-	-	-	-	-
360	-	-	-	-	-	-	-	-	-	-	-	-	-
365	-	-	-	-	-	-	-	-	-	-	-	-	-
370	-	-	-	-	-	-	-	-	-	-	-	-	-
375	-	-	-	-	-	-	-	-	-	-	-	-	-
380	-	-	-	-	-	-	-	-	-	-	-	-	-
385	-	-	-	-	-	-	-	-	-	-	-	-	-
390	-	-	-	-	-	-	-	-	-	-	-	-	-
395	-	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	-
405	-	-	-	-	-	-	-	-	-	-	-	-	-

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 32: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 120 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
50	-	4.926	4.213	3.923	3.142	3.025	3.014	2.950	2.950	2.519	2.311	1.982	0.868
55	-	5.419	4.408	4.089	4.005	3.703	3.693	3.286	3.244	2.772	2.486	2.161	0.868
60	-	-	4.604	4.255	4.169	4.095	4.092	3.771	3.717	2.893	2.571	2.242	0.868
65	-	-	4.799	4.421	4.332	4.260	4.256	4.094	4.066	3.014	2.657	2.324	0.868
70	-	-	4.995	4.587	4.496	4.426	4.421	4.267	4.224	3.327	2.742	2.405	0.868
75	-	-	5.190	4.753	4.659	4.591	4.585	4.440	4.383	3.707	2.827	2.487	1.788
80	-	-	5.386	4.919	4.823	4.756	4.749	4.614	4.541	4.039	2.912	2.568	2.293
85	-	-	-	5.085	4.987	4.921	4.913	4.787	4.700	4.200	2.997	2.650	2.455
90	-	-	-	5.733	5.287	5.086	5.077	4.961	4.859	4.361	3.142	2.731	2.616
95	-	-	-	-	5.588	5.587	5.548	5.154	5.017	4.521	3.362	2.813	2.777
100	-	-	-	-	-	6.087	6.019	5.425	5.258	4.682	3.582	2.939	2.939
105	-	-	-	-	-	-	-	5.696	5.583	4.843	3.803	3.100	3.100
110	-	-	-	-	-	-	-	5.967	5.908	5.004	4.021	3.261	3.261
115	-	-	-	-	-	-	-	-	-	5.179	4.215	3.507	3.423
120	-	-	-	-	-	-	-	-	-	5.374	4.409	3.907	3.584
125	-	-	-	-	-	-	-	-	-	5.568	4.603	4.140	3.746
130	-	-	-	-	-	-	-	-	-	5.763	4.796	4.319	3.907
135	-	-	-	-	-	-	-	-	-	5.957	4.990	4.499	4.071
140	-	-	-	-	-	-	-	-	-	6.152	5.167	4.679	4.239
145	-	-	-	-	-	-	-	-	-	-	5.323	4.859	4.407
150	-	-	-	-	-	-	-	-	-	-	5.479	5.038	4.575
155	-	-	-	-	-	-	-	-	-	-	5.635	5.141	4.743
160	-	-	-	-	-	-	-	-	-	-	5.791	5.207	4.911
165	-	-	-	-	-	-	-	-	-	-	5.947	5.273	5.079
170	-	-	-	-	-	-	-	-	-	-	6.103	5.339	5.138
175	-	-	-	-	-	-	-	-	-	-	6.259	5.404	5.184
180	-	-	-	-	-	-	-	-	-	-	-	5.470	5.230
185	-	-	-	-	-	-	-	-	-	-	-	5.536	5.275
190	-	-	-	-	-	-	-	-	-	-	-	5.601	5.321
195	-	-	-	-	-	-	-	-	-	-	-	5.667	5.367
200	-	-	-	-	-	-	-	-	-	-	-	5.733	5.413
205	-	-	-	-	-	-	-	-	-	-	-	5.798	5.458
210	-	-	-	-	-	-	-	-	-	-	-	5.864	5.504
215	-	-	-	-	-	-	-	-	-	-	-	5.930	5.550
220	-	-	-	-	-	-	-	-	-	-	-	5.995	5.596
225	-	-	-	-	-	-	-	-	-	-	-	6.061	5.641

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 32: RHS/SHS - 4 Sided Columns
Fire Resistance Period: 120 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
230	-	-	-	-	-	-	-	-	-	-	-	6.127	5.687
235	-	-	-	-	-	-	-	-	-	-	-	-	5.733
240	-	-	-	-	-	-	-	-	-	-	-	-	5.779
245	-	-	-	-	-	-	-	-	-	-	-	-	5.825
250	-	-	-	-	-	-	-	-	-	-	-	-	5.870
255	-	-	-	-	-	-	-	-	-	-	-	-	5.916
260	-	-	-	-	-	-	-	-	-	-	-	-	5.962
265	-	-	-	-	-	-	-	-	-	-	-	-	6.008
270	-	-	-	-	-	-	-	-	-	-	-	-	6.053
275	-	-	-	-	-	-	-	-	-	-	-	-	6.099
280	-	-	-	-	-	-	-	-	-	-	-	-	-
285	-	-	-	-	-	-	-	-	-	-	-	-	-
290	-	-	-	-	-	-	-	-	-	-	-	-	-
295	-	-	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-	-	-
305	-	-	-	-	-	-	-	-	-	-	-	-	-
310	-	-	-	-	-	-	-	-	-	-	-	-	-
315	-	-	-	-	-	-	-	-	-	-	-	-	-
320	-	-	-	-	-	-	-	-	-	-	-	-	-
325	-	-	-	-	-	-	-	-	-	-	-	-	-
330	-	-	-	-	-	-	-	-	-	-	-	-	-
335	-	-	-	-	-	-	-	-	-	-	-	-	-
340	-	-	-	-	-	-	-	-	-	-	-	-	-
345	-	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-	-
355	-	-	-	-	-	-	-	-	-	-	-	-	-
360	-	-	-	-	-	-	-	-	-	-	-	-	-
365	-	-	-	-	-	-	-	-	-	-	-	-	-
370	-	-	-	-	-	-	-	-	-	-	-	-	-
375	-	-	-	-	-	-	-	-	-	-	-	-	-
380	-	-	-	-	-	-	-	-	-	-	-	-	-
385	-	-	-	-	-	-	-	-	-	-	-	-	-
390	-	-	-	-	-	-	-	-	-	-	-	-	-
395	-	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	-
405	-	-	-	-	-	-	-	-	-	-	-	-	-

- For rectangular and square hollow columns, 50 mm wide self-adhesive plasterboard fiberglass tape is applied approximately at mid-depth of the intumescent coating as per NTN026

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 33: CHS - 4 Sided Columns
Fire Resistance Period: 15 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
40	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
45	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
50	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
55	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
60	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
65	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
70	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
75	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
80	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
85	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
90	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
95	0.480	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
100	0.513	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
105	0.546	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
110	0.580	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
115	0.613	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
120	0.646	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
125	0.679	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
130	0.712	0.488	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
135	0.745	0.507	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
140	0.779	0.526	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
145	0.812	0.544	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
150	0.845	0.563	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
155	0.878	0.582	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
160	0.911	0.601	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
165	0.945	0.620	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
170	0.978	0.639	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
175	1.011	0.658	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
180	1.044	0.677	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
185	1.077	0.696	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
190	1.110	0.714	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
195	1.144	0.733	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
200	1.177	0.752	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
205	1.210	0.771	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
210	1.243	0.790	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
215	1.275	0.809	0.483	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
220	1.307	0.828	0.502	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
225	1.339	0.847	0.521	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
230	1.371	0.866	0.541	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
235	1.402	0.884	0.560	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 33: CHS - 4 Sided Columns
Fire Resistance Period: 15 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
240	1.434	0.903	0.579	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
245	1.466	0.922	0.598	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
250	1.498	0.941	0.617	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
255	1.530	0.960	0.636	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
260	1.562	0.979	0.655	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
265	1.593	0.998	0.674	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
270	1.625	1.017	0.694	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
275	1.657	1.036	0.713	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
280	1.689	1.054	0.732	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
285	1.721	1.073	0.751	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
290	1.753	1.092	0.770	0.484	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
295	1.785	1.111	0.789	0.501	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
300	1.816	1.130	0.808	0.518	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
305	1.848	1.149	0.827	0.535	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
310	1.880	1.168	0.847	0.552	0.483	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
315	1.912	1.187	0.866	0.568	0.500	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
320	1.944	1.206	0.885	0.585	0.516	0.476	0.473	0.473	0.473	0.473	0.473	0.473	0.473
325	1.976	1.224	0.904	0.602	0.532	0.491	0.485	0.473	0.473	0.473	0.473	0.473	0.473
330	2.012	1.243	0.923	0.619	0.548	0.507	0.501	0.473	0.473	0.473	0.473	0.473	0.473
335	2.053	1.277	0.942	0.636	0.565	0.523	0.516	0.473	0.473	0.473	0.473	0.473	0.473
340	2.094	1.316	0.961	0.653	0.581	0.538	0.532	0.473	0.473	0.473	0.473	0.473	0.473
345	2.135	1.355	0.980	0.670	0.597	0.554	0.547	0.473	0.473	0.473	0.473	0.473	0.473
350	2.176	1.394	1.000	0.687	0.614	0.570	0.563	0.473	0.473	0.473	0.473	0.473	0.473
355	2.217	1.433	1.019	0.704	0.630	0.586	0.579	0.473	0.473	0.473	0.473	0.473	0.473
360	2.259	1.472	1.038	0.720	0.646	0.601	0.594	0.473	0.473	0.473	0.473	0.473	0.473
365	2.300	1.511	1.057	0.737	0.663	0.617	0.610	0.473	0.473	0.473	0.473	0.473	0.473
370	2.341	1.550	1.076	0.754	0.679	0.633	0.625	0.473	0.473	0.473	0.473	0.473	0.473
375	2.382	1.589	1.095	0.771	0.695	0.648	0.641	0.482	0.473	0.473	0.473	0.473	0.473
380	2.423	1.628	1.114	0.788	0.712	0.664	0.656	0.497	0.482	0.473	0.473	0.473	0.473
385	2.464	1.667	1.133	0.805	0.728	0.680	0.672	0.511	0.496	0.473	0.473	0.473	0.473
390	2.505	1.706	1.153	0.822	0.744	0.695	0.688	0.525	0.510	0.473	0.473	0.473	0.473
395	2.547	1.745	1.172	0.839	0.761	0.711	0.703	0.539	0.524	0.473	0.473	0.473	0.473
400	2.588	1.784	1.191	0.856	0.777	0.727	0.719	0.554	0.538	0.473	0.473	0.473	0.473
405	2.629	1.822	1.210	0.872	0.793	0.742	0.734	0.568	0.552	0.473	0.473	0.473	0.473
410	2.670	1.861	1.229	0.889	0.809	0.758	0.750	0.582	0.566	0.473	0.473	0.473	0.473
415	2.711	1.900	1.248	0.906	0.826	0.774	0.766	0.597	0.580	0.473	0.473	0.473	0.473
420	2.752	1.939	1.283	0.923	0.842	0.789	0.781	0.611	0.595	0.473	0.473	0.473	0.473
425	2.794	1.978	1.318	0.940	0.858	0.805	0.797	0.625	0.609	0.473	0.473	0.473	0.473
430	2.835	2.007	1.353	0.957	0.875	0.821	0.812	0.640	0.623	0.473	0.473	0.473	0.473
435	2.876	2.031	1.387	0.974	0.891	0.836	0.828	0.654	0.637	0.473	0.473	0.473	0.473

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



SC901 & SC902

Loading Tables

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Table 34: CHS - 4 Sided Columns
Fire Resistance Period: 30 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
40	0.552	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
45	0.623	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
50	0.693	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
55	0.763	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
60	0.834	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
65	0.904	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
70	0.974	0.527	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
75	1.044	0.608	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
80	1.115	0.690	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
85	1.185	0.772	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
90	1.272	0.853	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
95	1.501	0.935	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
100	1.731	1.016	0.538	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
105	1.961	1.098	0.633	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
110	2.032	1.179	0.728	0.491	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
115	2.079	1.264	0.823	0.525	0.499	0.482	0.480	0.473	0.473	0.473	0.473	0.473	0.473
120	2.125	1.363	0.918	0.559	0.530	0.512	0.510	0.473	0.473	0.473	0.473	0.473	0.473
125	2.171	1.463	1.013	0.594	0.561	0.542	0.540	0.485	0.477	0.473	0.473	0.473	0.473
130	2.217	1.563	1.108	0.628	0.592	0.572	0.570	0.511	0.503	0.473	0.473	0.473	0.473
135	2.264	1.662	1.203	0.662	0.623	0.603	0.599	0.537	0.529	0.473	0.473	0.473	0.473
140	2.310	1.762	1.281	0.697	0.654	0.633	0.629	0.563	0.555	0.473	0.473	0.473	0.473
145	2.356	1.861	1.344	0.731	0.685	0.663	0.659	0.590	0.581	0.473	0.473	0.473	0.473
150	2.403	1.961	1.407	0.766	0.716	0.693	0.689	0.616	0.607	0.491	0.473	0.473	0.473
155	2.449	2.018	1.470	0.800	0.747	0.723	0.719	0.642	0.632	0.511	0.473	0.473	0.473
160	2.495	2.055	1.533	0.834	0.778	0.753	0.749	0.668	0.658	0.531	0.473	0.473	0.473
165	2.542	2.092	1.596	0.869	0.808	0.783	0.779	0.695	0.684	0.552	0.473	0.473	0.473
170	2.588	2.129	1.659	0.903	0.839	0.813	0.809	0.721	0.710	0.572	0.473	0.473	0.473
175	2.634	2.166	1.723	0.937	0.870	0.843	0.839	0.747	0.736	0.592	0.473	0.473	0.473
180	2.681	2.203	1.786	0.972	0.901	0.873	0.869	0.774	0.762	0.613	0.473	0.473	0.473
185	2.727	2.241	1.849	1.006	0.932	0.903	0.899	0.800	0.788	0.633	0.473	0.473	0.473
190	2.773	2.278	1.912	1.041	0.963	0.933	0.929	0.826	0.813	0.653	0.473	0.473	0.473
195	2.819	2.315	1.975	1.075	0.994	0.964	0.959	0.852	0.839	0.674	0.473	0.473	0.473
200	2.866	2.352	2.018	1.109	1.025	0.994	0.989	0.879	0.865	0.694	0.473	0.473	0.473
205	2.912	2.389	2.054	1.144	1.056	1.024	1.019	0.905	0.891	0.715	0.473	0.473	0.473
210	2.958	2.426	2.089	1.178	1.087	1.054	1.049	0.931	0.917	0.735	0.473	0.473	0.473
215	3.005	2.463	2.125	1.212	1.118	1.084	1.078	0.957	0.943	0.755	0.473	0.473	0.473
220	3.051	2.500	2.160	1.247	1.149	1.114	1.108	0.984	0.968	0.776	0.473	0.473	0.473
225	3.097	2.538	2.196	1.358	1.180	1.144	1.138	1.010	0.994	0.796	0.473	0.473	0.473
230	3.144	2.575	2.232	1.473	1.211	1.174	1.168	1.036	1.020	0.816	0.487	0.473	0.473
235	3.190	2.612	2.267	1.588	1.241	1.204	1.198	1.062	1.046	0.837	0.510	0.473	0.473

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



SC901 & SC902

Loading Tables

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Table 34: CHS - 4 Sided Columns
Fire Resistance Period: 30 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
240	3.236	2.649	2.303	1.702	1.302	1.234	1.228	1.089	1.072	0.857	0.533	0.473	0.473
245	3.283	2.686	2.338	1.817	1.371	1.280	1.268	1.115	1.098	0.877	0.555	0.473	0.473
250	3.329	2.723	2.374	1.931	1.440	1.338	1.326	1.141	1.123	0.898	0.578	0.473	0.473
255	3.375	2.760	2.409	2.009	1.509	1.396	1.384	1.167	1.149	0.918	0.601	0.473	0.473
260	3.421	2.797	2.445	2.044	1.578	1.454	1.442	1.194	1.175	0.939	0.624	0.473	0.473
265	3.468	2.835	2.481	2.080	1.646	1.512	1.500	1.220	1.201	0.959	0.647	0.473	0.473
270	3.518	2.872	2.516	2.115	1.715	1.570	1.558	1.246	1.227	0.979	0.670	0.473	0.473
275	3.583	2.909	2.552	2.151	1.784	1.628	1.616	1.313	1.261	1.000	0.693	0.473	0.473
280	3.648	2.946	2.587	2.186	1.853	1.686	1.675	1.382	1.333	1.020	0.716	0.473	0.473
285	3.713	2.983	2.623	2.221	1.922	1.744	1.733	1.452	1.405	1.040	0.739	0.473	0.473
290	3.778	3.020	2.658	2.257	1.991	1.802	1.791	1.521	1.477	1.061	0.762	0.489	0.473
295	3.843	3.057	2.694	2.292	2.031	1.860	1.849	1.591	1.549	1.081	0.785	0.506	0.473
300	3.908	3.094	2.730	2.328	2.070	1.918	1.907	1.660	1.621	1.101	0.808	0.523	0.473
305	3.973	3.132	2.765	2.363	2.110	1.976	1.965	1.730	1.693	1.122	0.831	0.540	0.473
310	4.038	3.169	2.801	2.399	2.149	2.022	2.014	1.799	1.765	1.142	0.854	0.556	0.473
315	4.103	3.206	2.836	2.434	2.189	2.062	2.054	1.869	1.837	1.162	0.877	0.573	0.473
320	4.168	3.243	2.872	2.469	2.228	2.103	2.095	1.938	1.909	1.183	0.900	0.590	0.473
325	4.233	3.280	2.907	2.505	2.268	2.143	2.135	2.000	1.981	1.203	0.923	0.607	0.473
330	4.298	3.317	2.943	2.540	2.307	2.184	2.176	2.037	2.023	1.224	0.946	0.623	0.473
335	4.363	3.354	2.979	2.576	2.347	2.224	2.216	2.074	2.059	1.244	0.969	0.640	0.473
340	4.428	3.392	3.014	2.611	2.386	2.265	2.257	2.110	2.095	1.351	0.992	0.657	0.473
345	4.493	3.429	3.050	2.646	2.426	2.305	2.297	2.147	2.131	1.480	1.015	0.674	0.473
350	4.558	3.466	3.085	2.682	2.465	2.346	2.337	2.184	2.167	1.610	1.038	0.690	0.473
355	4.623	3.503	3.121	2.717	2.505	2.387	2.378	2.220	2.203	1.739	1.061	0.707	0.473
360	4.688	3.547	3.156	2.753	2.544	2.427	2.418	2.257	2.240	1.868	1.084	0.724	0.473
365	4.753	3.592	3.192	2.788	2.584	2.468	2.459	2.294	2.276	1.993	1.107	0.741	0.473
370	4.818	3.636	3.228	2.823	2.623	2.508	2.499	2.330	2.312	2.023	1.130	0.758	0.473
375	4.883	3.681	3.263	2.859	2.663	2.549	2.540	2.367	2.348	2.052	1.153	0.774	0.473
380	4.948	3.725	3.299	2.894	2.702	2.589	2.580	2.404	2.384	2.081	1.176	0.791	0.473
385	5.013	3.769	3.334	2.930	2.742	2.630	2.621	2.440	2.420	2.111	1.199	0.808	0.473
390	5.078	3.814	3.370	2.965	2.781	2.670	2.661	2.477	2.457	2.140	1.222	0.825	0.473
395	-	3.858	3.405	3.001	2.821	2.711	2.701	2.513	2.493	2.169	1.245	0.841	0.473
400	-	3.903	3.441	3.036	2.860	2.751	2.742	2.550	2.529	2.199	1.338	0.858	0.473
405	-	3.947	3.477	3.071	2.900	2.792	2.782	2.587	2.565	2.228	1.443	0.875	0.473
410	-	3.992	3.513	3.107	2.939	2.833	2.823	2.623	2.601	2.257	1.548	0.892	0.473
415	-	4.036	3.553	3.142	2.979	2.873	2.863	2.660	2.637	2.287	1.653	0.909	0.473
420	-	4.080	3.593	3.178	3.018	2.914	2.904	2.697	2.674	2.316	1.758	0.925	0.473
425	-	4.125	3.633	3.213	3.058	2.954	2.944	2.733	2.710	2.345	1.863	0.942	0.473
430	-	4.169	3.673	3.248	3.097	2.995	2.984	2.770	2.746	2.374	1.968	0.959	0.481
435	-	4.214	3.713	3.284	3.137	3.035	3.025	2.807	2.782	2.404	2.011	0.976	0.494

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 35: CHS - 4 Sided Columns
Fire Resistance Period: 45 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
40	1.327	0.852	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
45	1.502	0.947	0.579	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
50	1.677	1.043	0.654	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
55	1.852	1.138	0.728	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
60	2.006	1.233	0.802	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
65	2.076	1.423	0.876	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
70	2.145	1.630	0.951	0.529	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
75	2.215	1.837	1.025	0.631	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
80	2.284	2.003	1.099	0.732	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473	0.473
85	2.354	2.047	1.173	0.834	0.575	0.526	0.515	0.473	0.473	0.473	0.473	0.473	0.473
90	2.423	2.091	1.247	0.935	0.713	0.659	0.649	0.485	0.473	0.473	0.473	0.473	0.473
95	2.493	2.135	1.515	1.036	0.851	0.792	0.783	0.607	0.586	0.473	0.473	0.473	0.473
100	2.562	2.179	1.783	1.138	0.989	0.926	0.917	0.729	0.708	0.473	0.473	0.473	0.473
105	2.632	2.222	2.001	1.239	1.127	1.059	1.050	0.851	0.829	0.518	0.473	0.473	0.473
110	2.701	2.266	2.041	1.368	1.263	1.192	1.184	0.973	0.951	0.607	0.473	0.473	0.473
115	2.771	2.310	2.081	1.498	1.381	1.315	1.308	1.095	1.072	0.695	0.473	0.473	0.473
120	2.840	2.354	2.120	1.629	1.499	1.430	1.423	1.217	1.194	0.784	0.510	0.476	0.473
125	2.910	2.398	2.160	1.760	1.617	1.545	1.537	1.326	1.305	0.872	0.589	0.496	0.473
130	2.979	2.442	2.200	1.891	1.735	1.660	1.652	1.430	1.409	0.960	0.668	0.515	0.473
135	3.049	2.485	2.240	2.001	1.853	1.775	1.766	1.534	1.512	1.049	0.747	0.535	0.473
140	3.118	2.529	2.279	2.040	1.971	1.890	1.881	1.638	1.616	1.137	0.826	0.555	0.473
145	3.188	2.573	2.319	2.079	2.025	1.997	1.994	1.742	1.719	1.225	0.905	0.575	0.473
150	3.257	2.617	2.359	2.119	2.064	2.036	2.033	1.846	1.822	1.322	0.985	0.594	0.473
155	3.327	2.661	2.399	2.158	2.104	2.076	2.073	1.950	1.926	1.421	1.064	0.614	0.473
160	3.396	2.705	2.438	2.197	2.143	2.116	2.113	2.016	2.007	1.520	1.143	0.634	0.473
165	3.466	2.748	2.478	2.236	2.183	2.155	2.152	2.056	2.046	1.619	1.222	0.654	0.473
170	3.552	2.792	2.518	2.275	2.222	2.195	2.192	2.096	2.086	1.718	1.301	0.673	0.473
175	3.658	2.836	2.558	2.315	2.262	2.235	2.232	2.135	2.126	1.817	1.380	0.693	0.473
180	3.764	2.880	2.597	2.354	2.301	2.274	2.271	2.175	2.166	1.917	1.459	0.713	0.473
185	3.870	2.924	2.637	2.393	2.341	2.314	2.311	2.215	2.206	2.001	1.539	0.733	0.473
190	3.975	2.968	2.677	2.432	2.380	2.354	2.351	2.255	2.245	2.039	1.618	0.752	0.473
195	4.081	3.011	2.717	2.471	2.420	2.393	2.390	2.295	2.285	2.077	1.697	0.772	0.473
200	4.187	3.055	2.756	2.511	2.459	2.433	2.430	2.335	2.325	2.115	1.776	0.792	0.473
205	4.293	3.099	2.796	2.550	2.499	2.473	2.470	2.374	2.365	2.152	1.855	0.811	0.480
210	4.399	3.143	2.836	2.589	2.538	2.512	2.509	2.414	2.405	2.190	1.934	0.831	0.505
215	4.504	3.187	2.876	2.628	2.578	2.552	2.549	2.454	2.444	2.228	2.001	0.851	0.529
220	4.610	3.231	2.915	2.667	2.617	2.592	2.589	2.494	2.484	2.266	2.035	0.871	0.554
225	4.716	3.274	2.955	2.707	2.657	2.631	2.628	2.534	2.524	2.303	2.068	0.890	0.578
230	4.822	3.318	2.995	2.746	2.697	2.671	2.668	2.573	2.564	2.341	2.101	0.910	0.603
235	4.928	3.362	3.035	2.785	2.736	2.711	2.708	2.613	2.604	2.379	2.134	0.930	0.627

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 35: CHS - 4 Sided Columns
Fire Resistance Period: 45 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
240	5.034	3.406	3.074	2.824	2.776	2.750	2.747	2.653	2.643	2.417	2.168	0.950	0.652
245	-	3.450	3.114	2.863	2.815	2.790	2.787	2.693	2.683	2.454	2.201	0.969	0.676
250	-	3.494	3.154	2.903	2.855	2.830	2.827	2.733	2.723	2.492	2.234	0.989	0.701
255	-	3.579	3.194	2.942	2.894	2.869	2.866	2.772	2.763	2.530	2.267	1.009	0.725
260	-	3.676	3.234	2.981	2.934	2.909	2.906	2.812	2.803	2.568	2.301	1.029	0.750
265	-	3.773	3.273	3.020	2.973	2.949	2.946	2.852	2.842	2.605	2.334	1.048	0.775
270	-	3.870	3.313	3.059	3.013	2.989	2.985	2.892	2.882	2.643	2.367	1.068	0.799
275	-	3.967	3.353	3.099	3.052	3.028	3.025	2.932	2.922	2.681	2.400	1.088	0.824
280	-	4.064	3.393	3.138	3.092	3.068	3.065	2.972	2.962	2.719	2.434	1.108	0.848
285	-	4.162	3.432	3.177	3.131	3.108	3.104	3.011	3.002	2.756	2.467	1.127	0.873
290	-	4.259	3.472	3.216	3.171	3.147	3.144	3.051	3.041	2.794	2.500	1.147	0.897
295	-	4.356	3.523	3.255	3.210	3.187	3.184	3.091	3.081	2.832	2.533	1.167	0.922
300	-	4.453	3.616	3.295	3.250	3.227	3.223	3.131	3.121	2.870	2.567	1.187	0.946
305	-	4.550	3.709	3.334	3.289	3.266	3.263	3.171	3.161	2.908	2.600	1.206	0.971
310	-	4.647	3.802	3.373	3.329	3.306	3.303	3.210	3.201	2.945	2.633	1.226	0.995
315	-	4.744	3.895	3.412	3.368	3.346	3.342	3.250	3.241	2.983	2.667	1.246	1.020
320	-	4.841	3.988	3.451	3.408	3.385	3.382	3.290	3.280	3.021	2.700	1.853	1.044
325	-	4.938	4.080	3.491	3.447	3.425	3.422	3.330	3.320	3.059	2.733	2.022	1.069
330	-	-	4.173	3.558	3.487	3.465	3.461	3.370	3.360	3.096	2.766	2.060	1.093
335	-	-	4.266	3.638	3.547	3.505	3.501	3.409	3.400	3.134	2.800	2.098	1.118
340	-	-	4.359	3.719	3.622	3.576	3.569	3.449	3.440	3.172	2.833	2.136	1.142
345	-	-	4.452	3.799	3.698	3.646	3.639	3.489	3.479	3.210	2.866	2.173	1.167
350	-	-	4.545	3.880	3.773	3.717	3.709	3.542	3.527	3.247	2.899	2.211	1.191
355	-	-	4.638	3.960	3.848	3.787	3.779	3.603	3.587	3.285	2.933	2.249	1.216
360	-	-	4.731	4.041	3.923	3.858	3.849	3.664	3.647	3.323	2.966	2.287	1.240
365	-	-	4.823	4.121	3.998	3.928	3.919	3.725	3.707	3.361	2.999	2.324	1.433
370	-	-	4.916	4.202	4.073	3.999	3.989	3.786	3.767	3.398	3.032	2.362	1.701
375	-	-	-	4.282	4.148	4.069	4.059	3.847	3.827	3.436	3.066	2.400	1.969
380	-	-	-	4.363	4.223	4.140	4.129	3.907	3.887	3.474	3.099	2.437	2.016
385	-	-	-	4.443	4.298	4.210	4.199	3.968	3.947	3.514	3.132	2.475	2.043
390	-	-	-	4.524	4.374	4.281	4.270	4.029	4.007	3.563	3.165	2.513	2.069
395	-	-	-	4.604	4.449	4.351	4.340	4.090	4.067	3.611	3.199	2.551	2.095
400	-	-	-	4.684	4.524	4.422	4.410	4.151	4.127	3.660	3.232	2.588	2.121
405	-	-	-	4.765	4.599	4.492	4.480	4.211	4.187	3.709	3.265	2.626	2.148
410	-	-	-	4.845	4.674	4.563	4.550	4.272	4.246	3.757	3.299	2.664	2.174
415	-	-	-	4.926	4.749	4.633	4.620	4.333	4.306	3.806	3.332	2.702	2.200
420	-	-	-	5.006	4.824	4.704	4.690	4.394	4.366	3.854	3.365	2.739	2.227
425	-	-	-	-	4.899	4.774	4.760	4.455	4.426	3.903	3.398	2.777	2.253
430	-	-	-	-	4.974	4.845	4.830	4.516	4.486	3.951	3.432	2.815	2.279
435	-	-	-	-	5.049	4.915	4.900	4.576	4.546	4.000	3.465	2.853	2.305

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 36: CHS - 4 Sided Columns
Fire Resistance Period: 60 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
40	1.971	1.431	1.088	0.788	0.724	0.666	0.665	0.569	0.559	0.473	0.473	0.473	0.473
45	2.082	1.654	1.216	0.874	0.802	0.742	0.740	0.639	0.629	0.473	0.473	0.473	0.473
50	2.194	1.876	1.387	0.961	0.880	0.818	0.816	0.709	0.699	0.473	0.473	0.473	0.473
55	2.305	2.030	1.572	1.047	0.959	0.895	0.891	0.778	0.768	0.473	0.473	0.473	0.473
60	2.416	2.110	1.758	1.133	1.037	0.971	0.967	0.848	0.838	0.508	0.473	0.473	0.473
65	2.527	2.189	1.943	1.220	1.115	1.047	1.042	0.917	0.908	0.597	0.473	0.473	0.473
70	2.638	2.268	2.043	1.416	1.194	1.123	1.117	0.987	0.977	0.685	0.473	0.473	0.473
75	2.750	2.347	2.113	1.667	1.339	1.199	1.193	1.057	1.047	0.773	0.473	0.473	0.473
80	2.861	2.427	2.183	1.918	1.636	1.370	1.339	1.126	1.117	0.861	0.473	0.473	0.473
85	2.972	2.506	2.252	2.027	1.933	1.715	1.684	1.196	1.187	0.949	0.473	0.473	0.473
90	3.083	2.585	2.322	2.075	2.030	2.002	1.997	1.331	1.287	1.037	0.545	0.473	0.473
95	3.195	2.664	2.391	2.124	2.078	2.048	2.044	1.663	1.606	1.125	0.676	0.473	0.473
100	3.306	2.744	2.461	2.173	2.125	2.095	2.091	1.993	1.925	1.214	0.807	0.484	0.473
105	3.417	2.823	2.531	2.221	2.172	2.142	2.137	2.036	2.026	1.341	0.937	0.589	0.473
110	3.587	2.902	2.600	2.270	2.220	2.189	2.184	2.080	2.070	1.493	1.068	0.694	0.473
115	3.959	2.981	2.670	2.319	2.267	2.235	2.231	2.123	2.113	1.644	1.199	0.798	0.492
120	4.332	3.061	2.739	2.367	2.314	2.282	2.278	2.167	2.156	1.796	1.319	0.903	0.530
125	4.704	3.140	2.809	2.416	2.362	2.329	2.324	2.210	2.199	1.948	1.434	1.008	0.568
130	-	3.219	2.879	2.465	2.409	2.376	2.371	2.254	2.242	2.020	1.548	1.112	0.606
135	-	3.299	2.948	2.513	2.456	2.422	2.418	2.298	2.286	2.059	1.663	1.217	0.643
140	-	3.378	3.018	2.562	2.504	2.469	2.465	2.341	2.329	2.098	1.778	1.320	0.681
145	-	3.457	3.087	2.610	2.551	2.516	2.511	2.385	2.372	2.138	1.892	1.421	0.719
150	-	3.581	3.157	2.659	2.598	2.563	2.558	2.428	2.415	2.177	1.997	1.523	0.757
155	-	3.766	3.226	2.708	2.646	2.609	2.605	2.472	2.459	2.216	2.037	1.625	0.795
160	-	3.951	3.296	2.756	2.693	2.656	2.652	2.516	2.502	2.255	2.077	1.727	0.833
165	-	4.137	3.366	2.805	2.741	2.703	2.698	2.559	2.545	2.294	2.117	1.829	0.871
170	-	4.322	3.435	2.854	2.788	2.750	2.745	2.603	2.588	2.333	2.156	1.931	0.908
175	-	4.508	3.506	2.902	2.835	2.796	2.792	2.646	2.631	2.372	2.196	2.008	0.946
180	-	4.693	3.610	2.951	2.883	2.843	2.838	2.690	2.675	2.412	2.236	2.049	0.984
185	-	4.878	3.715	3.000	2.930	2.890	2.885	2.733	2.718	2.451	2.276	2.089	1.022
190	-	-	3.819	3.048	2.977	2.937	2.932	2.777	2.761	2.490	2.316	2.130	1.060
195	-	-	3.923	3.097	3.025	2.984	2.979	2.821	2.804	2.529	2.355	2.170	1.098
200	-	-	4.028	3.146	3.072	3.030	3.025	2.864	2.847	2.568	2.395	2.210	1.135
205	-	-	4.132	3.194	3.119	3.077	3.072	2.908	2.891	2.607	2.435	2.251	1.173
210	-	-	4.237	3.243	3.167	3.124	3.119	2.951	2.934	2.646	2.475	2.291	1.211
215	-	-	4.341	3.292	3.214	3.171	3.166	2.995	2.977	2.686	2.514	2.332	1.254
220	-	-	4.446	3.340	3.261	3.217	3.212	3.038	3.020	2.725	2.554	2.372	1.507
225	-	-	4.550	3.389	3.309	3.264	3.259	3.082	3.063	2.764	2.594	2.413	1.760
230	-	-	4.655	3.438	3.356	3.311	3.306	3.126	3.107	2.803	2.634	2.453	1.995
235	-	-	4.759	3.486	3.404	3.358	3.353	3.169	3.150	2.842	2.673	2.494	2.032

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 36: CHS - 4 Sided Columns
Fire Resistance Period: 60 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
240	-	-	4.863	3.604	3.451	3.404	3.399	3.213	3.193	2.881	2.713	2.534	2.069
245	-	-	4.968	3.758	3.498	3.451	3.446	3.256	3.236	2.920	2.753	2.575	2.105
250	-	-	-	3.912	3.623	3.498	3.493	3.300	3.280	2.960	2.793	2.615	2.142
255	-	-	-	4.067	3.757	3.609	3.596	3.344	3.323	2.999	2.833	2.655	2.178
260	-	-	-	4.221	3.890	3.729	3.714	3.387	3.366	3.038	2.872	2.696	2.215
265	-	-	-	4.375	4.024	3.849	3.833	3.431	3.409	3.077	2.912	2.736	2.252
270	-	-	-	4.529	4.158	3.969	3.951	3.474	3.452	3.116	2.952	2.777	2.288
275	-	-	-	4.684	4.291	4.088	4.070	3.538	3.496	3.155	2.992	2.817	2.325
280	-	-	-	4.838	4.425	4.208	4.188	3.642	3.597	3.194	3.031	2.858	2.362
285	-	-	-	-	4.559	4.328	4.307	3.746	3.711	3.234	3.071	2.898	2.398
290	-	-	-	-	4.692	4.448	4.426	3.850	3.825	3.273	3.111	2.939	2.435
295	-	-	-	-	4.826	4.568	4.544	3.954	3.939	3.312	3.151	2.979	2.471
300	-	-	-	-	4.960	4.687	4.663	4.058	4.052	3.351	3.191	3.019	2.508
305	-	-	-	-	-	4.807	4.781	4.166	4.166	3.390	3.230	3.060	2.545
310	-	-	-	-	-	4.927	4.900	4.280	4.280	3.429	3.270	3.100	2.581
315	-	-	-	-	-	-	-	4.394	4.394	3.468	3.310	3.141	2.618
320	-	-	-	-	-	-	-	4.508	4.508	3.517	3.350	3.181	2.654
325	-	-	-	-	-	-	-	4.622	4.622	3.644	3.389	3.222	2.691
330	-	-	-	-	-	-	-	4.736	4.736	3.771	3.429	3.262	2.728
335	-	-	-	-	-	-	-	4.850	4.850	3.898	3.469	3.303	2.764
340	-	-	-	-	-	-	-	4.963	4.963	4.025	3.515	3.343	2.801
345	-	-	-	-	-	-	-	4.995	5.077	4.151	3.596	3.384	2.838
350	-	-	-	-	-	-	-	-	-	4.278	3.677	3.424	2.874
355	-	-	-	-	-	-	-	-	-	4.405	3.759	3.464	2.911
360	-	-	-	-	-	-	-	-	-	4.532	3.840	3.505	2.947
365	-	-	-	-	-	-	-	-	-	4.659	3.921	3.555	2.984
370	-	-	-	-	-	-	-	-	-	4.786	4.003	3.604	3.021
375	-	-	-	-	-	-	-	-	-	4.912	4.084	3.653	3.057
380	-	-	-	-	-	-	-	-	-	-	4.165	3.703	3.094
385	-	-	-	-	-	-	-	-	-	-	4.247	3.752	3.130
390	-	-	-	-	-	-	-	-	-	-	4.328	3.801	3.167
395	-	-	-	-	-	-	-	-	-	-	4.409	3.851	3.204
400	-	-	-	-	-	-	-	-	-	-	4.491	3.900	3.240
405	-	-	-	-	-	-	-	-	-	-	4.572	3.949	3.277
410	-	-	-	-	-	-	-	-	-	-	4.653	3.999	3.314
415	-	-	-	-	-	-	-	-	-	-	4.735	4.048	3.350
420	-	-	-	-	-	-	-	-	-	-	4.816	4.097	3.387
425	-	-	-	-	-	-	-	-	-	-	4.897	4.146	3.423
430	-	-	-	-	-	-	-	-	-	-	4.979	4.196	3.460
435	-	-	-	-	-	-	-	-	-	-	-	4.245	3.497

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 37: CHS - 4 Sided Columns
Fire Resistance Period: 75 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
40	2.477	2.005	1.563	1.265	1.131	1.124	1.118	0.981	0.969	0.742	0.551	0.473	0.473
45	2.640	2.134	1.809	1.461	1.331	1.252	1.244	1.089	1.075	0.821	0.620	0.473	0.473
50	2.803	2.264	2.016	1.657	1.531	1.454	1.443	1.197	1.181	0.899	0.688	0.473	0.473
55	2.966	2.393	2.109	1.852	1.732	1.655	1.645	1.359	1.327	0.977	0.757	0.473	0.473
60	3.129	2.523	2.202	2.014	1.932	1.857	1.847	1.571	1.543	1.055	0.826	0.473	0.473
65	3.291	2.652	2.295	2.092	2.044	2.016	2.013	1.784	1.759	1.133	0.895	0.491	0.473
70	3.454	2.782	2.388	2.169	2.118	2.088	2.084	1.993	1.974	1.212	0.964	0.587	0.473
75	3.772	2.911	2.481	2.246	2.193	2.160	2.156	2.058	2.050	1.407	1.032	0.684	0.473
80	4.156	3.041	2.574	2.324	2.267	2.232	2.228	2.122	2.113	1.704	1.101	0.780	0.473
85	4.540	3.170	2.667	2.401	2.341	2.305	2.300	2.186	2.176	1.994	1.170	0.877	0.473
90	4.923	3.300	2.760	2.478	2.415	2.377	2.372	2.250	2.239	2.044	1.239	0.973	0.473
95	-	3.429	2.853	2.555	2.490	2.449	2.444	2.314	2.302	2.094	1.491	1.070	0.537
100	-	3.702	2.946	2.633	2.564	2.521	2.515	2.378	2.365	2.144	1.771	1.167	0.669
105	-	4.162	3.039	2.710	2.638	2.593	2.587	2.443	2.427	2.194	2.001	1.270	0.801
110	-	4.623	3.133	2.787	2.713	2.665	2.659	2.507	2.490	2.244	2.043	1.409	0.932
115	-	5.084	3.226	2.865	2.787	2.737	2.731	2.571	2.553	2.294	2.085	1.548	1.064
120	-	-	3.319	2.942	2.861	2.809	2.803	2.635	2.616	2.344	2.126	1.687	1.196
125	-	-	3.412	3.019	2.935	2.881	2.875	2.699	2.679	2.394	2.168	1.826	1.309
130	-	-	3.516	3.096	3.010	2.953	2.946	2.763	2.742	2.444	2.210	1.965	1.411
135	-	-	4.331	3.174	3.084	3.025	3.018	2.827	2.805	2.494	2.251	2.024	1.512
140	-	-	-	3.251	3.158	3.097	3.090	2.892	2.868	2.544	2.293	2.063	1.614
145	-	-	-	3.328	3.232	3.170	3.162	2.956	2.931	2.594	2.335	2.102	1.715
150	-	-	-	3.405	3.307	3.242	3.234	3.020	2.994	2.644	2.376	2.141	1.816
155	-	-	-	3.483	3.381	3.314	3.306	3.084	3.056	2.694	2.418	2.180	1.918
160	-	-	-	3.810	3.455	3.386	3.377	3.148	3.119	2.744	2.460	2.219	2.003
165	-	-	-	4.226	3.623	3.458	3.449	3.212	3.182	2.794	2.502	2.258	2.043
170	-	-	-	4.642	3.959	3.616	3.578	3.277	3.245	2.844	2.543	2.297	2.083
175	-	-	-	-	4.295	3.918	3.880	3.341	3.308	2.895	2.585	2.336	2.124
180	-	-	-	-	4.631	4.220	4.182	3.405	3.371	2.945	2.627	2.375	2.164
185	-	-	-	-	4.967	4.523	4.484	3.469	3.434	2.995	2.668	2.414	2.204
190	-	-	-	-	-	4.825	4.785	3.613	3.497	3.045	2.710	2.453	2.245
195	-	-	-	-	-	-	-	3.847	3.714	3.095	2.752	2.492	2.285
200	-	-	-	-	-	-	-	4.081	3.948	3.145	2.793	2.531	2.325
205	-	-	-	-	-	-	-	4.315	4.182	3.195	2.835	2.570	2.365
210	-	-	-	-	-	-	-	4.549	4.416	3.245	2.877	2.609	2.406
215	-	-	-	-	-	-	-	4.784	4.650	3.295	2.919	2.648	2.446
220	-	-	-	-	-	-	-	-	-	3.345	2.960	2.687	2.486
225	-	-	-	-	-	-	-	-	-	3.395	3.002	2.726	2.526
230	-	-	-	-	-	-	-	-	-	3.445	3.044	2.765	2.567
235	-	-	-	-	-	-	-	-	-	3.495	3.085	2.804	2.607

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 37: CHS - 4 Sided Columns
Fire Resistance Period: 75 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
240	-	-	-	-	-	-	-	-	-	3.664	3.127	2.843	2.647
245	-	-	-	-	-	-	-	-	-	3.857	3.169	2.882	2.688
250	-	-	-	-	-	-	-	-	-	4.049	3.210	2.921	2.728
255	-	-	-	-	-	-	-	-	-	4.241	3.252	2.960	2.768
260	-	-	-	-	-	-	-	-	-	4.434	3.294	2.999	2.808
265	-	-	-	-	-	-	-	-	-	4.626	3.336	3.038	2.849
270	-	-	-	-	-	-	-	-	-	4.819	3.377	3.077	2.889
275	-	-	-	-	-	-	-	-	-	5.011	3.419	3.116	2.929
280	-	-	-	-	-	-	-	-	-	-	3.461	3.155	2.969
285	-	-	-	-	-	-	-	-	-	-	3.502	3.194	3.010
290	-	-	-	-	-	-	-	-	-	-	3.640	3.233	3.050
295	-	-	-	-	-	-	-	-	-	-	3.779	3.272	3.090
300	-	-	-	-	-	-	-	-	-	-	3.918	3.311	3.131
305	-	-	-	-	-	-	-	-	-	-	4.057	3.350	3.171
310	-	-	-	-	-	-	-	-	-	-	4.197	3.389	3.211
315	-	-	-	-	-	-	-	-	-	-	4.336	3.428	3.251
320	-	-	-	-	-	-	-	-	-	-	4.475	3.467	3.292
325	-	-	-	-	-	-	-	-	-	-	4.615	3.514	3.332
330	-	-	-	-	-	-	-	-	-	-	4.754	3.646	3.372
335	-	-	-	-	-	-	-	-	-	-	4.893	3.779	3.412
340	-	-	-	-	-	-	-	-	-	-	5.032	3.911	3.453
345	-	-	-	-	-	-	-	-	-	-	-	4.043	3.493
350	-	-	-	-	-	-	-	-	-	-	-	4.175	3.555
355	-	-	-	-	-	-	-	-	-	-	-	4.307	3.625
360	-	-	-	-	-	-	-	-	-	-	-	4.440	3.695
365	-	-	-	-	-	-	-	-	-	-	-	4.572	3.764
370	-	-	-	-	-	-	-	-	-	-	-	4.704	3.834
375	-	-	-	-	-	-	-	-	-	-	-	4.836	3.904
380	-	-	-	-	-	-	-	-	-	-	-	4.968	3.973
385	-	-	-	-	-	-	-	-	-	-	-	-	4.043
390	-	-	-	-	-	-	-	-	-	-	-	-	4.113
395	-	-	-	-	-	-	-	-	-	-	-	-	4.182
400	-	-	-	-	-	-	-	-	-	-	-	-	4.252
405	-	-	-	-	-	-	-	-	-	-	-	-	4.322
410	-	-	-	-	-	-	-	-	-	-	-	-	4.391
415	-	-	-	-	-	-	-	-	-	-	-	-	4.461
420	-	-	-	-	-	-	-	-	-	-	-	-	4.531
425	-	-	-	-	-	-	-	-	-	-	-	-	4.600
430	-	-	-	-	-	-	-	-	-	-	-	-	4.670
435	-	-	-	-	-	-	-	-	-	-	-	-	4.740

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Loading Tables

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Table 38: CHS - 4 Sided Columns
Fire Resistance Period: 90 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
40	2.814	2.473	2.036	1.677	1.575	1.523	1.518	1.422	1.406	1.085	0.853	0.664	0.473
45	3.149	2.644	2.186	1.953	1.839	1.776	1.769	1.629	1.615	1.205	0.945	0.731	0.473
50	3.364	2.816	2.336	2.088	2.036	2.009	2.006	1.836	1.824	1.388	1.037	0.798	0.473
55	3.707	2.987	2.485	2.200	2.140	2.106	2.102	2.030	2.021	1.606	1.130	0.865	0.521
60	4.284	3.159	2.635	2.312	2.243	2.204	2.199	2.180	2.169	1.825	1.222	0.932	0.607
65	-	3.330	2.785	2.423	2.347	2.330	2.330	2.330	2.317	2.008	1.429	0.999	0.692
70	-	3.502	2.934	2.535	2.480	2.480	2.480	2.480	2.465	2.078	1.683	1.066	0.778
75	-	4.082	3.084	2.647	2.630	2.630	2.630	2.630	2.613	2.148	1.936	1.133	0.863
80	-	-	3.234	2.780	2.780	2.780	2.780	2.780	2.761	2.217	2.037	1.200	0.949
85	-	-	3.383	2.931	2.931	2.931	2.931	2.931	2.909	2.287	2.094	1.367	1.034
90	-	-	3.642	3.081	3.081	3.081	3.081	3.081	3.057	2.357	2.151	1.777	1.120
95	-	-	4.339	3.231	3.231	3.231	3.231	3.231	3.205	2.426	2.209	2.014	1.205
100	-	-	-	3.381	3.381	3.381	3.381	3.381	3.353	2.496	2.266	2.060	1.327
105	-	-	-	3.531	3.531	3.531	3.531	3.531	3.501	2.566	2.323	2.106	1.486
110	-	-	-	3.681	3.681	3.681	3.681	3.681	3.649	2.635	2.380	2.152	1.645
115	-	-	-	3.942	3.831	3.831	3.831	3.831	3.797	2.705	2.437	2.197	1.804
120	-	-	-	-	3.982	3.982	3.982	3.982	3.945	2.775	2.495	2.243	1.963
125	-	-	-	-	4.132	4.132	4.132	4.132	4.093	2.844	2.552	2.289	2.023
130	-	-	-	-	4.282	4.282	4.282	4.282	4.241	2.914	2.609	2.335	2.061
135	-	-	-	-	4.282	4.432	4.432	4.432	4.389	2.984	2.666	2.381	2.099
140	-	-	-	-	-	4.432	4.432	4.582	4.537	3.053	2.724	2.427	2.137
145	-	-	-	-	-	-	-	4.732	4.685	3.123	2.781	2.472	2.175
150	-	-	-	-	-	-	-	4.882	4.833	3.193	2.838	2.518	2.213
155	-	-	-	-	-	-	-	5.033	4.981	3.262	2.895	2.564	2.251
160	-	-	-	-	-	-	-	-	-	3.332	2.952	2.610	2.289
165	-	-	-	-	-	-	-	-	-	3.402	3.010	2.656	2.327
170	-	-	-	-	-	-	-	-	-	3.471	3.067	2.702	2.365
175	-	-	-	-	-	-	-	-	-	4.137	3.124	2.747	2.403
180	-	-	-	-	-	-	-	-	-	-	3.181	2.793	2.440
185	-	-	-	-	-	-	-	-	-	-	3.239	2.839	2.478
190	-	-	-	-	-	-	-	-	-	-	3.296	2.885	2.516
195	-	-	-	-	-	-	-	-	-	-	3.353	2.931	2.554
200	-	-	-	-	-	-	-	-	-	-	3.410	2.977	2.592
205	-	-	-	-	-	-	-	-	-	-	3.468	3.022	2.630
210	-	-	-	-	-	-	-	-	-	-	3.635	3.068	2.668
215	-	-	-	-	-	-	-	-	-	-	3.985	3.114	2.706
220	-	-	-	-	-	-	-	-	-	-	4.336	3.160	2.744
225	-	-	-	-	-	-	-	-	-	-	4.686	3.206	2.782
230	-	-	-	-	-	-	-	-	-	-	-	3.252	2.820
235	-	-	-	-	-	-	-	-	-	-	-	3.298	2.857

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Fire Resistance Period: 90 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
240	-	-	-	-	-	-	-	-	-	-	-	3.343	2.895
245	-	-	-	-	-	-	-	-	-	-	-	3.389	2.933
250	-	-	-	-	-	-	-	-	-	-	-	3.435	2.971
255	-	-	-	-	-	-	-	-	-	-	-	3.481	3.009
260	-	-	-	-	-	-	-	-	-	-	-	3.581	3.047
265	-	-	-	-	-	-	-	-	-	-	-	3.733	3.085
270	-	-	-	-	-	-	-	-	-	-	-	3.886	3.123
275	-	-	-	-	-	-	-	-	-	-	-	4.038	3.161
280	-	-	-	-	-	-	-	-	-	-	-	4.190	3.199
285	-	-	-	-	-	-	-	-	-	-	-	4.342	3.237
290	-	-	-	-	-	-	-	-	-	-	-	4.494	3.275
295	-	-	-	-	-	-	-	-	-	-	-	4.646	3.312
300	-	-	-	-	-	-	-	-	-	-	-	4.798	3.350
305	-	-	-	-	-	-	-	-	-	-	-	-	3.388
310	-	-	-	-	-	-	-	-	-	-	-	-	3.426
315	-	-	-	-	-	-	-	-	-	-	-	-	3.464
320	-	-	-	-	-	-	-	-	-	-	-	-	3.502
325	-	-	-	-	-	-	-	-	-	-	-	-	3.686
330	-	-	-	-	-	-	-	-	-	-	-	-	3.874
335	-	-	-	-	-	-	-	-	-	-	-	-	4.062
340	-	-	-	-	-	-	-	-	-	-	-	-	4.250
345	-	-	-	-	-	-	-	-	-	-	-	-	4.438
350	-	-	-	-	-	-	-	-	-	-	-	-	4.626
355	-	-	-	-	-	-	-	-	-	-	-	-	4.814
360	-	-	-	-	-	-	-	-	-	-	-	-	5.002
365	-	-	-	-	-	-	-	-	-	-	-	-	-
370	-	-	-	-	-	-	-	-	-	-	-	-	-
375	-	-	-	-	-	-	-	-	-	-	-	-	-
380	-	-	-	-	-	-	-	-	-	-	-	-	-
385	-	-	-	-	-	-	-	-	-	-	-	-	-
390	-	-	-	-	-	-	-	-	-	-	-	-	-
395	-	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	-
405	-	-	-	-	-	-	-	-	-	-	-	-	-
410	-	-	-	-	-	-	-	-	-	-	-	-	-
415	-	-	-	-	-	-	-	-	-	-	-	-	-
420	-	-	-	-	-	-	-	-	-	-	-	-	-
425	-	-	-	-	-	-	-	-	-	-	-	-	-
430	-	-	-	-	-	-	-	-	-	-	-	-	-
435	-	-	-	-	-	-	-	-	-	-	-	-	-

PLEASE NOTE: The critical temperatures in this loading table are as defined for offices in accordance with BS5950-8:2003 as per Table 18 of the ASFP 5th Edition Yellow Book. The Yellow book also gives new critical temperatures to comply with several different building uses either to the Eurocodes for steel design or BS5950-8:2003. Alternative loadings tables to other critical temperatures are available from the Nullifire Technical Desk on request. CHS & RHS range up to 435 m-1 - Ask Technical Support



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Loading Tables

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Table 39: CHS - 4 Sided Columns
Fire Resistance Period: IO5 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
40	3.153	2.872	2.480	2.161	2.017	1.987	1.984	1.774	1.763	1.432	1.123	0.915	0.680
45	3.917	3.089	2.665	2.315	2.172	2.134	2.130	2.026	2.021	1.668	1.298	1.015	0.757
50	-	3.306	2.850	2.470	2.326	2.281	2.276	2.151	2.144	1.931	1.529	1.115	0.834
55	-	3.567	3.034	2.624	2.480	2.428	2.422	2.277	2.267	2.121	1.760	1.215	0.911
60	-	4.255	3.219	2.778	2.634	2.575	2.568	2.402	2.390	2.290	1.991	1.413	0.987
65	-	-	3.404	2.933	2.789	2.722	2.714	2.528	2.512	2.458	2.124	1.662	1.064
70	-	-	3.831	3.087	2.943	2.869	2.860	2.653	2.635	2.626	2.257	1.910	1.141
75	-	-	4.538	3.242	3.097	3.016	3.007	2.795	2.795	2.795	2.390	2.033	1.218
80	-	-	-	3.396	3.251	3.163	3.153	2.963	2.963	2.963	2.523	2.094	1.409
85	-	-	-	3.767	3.406	3.310	3.299	3.132	3.132	3.132	2.656	2.155	1.676
90	-	-	-	4.630	3.850	3.457	3.445	3.300	3.300	3.300	2.788	2.217	1.943
95	-	-	-	-	-	4.241	4.167	3.469	3.469	3.469	2.921	2.278	2.036
100	-	-	-	-	-	-	-	3.637	3.637	3.637	3.054	2.339	2.089
105	-	-	-	-	-	-	-	4.002	3.805	3.805	3.187	2.400	2.143
110	-	-	-	-	-	-	-	-	3.974	3.974	3.320	2.461	2.196
115	-	-	-	-	-	-	-	-	3.974	4.142	3.453	2.522	2.249
120	-	-	-	-	-	-	-	-	-	4.311	3.585	2.583	2.303
125	-	-	-	-	-	-	-	-	-	4.479	3.718	2.644	2.356
130	-	-	-	-	-	-	-	-	-	4.648	3.851	2.705	2.410
135	-	-	-	-	-	-	-	-	-	4.816	3.984	2.766	2.463
140	-	-	-	-	-	-	-	-	-	-	4.117	2.827	2.516
145	-	-	-	-	-	-	-	-	-	-	4.249	2.888	2.570
150	-	-	-	-	-	-	-	-	-	-	4.382	2.949	2.623
155	-	-	-	-	-	-	-	-	-	-	4.515	3.011	2.677
160	-	-	-	-	-	-	-	-	-	-	4.648	3.072	2.730
165	-	-	-	-	-	-	-	-	-	-	4.781	3.133	2.783
170	-	-	-	-	-	-	-	-	-	-	4.914	3.194	2.837
175	-	-	-	-	-	-	-	-	-	-	-	3.255	2.890
180	-	-	-	-	-	-	-	-	-	-	-	3.316	2.944
185	-	-	-	-	-	-	-	-	-	-	-	3.377	2.997
190	-	-	-	-	-	-	-	-	-	-	-	3.438	3.050
195	-	-	-	-	-	-	-	-	-	-	-	3.499	3.104
200	-	-	-	-	-	-	-	-	-	-	-	3.560	3.157
205	-	-	-	-	-	-	-	-	-	-	-	3.621	3.210
210	-	-	-	-	-	-	-	-	-	-	-	3.682	3.264
215	-	-	-	-	-	-	-	-	-	-	-	3.743	3.317
220	-	-	-	-	-	-	-	-	-	-	-	3.805	3.371
225	-	-	-	-	-	-	-	-	-	-	-	-	3.424
230	-	-	-	-	-	-	-	-	-	-	-	-	3.477
235	-	-	-	-	-	-	-	-	-	-	-	-	3.578

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Loading Tables

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Table 39: CHS - 4 Sided Columns
Fire Resistance Period: 105 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
240	-	-	-	-	-	-	-	-	-	-	-	-	3.722
245	-	-	-	-	-	-	-	-	-	-	-	-	3.866
250	-	-	-	-	-	-	-	-	-	-	-	-	4.010
255	-	-	-	-	-	-	-	-	-	-	-	-	4.154
260	-	-	-	-	-	-	-	-	-	-	-	-	4.298
265	-	-	-	-	-	-	-	-	-	-	-	-	4.442
270	-	-	-	-	-	-	-	-	-	-	-	-	4.586
275	-	-	-	-	-	-	-	-	-	-	-	-	4.730
280	-	-	-	-	-	-	-	-	-	-	-	-	4.874
285	-	-	-	-	-	-	-	-	-	-	-	-	5.018
290	-	-	-	-	-	-	-	-	-	-	-	-	-
295	-	-	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-	-	-
305	-	-	-	-	-	-	-	-	-	-	-	-	-
310	-	-	-	-	-	-	-	-	-	-	-	-	-
315	-	-	-	-	-	-	-	-	-	-	-	-	-
320	-	-	-	-	-	-	-	-	-	-	-	-	-
325	-	-	-	-	-	-	-	-	-	-	-	-	-
330	-	-	-	-	-	-	-	-	-	-	-	-	-
335	-	-	-	-	-	-	-	-	-	-	-	-	-
340	-	-	-	-	-	-	-	-	-	-	-	-	-
345	-	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-	-
355	-	-	-	-	-	-	-	-	-	-	-	-	-
360	-	-	-	-	-	-	-	-	-	-	-	-	-
365	-	-	-	-	-	-	-	-	-	-	-	-	-
370	-	-	-	-	-	-	-	-	-	-	-	-	-
375	-	-	-	-	-	-	-	-	-	-	-	-	-
380	-	-	-	-	-	-	-	-	-	-	-	-	-
385	-	-	-	-	-	-	-	-	-	-	-	-	-
390	-	-	-	-	-	-	-	-	-	-	-	-	-
395	-	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	-
405	-	-	-	-	-	-	-	-	-	-	-	-	-
410	-	-	-	-	-	-	-	-	-	-	-	-	-
415	-	-	-	-	-	-	-	-	-	-	-	-	-
420	-	-	-	-	-	-	-	-	-	-	-	-	-
425	-	-	-	-	-	-	-	-	-	-	-	-	-
430	-	-	-	-	-	-	-	-	-	-	-	-	-
435	-	-	-	-	-	-	-	-	-	-	-	-	-

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Loading Tables

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Table 40: CHS - 4 Sided Columns
Fire Resistance Period: 120 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
40	-	3.153	2.843	2.498	2.412	2.363	2.357	2.203	2.194	1.923	1.481	1.123	0.896
45	-	3.558	3.069	2.690	2.598	2.542	2.536	2.365	2.353	2.051	1.733	1.349	1.003
50	-	4.358	3.295	2.883	2.784	2.722	2.715	2.527	2.513	2.179	2.008	1.589	1.111
55	-	-	3.561	3.076	2.969	2.902	2.894	2.690	2.672	2.306	2.186	1.829	1.219
60	-	-	4.295	3.269	3.155	3.082	3.073	2.852	2.832	2.434	2.364	2.038	1.413
65	-	-	-	3.462	3.341	3.262	3.252	3.014	2.991	2.561	2.542	2.183	1.638
70	-	-	-	4.098	3.603	3.442	3.431	3.176	3.151	2.720	2.720	2.329	1.863
75	-	-	-	-	4.393	4.057	4.012	3.339	3.310	2.899	2.899	2.474	2.042
80	-	-	-	-	-	-	-	3.501	3.470	3.077	3.077	2.619	2.158
85	-	-	-	-	-	-	-	4.580	4.405	3.255	3.255	2.764	2.274
90	-	-	-	-	-	-	-	-	-	3.433	3.433	2.909	2.390
95	-	-	-	-	-	-	-	-	-	3.611	3.611	3.054	2.506
100	-	-	-	-	-	-	-	-	-	3.789	3.789	3.199	2.622
105	-	-	-	-	-	-	-	-	-	3.967	3.967	3.344	2.738
110	-	-	-	-	-	-	-	-	-	-	4.146	3.489	2.854
115	-	-	-	-	-	-	-	-	-	-	4.324	3.635	2.970
120	-	-	-	-	-	-	-	-	-	-	4.502	3.780	3.086
125	-	-	-	-	-	-	-	-	-	-	4.680	3.925	3.202
130	-	-	-	-	-	-	-	-	-	-	4.858	4.070	3.318
135	-	-	-	-	-	-	-	-	-	-	-	4.215	3.434
140	-	-	-	-	-	-	-	-	-	-	-	4.360	3.551
145	-	-	-	-	-	-	-	-	-	-	-	4.505	3.667
150	-	-	-	-	-	-	-	-	-	-	-	4.650	3.783
155	-	-	-	-	-	-	-	-	-	-	-	4.795	3.899
160	-	-	-	-	-	-	-	-	-	-	-	4.941	4.015
165	-	-	-	-	-	-	-	-	-	-	-	-	4.131
170	-	-	-	-	-	-	-	-	-	-	-	-	4.247
175	-	-	-	-	-	-	-	-	-	-	-	-	4.363
180	-	-	-	-	-	-	-	-	-	-	-	-	4.479
185	-	-	-	-	-	-	-	-	-	-	-	-	4.595
190	-	-	-	-	-	-	-	-	-	-	-	-	4.711
195	-	-	-	-	-	-	-	-	-	-	-	-	4.827
200	-	-	-	-	-	-	-	-	-	-	-	-	4.943
205	-	-	-	-	-	-	-	-	-	-	-	-	-
210	-	-	-	-	-	-	-	-	-	-	-	-	-
215	-	-	-	-	-	-	-	-	-	-	-	-	-
220	-	-	-	-	-	-	-	-	-	-	-	-	-
225	-	-	-	-	-	-	-	-	-	-	-	-	-
230	-	-	-	-	-	-	-	-	-	-	-	-	-
235	-	-	-	-	-	-	-	-	-	-	-	-	-

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Loading Tables

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Table 40: CHS - 4 Sided Columns
Fire Resistance Period: 120 Minutes

Thickness (mm) Required for a Design Temperature of

Section Factor up to m ¹	350°C	400°C	450°C	500°C	512°C	520°C	521°C	547°C	550°C	600°C	650°C	700°C	750°C
	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)	DFT (mm)
240	-	-	-	-	-	-	-	-	-	-	-	-	-
245	-	-	-	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-	-	-	-
255	-	-	-	-	-	-	-	-	-	-	-	-	-
260	-	-	-	-	-	-	-	-	-	-	-	-	-
265	-	-	-	-	-	-	-	-	-	-	-	-	-
270	-	-	-	-	-	-	-	-	-	-	-	-	-
275	-	-	-	-	-	-	-	-	-	-	-	-	-
280	-	-	-	-	-	-	-	-	-	-	-	-	-
285	-	-	-	-	-	-	-	-	-	-	-	-	-
290	-	-	-	-	-	-	-	-	-	-	-	-	-
295	-	-	-	-	-	-	-	-	-	-	-	-	-
300	-	-	-	-	-	-	-	-	-	-	-	-	-
305	-	-	-	-	-	-	-	-	-	-	-	-	-
310	-	-	-	-	-	-	-	-	-	-	-	-	-
315	-	-	-	-	-	-	-	-	-	-	-	-	-
320	-	-	-	-	-	-	-	-	-	-	-	-	-
325	-	-	-	-	-	-	-	-	-	-	-	-	-
330	-	-	-	-	-	-	-	-	-	-	-	-	-
335	-	-	-	-	-	-	-	-	-	-	-	-	-
340	-	-	-	-	-	-	-	-	-	-	-	-	-
345	-	-	-	-	-	-	-	-	-	-	-	-	-
350	-	-	-	-	-	-	-	-	-	-	-	-	-
355	-	-	-	-	-	-	-	-	-	-	-	-	-
360	-	-	-	-	-	-	-	-	-	-	-	-	-
365	-	-	-	-	-	-	-	-	-	-	-	-	-
370	-	-	-	-	-	-	-	-	-	-	-	-	-
375	-	-	-	-	-	-	-	-	-	-	-	-	-
380	-	-	-	-	-	-	-	-	-	-	-	-	-
385	-	-	-	-	-	-	-	-	-	-	-	-	-
390	-	-	-	-	-	-	-	-	-	-	-	-	-
395	-	-	-	-	-	-	-	-	-	-	-	-	-
400	-	-	-	-	-	-	-	-	-	-	-	-	-
405	-	-	-	-	-	-	-	-	-	-	-	-	-
410	-	-	-	-	-	-	-	-	-	-	-	-	-
415	-	-	-	-	-	-	-	-	-	-	-	-	-
420	-	-	-	-	-	-	-	-	-	-	-	-	-
425	-	-	-	-	-	-	-	-	-	-	-	-	-
430	-	-	-	-	-	-	-	-	-	-	-	-	-
435	-	-	-	-	-	-	-	-	-	-	-	-	-

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