

Southwest Fireproofing Type 5 GP, 5 MD, 7 GP and 7 HD

Design No. J718 - Beam / Slab Floor Assembly

Minimum Thickness, in., Required on Beam When Lower Flange Edge Thickness is Reduced by One-Half *

Member	W/D	Unrestrained Beam Rating				
		1 Hr	1.5 Hr	2 Hr	3 Hr	4 Hr
W4x13	0.65	0.560	0.840	1.120	1.680	2.380
W5x16	0.65	0.560	0.840	1.120	1.680	2.380
W5x19	0.76	0.515	0.772	1.029	1.544	2.188
W6x9	0.39	0.707	1.061	1.414	2.121	3.005
W6x12	0.51	0.631	0.946	1.261	1.892	2.680
W6x16	0.66	0.556	0.833	1.111	1.667	2.361
W6x20	0.67	0.551	0.827	1.102	1.654	2.343
W6x26	0.82	0.493	0.739	0.986	1.479	2.095
W8x10	0.37	0.722	1.082	1.443	2.165	3.067
W8x13	0.47	0.654	0.981	1.308	1.963	2.780
W8x15	0.54	0.614	0.921	1.228	1.842	2.610
W8x18	0.57	0.598	0.897	1.197	1.795	2.543
W8x21	0.66	0.556	0.833	1.111	1.667	2.361
W8x24	0.69	0.543	0.814	1.085	1.628	2.306
W8x28	0.80	0.500	0.750	1.000	1.500	2.125
W8x31	0.79	0.504	0.755	1.007	1.511	2.140
W8x35	0.88	0.473	0.709	0.946	1.419	2.010
W8x40	1.00	0.438	0.656	0.875	1.313	1.859
W8x48	1.18	0.393	0.590	0.787	1.180	1.671
W8x58	1.41	0.375	0.522	0.697	1.045	1.480
W8x67	1.61	0.375	0.475	0.633	0.950	1.346
W10x12	0.38	0.714	1.071	1.429	2.143	3.036
W10x15	0.48	0.648	0.972	1.296	1.944	2.755
W10x17	0.54	0.614	0.921	1.228	1.842	2.610
W10x19	0.59	0.588	0.882	1.176	1.765	2.500
W10x22	0.59	0.588	0.882	1.176	1.765	2.500
W10x26	0.69	0.543	0.814	1.085	1.628	2.306
W10x30	0.79	0.504	0.755	1.007	1.511	2.140
W10x33	0.77	0.511	0.766	1.022	1.533	2.172
W10x39	0.90	0.467	0.700	0.933	1.400	1.983
W10x46	1.03	0.429	0.644	0.859	1.288	1.825
W10x49	0.99	0.440	0.660	0.881	1.321	1.871
W10x54	1.09	0.414	0.621	0.828	1.243	1.760
W10x60	1.20	0.389	0.583	0.778	1.167	1.653
W10x68	1.36	0.375	0.536	0.714	1.071	1.518
W10x77	1.52	0.375	0.495	0.660	0.991	1.403
W10x88	1.72	0.375	0.453	0.603	0.905	1.282
W10x100	1.93	0.375	0.415	0.553	0.830	1.176
W10x112	2.14	0.375	0.383	0.511	0.766	1.086
W12x14	0.40	0.700	1.050	1.400	2.100	2.975
W12x16	0.45	0.667	1.000	1.333	2.000	2.833
W12x19	0.53	0.619	0.929	1.239	1.858	2.633
W12x22	0.61	0.579	0.868	1.157	1.736	2.459
W12x26	0.60	0.583	0.875	1.167	1.750	2.479

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		1 Hr	1.5 Hr	2 Hr	3.500	4 Hr
W12x30	0.69	0.543	0.814	1.085	1.628	2.306
W12x35	0.79	0.504	0.755	1.007	1.511	2.140
W12x40	0.85	0.483	0.724	0.966	1.448	2.052
W12x45	0.95	0.452	0.677	0.903	1.355	1.919
W12x50	1.04	0.427	0.640	0.854	1.280	1.814
W12x53	0.99	0.440	0.660	0.881	1.321	1.871
W12x54	1.04	0.427	0.640	0.854	1.280	1.814
W12x58	1.08	0.417	0.625	0.833	1.250	1.771
W12x65	1.09	0.414	0.621	0.828	1.243	1.760
W12x72	1.20	0.389	0.583	0.778	1.167	1.653
W12x79	1.32	0.375	0.547	0.729	1.094	1.549
W12x87	1.44	0.375	0.515	0.686	1.029	1.458
W12x96	1.57	0.375	0.484	0.645	0.968	1.371
W12x106	1.73	0.375	0.451	0.601	0.901	1.277
W12x120	1.94	0.375	0.413	0.551	0.827	1.171
W12x136	2.17	0.375	0.379	0.505	0.758	1.074
W12x152	2.40	0.375	0.375	0.467	0.700	0.992
W12x170	2.66	0.375	0.375	0.429	0.644	0.913
W12x190	2.93	0.375	0.375	0.397	0.595	0.843
W12x210	3.21	0.375	0.375	0.375	0.551	0.781
W12x230	3.47	0.375	0.375	0.375	0.516	0.731
W12x262	3.76	0.375	0.375	0.375	0.482	0.682
W12x279	4.10	0.375	0.375	0.375	0.447	0.633
W12x305	4.41	0.375	0.375	0.375	0.419	0.594
W12x336	4.78	0.375	0.375	0.375	0.390	0.553
W14x22	0.52	0.625	0.938	1.250	1.875	2.656
W14x26	0.61	0.579	0.868	1.157	1.736	2.459
W14x30	0.63	0.569	0.854	1.138	1.707	2.419
W14x34	0.71	0.534	0.802	1.069	1.603	2.271
W14x38	0.79	0.504	0.755	1.007	1.511	2.140
W14x43	0.85	0.483	0.724	0.966	1.448	2.052
W14x48	0.94	0.455	0.682	0.909	1.364	1.932
W14x53	1.03	0.429	0.644	0.859	1.288	1.825
W14x61	1.07	0.419	0.629	0.838	1.257	1.781
W14x68	1.19	0.391	0.587	0.782	1.173	1.662
W14x74	1.28	0.375	0.559	0.745	1.117	1.582
W14x82	1.41	0.375	0.522	0.697	1.045	1.480
W14x90	1.27	0.375	0.561	0.749	1.123	1.591
W14x99	1.39	0.375	0.528	0.704	1.055	1.495
W14x109	1.53	0.375	0.493	0.657	0.986	1.397
W14x120	1.67	0.375	0.463	0.617	0.925	1.311
W14x132	1.83	0.375	0.432	0.576	0.864	1.224
W14x145	1.94	0.375	0.413	0.551	0.827	1.171
W14x159	2.11	0.375	0.387	0.517	0.775	1.098

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		1 Hr	1.5 Hr	2 Hr	3 Hr	4 Hr
W14x176	2.25	0.375	0.375	0.491	0.737	1.044
W14x193	2.32	0.375	0.375	0.479	0.719	1.019
W14x211	2.74	0.375	0.375	0.419	0.629	0.891
W14x233	3.00	0.375	0.375	0.389	0.583	0.826
W14x257	3.27	0.375	0.375	0.375	0.543	0.769
W14x283	3.57	0.375	0.375	0.375	0.504	0.713
W14x311	3.88	0.375	0.375	0.375	0.469	0.664
W14x342	4.21	0.375	0.375	0.375	0.437	0.619
W14x370	4.51	0.375	0.375	0.375	0.411	0.582
W14x398	4.80	0.375	0.375	0.375	0.389	0.551
W14x426	5.09	0.375	0.375	0.375	0.375	0.523
W14x455	5.38	0.375	0.375	0.375	0.375	0.497
W14x500	5.82	0.375	0.375	0.375	0.375	0.463
W14x550	6.30	0.375	0.375	0.375	0.375	0.431
W14x605	6.80	0.375	0.375	0.375	0.375	0.402
W16x26	0.55	0.609	0.913	1.217	1.826	2.587
W16x31	0.65	0.560	0.840	1.120	1.680	2.380
W16x36	0.69	0.543	0.814	1.085	1.628	2.306
W16x40	0.76	0.515	0.772	1.029	1.544	2.188
W16x45	0.85	0.483	0.724	0.966	1.448	2.052
W16x50	0.94	0.455	0.682	0.909	1.364	1.932
W16x67	1.07	0.419	0.629	0.838	1.257	1.781
W16x77	1.07	0.419	0.629	0.838	1.257	1.781
W16x89	1.22	0.385	0.577	0.769	1.154	1.635
W16x100	1.56	0.375	0.486	0.648	0.972	1.377
W18x35	0.66	0.556	0.833	1.111	1.667	2.361
W18x40	0.76	0.515	0.772	1.029	1.544	2.188
W18x46	0.86	0.479	0.719	0.959	1.438	2.038
W18x50	0.87	0.476	0.714	0.952	1.429	2.024
W18x55	0.95	0.452	0.677	0.903	1.355	1.919
W18x60	1.03	0.429	0.644	0.859	1.288	1.825
W18x65	1.11	0.409	0.614	0.819	1.228	1.740
W18x71	1.21	0.387	0.580	0.773	1.160	1.644
W18x76	1.11	0.409	0.614	0.819	1.228	1.740
W18x88	1.24	0.380	0.571	0.761	1.141	1.617
W18x97	1.39	0.375	0.528	0.704	1.055	1.495
W18x106	1.52	0.375	0.495	0.660	0.991	1.403
W18x119	1.68	0.375	0.461	0.614	0.921	1.305
W21x44	0.73	0.526	0.789	1.053	1.579	2.237
W21x50	0.83	0.490	0.734	0.979	1.469	2.080
W21x57	0.93	0.458	0.686	0.915	1.373	1.944
W21x62	0.94	0.455	0.682	0.909	1.364	1.932
W21x68	1.03	0.429	0.644	0.859	1.288	1.825
W21x83	1.24	0.380	0.571	0.761	1.141	1.617

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Member	W/D	Unrestrained Beam Rating				
		1 Hr	1.5 Hr	2 Hr	3 Hr	4 Hr
W21x93	1.38	0.375	0.530	0.707	1.061	1.503
W21x101	1.29	0.375	0.556	0.741	1.111	1.574
W21x111	1.41	0.375	0.522	0.697	1.045	1.480
W21x122	1.54	0.375	0.491	0.654	0.981	1.390
W21x132	1.66	0.375	0.465	0.619	0.929	1.316
W21x147	1.83	0.375	0.432	0.576	0.864	1.224
W24x55	0.82	0.493	0.739	0.986	1.479	2.095
W24x62	0.92	0.461	0.691	0.921	1.382	1.957
W24x68	0.93	0.458	0.686	0.915	1.373	1.944
W24x76	1.02	0.432	0.648	0.864	1.296	1.836
W24x84	1.13	0.405	0.607	0.809	1.214	1.720
W24x94	1.26	0.376	0.565	0.753	1.129	1.599
W24x104	1.22	0.385	0.577	0.769	1.154	1.635
W24x117	1.36	0.375	0.536	0.714	1.071	1.518
W24x131	1.52	0.375	0.495	0.660	0.991	1.403
W24x146	1.68	0.375	0.461	0.614	0.921	1.305
W24x162	1.85	0.375	0.429	0.571	0.857	1.214
W27x84	1.02	0.432	0.648	0.864	1.296	1.836
W27x94	1.13	0.405	0.607	0.809	1.214	1.720
W27x102	1.23	0.383	0.574	0.765	1.148	1.626
W27x114	1.36	0.375	0.536	0.714	1.071	1.518
W27x146	1.53	0.375	0.493	0.657	0.986	1.397
W27x161	1.68	0.375	0.461	0.614	0.921	1.305
W27x178	1.85	0.375	0.429	0.571	0.857	1.214
W30x99	1.10	0.412	0.618	0.824	1.235	1.750
W30x108	1.20	0.389	0.583	0.778	1.167	1.653
W30x116	1.28	0.375	0.559	0.745	1.117	1.582
W30x124	1.37	0.375	0.533	0.711	1.066	1.510
W30x132	1.46	0.375	0.510	0.680	1.019	1.444
W30x173	1.66	0.375	0.465	0.619	0.929	1.316
W30x191	1.82	0.375	0.434	0.579	0.868	1.229
W30x211	2.00	0.375	0.404	0.538	0.808	1.144
W33x118	1.19	0.391	0.587	0.782	1.173	1.662
W33x130	1.31	0.375	0.550	0.733	1.099	1.558
W33x141	1.41	0.375	0.522	0.697	1.045	1.480
W33x152	1.51	0.375	0.498	0.664	0.995	1.410
W33x201	1.78	0.375	0.441	0.588	0.882	1.250

These beam protection thicknesses have been calculated for the convenience of users, in accordance with "6. Adjustment of Thickness of Spray-applied Fire Resistive Materials for Restrained and Unrestrained Beams", as detailed in the UL FireResistance Directory - Volume 1, 2007, page 9. While we have taken care to be as accurate as possible, we will not be held responsible for errors or omissions. If any discrepancy is found between these tables and the UL Design information, the UL Design information shall govern.

* Thickness applied to beam's lower flange edge shall be a minimum of 1/4-in.