

DEEP LONGSPAN STEEL JOISTS, DLH-SERIES

METRIC ASD LOAD TABLE DEEP LONGSPAN STEEL JOISTS, DLH-SERIES

Based on a 345 MPa Maximum Yield Strength.
Adopted by the Steel Joist Institute May 2, 1994
Revised to November 10, 2003 - Effective March 01, 2005

The black figures in the following table give the TOTAL safe uniformly distributed load-carrying capacities, in kiloNewtons per meter (kN/m) of **ASD DLH-Series** Steel Joists. The weight (kN/m) of the DEAD loads, including the joists, must in all cases be deducted to determine the LIVE load-carrying capacities of the joists. The approximate DEAD load of the joist may be determined from the weights shown in the tables. All loads shown are for roof construction only.

The **RED** figures in this load table are the nominal LIVE loads (kiloNewtons per meter) of joist which will produce an approximate deflection of 1/360 of the span. LIVE loads which produce a deflection of 1/240 of the span may be obtained by multiplying the **RED** figures by 1.5. In no case shall the TOTAL load capacity of the joists be exceeded.

This load table applies to joists with either parallel chords or standard pitched top chords. When top chords are pitched, the carrying capacities are determined by the nominal depth of the joist at center of the span. Standard top chord pitch is 1:96. If pitch exceeds this standard, the load table **does not** apply. Sloped parallel-chord joists shall use span as defined by the length along the slope.

All rows of bridging shall be diagonal bridging with bolted connections at the chords and intersections.

Where the joist span is in the **BLUE SHADED** area of the load table hoisting cables shall not be released until the two rows of bridging nearest the third points are completely installed.

Where the joist span is in the **GRAY SHADED** area of the load table hoisting cables shall not be released until all rows of bridging are completely installed.

When holes are required in top or bottom chords, the carrying capacities must be reduced in proportion to the reduction of chord areas.

The top chords are considered as being stayed laterally by the roof deck.

The approximate joist weights (kN/m) and mass (kg/m) shown in these tables do **not** include accessories.

The approximate moment of inertia of the joist, in mm⁴ is: $I_j = 2.6953(W_{LL})(L^3)(10^{-5})$, where W_{LL} = **RED** figure in the Load Table, and L = (span + 203) in millimeters.

ASD

METRIC LOAD TABLE FOR DEEP LONGSPAN STEEL JOISTS, DLH-SERIES																					
Based on a 345 MPa Maximum Yield Strength - Loads Shown in KiloNewtons per Meter (kN/m)																					
Joist Designation	Approx Mass (kN/m) (Joists only)	Approx Mass (kg/m) (Joists only)	Depth in (mm)	SAFELOAD* in kN Between	CLEAR SPAN (MM)																
					18593-26822	27127	27432	27737	28042	28346	28651	28956	29261	29566	29870	30175	30480	30785	31090	31394	31699
52DLH10	0.36	37	1321	118.8	4.34 2.49	4.24 2.40	4.15 2.32	4.07 2.24	3.98 2.18	3.89 2.11	3.80 2.04	3.73 1.98	3.66 1.92	3.59 1.86	3.51 1.80	3.44 1.75	3.37 1.69	3.31 1.66	3.25 1.60	3.18 1.56	
52DLH11	0.38	39	1321	130.3	4.77 2.72	4.67 3.96	4.56 3.80	4.46 3.69	4.36 3.59	4.27 3.45	4.18 3.34	4.10 3.26	4.01 3.15	3.94 3.06	3.85 2.95	3.77 2.88	3.70 2.80	3.63 2.71	3.56 2.62	3.50 2.56	
52DLH12	0.42	43	1321	145.5	5.32 2.97	5.21 2.87	5.09 2.78	4.99 2.69	4.87 2.61	4.77 2.52	4.67 2.45	4.58 2.37	4.48 2.30	4.39 2.23	4.30 2.17	4.21 2.10	4.14 2.04	4.05 1.97	3.98 1.92	3.91 1.86	
52DLH13	0.50	51	1321	176.6	6.46 3.60	6.31 3.48	6.18 3.37	6.04 3.26	5.92 3.15	5.79 3.05	5.67 2.96	5.56 2.87	5.44 2.78	5.34 2.69	5.22 2.62	5.12 2.53	5.02 2.48	4.93 2.39	4.83 2.32	4.74 2.26	
52DLH14	0.57	58	1321	201.9	7.39 4.02	7.25 3.88	7.09 3.76	6.94 3.63	6.80 3.53	6.66 3.41	6.52 3.31	6.39 3.21	6.27 3.10	6.14 3.02	6.02 2.93	5.91 2.83	5.79 2.75	5.69 2.68	5.57 2.59	5.47 2.52	
52DLH15	0.61	63	1321	226.9	8.30 4.53	8.12 4.39	7.95 4.24	7.77 4.11	7.63 3.96	7.45 3.85	7.29 3.73	7.15 3.60	7.00 3.50	6.85 3.40	6.72 3.29	6.58 3.19	6.46 3.10	6.33 3.02	6.21 2.93	6.10 2.84	
52DLH16	0.66	67	1321	244.7	8.96 5.04	8.77 4.88	8.58 4.72	8.39 4.58	8.21 4.43	8.04 4.29	7.88 4.15	7.70 4.02	7.55 3.89	7.39 3.79	7.25 3.67	7.10 3.57	6.97 3.45	6.82 3.35	6.69 3.26	6.58 3.16	
52DLH17	0.76	77	1321	281.6	10.30 5.76	10.08 5.56	9.86 5.38	9.64 5.21	9.44 5.04	9.25 4.92	9.04 4.72	8.87 4.59	8.68 4.43	8.50 4.31	8.34 4.17	8.17 4.07	8.01 3.94	7.86 3.83	7.70 3.72	7.55 3.60	
					20117-29261	29566	29870	30175	30480	30785	31090	31394	31699	32004	32309	32614	32918	33223	33528	33833	34138
56DLH11	0.38	39	1422	125.0	4.20 2.46	4.13 2.37	4.04 2.30	3.96 2.23	3.89 2.17	3.82 2.11	3.75 2.04	3.69 1.98	3.61 1.92	3.56 1.88	3.48 1.82	3.42 1.78	3.37 1.72	3.31 1.67	3.25 1.64	3.19 1.60	
56DLH12	0.44	45	1422	143.7	4.83 2.68	4.72 2.59	4.64 2.52	4.55 2.45	4.46 2.37	4.37 2.30	4.30 2.23	4.21 2.18	4.14 2.11	4.05 2.05	3.98 1.99	3.91 1.91	3.83 1.89	3.77 1.83	3.70 1.79	3.63 1.73	
56DLH13	0.50	51	1422	173.9	5.85 3.25	5.74 3.15	5.63 3.05	5.53 2.97	5.42 2.87	5.32 2.78	5.22 2.71	5.12 2.64	5.02 2.55	4.93 2.49	4.83 2.42	4.74 2.34	4.65 2.29	4.58 2.21	4.49 2.17	4.42 2.11	
56DLH14	0.57	58	1422	196.6	6.61 3.63	6.47 3.53	6.34 3.41	6.23 3.32	6.11 3.22	5.99 3.12	5.88 3.05	5.77 2.94	5.66 2.86	5.56 2.77	5.47 2.71	5.37 2.64	5.26 2.55	5.18 2.49	5.09 2.43	5.00 2.36	
56DLH15	0.61	63	1422	224.6	7.55 4.10	7.41 3.96	7.26 3.85	7.12 3.73	6.97 3.61	6.84 3.53	6.71 3.41	6.58 3.32	6.46 3.22	6.33 3.13	6.21 3.05	6.11 2.97	5.99 2.88	5.88 2.80	5.77 2.74	5.67 2.65	
56DLH16	0.67	68	1422	242.4	8.15 4.56	7.99 4.43	7.83 4.29	7.67 4.15	7.53 4.04	7.38 3.92	7.23 3.82	7.10 3.70	6.97 3.60	6.84 3.50	6.71 3.40	6.59 3.31	6.47 3.22	6.36 3.12	6.24 3.05	6.12 2.97	
56DLH17	0.74	76	1422	279.3	9.38 5.19	9.19 5.03	9.01 4.88	8.82 4.74	8.66 4.61	8.49 4.46	8.33 4.34	8.17 4.21	8.01 4.10	7.86 3.98	7.72 3.88	7.58 3.76	7.44 3.66	7.31 3.57	7.18 3.47	7.04 3.37	



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METRIC LOAD TABLE FOR DEEP LONGSPAN STEEL JOISTS, DLH-SERIES
Based on a 345 MPa Maximum Yield Strength - Loads Shown in KiloNewtons per Meter (kN/m)

Joist Designation	Approx Mass (kN/m) (Joists only)	Approx Mass (kg/m) (Joists only)	Depth in (mm)	SAFELOAD* in kN		CLEAR SPAN (mm)																			
				Between																					
				21336-30175	30480-31699	32004	32309	32614	32918	33223	33528	33833	34138	34442	34747	35052	35357	35662	35966	36271	36576				
60DLH12	0.42	43	1524	138.3	138.3	4.30 2.45	4.21 2.37	4.14 2.30	4.07 2.24	3.99 2.18	3.94 2.13	3.86 2.07	3.80 2.01	3.73 1.95	3.67 1.91	3.61 1.86	3.56 1.80	3.50 1.76	3.44 1.72	3.38 1.67	3.32 1.64				
60DLH13	0.51	52	1524	168.1	168.1	5.22 2.96	5.12 2.87	5.03 2.78	4.94 2.72	4.85 2.64	4.77 2.56	4.69 2.49	4.61 2.43	4.53 2.37	4.46 2.30	4.39 2.24	4.31 2.20	4.24 2.14	4.17 2.08	4.11 2.02	4.04 1.97				
60DLH14	0.58	60	1524	186.8	186.8	5.80 3.15	5.70 3.06	5.58 2.99	5.48 2.90	5.39 2.81	5.29 2.75	5.19 2.67	5.10 2.59	5.02 2.52	4.93 2.48	4.84 2.40	4.77 2.34	4.68 2.27	4.61 2.21	4.52 2.17	4.45 2.11				
60DLH15	0.63	64	1524	219.2	219.2	6.81 3.72	6.68 3.61	6.56 3.53	6.45 3.42	6.33 3.32	6.23 3.25	6.11 3.15	6.01 3.06	5.91 2.99	5.80 2.91	5.72 2.83	5.61 2.77	5.53 2.69	5.44 2.62	5.35 2.55	5.26 2.49				
60DLH16	0.67	68	1524	241.0	241.0	7.48 4.15	7.35 4.04	7.20 3.92	7.07 3.82	6.94 3.72	6.82 3.60	6.71 3.51	6.58 3.42	6.47 3.32	6.36 3.25	6.24 3.16	6.14 3.07	6.04 2.99	5.93 2.90	5.83 2.86	5.73 2.77				
60DLH17	0.76	77	1524	277.1	277.1	8.61 4.72	8.44 4.59	8.30 4.46	8.12 4.34	7.99 4.23	7.85 4.13	7.72 4.01	7.57 3.89	7.44 3.80	7.31 3.70	7.19 3.60	7.06 3.51	6.94 3.42	6.82 3.32	6.71 3.25	6.61 3.16				
60DLH18	0.86	88	1524	319.8	319.8	9.93 5.34	9.74 5.21	9.57 5.04	9.39 4.91	9.22 4.77	9.06 4.65	8.91 4.52	8.74 4.42	8.59 4.29	8.43 4.17	8.28 4.07	8.15 3.96	8.01 3.88	7.88 3.77	7.74 3.67	7.61 3.59				
				22860-30175	30480-34138	34442	34747	35052	35357	35662	35966	36271	36576	36881	37186	37490	37795	38100	38405	38710	39014				
64DLH12	0.45	46	1626	133.4	133.4	3.85 2.23	3.77 2.18	3.72 2.13	3.66 2.07	3.60 2.01	3.54 1.97	3.48 1.92	3.42 1.88	3.37 1.82	3.32 1.78	3.26 1.73	3.22 1.69	3.18 1.66	3.12 1.61	3.07 1.59	3.03 1.54				
64DLH13	0.50	51	1626	161.9	161.9	4.68 2.71	4.59 2.64	4.52 2.56	4.45 2.49	4.37 2.45	4.30 2.37	4.24 2.32	4.17 2.26	4.10 2.21	4.04 2.15	3.98 2.10	3.92 2.05	3.85 1.99	3.79 1.95	3.75 1.91	3.69 1.86				
64DLH14	0.58	60	1626	185.4	185.4	5.35 2.90	5.25 2.81	5.16 2.75	5.09 2.68	5.00 2.61	4.91 2.53	4.84 2.42	4.75 2.36	4.68 2.30	4.61 2.24	4.53 2.20	4.46 2.19	4.39 2.14	4.31 2.08	4.24 2.04	4.18 1.98				
64DLH15	0.63	64	1626	212.6	212.6	6.14 3.41	6.04 3.32	5.93 3.25	5.83 3.16	5.74 3.07	5.64 3.00	5.56 2.96	5.47 2.86	5.38 2.78	5.29 2.72	5.22 2.65	5.13 2.58	5.06 2.52	4.97 2.48	4.90 2.40	4.83 2.34				
64DLH16	0.67	68	1626	239.3	239.3	6.91 3.82	6.80 3.70	6.68 3.61	6.56 3.53	6.46 3.42	6.34 3.34	6.24 3.26	6.14 3.18	6.04 3.10	5.93 3.03	5.85 2.96	5.74 2.88	5.66 2.81	5.57 2.75	5.48 2.68	5.39 2.62				
64DLH17	0.76	77	1626	275.7	275.7	7.96 4.34	7.82 4.23	7.69 4.13	7.55 4.01	7.42 3.91	7.31 3.82	7.18 3.72	7.06 3.61	6.94 3.54	6.82 3.45	6.72 3.37	6.62 3.29	6.50 3.21	6.40 3.13	6.30 3.06	6.21 2.99				
64DLH18	0.86	88	1626	318.4	318.4	9.19 4.91	9.03 4.78	8.87 4.67	8.72 4.53	8.56 4.43	8.43 4.31	8.28 4.20	8.15 4.11	8.01 3.99	7.88 3.89	7.76 3.80	7.63 3.72	7.51 3.63	7.39 3.54	7.28 3.45	7.16 3.38				
				24384-30175	30480-36576	36881	37186	37490	37795	38100	38405	38710	39014	39319	39624	39929	40234	40538	40843	41148	41453				
68DLH13	0.54	55	1727	155.6	155.6	4.20 2.49	4.14 2.45	4.07 2.39	4.01 2.32	3.95 2.26	3.89 2.21	3.83 2.17	3.77 2.11	3.72 2.07	3.67 2.01	3.61 1.97	3.56 1.94	3.51 1.89	3.45 1.85	3.41 1.80	3.37 1.76				
68DLH14	0.58	60	1727	179.2	179.2	4.84 2.68	4.77 2.61	4.69 2.55	4.62 2.49	4.55 2.43	4.49 2.37	4.42 2.32	4.36 2.26	4.29 2.21	4.23 2.15	4.17 2.11	4.10 2.05	4.04 2.00	3.98 1.97	3.92 1.94	3.88 1.89				
68DLH15	0.64	65	1727	201.0	201.0	5.42 3.00	5.32 2.93	5.25 2.86	5.16 2.78	5.07 2.72	5.00 2.65	4.91 2.59	4.84 2.53	4.77 2.48	4.69 2.42	4.62 2.36	4.55 2.30	4.49 2.24	4.42 2.21	4.36 2.15	4.29 2.11				
68DLH16	0.72	73	1727	238.4	238.4	6.43 3.53	6.31 3.44	6.23 3.35	6.12 3.28	6.02 3.19	5.93 3.12	5.83 3.05	5.74 2.97	5.66 2.90	5.57 2.82	5.48 2.77	5.41 2.71	5.32 2.65	5.25 2.59	5.16 2.53	5.09 2.49				
68DLH17	0.80	82	1727	268.6	268.6	7.25 4.01	7.13 3.91	7.01 3.82	6.91 3.73	6.81 3.63	6.71 3.56	6.61 3.47	6.50 3.38	6.40 3.32	6.31 3.23	6.23 3.16	6.12 3.09	6.04 3.03	5.95 2.96	5.88 2.88	5.79 2.79				
68DLH18	0.89	91	1727	310.9	310.9	8.39 4.53	8.26 4.43	8.12 4.33	8.01 4.21	7.88 4.13	7.76 4.02	7.64 3.92	7.53 3.83	7.41 3.75	7.31 3.66	7.19 3.59	7.09 3.50	6.99 3.41	6.88 3.35	6.78 3.28	6.69 3.19				
68DLH19	0.98	100	1727	358.0	358.0	9.66 5.15	9.50 5.02	9.35 4.90	9.20 4.78	9.06 4.67	8.91 4.56	8.77 4.45	8.63 4.34	8.50 4.24	8.37 4.15	8.24 4.05	8.12 3.96	7.99 3.88	7.88 3.79	7.76 3.70	7.66 3.61				
				25603-30175	30480-39014	39319	39624	39929	40234	40538	40843	41148	41453	41758	42062	42367	42672	42977	43282	43586	43891				
72DLH14	0.60	61	1829	174.3	174.3	4.42 2.49	4.34 2.43	4.29 2.37	4.23 2.32	4.15 2.26	4.10 2.21	4.04 2.17	3.99 2.13	3.94 2.08	3.88 2.02	3.82 1.96	3.77 1.94	3.72 1.91	3.67 1.86	3.61 1.82	3.57 1.79				
72DLH15	0.64	65	1829	199.7	199.7	5.06 2.78	4.99 2.72	4.90 2.67	4.83 2.59	4.75 2.53	4.69 2.49	4.62 2.43	4.55 2.37	4.49 2.33	4.42 2.27	4.36 2.21	4.30 2.18	4.24 2.14	4.17 2.08	4.11 2.04	4.07 1.99				
72DLH16	0.73	74	1829	230.8	230.8	5.85 3.28	5.76 3.19	5.69 3.12	5.60 3.05	5.51 2.99	5.44 2.91	5.37 2.86	5.29 2.78	5.22 2.74	5.15 2.67	5.07 2.61	5.00 2.55	4.93 2.49	4.87 2.46	4.80 2.40	4.74 2.34				
72DLH17	0.82	83	1829	259.7	259.7	6.58 3.73	6.49 3.64	6.39 3.57	6.30 3.48	6.21 3.40	6.12 3.32	6.04 3.26	5.95 3.18	5.86 3.10	5.79 3.05	5.70 2.99	5.63 2.91	5.56 2.86	5.48 2.78	5.41 2.74	5.34 2.68				
72DLH18	0.86	88	1829	304.2	304.2	7.70 4.21	7.58 4.13	7.47 4.02	7.36 3.94	7.25 3.86	7.15 3.76	7.04 3.67	6.99 3.60	6.85 3.53	6.75 3.44	6.66 3.37	6.56 3.31	6.47 3.23	6.39 3.16	6.30 3.09	6.21 3.05				
72DLH19	1.02	104	1829	356.7	356.7	9.03 4.78	8.88 4.68	8.75 4.56	8.62 4.46	8.49 4.37	8.36 4.27	8.24 4.17	8.12 4.08	8.01 3.99	7.89 3.91	7.77 3.83	7.67 3.75	7.55 3.66	7.45 3.60	7.35 3.51	7.25 3.44				

* The safe uniform load for the clear spans shown in the Safe Load Column is equal to (Safe Load) / (Clear span + 203). (The added 203 millimeters is required to obtain the proper length on which the Load Tables were developed).

In no case shall the safe uniform load, for clear spans less than the minimum clear span shown in the Safe Load Column, exceed the uniform load calculated for the minimum clear span listed in the Safe Load Column.

To solve for *live* loads for clear spans shown in the Safe Load Column (or lesser clear spans), multiply the live load of the shortest clear span shown in the Load Table by (the shortest clear span shown in the Load Table + 203 mm)² and divide by (the actual clear span + 203 mm)². The live load shall *not* exceed the safe uniform load.

