

STANDARD LRFD LOAD TABLE

FOR KCS JOISTS

Based on a 50 ksi (345 MPa) Maximum Yield Strength
Adopted by the Steel Joist Institute May 1, 2000
Revised to May 18, 2010 – Effective December 31, 2010

The figures in the following table give the Moment Capacity (kip-in.)(N/m) and Shear Capacity (lbs)(kN). The maximum uniformly distributed load capacity in **LRFD** shall not exceed 825 plf (12.03 kN/M) and a single concentrated load cannot exceed the shear capacity. Sloped parallel-chord KCS Joists shall use the appropriate moment and shear capacity for the span as defined by the length along the slope.

The approximate KCS Joist weights per linear foot (kiloNewtons per meter) shown in this table do not include accessories.

The KCS Joist designation is not used to establish bridging requirements. The Bridging Table Section Numbers given in the KCS Standard Load Table indicate the equivalent K-Series joist of the same depth to be used for determination of the number of bridging rows, the size of horizontal bridging, and the need for erection stability bridging. While the need for erection stability bridging (diagonal bridging with bolted connections at the chords and intersections), can be determined from the **RED** shaded portion of the Standard Load Table, Open Web Steel Joists, K-Series, for convenience the KCS Load Table also includes a column for erection stability bridging. Where the span of the KCS Joist designation exceeds the length in ft. (mm) listed, the row of bridging nearest the joist midspan shall be erection stability bridging. Where “NA” is listed in the column, the KCS Joist designation does not require bolted diagonal erection bridging regardless of span.

For the proper handling of concentrated and/or varying loads, see Section 2.4 in the Code of Standard Practice for Steel Joists and Joist Girders.



LRFD

STANDARD LOAD TABLE FOR KCS OPEN WEB STEEL JOISTS

Based on a 50 ksi Maximum Yield Strength

JOIST DESIGNATION	DEPTH (in.)	MOMENT CAPACITY (k-in.)	SHEAR CAPACITY* (lbs)	APPROX. WEIGHT** (lbs/ft.)	GROSS MOMENT OF INERTIA (in. ⁴)	ERECTION STABILITY BRIDGING REQ'D (ft.)	BRIDGING TABLE SECTION NUMBER
10KCS1	10	258	3000	6.0	29	NA	1
10KCS2	10	337	3750	7.5	37	NA	1
10KCS3	10	444	4500	10.0	47	NA	1
12KCS1	12	313	3600	6.0	43	NA	3
12KCS2	12	411	4500	8.0	55	NA	5
12KCS3	12	543	5250	10.0	71	NA	5
14KCS1	14	370	4350	6.5	59	NA	4
14KCS2	14	486	5100	8.0	77	NA	6
14KCS3	14	642	5850	10.0	99	NA	6
16KCS2	16	523	6000	8.5	99	NA	6
16KCS3	16	705	7200	10.5	128	NA	9
16KCS4	16	1080	7950	14.5	192	NA	9
16KCS5	16	1401	8700	18.0	245	NA	9
18KCS2	18	592	7050	9.0	127	35-0	6
18KCS3	18	798	7800	11.0	164	NA	9
18KCS4	18	1225	8550	15.0	247	NA	10
18KCS5	18	1593	9300	18.5	316	NA	10
20KCS2	20	663	7800	9.5	159	36-0	6
20KCS3	20	892	9000	11.5	205	39-0	9
20KCS4	20	1371	11850	16.5	308	NA	10
20KCS5	20	1786	12600	20.0	396	NA	10
22KCS2	22	732	8850	10.0	194	36-0	6
22KCS3	22	987	9900	12.5	251	40-0	9
22KCS4	22	1518	11850	16.5	377	NA	11
22KCS5	22	1978	12900	20.5	485	NA	11
24KCS2	24	801	9450	10.0	232	39-0	6
24KCS3	24	1080	10800	12.5	301	44-0	9
24KCS4	24	1662	12600	16.5	453	NA	12
24KCS5	24	2172	13350	20.5	584	NA	12
26KCS2	26	870	9900	10.0	274	39-0	6
26KCS3	26	1174	11700	12.5	355	44-0	9
26KCS4	26	1809	12750	16.5	536	NA	12
26KCS5	26	2364	13800	20.5	691	NA	12
28KCS2	28	939	10350	10.5	320	40-0	6
28KCS3	28	1269	12000	12.5	414	45-0	9
28KCS4	28	1954	12750	16.5	626	53-0	12
28KCS5	28	2556	13800	20.5	808	53-0	12
30KCS3	30	1362	12000	13.0	478	45-0	9
30KCS4	30	2100	12750	16.5	722	54-0	12
30KCS5	30	2749	13800	21.0	934	54-0	12

*Maximum uniformly distributed load capacity is 825 plf and single concentrated load cannot exceed shear capacity

**Does not include accessories



LRFD

METRIC LOAD TABLE FOR KCS OPEN WEB STEEL JOISTS

Based on 345 MPa Maximum Yield Strength

JOIST DESIGNATION	DEPTH (mm)	MOMENT CAPACITY (kN-m)	SHEAR CAPACITY* (kN)	APPROX. WEIGHT** (kN/m)	GROSS MOMENT OF INERTIA (cm ⁴)	ERECTION STABILITY BRIDGING REQ'D (mm)	BRIDGING TABLE SECTION NUMBER
10KCS1	254	29.1	13.3	0.09	1200	NA	1
10KCS2	254	38.1	16.6	0.11	1540	NA	1
10KCS3	254	50.1	20.0	0.15	1950	NA	1
12KCS1	305	35.4	16.0	0.09	1780	NA	3
12KCS2	305	46.4	20.0	0.12	2280	NA	5
12KCS3	305	61.3	23.3	0.15	2950	NA	5
14KCS1	356	41.8	19.3	0.09	2450	NA	4
14KCS2	356	54.9	22.6	0.12	3200	NA	6
14KCS3	356	72.5	26.0	0.15	4120	NA	6
16KCS2	406	59.1	26.6	0.12	4120	NA	6
16KCS3	406	79.6	32.0	0.15	5320	NA	9
16KCS4	406	122.0	35.3	0.21	7990	NA	9
16KCS5	406	158.2	38.6	0.26	10190	NA	9
18KCS2	457	66.9	31.3	0.13	5280	10668	6
18KCS3	457	90.1	34.6	0.16	6820	NA	9
18KCS4	457	138.4	38.0	0.22	10280	NA	10
18KCS5	457	179.9	41.3	0.27	13150	NA	10
20KCS2	508	74.9	34.6	0.14	6610	10973	6
20KCS3	508	100.7	40.0	0.17	8530	11887	9
20KCS4	508	154.9	52.7	0.24	12810	NA	10
20KCS5	508	201.8	56.0	0.29	16480	NA	10
22KCS2	559	82.7	39.3	0.15	8070	10973	6
22KCS3	559	111.5	44.0	0.18	10440	12192	9
22KCS4	559	171.5	52.7	0.24	15690	NA	11
22KCS5	559	223.5	57.3	0.30	20180	NA	11
24KCS2	610	90.5	42.0	0.15	9650	11887	6
24KCS3	610	122.0	48.0	0.18	12520	13411	9
24KCS4	610	187.7	56.0	0.24	18850	NA	12
24KCS5	610	245.4	59.3	0.30	24300	NA	12
26KCS2	660	98.2	44.0	0.15	11400	11887	6
26KCS3	660	132.7	52.0	0.18	14770	13411	9
26KCS4	660	204.3	56.7	0.24	22310	NA	12
26KCS5	660	267.0	61.3	0.30	28760	NA	12
28KCS2	711	106.0	46.0	0.15	13310	12192	6
28KCS3	711	143.3	53.3	0.18	17230	13716	9
28KCS4	711	220.8	56.7	0.24	26050	16154	12
28KCS5	711	288.7	61.3	0.30	33630	16154	12
30KCS3	762	153.8	53.3	0.19	19890	13716	9
30KCS4	762	237.2	56.7	0.24	30050	16459	12
30KCS5	762	310.6	61.3	0.31	38870	16459	12

*Maximum uniformly distributed load capacity is 8.02 kN/m and single concentrated load cannot exceed shear capacity

**Does not include accessories



STANDARD ASD LOAD TABLE

FOR KCS JOISTS

Based on a 50 ksi (345 MPa) Maximum Yield Strength
Adopted by the Steel Joist Institute May 2, 1994
Revised to May 18, 2010 – Effective December 31, 2010

The figures in the following table give the Moment Capacity (kip-in.)(N/m) and Shear Capacity (lbs)(N). The maximum uniformly distributed load capacity in **ASD** shall not exceed 550 plf (8.02 kN/m) and a single concentrated load cannot exceed the shear capacity. Sloped parallel-chord KCS Joists shall use the appropriate moment and shear capacity for the span as defined by the length along the slope.

The approximate KCS Joist weights per linear foot shown in the table do not include accessories.

The KCS Joist designation is not used to establish bridging requirements. The Bridging Table Section Numbers given in the KCS Standard Load Table indicate the equivalent K-Series joist of the same depth to be used for determination of the number of bridging rows, the size of horizontal bridging, and the need for erection stability bridging. While the need for erection stability bridging (diagonal bridging with bolted connections at the chords and intersections), can be determined from the **RED** shaded portion of the Standard Load Table, Open Web Steel Joists, K-Series, for convenience the KCS Load Table also includes a column for erection stability bridging. Where the span of the KCS Joist designation exceeds the length in ft. (mm) listed, the row of bridging nearest the joist midspan shall be erection stability bridging. Where “NA” is listed in the column, the KCS Joist designation does not require bolted diagonal erection bridging regardless of span.

For the proper handling of concentrated and/or varying loads, see Section 2.4 in the Code of Standard Practice for Steel Joists and Joist Girders.



STANDARD LOAD TABLE FOR KCS OPEN WEB STEEL JOISTS

Based on a 50 ksi Maximum Yield Strength

JOIST DESIGNATION	DEPTH (in.)	MOMENT CAPACITY (k-in.)	SHEAR CAPACITY* (lbs)	APPROX. WEIGHT** (lbs/ft.)	GROSS MOMENT OF INERTIA (in. ⁴)	ERECTION STABILITY BRIDGING REQ'D (ft.)	BRIDGING TABLE SECTION NUMBER
10KCS1	10	172	2000	6.0	29	NA	1
10KCS2	10	225	2500	7.5	37	NA	1
10KCS3	10	296	3000	10.0	47	NA	1
12KCS1	12	209	2400	6.0	43	NA	3
12KCS2	12	274	3000	8.0	55	NA	5
12KCS3	12	362	3500	10.0	71	NA	5
14KCS1	14	247	2900	6.5	59	NA	4
14KCS2	14	324	3400	8.0	77	NA	6
14KCS3	14	428	3900	10.0	99	NA	6
16KCS2	16	349	4000	8.5	99	NA	6
16KCS3	16	470	4800	10.5	128	NA	9
16KCS4	16	720	5300	14.5	192	NA	9
16KCS5	16	934	5800	18.0	245	NA	9
18KCS2	18	395	4700	9.0	127	35-0	6
18KCS3	18	532	5200	11.0	164	NA	9
18KCS4	18	817	5700	15.0	247	NA	10
18KCS5	18	1062	6200	18.5	316	NA	10
20KCS2	20	442	5200	9.5	159	36-0	6
20KCS3	20	595	6000	11.5	205	39-0	9
20KCS4	20	914	7900	16.5	308	NA	10
20KCS5	20	1191	8400	20.0	396	NA	10
22KCS2	22	488	5900	10.0	194	36-0	6
22KCS3	22	658	6600	12.5	251	40-0	9
22KCS4	22	1012	7900	16.5	377	NA	11
22KCS5	22	1319	8600	20.5	485	NA	11
24KCS2	24	534	6300	10.0	232	39-0	6
24KCS3	24	720	7200	12.5	301	44-0	9
24KCS4	24	1108	8400	16.5	453	NA	12
24KCS5	24	1448	8900	20.5	584	NA	12
26KCS2	26	580	6600	10.0	274	39-0	6
26KCS3	26	783	7800	12.5	355	44-0	9
26KCS4	26	1206	8500	16.5	536	NA	12
26KCS5	26	1576	9200	20.5	691	NA	12
28KCS2	28	626	6900	10.5	320	40-0	6
28KCS3	28	846	8000	12.5	414	45-0	9
28KCS4	28	1303	8500	16.5	626	53-0	12
28KCS5	28	1704	9200	20.5	808	53-0	12
30KCS3	30	908	8000	13.0	478	45-0	9
30KCS4	30	1400	8500	16.5	722	54-0	12
30KCS5	30	1833	9200	21.0	934	54-0	12

*Maximum uniformly distributed load capacity is 550 plf and single concentrated load cannot exceed shear capacity

**Does not include accessories



METRIC LOAD TABLE FOR KCS OPEN WEB STEEL JOISTS

Based on 345 MPa Maximum Yield Strength

JOIST DESIGNATION	DEPTH (mm)	MOMENT CAPACITY (kN-m)	SHEAR CAPACITY* (kN)	APPROX. WEIGHT** (kN/m)	GROSS MOMENT OF INERTIA (cm ⁴)	ERECTION STABILITY BRIDGING REQ'D (mm)	BRIDGING TABLE SECTION NUMBER
10KCS1	254	19.4	8.8	0.09	1200	NA	1
10KCS2	254	25.4	11.1	0.11	1540	NA	1
10KCS3	254	33.4	13.3	0.15	1950	NA	1
12KCS1	305	23.6	10.6	0.09	1780	NA	3
12KCS2	305	31.0	13.3	0.12	2280	NA	5
12KCS3	305	40.9	15.5	0.15	2950	NA	5
14KCS1	356	27.9	12.8	0.09	2450	NA	4
14KCS2	356	36.6	15.1	0.12	3200	NA	6
14KCS3	356	48.4	17.3	0.15	4120	NA	6
16KCS2	406	39.4	17.7	0.12	4120	NA	6
16KCS3	406	53.1	21.3	0.15	5320	NA	9
16KCS4	406	81.3	23.5	0.21	7990	NA	9
16KCS5	406	105.5	25.7	0.26	10190	NA	9
18KCS2	457	44.6	20.9	0.13	5280	10668	6
18KCS3	457	60.1	23.1	0.16	6820	NA	9
18KCS4	457	92.3	25.3	0.22	10280	NA	10
18KCS5	457	120.0	27.5	0.27	13150	NA	10
20KCS2	508	49.9	23.1	0.14	6610	10973	6
20KCS3	508	67.2	26.6	0.17	8530	11887	9
20KCS4	508	103.3	35.1	0.24	12810	NA	10
20KCS5	508	134.6	37.3	0.29	16480	NA	10
22KCS2	559	55.1	26.2	0.15	8070	10973	6
22KCS3	559	74.3	29.3	0.18	10440	12192	9
22KCS4	559	114.3	35.1	0.24	15690	NA	11
22KCS5	559	149.0	38.2	0.30	20180	NA	11
24KCS2	610	60.3	28.0	0.15	9650	11887	6
24KCS3	610	81.3	32.0	0.18	12520	13411	9
24KCS4	610	125.2	37.3	0.24	18850	NA	12
24KCS5	610	163.6	39.5	0.30	24300	NA	12
26KCS2	660	65.5	29.3	0.15	11400	11887	6
26KCS3	660	88.5	34.6	0.18	14770	13411	9
26KCS4	660	136.3	37.8	0.24	22310	NA	12
26KCS5	660	178.1	40.9	0.30	28760	NA	12
28KCS2	711	70.7	30.6	0.15	13310	12192	6
28KCS3	711	95.6	35.5	0.18	17230	13716	9
28KCS4	711	147.2	37.8	0.24	26050	16154	12
28KCS5	711	192.5	40.9	0.30	33630	16154	12
30KCS3	762	102.6	35.5	0.19	19890	13716	9
30KCS4	762	158.2	37.8	0.24	30050	16459	12
30KCS5	762	207.1	40.9	0.31	38870	16459	12

*Maximum uniformly distributed load capacity is 8.02 kN/m and single concentrated load cannot exceed shear capacity

**Does not include accessories