



SJI 100 - 2015

AMERICAN NATIONAL STANDARD

44th Edition

Standard Specifications

Load Tables and Weight Tables
For Steel Joists and Joist Girders

K-Series
LH-Series
DLH-Series
Joist Girders

STANDARD SPECIFICATION

FOR K-SERIES, LH-SERIES, AND DLH-SERIES OPEN WEB STEEL JOISTS AND FOR JOIST GIRDERS.

K-Series Adopted by the Steel Joist Institute November 4, 1985
LH/DLH-Series Adopted by the Steel Joist Institute May 10, 2006
Joist Girders Adopted by the Steel Joist Institute November 4, 1985
Revised to November 10, 2014, Effective January 1, 2015

SECTION 1.

SCOPE AND DEFINITIONS

1.1 SCOPE

The *Standard Specification for K-Series, LH-Series, DLH-Series Open Web Steel Joists and for Joist Girders*, hereafter referred to as the Specification, covers the design, manufacture, application, and erection stability and handling of **Joist Girders** and Open Web Steel Joists **K-Series, LH-Series, and DLH-Series** in buildings or other structures, where other structures are defined as those structures designed, manufactured, and erected in a manner similar to buildings. **Joist Girders** and **K-Series, LH-Series, and DLH-Series** joists shall be designed using Allowable Stress Design (ASD) or Load and Resistance Factor Design (LRFD) in accordance with this Specification. Included as part of this specification are **KCS** joists, **K-Series**; Joist Substitutes, **K-Series**; and Top Chord Extensions and Extended Ends, **K-Series**.

1.2 OTHER REGULATIONS

Joist Girders and **K-Series, LH-Series, and DLH-Series** joists shall be erected in accordance with the Occupational Safety and Health Administration (OSHA), 29 CFR Part 1926, Safety Standards for Steel Erection, Subpart R – Steel Erection. The erection of **Joist Girders** and **K-Series, LH-Series, and DLH-Series** joists 144 ft. (43.9 m) or less in length shall be in accordance with the requirements of Section 1926.757, Open Web Steel Joists. **Joist Girders** and **DLH-Series** joists greater than 144 ft. (43.9 m) in length shall be in accordance with the requirements of Section 1926.756 Beams and Columns.

1.3 APPLICATION

This Specification includes Section 1 through Section 6. The user notes shall not be part of the Specification.

User Note: User notes are intended to provide practical guidance in the use and application of this Specification.

1.4 DEFINITIONS

The following terms shall, for the purposes of this Specification, have the meanings shown in this Section. Where terms are not defined in this Section, those terms shall have their ordinary accepted meanings in the context in which it applies.

Joist Girders, K-Series, LH-Series, and DLH-Series shall be open web, in-plane load-carrying steel members utilizing hot-rolled or cold-formed steel, including cold-formed steel whose yield strength has been attained by cold working.

Joist Girders shall be open web steel trusses used as primary framing members designed as simple spans supporting in-plane concentrated loads for a floor or roof system. These concentrated loads shall be considered to act at the top chord

panel points of the **Joist Girders** unless otherwise specified.

The **Joist Girder** standard designation in ASD shall be established by its nominal depth in inches (mm), the letter “**G**”, followed by the number of joist spaces, the letter “**N**”, and finally the load in kips (kN) at each panel point, and the letter “**K**”. The **Joist Girder** standard designation in LRFD shall be established by its nominal depth in inches (mm), the letter “**G**”, followed by the number of joist spaces, the letter “**N**”, and finally the factored load in kips (kN) at each panel point, and the letter “**F**”. **Joist Girders** shall be designed in accordance with this specification to support the loads defined by the specifying professional.

Joist Girders shall be designed and manufactured as either simple framing members with underslung ends and bottom chord extensions or as part of an ordinary steel moment frame (OMF). Where used as part of an OMF the specifying professional shall be responsible for carrying out all the required frame analyses (i.e. first-order and second-order), provide all the required load information and stiffness data to the joist manufacturer, and indicate the type of **Joist Girder** to column connections that are being designed on the structural drawings.

User Note: **Joist Girders** have been standardized in depths from 20 inches (508 mm) through 120 inches (3048 mm), for spans from 20 feet (6096 mm) through 120 feet (36576 mm).

Where this Specification refers to “steel joists”, this shall mean the **K-Series**, **LH-Series**, and **DLH-Series** joists.

User Note: Joists are suitable for the direct support of floors and roof slabs or decks. The **K-Series** joists are standardized in depths from 10 inches (254 mm) through 30 inches (762 mm), for spans up through 60 feet (18288 mm). The **LH-Series** joists are standardized in depths from 18 inches (457 mm) through 48 inches (1219 mm), for spans up through 96 feet (29261 mm). The **DLH-Series** joists are standardized in depths from 52 inches (1321 mm) through 120 inches (3048 mm), for spans up through 240 feet (73152 mm).

The **K-Series**, **LH-Series** and **DLH-Series** standard joist designations shall be established by their nominal depth, followed by the letters **K**, **LH** or **DLH** as appropriate, and then by the Section Number designation assigned. The Section Number designations shall range from 01 to 25. The **K-Series**, **LH-Series** and **DLH-Series** standard joist designations listed in the following Standard Load Tables shall support the uniformly distributed loads as provided in the applicable tables:

Standard LRFD Load Table Open Web Steel Joists, **K-Series** – U.S. Customary Units
 Standard ASD Load Table Open Web Steel Joists, **K-Series** – U.S. Customary Units
 Standard LRFD Load Table Longspan Steel Joists, **LH-Series** – U.S. Customary Units
 Standard ASD Load Table Longspan Steel Joists, **LH-Series** – U.S. Customary Units
 Standard LRFD Load Table Deep Longspan Steel Joists, **DLH-Series** – U.S. Customary Units
 Standard ASD Load Table Deep Longspan Steel Joists, **DLH-Series** – U.S. Customary Units
 Standard LRFD Load Table Open Web Steel Joists, **K-Series** – S.I. Units
 Standard ASD Load Table Open Web Steel Joists, **K-Series** – S.I. Units
 Standard LRFD Load Table Longspan Steel Joists, **LH-Series** – S.I. Units
 Standard ASD Load Table Longspan Steel Joists, **LH-Series** – S.I. Units
 Standard LRFD Load Table Deep Longspan Steel Joists, **DLH-Series** – S.I. Units
 Standard ASD Load Table Deep Longspan Steel Joists, **DLH-Series** – S.I. Units

Wherever a standard SJI Section Number is specified in the joist designation (i.e. 18K4, 32LH10) and other design load cases are also specified for the joist, the steel joist shall be designed for the corresponding total load as shown in the Standard Load Tables as a minimum.

User Note: Six standard types of **K-Series**, **LH-Series** and **DLH-Series** joists are designed and manufactured. These types are underslung (top chord bearing) or square-ended (bottom chord bearing), with parallel chords or with single or double pitched top chords. The Standard Load Tables apply for a pitched top chord up to 1/2 inch per foot (1:24).

The steel joist or **Joist Girder** designation depth shall be the depth at mid-span.

An alternate method of specifying a standard **K-Series**, **LH-Series**, or **DLH-Series** joist shall be permitted by providing the designation in a “load/load” sequence. The format used shall be dd**K**tl/ll, dd**LH**tl/ll, or dd**DLH**tl/ll where:

dd is the nominal depth of the joist in inches (mm)

tl is the total uniformly distributed load applied to the joist top chord, plf (kN/m)

ll is the uniform live load for which the deflection shall be checked and limited as required by this Specification, plf (kN/m)

User Note: The load/load **K-Series**, **LH-Series**, or **DLH-Series** joists can be specified in depths from 10 inches (254 mm) through 120 inches (3048 mm) and spans up through 240 feet (73152 mm). The maximum uniformly distributed load-carrying capacity of 2400 plf (35.03 kN/m) in ASD and 3600 plf (52.54 kN/m) in LRFD has been established for this alternate **K-Series**, **LH-Series**, or **DLH-Series** format. The maximum capacity for any given load/load joist designation is a function of span, depth and chord member size. When requirements exceed the standard K-Series load table limitations for loading, span, and depth, an LH-Series designation is recommended to facilitate the proper determination of minimum seat depth, end anchorage, bridging size, deck attachment, etc. Thus, any joist exceeding a 30 inch depth, a span of 60 feet, an in-kip moment of Depth x 61 kips in ASD or Depth x 91.5 kips in LRFD, or an end reaction of 9.2 kips in ASD or 13.8 kips in LRFD should be designated as an LH-Series which allows for a cross-reference with a standard LH designation as listed in this Specification for seat, end anchorage, bridging, attachment tables, etc.

A **KCS** Joist is a particular type of **K-Series** joist, and shall be designed in accordance with this Specification based on an envelope of moment and shear capacity, rather than uniform load capacity, to support uniform plus concentrated loads or other non-uniform loads. The **KCS** Joists shall be selected from standardized depths from 10 inches (254 mm) through 30 inches (762 mm), for spans up through 60 feet (18288 mm). The maximum total safe uniformly distributed load-carrying capacity of a **KCS** Joist, **K-Series**, shall be 550 plf (8.02 kN/m) in ASD or 825 plf (12.03 kN/m) in LRFD. A KCS Joist shall be parallel chord only and shall be permitted to be underslung or bottom chord bearing.

The **KCS** Joists, **K-Series**, standard designations shall be established by their nominal depth, followed by the letters “**KCS**”, and then by the Section Number designation assigned. The Section Number designations shall range from 1 to 5. A KCS Joist shall not be designated using the alternate “load/load” method. The **KCS** Joists, **K-Series**, standard designations listed in the following Standard Load Tables shall provide the moment capacity and shear capacity as listed in the applicable tables:

Standard LRFD Load Table for **KCS** Open Web Steel Joists – U.S. Customary Units
 Standard ASD Load Table for **KCS** Open Web Steel Joists – U.S. Customary Units
 Standard LRFD Load Table for **KCS** Open Web Steel Joists – S.I. Units
 Standard ASD Load Table for **KCS** Open Web Steel Joists – S.I. Units

Where an open web configuration becomes impractical, a Joist Substitute, **K-Series**, shall be designed in accordance with this Specification to support uniform loads when the span is less than 10 feet (3048 mm). The maximum total safe uniformly distributed load-carrying capacity of a Joist Substitute shall be 550 plf (8.02 kN/m) in ASD or 825 plf (12.03 kN/m) in LRFD.

The Joist Substitutes, **K-Series**, standard designations shall be established by their nominal depth, i.e. **2.5**, followed by the letter “**K**” and then by the chord size designation assigned. The chord size designations shall range from 1 to 3. The Joist Substitutes, **K-Series**, standard designations listed in the following Load Tables shall support the uniformly distributed loads as provided in the applicable tables:

User Note: The Joist Substitutes, **K-Series**, are standardized as 2.5 inch (64 mm) deep sections for spans up through 10'-0" (3048 mm).

LRFD Simple Span Load Table for 2.5 Inch **K-Series** Joist Substitutes – U.S. Customary Units
 ASD Simple Span Load Table for 2.5 Inch **K-Series** Joist Substitutes – U.S. Customary Units
 LRFD Simple Span Load Table for 64 mm **K-Series** Joist Substitutes – S.I. Units
 ASD Simple Span Load Table for 64 mm **K-Series** Joist Substitutes – S.I. Units

LRFD Outriggers Load Table for 2.5 Inch **K-Series** Joist Substitutes – U.S. Customary Units
 ASD Outriggers Load Table for 2.5 Inch **K-Series** Joist Substitutes – U.S. Customary Units
 LRFD Outriggers Load Table for 64 mm **K-Series** Joist Substitutes – S.I. Units
 ASD Outriggers Load Table for 64 mm **K-Series** Joist Substitutes – S.I. Units

A Top Chord Extension or Extended End, **K**-series, shall be a joist accessory that shall be designed in accordance with this Specification to support uniform loads when one or both ends of an underslung joist needs to be cantilevered beyond its bearing seat.

User Note: The Top Chord Extensions and Extended Ends are standardized as an “S” Type (top chord angles extended only) and an “R” Type (top chord and bearing seat angles extended), respectively.

Standard designations for the “S” Type shall range from S1 to S12 for spans from 0'-6" to 4'-6" (152 to 1372 mm). Standard designations for the “R” Type shall range from R1 to R12 for spans from 0'-6" to 6'-0" (152 to 1829 mm). The maximum total safe uniformly distributed load-carrying capacity of either an “R” or “S” Type extension shall be 550 plf (8.02 kN/m) in ASD or 825 plf (12.03 kN/m) in LRFD. The “S” Type Top Chord Extensions and “R” Type Extended Ends listed in the following Standard Load Tables shall support the uniformly distributed loads as provided in the applicable tables:

LRFD Top Chord Extension Load Table (S Type) – U.S. Customary Units
ASD Top Chord Extension Load Table (S Type) – U.S. Customary Units
LRFD Top Chord Extension Load Table (R Type) – U.S. Customary Units
ASD Top Chord Extension Load Table (R Type) – U.S. Customary Units
LRFD Top Chord Extension Load Table (S Type) – S.I. Units
ASD Top Chord Extension Load Table (S Type) – S.I. Units
LRFD Top Chord Extension Load Table (R Type) – S.I. Units
ASD Top Chord Extension Load Table (R Type) – S.I. Units

1.5 STRUCTURAL DESIGN DRAWINGS AND SPECIFICATIONS

The structural design drawings and specifications shall meet the requirements in the *Code of Standard Practice for Steel Joists and Joist Girders*, except for deviations specifically identified in the design drawings and/or specifications.

SECTION 2.

REFERENCED SPECIFICATIONS, CODES AND STANDARDS

2.1 REFERENCES

The standards listed below shall be considered as part of the requirements of this Specification. Where conflicts occur between this Specification and a referenced standard, the provisions of this Specification shall take precedence unless otherwise stated. This section lists the standards that are referenced in this Specification. The standards are listed in alphabetical order by name of standards developer organization, with the specific standard designations, title and dates of each of the referenced standards below.

American Institute of Steel Construction, Inc. (AISC), Chicago, IL

ANSI/AISC 360-10 *Specification for Structural Steel Buildings*

American Iron and Steel Institute (AISI), Washington, DC

ANSI/AISI S100-2012 *North American Specification for the Design of Cold-Formed Steel Structural Members*

American Society of Civil Engineers (ASCE), Reston, VA

SEI/ASCE 7-10 *Minimum Design Loads for Buildings and Other Structures*

American Society of Testing and Materials, ASTM International (ASTM), West Conshohocken, PA

ASTM A6/A6M-13A, *Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling*

ASTM A36/A36M-12, *Standard Specification for Carbon Structural Steel*

ASTM A242/242M-13 (2013), *Standard Specification for High-Strength Low-Alloy Structural Steel*

ASTM A307-12a, *Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength*

ASTM A325/325M-13, *Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi [830 MPa] Minimum Tensile Strength*

ASTM A370-12a, *Standard Test Methods and Definitions for Mechanical Testing of Steel Products*

ASTM A500/A500M-13, *Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes*

ASTM A501-07 *Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing*

ASTM A529/A529M-05(2009), *Standard Specification for High-Strength Carbon-Manganese Steel of Structural Quality*

ASTM A572/A572M-13a, *Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel*

ASTM A588/A588M-10, *Standard Specification for High-Strength Low-Alloy Structural Steel, up to 50 ksi [345 MPa] Minimum Yield Point, with Atmospheric Corrosion Resistance*

ASTM A606/A606M-09a, *Standard Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance*

ASTM A992/A992M-11, *Standard Specification for Structural Steel Shapes*

ASTM A1008/A1008M-13, *Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable*

ASTM A1011/A1011M-13, *Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength*

ASTM A1065/A1065M-09(2014) *Standard Specification for Cold-Formed Electric-Fusion (ARC) Welded High-Strength Low-Alloy Structural Tubing in Shapes with 50 ksi (345 MPa) Minimum Yield Point*

ASTM A1085-13 *Standard Specification for Cold-Formed Welded Carbon Steel Hollow Structural Sections (HSS)*

American Welding Society (AWS), Miami, FL

AWS A5.1/A5.1M-2012, *Specification for Carbon Steel Electrodes for Shielded Metal Arc Welding*

AWS A5.5/A5.5M:2006, *Specification for Low-Alloy Steel Electrodes for Shielded Metal Arc Welding*

AWS A5.17/A5.17M-97:R2007, *Specification for Carbon Steel Electrodes and Fluxes for Submerged Arc Welding*

AWS A5.18/A5.18M:2005, *Specification for Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding*

AWS A5.20/A5.20M:2005, *Specification for Carbon Steel Electrodes for Flux Cored Arc Welding*

AWS A5.23/A5.23M:2011, *Specification for Low-Alloy Steel Electrodes and Fluxes for Submerged Arc Welding*

AWS A5.28/A5.28M:2005, *Specification for Low-Alloy Steel Electrodes and Rods for Gas Shielded Arc Welding*

AWS A5.29/A5.29M:2010, *Specification for Low-Alloy Steel Electrodes for Flux Cored Arc Welding*

AWS D1.1/D1.1M:2015, *Structural Welding Code - Steel*

AWS D1.3/D1.3M:2008, *Structural Welding Code Sheet Steel*

User Note: The following informative references provide practical guidance in the use and application of this specification:

Code of Federal Regulations (CFR), Occupational Safety and Health Administration (OSHA), 29 CFR Part 1926, Safety Standards for Steel Erection; Subpart R - Steel Erection; January 18, 2001, Washington, D.C.

Steel Joist Institute (SJI), Florence, SC

SJI-COSP-2015, *Code of Standard Practice for Steel Joists and Joist Girders*

Technical Digest No. 3 (2007), *Structural Design of Steel Joist Roofs to Resist Ponding Loads*

Technical Digest No. 5 (2014), *Vibration of Steel Joist-Concrete Slab Floors*

Technical Digest No. 6 (2010), *Structural Design of Steel Joist Roofs to Resist Uplift Loads*

Technical Digest No. 8 (2008), *Welding of Open Web Steel Joists and Joist Girders*

Technical Digest No. 9 (2008), *Handling and Erection of Steel Joists and Joist Girders*

Technical Digest No. 10 (2003), *Design of Fire Resistive Assemblies with Steel Joists*

Technical Digest No. 11 (2007), *Design of Lateral Load Resisting Frames Using Steel Joists and Joist Girders*

The Society for Protective Coatings (SSPC), *Steel Structures Painting Manual, Volume 2, Systems and Specifications*, Paint Specification No. 15, Steel Joist Shop Primer, May 1, 1999, Pittsburgh, PA.

Van Malssen, S.H. (1984), *The Effects of Arc Strikes on Steel Used in Nuclear Construction*, Welding Journal, American Welding Society, Miami, FL, July 1984.

SECTION 3. MATERIALS

3.1 STEEL

The steel used in the manufacture of **Joist Girders** and **K-Series**, **LH-Series**, and **DLH-Series** joists shall conform to one of the following ASTM specifications:

ASTM A36/A36M, Carbon Structural Steel

ASTM A242/A242M, High-Strength Low-Alloy Structural Steel

ASTM A500/A500M, Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes

ASTM A529/A529M, High-Strength Carbon-Manganese Steel of Structural Quality

ASTM A572/A572M, High-Strength Low-Alloy Columbium-Vanadium Structural Steel

ASTM A588/A588M, High-Strength Low-Alloy Structural Steel up to 50 ksi [345 MPa] Minimum Yield Point with Atmospheric Corrosion Resistance

ASTM A606/A606M, Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance

ASTM A992/A992M, Structural Steel Shapes

ASTM A1008/A1008M, Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable

ASTM A1011/A1011M, Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength

EXCEPTION: Steel used in the manufacture of **Joist Girders** and **K-Series**, **LH-Series**, and **DLH-Series** joists shall be permitted to be of suitable quality ordered or produced to other than the listed ASTM specifications, provided that such material in the state used for final assembly and manufacture is weldable and is proven by tests performed by the producer or manufacturer to have properties, in accordance with Section 3.2.

3.2 MECHANICAL PROPERTIES

3.2.1 Minimum Yield Strength: Steel used for **Joist Girders** and **K-Series**, **LH-Series**, and **DLH-Series** joists shall have a minimum yield strength determined in accordance with one of the procedures specified in this section, which is equal to the yield strength assumed in the design.

User note: The term "Yield Strength" as used herein designates the yield level of a material as determined by the applicable method outlined in paragraph 13.1 "Yield Point", and in paragraph 13.2 "Yield Strength", of ASTM A370, *Standard Test Methods and Definitions for Mechanical Testing of Steel Products*, or as specified in Section 3.2.3.

Evidence that the steel furnished meets or exceeds the design yield strength shall, if requested, be provided in the form of an affidavit or by witnessed or certified test reports.

For material used without consideration of increase in yield strength resulting from cold forming, the specimens shall be taken from as-rolled material. In the case of such material, the mechanical properties of which conform to the requirements of one of the listed ASTM specifications in Section 3.1, the test specimens and procedures shall conform to those of the applicable ASTM specification and to ASTM A370.

3.2.2 Other Materials: For materials where the mechanical properties do not conform to the requirements of one of the ASTM specifications listed in Section 3.1, these materials shall conform to the following requirements:

- a) The specimens shall comply with ASTM A370,
- b) The specimens shall exhibit a yield strength equal to or exceeding the design yield strength,
- c) The specimens shall have an elongation of not less than 20 percent in 2 inches (51 mm) for sheet strip, or 18 percent in 8 inches (203 mm) for plates, shapes and bars with adjustments for thickness for plates, shapes and bars as prescribed in either ASTM A36/A36M, A242/A242M, A500/A500M, A529/A529M, A572/A572M, A588/A588M, or A992/A992M, whichever ASTM specification is applicable, on the basis of design yield strength.
- d) The number of tests for a), b), and c) above shall be as prescribed in ASTM A6/A6M for plates, shapes, and bars; and ASTM A606/A606M, A1008/A1008M and A1011/A1011M for sheet and strip.

3.2.3 As-Formed Strength: If as-formed strength is utilized, the test reports shall show the results of tests performed on full section specimens in accordance with the provisions of the AISI S100. The reports shall also indicate compliance with the following additional requirements:

- a) The yield strength calculated from the test data shall equal or exceed the design yield strength.
- b) Where tension tests are made for acceptance and control purposes, the tensile strength shall be at least 8 percent greater than the yield strength of the section.
- c) Where compression tests are used for acceptance and control purposes, the specimen shall withstand a gross shortening of 2 percent of its original length without cracking. The length of the specimen shall be not greater than 20 times the least radius of gyration.
- d) If any test specimen fails to pass the requirements of the subparagraphs (a), (b), or (c) above, as applicable, two retests shall be made of specimens from the same lot. Failure of one of the retest specimens to meet such requirements shall be the cause for rejection of the lot represented by the specimens.

3.3 WELDING ELECTRODES

3.3.1 Welding Electrodes: The welding electrodes used for arc welding shall be in accordance with the following:

- a) For connected members both having a specified minimum yield strength greater than 36 ksi (250 MPa), one of the following electrodes shall be used:

AWS A5.1: E70XX
 AWS A5.5: E70XX-X
 AWS A5.17: F7XX–EXXX, F7XX–ECXXX flux electrode combination
 AWS A5.18: ER70S-X, E70C-XC, E70C-XM
 AWS A5.20: E7XT-X, E7XT-XM
 AWS A5.23: F7XX–EXXX-XX, F7XX–ECXXX-XX
 AWS A5.28: ER70S-XXX, E70C-XXX
 AWS A5.29: E7XTX-X, E7XTX-XM

- b) For connected members both having a specified minimum yield strength of 36 ksi (250 MPa) or one having a specified minimum yield strength of 36 ksi (250 MPa), and the other having a specified minimum yield strength greater than 36 ksi (250 MPa), one of the following electrodes shall be used:

AWS A5.1: E60XX
 AWS A5.17: F6XX–EXXX, F6XX–ECXXX flux electrode combination
 AWS A5.20: E6XT-X, E6XT-XM
 AWS A5.29: E6XTX-X, E6XTX-XM
 or any of those listed in Section 3.3.1(a).

3.3.2 Other Welding Methods: Other welding methods, providing equivalent strength as demonstrated by tests, shall be permitted to be used.

3.4 PAINT

The standard shop paint shall be considered an impermanent and provisional coating.

User Note: The standard shop paint is intended to protect the steel for only a short period of exposure in ordinary atmospheric conditions.

When specified, the standard shop paint shall conform to one of the following:

- a) The Society for Protective Coatings, SSPC Paint Specification No. 15.
 b) Or, shall be a shop paint which meets the minimum performance requirements of SSPC Paint Specification No. 15.

SECTION 4. DESIGN AND MANUFACTURE

4.1 METHOD

Joist Girders support steel joists or other secondary members and shall be designed in accordance with this Specification as simply-supported primary load-carrying members for in-plane loading. Steel joists shall be designed in accordance with this Specification as simply-supported trusses supporting a floor or roof deck so constructed as to brace the top chord of the steel joists against lateral buckling. Where any applicable design feature is not specifically covered herein, the design shall be in accordance with the following Specifications:

- a) Where the steel used consists of hot-rolled shapes, bars or plates, AISC 360.
 b) For members which are cold-formed from sheet or strip steel, AISI S100.

4.1.1 Design Basis:

Steel joist and **Joist Girder** designs shall be in accordance with the provisions in this Specification using Load and Resistance Factor Design (LRFD) or Allowable Strength Design (ASD) as specified by the specifying professional for the project.

4.1.2 Loads, Forces and Load Combinations:

The loads and forces used for the steel joist and **Joist Girder** design shall be calculated by the specifying professional in accordance with the applicable building code and specified and provided on the structural drawings.

For nominal concentrated loads, which have been accounted for in the specified uniform loads, the addition of chord bending moments or an added shop or field web member due to these nominal concentrated loads shall not be required provided that the sum of the concentrated loads within a chord panel does not exceed 100 pounds and the attachments are concentric to the chord. When exact dimensional locations for concentrated loads which do not meet the above criteria are provided by the specifying professional, the joist shall be designed for the loads and load locations provided without the need for additional field applied web members at the specified locations.

The load combinations shall be specified by the specifying professional on the structural drawings in accordance with the applicable building code. In the absence of an applicable building code, the load combinations shall be those stipulated in SEI/ASCE 7 Section 2.3 and Section 2.4 as appropriate. For LRFD designs, the load combinations in SEI/ASCE 7, Section 2.3 shall apply. For ASD designs, the load combinations in SEI/ASCE 7, Section 2.4 shall apply.

4.2 DESIGN AND ALLOWABLE STRESSES

4.2.1 Design Using Load and Resistance Factor Design (LRFD)

Joists and **Joist Girders** shall have their components so proportioned that the required stresses, f_u , shall not exceed ϕF_n where

f_u	= required stress	ksi (MPa)
F_n	= nominal stress	ksi (MPa)
ϕ	= resistance factor	
ϕF_n	= design stress	ksi (MPa)

4.2.2 Design Using Allowable Strength Design (ASD)

Joists and **Joist Girders** shall have their components so proportioned that the required stresses, f , shall not exceed F_n / Ω where

f	= required stress	ksi (MPa)
F_n	= nominal stress	ksi (MPa)
Ω	= safety factor	
F_n / Ω	= allowable stress	ksi (MPa)

4.2.3 Stresses:

The calculation of design stress or allowable stress for chords shall be based on a yield strength, F_y , of the material used in manufacturing equal to 50 ksi (345 MPa). The calculation of design stress or allowable stress for all other joist elements shall be based on a yield strength, F_y , of the material used in manufacturing, but shall not be less than 36 ksi (250 MPa) nor greater than 50 ksi (345 MPa). Yield strengths greater than 50 ksi shall not be used for the design of any members.

4.2.3.1 Tension: $\phi_t = 0.90$ (LRFD), $\Omega_t = 1.67$ (ASD)

$$\text{Design Stress} = 0.9F_y \text{ (LRFD)} \quad (4.2-1)$$

$$\text{Allowable Stress} = 0.6F_y \text{ (ASD)} \quad (4.2-2)$$

4.2.3.2 Compression: $\phi_c = 0.90$ (LRFD), $\Omega_c = 1.67$ (ASD)

$$\text{Design Stress} = 0.9F_{cr} \text{ (LRFD)} \quad (4.2-3)$$

$$\text{Allowable Stress} = 0.6F_{cr} \text{ (ASD)} \quad (4.2-4)$$

Where:

For members with $k\ell/r \leq 4.71\sqrt{E/QF_y}$

$$F_{cr} = Q \left[0.658^{\left(\frac{QF_y}{F_e} \right)} \right] F_y \quad (4.2-5)$$

For members with $k\ell/r > 4.71\sqrt{E/QF_y}$

$$F_{cr} = 0.877F_e \quad (4.2-6)$$

Where F_e = Elastic buckling stress determined in accordance with Equation 4.2-7

$$F_e = \frac{\pi^2 E}{\left(k\ell/r \right)^2} \quad (4.2-7)$$

In the above equations, ℓ is the length, k is the effective length factor, and r is the corresponding radius of gyration of the member as defined in Section 4.3. E is equal to 29,000 ksi (200,000 MPa).

For hot-rolled sections and cold-formed angles, Q shall be taken as the full reduction factor for slender compression members as determined in accordance with AISI 360-10.

Exception: Where a compression web member is a crimped-end angle member intersecting at the first bottom chord panel point, whether hot-rolled or cold-formed, then Q shall be determined as follows:

$$Q = [5.25/(w/t)] + t \leq 1.0 \quad (4.2-8a)$$

Where: w = angle leg length, inches
 t = angle leg thickness, inches

or,

$$Q = [5.25/(w/t)] + (t/25.4) \leq 1.0 \quad (4.2-8b)$$

Where: w = angle leg length, millimeters
 t = angle leg thickness, millimeters

For all other cold-formed sections the method of calculating the nominal compression strength shall be in accordance with AISI S100.

4.2.3.3 Bending: $\phi_b = 0.90$ (LRFD), $\Omega_b = 1.67$ (ASD)

Bending calculations shall be based on the elastic section modulus.

For chords and web members other than solid rounds: $F_n = F_y$

$$\text{Design Stress} = \phi_b F_n = 0.9F_y \text{ (LRFD)} \quad (4.2-9)$$

$$\text{Allowable Stress} = F_n/\Omega_b = 0.6F_y \text{ (ASD)} \quad (4.2-10)$$

For web members of solid round cross section: $F_n = 1.6 F_y$

$$\text{Design Stress} = \phi_b F_n = 1.45F_y \text{ (LRFD)} \quad (4.2-11)$$

$$\text{Allowable Stress} = F_n/\Omega_b = 0.95F_y \text{ (ASD)} \quad (4.2-12)$$

For bearing plates used in joist seats: $F_n = 1.5 F_y$

$$\text{Design Stress} = \phi_b F_n = 1.35F_y \text{ (LRFD)} \quad (4.2-13)$$

$$\text{Allowable Stress} = F_n/\Omega_b = 0.90F_y \text{ (ASD)} \quad (4.2-14)$$

4.2.3.4 Weld Strength:

Shear at throat of fillet welds, flare bevel groove welds, partial joint penetration groove welds, and plug/slot welds shall be determined as follows:

$$\text{Nominal Shear Stress} = F_{nw} = 0.6F_{exx} \quad (4.2-15)$$

LRFD: $\phi_w = 0.75$

$$\text{Design Shear Strength} = \phi R_n = \phi_w F_{nw} A = 0.45F_{exx} A_w \quad (4.2-16)$$

ASD: $\Omega_w = 2.0$

$$\text{Allowable Shear Strength} = R_n/\Omega_w = F_{nw} A/\Omega_w = 0.3F_{exx} A_w \quad (4.2-17)$$

Where:

F_{exx} is determined as follows:

E70 series electrodes or F7XX-EXXX flux-electrode combinations $F_{exx} = 70$ ksi (483 MPa)

E60 series electrodes or F6XX-EXXX flux-electrode combinations $F_{exx} = 60$ ksi (414 MPa)

A_w = effective throat area, where:

For fillet welds, A_w = effective throat area

Other design methods demonstrated to provide sufficient strength by testing shall be permitted to be used.

For flare bevel groove welds, the effective weld area is based on a weld throat width, T , where:

$$T \text{ (inches)} = 0.12D + 0.11 \quad (4.2-18a)$$

Where D = web diameter, inches

or,

$$T \text{ (mm)} = 0.12D + 2.8 \quad (4.2-18b)$$

Where D = web diameter, mm

For plug/slot welds, A_w = cross-sectional area of the hole or slot in the plane of the faying surface provided that the hole or slot meets the requirements of AISC 360.

User Note: For more on plugs/slot welds see Steel Joist Institute Technical Digest No. 8, "Welding of Open-Web Steel Joists and Joist Girders".

Strength of resistance welds and complete-joint-penetration groove or butt welds in tension or compression (only where the stress is normal to the weld axis) shall be equal to the base metal strength:

$$\phi_t = \phi_c = 0.90 \text{ (LRFD)} \quad \Omega_t = \Omega_c = 1.67 \text{ (ASD)}$$

$$\text{Design Stress} = 0.9 F_y \text{ (LRFD)} \quad (4.2-19)$$

$$\text{Allowable Stress} = 0.6 F_y \text{ (ASD)} \quad (4.2-20)$$

4.3 MAXIMUM SLENDERNESS RATIOS

The slenderness ratios, $1.0\ell/r$ and $1.0\ell_s/r$ of members as a whole or any component part shall not exceed the values given in Table 4.3-1, Part A.

4.3.1 Effective Slenderness Ratios: The effective slenderness ratio, $k\ell/r$ to be used in calculating the nominal stresses, F_{cr} and F'_e , is the largest value as determined from Table 4.3-1, Part B and Part C, and modified where required with equation 4.3-1. The effective length k shall be taken as 1.0 for all components in Joist Girders.

4.3.2 Compressive Members: In compression members where fillers or ties are used, they shall be spaced so that the ℓ_s/r_z ratio of each component does not exceed the governing ℓ/r ratio of the member as a whole. The terms used in Table 4.3-1 shall be defined as follows:

- ℓ = length center-to-center of panel points, except $\ell = 36$ inches (914 millimeters) for calculating ℓ/r_y of the top chord member for joists, and for Joist Girders this distance shall be the unbraced length between joists which are positively attached to the top chord, in. (mm).
- ℓ_s = maximum length center-to-center between panel point and filler (tie), or between adjacent fillers (ties), in. (mm).
- r_x = member radius of gyration about the horizontal axis of the joist or **Joist Girder** cross section, in. (mm).
- r_y = member radius of gyration about the vertical axis of the joist or **Joist Girder** cross section, in. (mm).
- r_z = least radius of gyration of a member component, in. (mm).

Compression web members shall be those web members subject to compressive axial loads under gravity loading.

4.3.3 Tension Members: Tension web members shall be those web members subject to tension axial loads under gravity loading, and which shall be permitted to be subject to compressive axial loads under alternate loading conditions

User Note: An example of a non-gravity alternate loading condition is net uplift.

4.3.4 Top Chords: For top chords, the end panel(s) shall be the panels between the bearing seat and the first primary interior panel point comprised of at least two intersecting web members.

4.3.5 Built-Up Web Members: For built-up web members composed of two interconnected shapes, where $\ell_s/r_z > 40$,

a modified slenderness ratio $\left(\frac{k\ell}{r_y}\right)_m$ shall replace $\frac{k\ell}{r_y}$ in equations 4.2-5, 4.2-6, and 4.2-7, where:

$$\left(\frac{k\ell}{r_y}\right)_m = \sqrt{\left(\frac{k\ell}{r_y}\right)^2 + \left(\frac{k_i\ell_s}{r_z}\right)^2} \quad (4.3-1)$$

and,

$k_i = 0.50$ for angles back-to-back
 $= 0.75$ for channels back-to-back

TABLE 4.3-1
MAXIMUM AND EFFECTIVE SLENDERNESS RATIOS¹

Description		$k\ell/r_x$	$k\ell/r_y$	$k\ell/r_z$	$k\ell_s/r_z$
I. TOP CHORD INTERIOR PANELS					
A.	The slenderness ratios, $1.0\ell/r$ and $1.0\ell_s/r$, of members as a whole or any component part shall not exceed 90.				
B.	The effective slenderness ratio for joists, $k\ell/r$, to determine F_{cr} where k is:				
1.	Two shapes with fillers or ties	0.75	0.94	---	1.0
2.	Two shapes without fillers or ties	---	---	0.75	---
3.	Single component members	0.75	0.94	---	---
C.	For bending, the effective slenderness ratio, $k\ell/r$, to determine F'_e where k is:				
		0.75	---	---	---
II. TOP CHORD END PANELS					
A.	The slenderness ratios, $1.0\ell/r$ and $1.0\ell_s/r$, of members as a whole or any component part shall not exceed 120.				
B.	The effective slenderness ratio for joists, $k\ell/r$, to determine F_{cr} where k is:				
1.	Two shapes with fillers or ties	1.0	0.94	---	1.0
2.	Two shapes without fillers or ties	---	---	1.0	---
3.	Single component members	1.0	0.94	---	---
C.	For bending, the effective slenderness ratio, $k\ell/r$, to determine F'_e where k is:				
		1.0	---	---	---
III. ALL BOTTOM CHORD PANELS					
A.	The slenderness ratios, $1.0\ell/r$ and $1.0\ell_s/r$, of members as a whole or any component part shall not exceed 240.				
B.	For members subject to compression, the effective slenderness ratio for joists, $k\ell/r$, to determine F_{cr} where k is:				
1.	Two shapes with fillers or ties	0.9	0.94	---	1.0
2.	Two shapes without fillers or ties	---	---	0.9	---
3.	Single component members	0.9	0.94	---	---
C.	For bending, the effective slenderness ratio, $k\ell/r$, to determine F'_e where k is:				
		0.9	---	---	---
IV. WEB MEMBERS					
A.	The slenderness ratios, 1.0 and $1.0\ell_s/r$, of members as a whole or any component part shall not exceed 240 for a tension member or 200 for a compression member.				
B.	For members subject to compression, the effective slenderness ratio for joists, $k\ell/r$, to determine F_{cr} where k is:				
1.	Two shapes with fillers or ties	0.75	1.0	---	1.0
2.	Two shapes without fillers or ties	---	---	1.0	---
3.	Single component members	0.75	0.9*	---	---
*For end tension web members subject to compression, k shall equal 0.8					
(1) The effective length k shall equal 1.0 for all components of Joist Girders.					

4.4 MEMBERS

4.4.1 Chords

The joist and **Joist Girder** bottom chord shall be designed as an axially loaded tension member.

For **Joist Girders**, the radius of gyration of the bottom chord about its vertical axis shall not be less than $\ell/240$ where ℓ is the distance between lines of bracing. The radius of gyration of a Joist Girder top chord about the vertical axis shall not be less than Span/575.

For steel joists, the radius of gyration of the top chord about its vertical axis shall not be less than the results of equation 4.4-1 or 4.4-2:

$$r_y \geq \ell_{br} / \left(124 + 0.67 d_j + 28 \frac{d_j}{L} \right), \text{ in.} \quad (4.4-1a)$$

$$r_y \geq \ell_{br} / \left(124 + 0.026 d_j + 0.34 \frac{d_j}{L} \right), \text{ mm} \quad (4.4-1b)$$

or,

$$r_y \geq \ell_{br} / 170 \quad (4.4-2)$$

Where:

d_j is the steel joist depth, in. (mm)

L is the joist span length, ft. (m)

r_y is the radius of gyration of the top chord about the vertical axis of the joist cross section, in. (mm)

ℓ_{br} is the spacing in inches (millimeters) between lines of bridging as specified in Section 5.5.3.1.

A steel joist top chord shall be considered as laterally braced by the floor slab or roof deck provided the requirements of Section 5.9 are met.

A **Joist Girder** top chord shall be considered as laterally braced by the steel joists provided positive attachment is made. The outstanding part of the top chord member shall be designed such that the allowable reaction from a single joist shall not exceed equation 4.4-3 or 4.4-4:

$$\phi P_p \text{ and } \phi P_p (1.6 - f_{au}/\phi Q F_y) \quad (\text{LRFD}, \phi = 0.9) \quad (4.4-3)$$

$$P_p/\Omega \text{ and } P_p/\Omega (1.6 - \Omega f_a/Q F_y) \quad (\text{ASD}, \Omega = 1.67) \quad (4.4-4)$$

Where:

F_y = Specified minimum yield strength, ksi (MPa)

P_p = Plastic failure mode = $[(t^2 F_y)/[2(b-k)]] [g + 5.66(b-k)]$, kips (N)

Q = Form factor defined in Section 4.2.3.2

b = width of the outstanding part of the top chord member, in. (mm)

$f_{au} = P_u/A$ = Required compressive stress, ksi (MPa)

$f_a = P/A$ = Required compressive stress, ksi (MPa)

g = width of bearing seat, in. (mm)

k = value from angle properties or similar dimension for other members, in (mm)

t = thickness of the outstanding part of the top chord member, in. (mm)

The top chord of a steel joist or **Joist Girder** shall be designed as a continuous member subject to combined axial and bending stresses, except a Joist Girder loaded only at panel points shall be designed as an axial loaded compression member. For combined stresses the top chord shall be so proportioned that:

For **LRFD**:

at the panel point:

$$f_{au} + f_{bu} \leq 0.9 F_y \quad (4.4-5)$$

at the mid panel:

$$\text{for, } \frac{f_{au}}{\phi_c F_{cr}} \geq 0.2,$$

$$\frac{f_{au}}{\phi_c F_{cr}} + \frac{8}{9} \left[\frac{C_m f_{bu}}{\left[1 - \left(\frac{f_{au}}{\phi_c F'_e} \right) \right] Q \phi_b F_y} \right] \leq 1.0 \quad (4.4-6)$$

$$\text{for, } \frac{f_{au}}{\phi_c F_{cr}} < 0.2,$$

$$\frac{f_{au}}{2 \phi_c F_{cr}} + \left[\frac{C_m f_{bu}}{\left[1 - \left(\frac{f_{au}}{\phi_c F'_e} \right) \right] Q \phi_b F_y} \right] \leq 1.0 \quad (4.4-7)$$

f_{au} = P_u/A = Required compressive stress using LRFD load combinations, ksi (MPa)

P_u = Required axial strength using LRFD load combinations, kips (N)

A = Area of the top chord, in.² (mm²)

f_{bu} = M_u/S = Required bending stress at the location under consideration using LRFD load combinations, ksi (MPa)

M_u = Required flexural strength using LRFD load combinations, kip-in. (N-mm)

S = Elastic Section Modulus, in.³ (mm³)

F_{cr} = Nominal axial compressive stress in ksi (MPa) based on $k\ell/r$ as defined in Section 4.3

C_m = $1 - 0.3 f_{au}/\phi_c F'_e$ for end panels

C_m = $1 - 0.4 f_{au}/\phi_c F'_e$ for interior panels

Q = Form factor defined in Section 4.2.3.2

ϕ_c = Resistance factor for compression = 0.9

= Resistance ϕ_b factor for flexure = 0.9

F_y = Specified minimum yield strength, ksi (MPa)

$$F'_e = \frac{\pi^2 E}{(k\ell/r_x)^2}, \text{ ksi (MPa),}$$

where ℓ is the length, k is the effective length factor, and r_x is the corresponding radius of gyration of the member as defined in Section 4.3

E = Modulus of elasticity, 29,000 ksi (200,000 MPa)

For **ASD**:

at the panel point:

$$f_a + f_b \leq 0.6F_y \quad (4.4-8)$$

at the mid panel:

$$\text{for, } \frac{f_a}{F_a} \geq 0.2,$$

$$\frac{f_a}{F_a} + \frac{8}{9} \left[\frac{C_m f_b}{\left[1 - \left(\frac{1.67 f_a}{F'_e} \right) \right] Q F_b} \right] \leq 1.0 \quad (4.4-9)$$

$$\text{for } \frac{f_a}{F_a} < 0.2,$$

$$\left(\frac{f_a}{2F_a} \right) + \left[\frac{C_m f_b}{\left[1 - \left(\frac{1.67 f_a}{F'_e} \right) \right] Q F_b} \right] \leq 1.0 \quad (4.4-10)$$

- f_a = P/A required compressive stress using ASD load combinations, ksi (MPa)
 A = Area of the top chord, in.² (mm²)
 P = Required axial strength using ASD load combinations, kips (N)
 f_b = M/S = required bending stress at the location under consideration using ASD load combinations, ksi (MPa)
 S = Elastic Section Modulus, in.³ (mm³)
 M = Required flexural strength using ASD load combinations, k-in. (N-mm)
 F_a = Allowable axial compressive stress based on $k\ell/r$ as defined in Section 4.3; $0.6F_{cr}$, ksi (MPa)
 F_b = Allowable bending stress; $0.6F_y$, ksi (MPa)
 C_m = $1 - 0.50 f_a/F'_e$ for end panels
 C_m = $1 - 0.67 f_a/F'_e$ for interior panels
 Q = Form factor defined in Section 4.2.3.2
 $F'_e = \frac{\pi^2 E}{(k\ell/r_x)^2}$, ksi (MPa),
 where ℓ is the length, k is the effective length factor, and r_x is the corresponding radius of gyration of the member as defined in Section 4.3
 E = Modulus of elasticity, 29,000 ksi (200,000 MPa)

The top chord and bottom chord shall be designed such that at each joint complies with equation 4.4-11 or 4.4-12:

$$f_{vmod} \leq \phi_v F_n \quad (\text{LRFD, } \phi_v = 1.00) \quad (4.4-11)$$

$$f_{vmod} \leq F_n / \Omega_v \quad (\text{ASD, } \Omega_v = 1.50) \quad (4.4-12)$$

F_n = nominal shear stress = $0.6F_y$, ksi (MPa)

f_t = axial stress = P/A , ksi (MPa)

f_v = shear stress = V/bt , ksi (MPa)

f_{vmod} = modified shear stress = $(1/2) \sqrt{f_t^2 + 4f_v^2}$

b = length of vertical part(s) of cross section, in. (mm)

t = thickness of vertical part(s) of cross section, in. (mm)

It shall not be necessary to design the top chord and bottom chord for the modified shear stress, f_{vmod} , where a round bar web member is continuous through a joint. The minimum required shear of section 4.4.2 (25 percent of the maximum end reaction) shall not be required when evaluating Equation 4.4-11 or 4.4-12.

KCS Joist, K-Series, chords shall be designed for a flat positive bending moment envelope where the moment capacity is constant at all interior panels. The top chord end panel(s) shall be designed for an axial load based on the force in the first tension web resulting from the specified shear. A uniform load of 550 plf (8020 N/m) in ASD or 825 plf (12030 N/m) in LRFD shall be used to check bending in the end panel(s). The top chord interior panels shall be designed for an axial stress resulting from the constant moment capacity plus the bending stress. The bending stress shall be determined from the smaller uniform load derived from the constant moment and constant shear, not to exceed 550 plf (ASD) or 825 (LRFD). The constant moment and shear shall be those values as listed in the Standard Load Table for KCS Open Web Steel Joists.

4.4.2 Web

The vertical shears to be used in the design of the web members shall be determined by including all loads, but such vertical shears shall be not less than 25 percent of the maximum end reaction from the design load combinations.

4.4.2.1 Redundant Web Members: Redundant web members used in modified Warren type web systems shall be designed to resist the gravity loads supported by the member plus an additional axial load of $1/2$ of 1.0 percent of the top chord axial force. For a **Joist Girder**, this total axial load shall not be less than 2 percent of the top chord axial force.

4.4.2.2 Joist Girders: For **Joist Girders**, the tension web members shall be designed to resist at least 25 percent of their axial force in compression.

4.4.2.3 KCS Joist Web Forces: KCS Joist web forces shall be determined based on a flat shear envelope, and the following:

- a) All webs shall be designed for a vertical shear equal to the specified shear capacity.
- b) All webs shall be designed for 100 percent stress reversal except for the first tension web which remains in tension under all simple span gravity loads.

4.4.2.4 Single Component Web Member: In those cases where a single component web member is attached to the outside of the stem of a tee or double angle chord or any other orientation of a single web member which creates an out-of-plane moment, the web member design shall account for the stresses due to eccentricity.

4.4.2.4.1 Uncrimped Single Angle Web Members

For 1 inch uncrimped single angle web members where one leg is placed flat against one chord member in the gap, the resulting eccentricities and the effects in loading shall be considered in the design. A minimum of 50 percent of the required weld shall be deposited to each chord angle.

For angles subjected to tensile loading, the following requirements shall be met:

For **LRFD**: combined axial and bending stresses shall be proportioned in accordance with Eq. 4.4-5.

For **ASD**: combined axial and bending stresses shall be proportioned in accordance with Eq. 4.4-8.

For angles subjected to compression loading, the following requirements shall be met:

For **LRFD**:

at the panel point, combined axial and bending stresses shall be proportioned in accordance with Eq. 4.4-5.

at the mid length, the strength shall meet Eqs. 4.4-6 or 4.4-7, and 4.4-13:

$$\frac{f_{au}}{\phi_c F_{crz}} \leq 1.0 \quad (4.4-13)$$

where

f_{au} = P_u/A = Required tensile or compressive stress, ksi (MPa)

P_u = Required axial strength using LRFD load combinations, kips (N)

A = Area of the uncrimped angle web, in.², (mm²)

f_{bu} = M_u/S = required bending stress, ksi (MPa)

M_u = Required flexural strength = $0.5 P_u \left(\frac{\text{chord gap}}{2} - \bar{y} \right)$, kip-in. (N-mm)

S = Minimum Elastic Section Modulus, in.³ (mm³)

F_{cr} = F_{crx} , ksi (MPa)

F_{crx} = Nominal axial compressive stress in ksi (MPa) based on $k\ell/r_x$, where ℓ is the length, k is the effective length factor, and r_x is the corresponding radius of gyration of the member as defined in Section 4.3

F_{crz} = Nominal axial compressive stress in ksi (MPa) based on $k\ell/r_z$ where $k = 1.0$

C_m = 1.0

F_y = Specified minimum yield strength, ksi (MPa)

$F'_e = \frac{\pi^2 E}{(k\ell/r_x)^2}$, ksi (MPa)

Q = Form factor defined in Section 4.2.3.2

For **ASD**:

at the panel point, combined axial and bending stresses shall be proportioned in accordance with Eq. 4.4-8.

at the mid length the strength shall meet Eqs. 4.4-9 or 4.4-10, and 4.4-14:

$$\frac{f_a}{F_{az}} \leq 1.0 \quad (4.4-14)$$

where

f_a = P/A = Required tensile or compressive stress, ksi (MPa)

P = Required axial strength using ASD load combinations, kips (N)

A = Area of the uncrimped angle web, in.², (mm²)

f_b = M/S = required bending stress, ksi (MPa)

S = Minimum Elastic Section Modulus, in.³ (mm³)

M = Required flexural strength = $0.5 P \left(\frac{\text{chord gap}}{2} - \bar{y} \right)$, kip-in. (N-mm)

F_a = F_{ax} , ksi (MPa)

F_{ax} = Nominal axial compressive stress in ksi (MPa) based on $k\ell/r_x$,
where ℓ is the length, k is the effective length factor, and r_x is the corresponding radius of gyration of the member as defined in Section 4.3

F_{az} = Nominal axial compressive stress in ksi (MPa) based on $K\ell/r_z$,
where $k = 1.0$

F_b = Allowable bending stress; $0.6F_y$, ksi (MPa)

Alternate methods of design shall be permitted provided they provide strength equal to or greater than those given. Alternate design procedures shall be submitted to the Steel Joist Institute's consulting engineer for approval.

4.4.3 Fillers and Ties

Fillers or ties added on chord or web compression members shall be designed and connected for a force equal to 2% of the required member axial force.

4.4.4 Joist and Joist Girder Extensions

Joist and **Joist Girder** extensions shall be designated as one of three extension types, as follows: top chord extensions (TCX), extended ends, or full depth cantilevers.

Design criteria for joist extensions shall be specified using one of the following methods:

- a) A joist top chord extension (TCX), extended end, or full depth cantilevered end shall be designed for the load from the Standard Load Tables based on the design length and designation of the specified joist. In the absence of other design information, the joist manufacturer shall design the joist extension for this loading as a default.

- b) A loading diagram shall be provided for the joist extension, extended end, or full depth cantilevered end. The diagram shall include the magnitude and location of the loads to be supported, as well as the applicable load combinations.
- c) 2½" deep steel joist extensions shall be permitted to be specified using extension designations found in the Top Chord Extension Load Table (S Type) for TCXs or the Top Chord Extension Load Table (R Type) for extended ends.

Any deflection requirements or limits due to the accompanying loads and load combinations on the steel joist or **Joist Girder** extension shall be provided by the specifying professional, regardless of the method used to specify the extension. Unless otherwise specified, the joist manufacturer shall check the extension for the specified deflection limit under uniform live load acting simultaneously on both the joist base span and the extension.

The joist manufacturer shall consider the effects of steel joist or **Joist Girder** extension loading on the base span of the steel joist or **Joist Girder**. This shall include carrying the design bending moment due to the loading on the extension into the top chord end panel(s), and the effect on the overall steel joist or **Joist Girder** chord and web axial forces. In the case of a K-Series Standard Type 'R' Extended End or 'S' TCX, the design bending moment shall be determined by the tabulated extension section modulus (S) multiplied by the appropriate allowable (ASD) or design (LRFD) flexural stress.

Bracing of extensions shall be clearly indicated on the structural drawings.

4.5 CONNECTIONS

4.5.1 Methods

Member connections and splices shall be made by attaching the members to one another by arc or resistance welding or other accredited methods in accordance with the following:

- a) Steel joist and Joist Girder arc welded joints shall be in accordance with the American Welding Society, "Structural Welding Code-Steel", D1.1, and/or the "Structural Welding Code Sheet Steel", D1.3 with the following seven modified acceptance criteria as permitted by AWS D1.1 Clause 6.8:

- a. Undercut shall not exceed 1/16 inch (2 mm) for welds oriented parallel to the principal stress.

User Note: The typical diagonal web member connection to one leg of a chord angle is considered to be parallel to the principal stress.

- b. Discontinuities outside of the weld design length shall be permitted provided no cracks exist and undercut does not exceed the limits of item 1).

User Note: The weld design length is the minimum weld length needed for the connection force and weld thickness. Portions of the actual weld length with imperfections or discontinuities such as porosity or lack of a full profile are not included when comparing the actual weld length to the weld design length.

- c. One unrepaired arc strike shall be permitted per joint provided it does not result in other unacceptable defects.

User Note: Minor arc strikes do not reduce the strength of AWS Group II materials (refer to Van Malssen, 1984).

- d. The effective throat for flare bevel groove welds shall be calculated in accordance with equation 4.2-18.

User Note: The effective weld throat used by the SJI with round bars is based on SJI research and is more conservative than AWS D1.1 for GMAW for round bars in excess of 9/16" (14 mm). See Steel Joist Institute Technical Digest 8 - Welding of Open Web Steel Joists and Joist Girders.

- e. Tack welds that are discontinuous from other welds shall meet the criteria for undercut, but shall be exempt from all other acceptance criteria.

User Note: Joist manufacturers use tack welds in the assembly process, and so long as they do not diminish the strength of the base metal and are not incorporated into the final weld for strength, they are not required to meet other inspection criteria.

- f. The weld profile shall be considered acceptable provided neither the weld leg nor the weld throat is undersized less than AWS D1.1 limits within the weld design length.

- g. For material with thickness less than 1/8", AWS D1.1 or D1.3 shall be considered appropriate.

User Note: AWS D1.1 does not address thicknesses less than 1/8" for hot rolled material and AWS D1.3 does not address hot rolled material, thus SJI has extended the ranges to include these material thicknesses.

- b) Steel joist and Joist Girder resistance welded joints shall follow a preproduction validation procedure and a production checking procedure and shall meet the strength requirements of this Specification.

User Note: Spot, flash or upset resistance welds should have a written welding procedure qualification record and a systematic quality plan. For further information, see Steel Joist Institute Technical Digest 8 - Welding of Open Web Steel Joists and Joist Girders.

- c) Welded Connections for Crimped-End Angle Web Members

- 1) The connection of each end of a crimped angle web member to each side of the chord shall consist of a weld group made of more than a single line of weld. The design weld length shall include an end return of no less than two times the nominal weld size.

- d) Welding Program

- 1) The manufacturer's welders shall be qualified in accordance with either AWS D1.1 or AWS D1.3 for the applicable weld type, position, and material.
- 2) Manufacturers shall have a program for establishing weld procedures and operator qualification, and for weld sampling and testing. Each manufacturing facility shall have trained inspectors, and an engineer responsible for all welding procedures.

- e) Weld Inspection by Outside Agencies (See Section 5.14)

- 1) The agency shall arrange for visual inspection to determine that welds meet the acceptance standards of Section 4.5.1.

User Note: Ultrasonic, X-ray, and magnetic particle testing are inappropriate for joists due to the configurations of the components and welds.

4.5.2 Strength

4.5.2.1 Joint Connections: Joint connections shall develop the maximum force due to any of the design loads, but not less than 50 percent of the strength of the member in tension or compression, whichever force is the controlling factor in the selection of the member.

4.5.2.2 Shop Splices: Shop splices shall be permitted to occur at any point in chord or web members. Splices shall be designed for the member force, but not less than 50 percent of the member strength. All component parts comprising the cross section of the chord or web member (including reinforcing plates, rods, etc.) at the point of the splice shall develop a nominal tensile strength of at least 1.2 times the product of the yield strength and the full design area of the chord or web. The “full design area” shall be defined as the minimum required area such that the required stress will be less than the design (LRFD) or allowable (ASD) stress.

User Note: For more information on welding, see Steel Joist Institute Technical Digest 8 - Welding of Open Web Steel Joists and Joist Girders.

4.5.3 Field Splices

Field Splices shall be designed by the manufacturer and shall be either bolted or welded. Splices shall be designed for the member force, but not less than 50 percent of the member strength.

4.5.4 Eccentricity

Members connected at a joint shall have their center of gravity lines meet at a point, where practical. Ends of joists or **Joist Girders** shall be proportioned to resist bending produced by eccentricity at the support.

For a single component web member, the eccentricity shall be permitted to be neglected where it does not exceed the lesser of three-quarters of the over-all dimension of the chord or 2” (51 mm). This eccentricity, measured in the plane of the joist, shall be the perpendicular distance from the centroidal axis of that web member to the point on the centroidal axis of the chord which is vertically above or below the intersection of the centroidal axis of the web member(s) forming the joint in accordance with Figure 4.5-1.

For a web member composed of at least two shapes, the eccentricity on either side of the neutral axis of chord members, measured in the plane of the joist at the joint work point, shall be permitted to be neglected where the web intersect point does not exceed one and one-half times the distance between the neutral axis and the back of the chord in accordance with Figure 4.5-2.

If these limits are exceeded, provision shall be made for the stresses due to eccentricity.

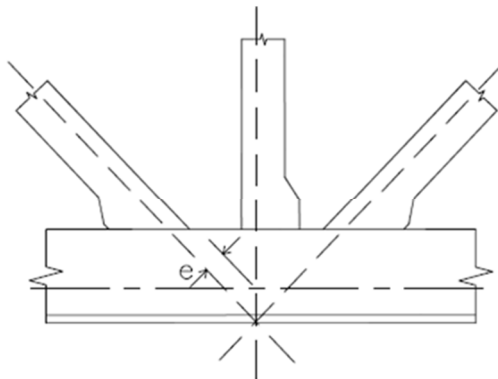


Figure 4.5-1

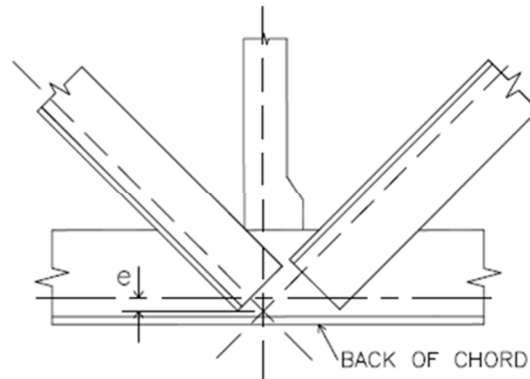


Figure 4.5-2

4.6 CAMBER

Steel joists and **Joist Girders** 100'-0" or less shall have a manufactured camber in accordance with Table 4.6-1:

TABLE 4.6-1

TOP CHORD LENGTH		APPROXIMATE CAMBER	
20'-0"	(6096 mm)	1/4"	(6 mm)
30'-0"	(9144 mm)	3/8"	(10 mm)
40'-0"	(12192 mm)	5/8"	(16 mm)
50'-0"	(15240 mm)	1"	(25 mm)
60'-0"	(18288 mm)	1 1/2"	(38 mm)
70'-0"	(21336 mm)	2"	(51 mm)
80'-0"	(24384 mm)	2 3/4"	(70 mm)
90'-0"	(27432 mm)	3 1/2"	(89 mm)
100'-0"	(30480 mm)	4 1/4"	(108 mm)

For lengths exceeding 100'-0", manufactured camber equal to Span/300 shall be used.

User Note: The specifying professional shall give consideration to coordinating this approximate camber with adjacent framing.

4.7 VERIFICATION OF DESIGN AND MANUFACTURE

User Note: This Section is included as part of this Specification since the verification of design and manufacture is a requirement of any Steel Joist Institute member company in order to be in compliance with this Specification. This Section applies only to a Steel Joist Institute member manufacturer.

4.7.1 Design Calculations

Companies manufacturing any **K-Series**, **LH-Series**, **DLH-Series** Joists or **Joist Girders** shall submit design data to the Steel Joist Institute, or an independent agency approved by the Steel Joist Institute, for verification of compliance with this Specification. Design data shall be submitted in detail and in the format specified by the Steel Joist Institute.

4.7.2 Tests of Chord and Web Members

Each manufacturer shall, at the time of design review by the Steel Joist Institute, verify by tests that the design, in accordance with Section 4.1 through Section 4.5, provides the theoretical strength of critical members. Such tests shall be evaluated considering the actual yield strength of the members of the test joists.

Material tests for determining mechanical properties of component members shall be conducted.

4.7.3 Tests of Joints and Connections

Each manufacturer shall, at the time of design review by the Steel Joist Institute, verify by shear tests on representative joints of typical joists that connections will meet the provision of Section 4.5.2. Chord and web members shall be permitted to be reinforced for such tests.

4.7.4 In-Plant Inspections

Each manufacturer shall verify their ability to manufacture **K-Series**, **LH-Series**, **DLH-Series** Joists and **Joist Girders** through periodic In-Plant Inspections. Inspections shall be performed by an independent agency approved by the Steel Joist Institute. The frequency, manner of inspection, and manner of reporting shall be determined by the Steel Joist Institute. The plant inspections shall not represent a guarantee of the quality of any specific joists; this responsibility shall lie fully and solely with the individual manufacturer.

SECTION 5. **APPLICATION**

5.1 USAGE

5.1.1 Scope: This Specification shall apply to any type of structure where floors or roofs are to be supported directly by steel joists installed as hereinafter specified or where steel joists are to be supported directly by **Joist Girders** installed as hereinafter specified. Where joists or **Joist Girders** are used other than on simple spans under uniformly distributed loading for joists, or under equal concentrated gravity loading for **Joist Girders**, as prescribed in Section 4.1, they shall be designed to limit the required stresses to those listed in Section 4.2. The magnitude and location of all loads and forces to be considered in the joist or **Joist Girder** design shall be provided on the structural drawings.

5.1.2 Continuous Frame Action: Where a rigid connection of the bottom chord is to be made to a column or other structural support, the steel joist or **Joist Girder** is then no longer simply-supported, and the system shall be investigated for continuous frame action by the specifying professional. The specifying professional shall design the supporting structure, including the design of columns, connections, and moment plates. This design shall account for the stresses caused by lateral forces and the stresses due to connecting the bottom chord to the column or other structural support.

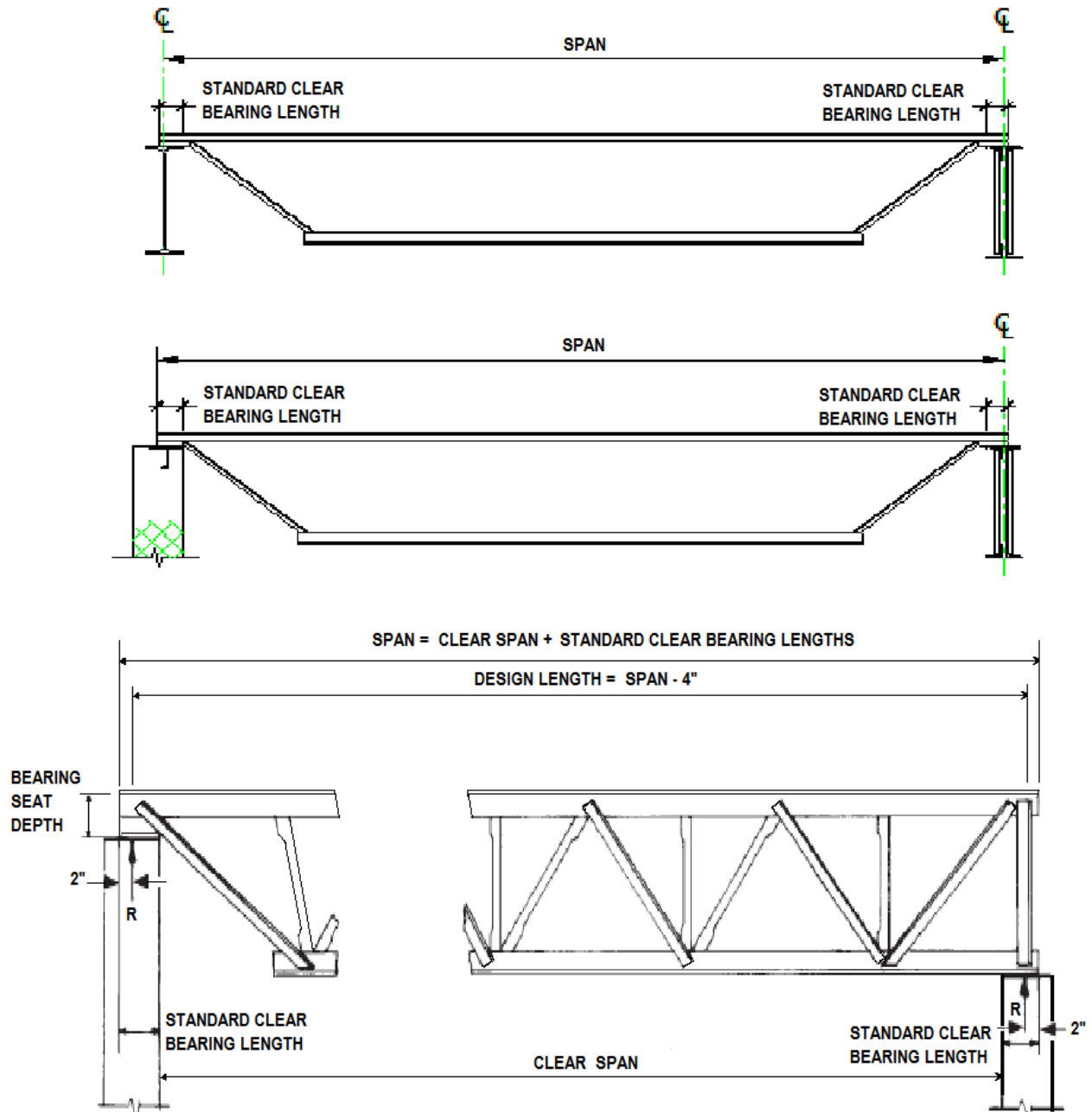
The designed detail of a rigid type connection and moment plates shall be shown on the structural drawings by the specifying professional. The moment plates shall be furnished by other than the joist manufacturer.

User Note: For further reference concerning continuous frame action and their connections, refer to Steel Joist Institute Technical Digest No. 11, "Design of Lateral Load Resisting Frames Using Steel Joists and Joist Girders".

5.2 SPAN

Except for joist substitutes, the span of a joist or **Joist Girder** shall not exceed 24 times the depth. Design length shall equal the span minus 4 inches (102 mm) as shown in Figure 5.2-1 "Definition of Span".

Figure 5.2-1
DEFINITION OF SPAN
(U. S. Customary Units)



5.3 DEPTH

Steel joists or **Joist Girders** shall have either parallel chords or a top chord pitch of up to 1/2 inch per foot (1:24). The steel joist or **Joist Girder** designation depth or nominal depth shall be the depth at mid-span, except for double pitched joists which shall be the depth at the ridge.

5.4 END SUPPORTS

Consideration of the reactions, vertical and lateral, shall be taken by the **specifying professional** in the design of the steel support, or the steel bearing plate on masonry or concrete. The standard location of the end reaction shall be 2" (51 mm) from the end of the span (exclusive of extensions) at each end of the steel joist or **Joist Girder** as shown in Figure 5.2-1 "Definition of Span". The standard end reaction location shall require the minimum bearing lengths shown in Table 5.4-1.

TABLE 5.4-1

JOIST SECTION NUMBER ¹	STANDARD CLEAR BEARING LENGTH	MINIMUM BEARING LENGTH ON STEEL
K1-12	4" (102 mm)	2 ½" (64 mm)
LH02-06	6" (152 mm)	2 ½" (64 mm)
LH07-17, DLH10-17, JG	6" (152 mm)	4" (102 mm)
DLH18-25, JG ²	6" (152 mm)	6" (152 mm)
⁽¹⁾ Last digit(s) of joist designation shown in Load Table.		
⁽²⁾ Joist Girders with a self weight greater than 50 plf.		

If the **specifying professional** requires the end reaction to be located at a distance from the face of support more than the standard clear bearing length values shown in Table 5.4-1 minus 2" (51 mm), the structural drawings shall indicate the required special location of the end reaction. The seat depth shall also be increased to the special minimum bearing seat depth per Table 5.4-3.

5.4.1 Masonry and Concrete

5.4.1.1 Scope: A **K-Series**, **LH-Series**, **DLH-Series** Joist or **Joist Girder** end supported by masonry or concrete shall bear on steel bearing plates and shall be designed as steel bearing.

5.4.1.2 Bearing Length: The ends of **K-Series** Joists shall extend a distance of not less than 4 inches (102 mm) over the face of masonry or concrete support unless it is deemed necessary to bear less than 4 inches (102 mm) over the support. The ends of **LH-Series**, **DLH-Series** Joists and **Joist Girders** shall extend a distance of not less than 6 inches (152 mm) over the face of masonry or concrete support unless it is deemed necessary to bear less than 6 inches (152 mm) over the support.

5.4.1.3 Anchorage: **K-Series**, **LH-Series**, **DLH-Series** Joists and **Joist Girders** shall be anchored to the steel bearing plate per Section 5.7.

The steel bearing plate shall be located not more than 1/2 inch (13 mm) from the face of the wall. If the steel bearing plate is located more than 1/2 inch (13 mm) from the face of the wall, or the minimum bearing over the masonry or concrete support cannot be provided as shown in Table 5.4-1, special consideration shall be given to the design of the steel bearing plate and the masonry or concrete by the **specifying professional**.

The steel bearing plate width shall not be less than that shown in Table 5.4-2 perpendicular to the length of the joist. The plate is to be designed by the **specifying professional** and shall be furnished by other than the joist manufacturer.

TABLE 5.4-2

JOIST SECTION NUMBER ¹	MINIMUM BEARING PLATE WIDTH
K1-12, LH02-06	7" (178 mm)
LH07-17, DLH10-17, JG	9" (229 mm)
DLH18-25, JG ²	14" (356 mm)
⁽¹⁾ Last digit(s) of joist designation shown in Load Table.	
⁽²⁾ Joist Girders with a self weight greater than 50 plf.	

5.4.2 Steel

The ends of **K-Series**, **LH-Series**, **DLH-Series** Joists and **Joist Girders** shall be anchored to the support per Section 5.7.

5.4.3 Bearing Depth

The standard non-sloping bearing seat depths shall be as shown in Table 5.4-3.

If the steel joist slopes 3/8 inch per foot or greater, the high end bearing seat shall require additional depth due to the slope.

User Note: The Steel Joist Institute Code of Standard Practice provides guidance for determining additional seat depth requirements for sloped joists.

TABLE 5.4-3

JOIST SECTION NUMBER ¹	STANDARD BEARING SEAT DEPTH	STANDARD CLEAR BEARING LENGTH	SPECIAL MINIMUM BEARING SEAT DEPTH ²
K1-12	2 ½" (64 mm)	4" (102 mm)	0.6 x (RP + 2 ½" (64 mm))
LH02-17, DLH10-17	5" (127 mm)	6" (152 mm)	0.6 x (RP + 4" (102 mm))
DLH18-25	7 ½" (191 mm)	6" (152 mm)	0.6 x (RP + 4" (102 mm)) + 2 ½" (64 mm)
JG	7 ½" (191 mm)	6" (152 mm)	RP + 4" (102 mm)

⁽¹⁾Last digit(s) of joist designation shown in Load Table.

⁽²⁾RP is equal to the distance the reaction is to occur from the face of the wall or leading edge of support member. The equation is not applicable for the high end of a sloped joist or Joist Girder.

When the specifying professional requires the steel joist or **Joist Girder** reaction to occur at or near the centerline of the wall or other support, a special bearing seat depth shall be required and a note shall be placed on the structural drawings identifying where the reaction is to occur. The specified bearing seat depth shall be increased according to Table 5.4-3 to allow for this special requirement.

5.5 BRIDGING or BRACING

Joist Girders shall be proportioned such that they can be erected without bridging. Therefore, the following requirements shall be met:

- The ends of the bottom chord shall be restrained from lateral movement to brace the girder from overturning. For **Joist Girders** at columns in steel frames, restraint shall be provided by a stabilizer plate on the column.

- b) No other loads shall be placed on the **Joist Girder** until the steel joists bearing on the **Joist Girder** are in place and positively attached to the **Joist Girder**.

User Note: See Section 5.12 for bridging or bracing required for uplift forces.

Steel joist top and bottom chord bridging shall be required and shall consist of one or both of either horizontal or diagonal bridging.

5.5.1 Horizontal Bridging

Horizontal bridging lines shall consist of continuous horizontal steel members. The ℓ/r ratio of the bridging member shall not exceed 300, where ℓ is the distance in inches (millimeters) between attachments and r is the least radius of gyration of the bridging member.

5.5.2 Diagonal Bridging

Diagonal bridging lines shall consist of cross-bracing with a ℓ/r ratio of not more than 200, where ℓ is the distance in inches (millimeters) between connections and r is the least radius of gyration of the bracing member. Where cross-bracing members are connected at their point of intersection, the ℓ distance shall be taken as the distance in inches (millimeters) between connections at the point of intersection of the bridging members and the connections to the chords of the joists.

5.5.2.1 Diagonal Erection Bridging

User Note: Joists exhibit varying degrees of stability dependent upon the span, depth, member sizes, self weight and other parameters. Bolted diagonal Erection Bridging which must be installed prior to releasing hoisting cables may be required.

Where required as identified below, bolted diagonal Erection Bridging shall be required and shall be in accordance with the following:

- (a) For joist spans up through and including 60 feet (18288 mm) in length;

Welded horizontal bridging shall be permitted except where the row of bridging nearest the center is required to be bolted diagonal Erection Bridging as indicated by the **Red shaded area** in the Load Tables. Hoisting cables shall not be released until this row of bolted diagonal Erection Bridging is completely installed and anchored.

Bolted diagonal Erection Bridging shall be provided as required in the SJI Load Tables wherever a standard SJI Section Number designation is specified. For spans 60 feet (18288mm) or less, in the absence of a standard SJI Section Number designation, minimum bolted diagonal Erection Bridging requirements shall be determined by:

- 1) Matching the joist design to an equivalent standard SJI Section Number designation to determine the span at which Erection Bridging is needed as designated in the tables; or
- 2) Using Equation 5.5-1 to determine the joist stability and the need for Erection Bridging.

$$W = \frac{-b + \sqrt{b^2 - 4 \cdot a \cdot c}}{2 \cdot a} ; \quad \text{If } \frac{w_u}{w_{actual}} > 1.00 \text{ Erection Bridging is not required.} \quad (5.5-1)$$

$$a = \left(\frac{\pi^2 + 3}{24} \right)^2$$

$$b = P \cdot \frac{\pi^2 + 3}{12} \cdot \frac{\pi^2 + 4}{16} - \frac{\pi^4 \cdot E \cdot I_y}{2 \cdot (k \cdot L)^3} \cdot \left[\beta_x \cdot \left(\frac{\pi^2 - 3}{24} \right) - \frac{y_o}{2} \right]$$

$$c = (P)^2 \left(\frac{\pi^2 + 4}{16} \right)^2 - \frac{\pi^4 \cdot E \cdot I_y}{2 \cdot (k \cdot L)^3} \cdot \left[P \cdot \left(\beta_x \cdot \frac{\pi^2 - 4}{16} - a_e \right) + \frac{\pi^4 \cdot E \cdot C_w}{2 \cdot (k \cdot L)^3} + \frac{\pi^2 \cdot G \cdot J}{2 \cdot k \cdot L} \right]$$

Where:

P = Factored weight of erector = 1.2 x (assumed weight of 250 lbs.) = 300 lbs. (1334 N)

E = Modulus of elasticity= 29,000,000 psi (200,000 MPa)

I_y = Joist moment of inertia about y-axis, in.⁴ (mm⁴) $I_y = I_{yt} + I_{yb}$

I_{yt} = Top chord moment of inertia about y-axis, in.⁴ (mm⁴)

I_{yb} = Bottom chord moment of inertia about y-axis, in.⁴ (mm⁴)

L = Joist Span, in. (mm)

k = Effective length factor = 0.85

β_x = Cross-Sectional parameter $\beta_x = \frac{1}{I_x} \left[A_b \cdot (d_e - y)^3 - A_t \cdot y^3 \right] - 2 \cdot y_o$

A_b = Area of bottom chord, in.² (mm²)

A_t = Area of top chord, in.² (mm²)

d_e = Joist effective depth, in.(mm) $d_e = d - y_t - y_b$

y_t = Neutral axis of top chord, in. (mm)

y_b = Neutral axis of bottom chord, in. (mm)

y = Distance from centroid of top chord to centroid of cross section, in. (mm) $y = \frac{A_b \cdot d_e}{A_t + A_b}$

I_x = Joist moment of inertia about x-axis, in.⁴ (mm⁴) $I_x = A_t y^2 + A_b (d_e - y)^2$

y_o = Distance from centroid of cross section to shear center, in. (mm) $y_o = -y + \frac{I_{yb} \cdot d_e}{I_y}$

a_e = Vertical location of load P from shear center (locate at joist center of gravity), in. (mm),
where $a_e = y_o$

C_w = Warping constant $C_w = \frac{d_e^2 \cdot I_{yb} \cdot I_{yt}}{I_y}$

G = Shear modulus, psi (MPa) $G = 0.385E$

J = St. Venant torsion constant, in.⁴ (mm⁴) $J = \frac{1}{3} (A_t \cdot t_t^3 + A_b \cdot t_b^3)$

t_t = Thickness of top chord, in. (mm)

t_b = Thickness of top chord, in. (mm)

$$w_u = \text{Ultimate lateral buckling load} \quad w_u = \frac{W \cdot 12}{L}, \text{ plf} \quad w_u = \frac{W}{L}, \text{ (kN/m)}$$

$$w_{actual} = \text{Joist self-weight, plf (kN/m)}$$

- b) For joist spans greater than 60 feet (18288 mm) in length;
Bolted diagonal Erection Bridging shall be used as indicated by the **Blue and Gray shaded areas** of the Load Tables. Hoisting cables shall not be released until all rows of bolted diagonal Erection Bridging are completely installed and anchored. Where the joist spacing is less than 0.70 x joist depth, bolted horizontal bridging shall be used in addition to bolted diagonal Erection Bridging.
- c) The bolted diagonal Erection Bridging determined by Section 5.5.2.1a and Section 5.5.2.1b shall be considered a minimum. This bolted diagonal Erection Bridging shall be indicated on the placement plans.

User Note: Joists with special profiles having a higher center of gravity as compared to a parallel chord joist, joists which are canted, or joists having any condition which may create instability, may require additional bridging and/or special erection methods.

5.5.3 Quantity and Spacing of Bridging

5.5.3.1 Scope: Bridging shall be properly spaced and anchored to support the decking and the employees prior to the attachment of the deck to the top chord. The maximum spacing between lines of bridging, ℓ_{brmax} shall be the lesser of,

$$\ell_{brmax} = \left(124 + 0.67 d_j + 28 \frac{d_j}{L} \right) r_y, \text{ in.} \quad (5.5-2a)$$

$$\ell_{brmax} = \left(124 + 0.026 d_j + 0.34 \frac{d_j}{L} \right) r_y, \text{ mm} \quad (5.5-2b)$$

$$\text{or,} \quad \ell_{brmax} = 170 r_y \quad (5.5-3)$$

Where:

d_j is the steel joist depth, in. (mm)

L is the joist span length, ft. (m)

r_y is the radius of gyration of the top chord about the vertical axis of the joist cross section, in. (mm)

5.5.3.2 Number of Rows: The number of rows of top chord bridging shall not be less than as shown in Table 5.5-1 and the spacing shall meet the requirements of Equations 5.5-2 and 5.5-3. The number of rows of bottom chord bridging, including bridging required per Section 5.12, shall not be less than the number of top chord rows. Rows of bottom chord bridging shall be permitted to be spaced independently of rows of top chord bridging. The spacing of rows of bottom chord bridging shall meet the slenderness requirement of Section 4.3 and any specified strength requirements.

5.5.3.3 DLH Joist Section 21 and Greater: For DLH-Series joist Section Number 21 and greater, bridging shall be installed near a bottom chord panel point or an extra web member shall be furnished to brace the bottom chord for the vertical component of the bridging force equal to the horizontal bracing force.

TABLE 5.5-1

U.S. CUSTOMARY UNITS										
NUMBER OF ROWS OF TOP CHORD BRIDGING ²										
Section Number ¹	Joist Depth	1 Row	2 Rows	3 Rows	4 Rows	5 Rows	6 Rows	7 Rows	8 Rows	9 Rows
K1	All	17	>17 to 26	>26 to 28						
K2	All	21	>21 to 30	>30 to 32						
K3	All	18	>18 to 26	>26 to 40						
K4	All	20	>20 to 30	>30 to 41	>41 to 48					
K5	12K to 24K	20	>20 to 30	>30 to 42	>42 to 48					
	26K	28	>28 to 41	> 41 to 52						
K6	14K to 24K	20	>20 to 31	>31 to 42	>42 to 48					
	26K & 28K	28	>28 to 41	>41 to 54	>54 to 56					
K7	16K to 24K	23	>23 to 34	>34 to 48						
	26K to 30K	29	>29 to 44	>44 to 60						
K8	24K	25	>25 to 39	>39 to 48						
	26K to 30K	29	>29 to 44	>44 to 60						
K9	16K to 24K	22	>22 to 34	>34 to 48						
	26K to 30K	29	>29 to 44	>44 to 60						
K10	18K to 24K	22	>22 to 38	>38 to 48						
	26K to 30K	29	>29 to 48	>48 to 60						
K11	22K	24	>24 to 39	>39 to 44						
	30K	34	>34 to 49	>49 to 60						
K12	24K	25	>25 to 43	>43 to 48						
	26K to 30K	29	>29 to 47	>47 to 60						
LH02-03	All	20	>20 to 30	>30 to 40	>40					
LH04-05	All	22	>22 to 33	>33 to 44	>44 to 55	>55				
LH06-08	All	26	>26 to 45	>45 to 60	>60 to 75	>75				
LH09	All	26	>26 to 48	>48 to 64	>64 to 80	>80				
LH/DLH10	All	28	>28 to 54	>54 to 72	>72 to 90	>90				
LH/DLH11	All	30	>30 to 54	>54 to 72	>72 to 90	>90 to 108	>108			
LH/DLH12	All	34	>34 to 55	>55 to 74	>74 to 92	>92 to 111	>111			
LH/DLH13	All	36	>36 to 63	>63 to 84	>84 to 105	>105 to 126	>126			
LH/DLH14	All	38	>38 to 64	>64 to 86	>86 to 107	>107 to 129	>129			
LH/DLH15	All	42	>42 to 73	>73 to 98	>98 to 122	>122 to 147	>147			
LH/DLH 16-17	All	44	>44 to 75	>75 to 100	>100 to 125	>125 to 150	>150 to 175	>175		
DLH18-20	All	52	>52 to 78	>78 to 104	>104 to 130	>130 to 156	>156 to 182	>182 to 208	>208 to 234	>234
DLH21-25	All	60	>60 to 90	>90 to 120	>120 to 150	>150 to 180	>180 to 210	>210		

⁽¹⁾ Last digit(s) of joist designation shown in Load Table.

⁽²⁾ Distances are Joist Span lengths in feet – See “Definition of Span” Figure 5.2-1. Refer to the Joist Load Table and Specification Section 6 for required bolted diagonal bridging and additional stability requirements. See Section 5.12 for additional bridging required for uplift design.

5.5.4 Sizing of Bridging

Horizontal and diagonal bridging shall be capable of resisting the nominal unfactored horizontal compressive force, P_{br} given in Equation 5.5-4.

$$P_{br} = 0.0025 n A_t F_{construction}, \text{ kips (N)} \quad (5.5-4)$$

Where:

$n = 8$ for horizontal bridging

$n = 2$ for diagonal bridging

A_t = cross sectional area of joist top chord, in.² (mm²)

$F_{construction}$ = assumed ultimate stress in top chord to resist construction loads, determined in accordance with the following:

$$F_{construction} = \left(\frac{\pi^2 E}{\left(\frac{0.9 \ell_{brmax}}{r_y} \right)^2} \right) \geq 12.2 \text{ ksi} \quad (5.5-5a)$$

$$F_{construction} = \left(\frac{\pi^2 E}{\left(\frac{0.9 \ell_{brmax}}{r_y} \right)^2} \right) \geq 84.1 \text{ MPa} \quad (5.5-5b)$$

Where:

E = Modulus of Elasticity of steel = 29,000 ksi (200,000 MPa)

and $\frac{\ell_{brmax}}{r_y}$ is determined from Equations 5.5-2 or 5.5-3

The bridging nominal horizontal unfactored compressive forces, P_{br} , shall be in accordance with Table 5.5-2.

TABLE 5.5-2

BRIDGING NOMINAL HORIZONTAL UNFACTORED COMPRESSIVE FORCE					
JOIST SECTION NUMBER ¹	HORIZONTAL BRIDGING P _{br} (n=8)		REQUIRED BRIDGING CONNECTION WELD ²	DIAGONAL BRIDGING P _{br} (n=2)	
	Lbs.	(N)	In.	Lbs.	(N)
K1-8	340	(1512)	1/8" x 1" (3mm x 25mm)	85	(378)
K9-10, LH02-03	450	(2002)		113	(503)
K11-12, LH04-05	560	(2491)		140	(623)
LH06-08	750	(3336)		188	(836)
LH09	850	(3781)		213	(945)
LH/DLH10	900	(4003)		225	(1001)
LH/DLH11	950	(4226)		238	(1056)
LH/DLH12	1100	(4893)		275	(1223)
LH/DLH13	1200	(5338)		300	(1334)
LH/DLH14	1300	(5783)		325	(1446)
LH/DLH15	1450	(6450)		363	(1612)
LH/DLH16-17	1850	(8229)	1/8" x 1 ½ " (3mm x 38mm)	463	(2057)
DLH18-20	2350	(10453)		585	(2602)
DLH21-22	3150	(14012)	1/8" x 2" (3mm x 51mm)	790	(3514)
DLH23-24	4130	(18371)	1/8" x 3" (3mm x 76mm)	1035	(4604)
DLH25	4770	(21218)		1195	(5316)
⁽¹⁾ Last digit(s) of joist designation shown in Load Table.					
⁽²⁾ Or other connection type designed for the required force.					

5.5.5 Connections

Connections to the joist chords shall be made by welding or mechanical means and shall be capable of resisting the unfactored or nominal horizontal force, P_{br} , of Equation 5.5-4 but not less than 700 pounds (3114 N).

5.5.6 Bottom Chord Bearing Joists

Where bottom chord bearing joists are utilized, a row of diagonal bridging shall be provided near the support(s). This bridging shall be installed and anchored before the hoisting cable(s) is released.

5.6 INSTALLATION OF BRIDGING

Bridging shall support the top and bottom chords against lateral movement during the construction period and shall hold the steel joists in the approximate position as shown on the joist placement plans.

The ends of all bridging lines terminating at walls or beams shall be anchored thereto.

5.7 BEARING SEAT ATTACHMENTS

5.7.1 Masonry and Concrete

Ends of **K-Series**, **LH-Series**, and **DLH-Series** Joists and **Joist Girders** resting on steel bearing plates on masonry or structural concrete shall be attached thereto, as shown in Table 5.7-1, with a minimum of two fillet welds, or with two bolts, or the equivalent.

5.7.2 Steel

Ends of **K-Series**, **LH-Series**, and **DLH-Series** Joists and **Joist Girders** resting on steel supports shall be attached thereto, as shown in Table 5.7-1, with a minimum of two fillet welds, or with two bolts, or the equivalent. Where **K-Series**, **LH-Series** and **DLH-Series** Joists and **Joist Girders** are used to provide lateral stability to the supporting member, the final connection shall be made by welding or as designated by the specifying professional.

TABLE 5.7-1

JOIST SECTION NUMBER ¹	MINIMUM FILLET WELD	MINIMUM BEARING SEAT BOLTS FOR ERECTION
K1-12	2– 1/8" x 2 1/2" (3 x 64 mm)	2– 1/2" (13 mm) A307
LH02-06	2– 3/16" x 2 1/2" (5 x 64 mm)	
LH07-17, DLH10-17, JG	2– 1/4" x 2 1/2" (6 x 64 mm)	2– 3/4" (19 mm) A307
DLH18-25, JG ²	2– 1/4" x 4" (6 x 102 mm)	2– 3/4" (19 mm) A325
⁽¹⁾ Last digit(s) of joist designation shown in load table.		
⁽²⁾ Joist Girders with a self weight greater than 50 plf.		

5.7.3 Uplift

Where uplift forces are a design consideration, roof joists shall be anchored to resist such forces and shall meet the requirements of Section 5.12.

5.8 JOIST SPACING

Joists shall be spaced so that the loading on each joist does not exceed the design load (LRFD or ASD) for the particular joist designation and span as shown in the applicable load tables.

5.9 FLOOR AND ROOF DECKS

5.9.1 Material

Floor and roof decks shall be permitted to consist of cast-in-place or pre-cast concrete or gypsum, cold-formed steel, wood, or other suitable material capable of supporting the required load at the specified joist spacing.

5.9.2 Thickness

Cast-in-place slabs shall be not less than 2 inches (51 mm) thick.

5.9.3 Centering

Centering for cast-in-place slabs shall be permitted to be ribbed metal lath, corrugated steel sheets, paper-backed welded wire fabric, removable centering or any other suitable material capable of supporting the slab at the designated joist spacing.

Centering shall not cause lateral displacement or damage to the top chord of joists during installation or removal of the centering or placing of the concrete.

5.9.4 Bearing

Slabs or decks shall bear uniformly along the top chords of the joists.

5.9.5 Attachments

The spacing of attachments along the joist top chord shall not exceed 36 inches (914 mm). Such attachments of the slab or deck to the top chords of joists shall be capable of resisting the forces given in Table 5.9-1.

TABLE 5.9-1

JOIST SECTION NUMBER ¹	NOMINAL FORCE REQUIRED ²
K1-12	100 lbs/ft. (1.46 kN/m)
LH02-04	120 lbs/ft. (1.75 kN/m)
LH05-09	150 lbs/ft. (2.19 kN/m)
LH/DLH10-17	200 lbs/ft. (2.92 kN/m)
DLH18-19	250 lbs/ft. (3.65 kN/m)
DLH20-21	300 lbs/ft. (4.38 kN/m)
DLH22-24	420 lbs/ft. (6.13 kN/m)
DLH25	520 lbs/ft. (7.59 kN/m)
⁽¹⁾ Last digit(s) of joist designation shown in Load Table.	
⁽²⁾ Nominal bracing force is unfactored.	

5.9.6 Wood Nailers

Where wood nailers are used, such nailers in conjunction with deck or slab shall be firmly attached to the top chords of the joists in conformance with Section 5.9.5.

5.9.7 Joist With Standing Seam Roofing or Laterally Unbraced Top Chords

Where the roof systems do not provide lateral stability for the steel joists in accordance with Section 5.9.5 sufficient stability shall be provided to brace the steel joists laterally under the full design load. For this condition, the compression chord design shall include the effects of both the in-plane and out-of-plane buckling of the steel joist (i.e., buckling about the vertical axis of the steel joist cross section). In any case where the attachment requirement of Section 5.9.5 is not achieved, out-of-plane strength shall be achieved by adjusting the bridging spacing and/or increasing the compression chord area and the y-axis radius of gyration. The effective slenderness ratio about the vertical axis equals $0.94 L/r_y$; where L is the bridging spacing in inches (millimeters) and r_y is the radius of gyration of the top chord in inches (millimeters). The maximum bridging spacing shall not exceed that specified in Section 5.5.3.

User Note: Some examples of roof systems which may not provide adequate top chord lateral stability may be standing seam roofs, skylights, or other openings which do not provide top chord attachments per Section 5.9.5.

Horizontal bridging members attached to the compression chords and their anchorages shall be designed for a compressive axial force, P_{br} , given in Equation 5.9-1.

$$P_{br} = 0.001nP + 0.004P\sqrt{n} \geq 0.0025nP, \text{ kips (N)} \quad (5.9-1)$$

Where n is the number of joists between end anchors and P is the chord design force in kips (N)

The attachment force between the horizontal bridging member and the compression chord shall be $0.01P$. Horizontal bridging attached to the tension chords shall be proportioned so that the slenderness ratio between attachments does not exceed 300. Diagonal bridging shall be proportioned so that the slenderness ratio between attachments does not exceed 200.

5.10 DEFLECTION

The deflection due to the design live load shall not exceed the following:

Floors: 1/360 of span.

Roofs: 1/360 of span where a plaster ceiling is attached or suspended, or
1/240 of span for all other cases.

The specifying professional shall give consideration to the effects of deflection and vibration in the selection of joists.

User Note: For further information on vibration, refer to Steel Joist Institute Technical Digest 5, "Vibration of Steel Joist-Concrete Slab Floors".

5.11 PONDING

The ponding investigation shall be performed by the specifying professional.

User Note: For further reference, refer to Steel Joist Institute Technical Digest 3, "Structural Design of Steel Joist Roofs to Resist Ponding Loads" and AISC 360.

5.12 UPLIFT

Where uplift forces due to wind are a design requirement, these forces shall be indicated on the structural drawings in terms of NET uplift in pounds per square foot (Pascals). The structural drawings shall indicate if the net uplift is based upon an LRFD or ASD load combination. When these forces are specified, they shall be considered in the design of joists, Joist Girders, and required bridging or bracing. Wherever uplift due to wind forces is a design consideration, the following shall be required:

- a) For joists, a single line of **bottom chord** bridging shall be provided near the first bottom chord panel points.
- b) For **Joist Girders**, if the ends of the bottom chord are not strutted and extended to column stabilizer plates, bracing shall be provided near the first bottom chord panel points.

User Note: For further reference, refer to Steel Joist Institute Technical Digest 6, "Structural Design of Steel Joist Roofs to Resist Uplift Loads."

5.13 DIAPHRAGMS AND COLLECTORS

Where diaphragm collector forces due to wind or seismic forces are a design requirement, these forces shall be indicated on the structural drawings. The structural drawings shall indicate the nominal (unfactored) forces. The structural drawings shall also indicate the Seismic Design Category, and the Seismic Force Resisting System type, and applicable seismic design coefficients. When this data is specified, joist collectors or chords in horizontal diaphragm systems, shall be designed in conformance with the provisions of Section 4 through Section 6. End connections and splices in joists incorporated into Seismic Force Resisting System (SFRS) as horizontal diaphragms as collectors or chords shall adhere to the requirements stipulated by the applicable building code.

5.14 INSPECTION

Joists shall be inspected by the manufacturer before shipment to verify compliance of materials and workmanship with the requirements of this Specification.

User Note: If the purchaser requires an inspection of the steel joists or **Joist Girders** by someone other than the manufacturer's own inspectors, they shall be permitted to reserve the right to do so in their "Invitation to Bid" or the accompanying "Job Specifications". Arrangements shall be made with the manufacturer for such inspection of the joists or **Joist Girders** at the manufacturing shop by the purchaser's inspectors at purchaser's expense.

5.15 PARALLEL CHORD SLOPED JOISTS AND JOIST GIRDERS

The span of a parallel chord sloped joist or **Joist Girder** shall be defined by the length along the slope. Minimum depth, load-carrying capacity, and bridging requirements shall be determined by the sloped definition of span. The Load Table capacity shall be the component normal to the joist.

SECTION 6

ERECTION STABILITY AND HANDLING

As a minimum, erection stability and handling of joists and Joist Girders shall meet the requirements of this Section 6.

User Note: Additional requirements for erection of steel joists and Joist Girders can be found in Steel Joist Institute Technical Digest No. 9, "Handling and Erection of Steel Joists and Joist Girders".

6.1 STABILITY REQUIREMENTS

User Note: It is not recommended that an erector climb on unbridged joists, extreme caution shall be exercised since unbridged joists exhibit some degree of instability under the erector's weight.

- a) In steel framing, where joists/**Joist Girders** are utilized at column lines, the joists/**Joist Girder** shall be field-bolted at the column. Before hoisting cables are released and before an employee is allowed on the joists/**Joist Girder** the following conditions shall be met:
 - 1) The seat at each end of the joists/**Joist Girder** is attached in accordance with Section 5.7. Where a bolted seat connection is used for erection purposes, as a minimum, the bolts shall be snug tightened. The snug tight condition shall be defined as the tightness that exists where all plies of a joint are in firm contact. This shall be attained by a few impacts of an impact wrench or the full effort of an employee using an ordinary spud wrench.
 - 2) Where stabilizer plates are required the joists/**Joist Girder** bottom chord shall engage the stabilizer plate.

During the construction period, the contractor shall provide means for the adequate distribution of loads so that the carrying capacity of any joist or **Joist Girder** is not exceeded.

- b) Before an employee is allowed on the steel joist: BOTH ends of joists at columns (or joists designated as column joists) shall be attached to its supports. For all other joists a minimum of one end shall be attached before the employee is allowed on the joist. The attachment shall be in accordance with Section 5.7.

Where a bolted seat connection is used for erection purposes, as a minimum, the bolts shall be snug tightened. The snug tight condition shall be defined as the tightness that exists where all plies of a joint are in firm contact. This shall be attained by a few impacts of an impact wrench or the full effort of an employee using an ordinary spud wrench.

- c) On steel joists that do not require erection bridging as shown by either the unshaded area of the Load Tables or as determined by Section 5.5.2.1, only one employee shall be allowed on the steel joist until all bridging is installed and anchored.
- d) Where the span of the steel joist is within the Red shaded area of the Load Table, or in the absence of a standard SJI Section Number designation and Erection Bridging is required in accordance with Section 5.5.2.1, the following shall apply:
 - 1) The row of bridging nearest the midspan of the steel joist shall be bolted diagonal Erection Bridging; and
 - 2) Hoisting cables shall not be released until this bolted diagonal Erection Bridging is installed and anchored, unless an alternate method of stabilizing the joist has been provided; and
 - 3) No more than one employee shall be allowed on these spans until all other bridging is installed and anchored.
- e) Where the span of the steel joist is within the Blue shaded area of the Load Table, the following shall apply:
 - 1) All rows of bridging shall be bolted diagonal bridging; and
 - 2) Hoisting cables shall not be released until the two rows of bolted diagonal Erection Bridging nearest the third points of the steel joist are installed and anchored; and
 - 3) No more than two employees shall be allowed on these spans until all bridging is installed and anchored.
- f) Where the span of the steel joist is in the Gray shaded area of the Load Table, the following shall apply:
 - 1) All rows of bridging shall be bolted diagonal bridging; and
 - 2) Hoisting cables shall not be released until all bridging is installed and anchored; and
 - 3) No more than two employees shall be allowed on these spans until all other bridging is installed and anchored.
- g) Where permanent bridging terminus points cannot be used during erection, additional temporary bridging terminus points shall be required to provide lateral stability.
- h) In the case of bottom chord bearing joists, the ends of the joist shall be restrained laterally per Section 5.5.6 before releasing the hoisting cables.
- i) After the joist is straightened and plumbed, and all bridging is completely installed and anchored, the ends of the joists shall be fully connected to the supports in accordance with Section 5.7.

6.2 LANDING AND PLACING LOADS

- a) Except as stated in Section 6.2(d), no "construction loads" shall be allowed on the steel joists until all bridging is installed and anchored, and all joist bearing ends are attached.

User Note: For definition of "construction load" see Code of Federal Regulations (CFR), Occupational Safety and Health Administration (OSHA), 29 CFR Part 1926, Safety Standards for Steel Erection; Subpart R - Steel Erection, §1926.751 Definitions; January 18, 2001, Washington, D.C.

- b) During the construction period, loads placed on the steel joists shall be distributed so as not to exceed the capacity of the steel joists.
- c) The weight of a bundle of joist bridging shall not exceed a total of 1000 pounds (454 kilograms). The bundle of joist bridging shall be placed on a minimum of three steel joists that are secured at one end. The edge of the bridging bundle shall be positioned within 1 foot (0.30 m) of the secured end.

- d) No bundle of deck shall be placed on steel joists until all bridging has been installed and anchored and all joist bearing ends attached, unless the following conditions are met:
- 1) The contractor has first determined from a “qualified person” and documented in a site-specific erection plan that the structure or portion of the structure is capable of supporting the load;
 - 2) The bundle of decking is placed on a minimum of three steel joists;
 - 3) The joists supporting the bundle of decking are attached at both ends;
 - 4) At least one row of bridging is installed and anchored;
 - 5) The total weight of the decking does not exceed 4000 pounds (1816 kilograms); and
 - 6) The edge of the bundle of decking is placed within 1 foot (0.30 meters) of the bearing surface of the joist end.

User Note: For definition of “qualified person” see Code of Federal Regulations (CFR), Occupational Safety and Health Administration (OSHA), 29 CFR Part 1926, Safety Standards for Steel Erection; Subpart R - Steel Erection, §1926.751 Definitions; January 18, 2001, Washington, D.C.

- e) The edge of the construction load shall be placed within 1 foot (0.30 meters) of the bearing surface of the joist end.

6.3 FIELD WELDING

All field welding shall be performed in accordance with the structural drawings. Field welding shall not damage the joists or **Joist Girders**.

On cold-formed steel members whose yield strength has been attained by cold working, and whose as-formed strength is used in the design, the total length of weld at any one point shall not exceed 50 percent of the overall developed width of the cold-formed section.

6.4 HANDLING

Particular attention shall be considered for the handling and erection of **K-Series**, **LH-Series**, **DLH-Series** steel joists and **Joist Girders**. Damage to the joists and accessories shall be avoided. Hoisting cables shall be attached at panel point locations and those locations shall be selected to minimize erection stresses.

Each joist shall be adequately braced laterally before any loads are applied. If lateral support is provided by bridging, the bridging lines as defined in Section 6.1(c), 6.1(d), 6.1(e), and 6.1(f) shall be anchored to prevent lateral movement.

6.5 FALL ARREST SYSTEMS

Steel joists and **Joist Girders** shall not be used as anchorage points for a fall arrest system unless written direction to do so is obtained from a “qualified person”.

User Note: For definition of “qualified person” see Code of Federal Regulations (CFR), Occupational Safety and Health Administration (OSHA), 29 CFR Part 1926, Safety Standards for Steel Erection; Subpart R - Steel Erection, §1926.751 Definitions; January 18, 2001, Washington, D.C.

STANDARD LRFD LOAD TABLE

OPEN WEB STEEL JOISTS, K-SERIES

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

The **BLACK** figures in the Load Table give the TOTAL safe factored uniformly distributed load-carrying capacities, in pounds per linear foot, of **LRFD K-Series Steel Joists**.

The approximate joist weights, in pounds per linear foot, given in the Load Table may be added to the other building weights to determine the unfactored DEAD load. In all cases the factored DEAD load, including the joist self-weight, must be deducted from the TOTAL load to determine the factored LIVE load. The approximate joist weights do not include accessories.

The **RED** figures in the Load Table represent the unfactored uniform load, in pounds per linear foot, which will produce an approximate joist deflection of 1/360 of the span. This load can be linearly prorated to obtain the unfactored uniform load for supplementary deflection criteria (i.e. an unfactored uniform load which will produce a joist deflection of 1/240 of the span may be obtained by multiplying the **RED** figures by 360/240). In no case shall the prorated, unfactored load exceed the unfactored TOTAL load-carrying capacity of the joist as given in the Standard **ASD** Load Table for Open Web Steel Joists, K-Series.

Where the joist span is in the **RED SHADED** area of the Load Table, the row of bridging nearest the mid span shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until this row of bolted diagonal bridging is completely installed. The **RED SHADED** area extends up through 60'-0".

The approximate gross moment of inertia (not adjusted for shear deformation), in inches⁴, of a standard joist listed in the Load Table may be determined as follows:

$$I_j = 26.767(W)(L^3)(10^{-6}), \text{ where } W = \text{RED figure in the Load Table, and}$$

$$L = (\text{span} - 0.33) \text{ in feet.}$$

The TOTAL safe factored uniformly distributed load-carrying capacities, in pounds per linear foot, of **LRFD K-Series Steel Joists** shall not exceed 825 plf for spans shorter than what is explicitly shown in the Load Table. The maximum prorated unfactored RED load shall not exceed 550 plf (the TOTAL load-carrying capacity of the joist as given in the Standard **ASD** Load Table for Open Web Steel Joists, K-Series).

Loads for span increments not explicitly given in the Load Table may be determined using linear interpolation between the load values given in adjacent span columns.

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

LRFD

STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES															
Based On A 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)															
Joist Designation	10K1	12K1	12K3	12K5	14K1	14K3	14K4	14K6	16K2	16K3	16K4	16K5	16K6	16K7	16K9
Depth (in.)	10	12	12	12	14	14	14	14	16	16	16	16	16	16	16
Approx. Wt (lbs./ft.)	5.0	5.0	5.7	7.1	5.2	6.0	6.7	7.7	5.5	6.3	7.0	7.5	8.1	8.6	10.0
Span (ft.)															
↓															
10	825 550														
11	825 542														
12	825 455	825 550	825 550	825 550											
13	718 363	825 510	825 510	825 510											
14	618 289	750 425	825 463	825 463	825 550	825 550	825 550	825 550							
15	537 234	651 344	814 428	825 434	766 475	825 507	825 507	825 507							
16	469 192	570 282	714 351	825 396	672 390	825 467	825 467	825 467	825 550	825 550	825 550	825 550	825 550	825 550	825 550
17	415 159	504 234	630 291	825 366	592 324	742 404	825 443	825 443	768 488	825 526	825 526	825 526	825 526	825 526	825 526
18	369 134	448 197	561 245	760 317	528 272	661 339	795 397	825 408	684 409	762 456	825 490	825 490	825 490	825 490	825 490
19	331 113	402 167	502 207	681 269	472 230	592 287	712 336	825 383	612 347	682 386	820 452	825 455	825 455	825 455	825 455
20	298 97	361 142	453 177	613 230	426 197	534 246	642 287	787 347	552 297	615 330	739 386	825 426	825 426	825 426	825 426
21		327 123	409 153	555 198	385 170	483 212	582 248	712 299	499 255	556 285	670 333	754 373	822 405	825 406	825 406
22		298 106	373 132	505 172	351 147	439 184	529 215	648 259	454 222	505 247	609 289	687 323	747 351	825 385	825 385
23		271 93	340 116	462 150	321 128	402 160	483 188	592 226	415 194	462 216	556 252	627 282	682 307	760 339	825 363
24		249 81	312 101	423 132	294 113	367 141	442 165	543 199	381 170	424 189	510 221	576 248	627 269	697 298	825 346
25					270 100	339 124	408 145	501 175	351 150	390 167	469 195	529 219	576 238	642 263	771 311
26					249 88	313 110	376 129	462 156	324 133	360 148	433 173	489 194	532 211	592 233	711 276
27					231 79	289 98	349 115	427 139	300 119	334 132	402 155	453 173	493 188	549 208	658 246
28					214 70	270 88	324 103	397 124	279 106	310 118	373 138	421 155	459 168	510 186	612 220
29									259 95	289 106	348 124	391 139	427 151	475 167	570 198
30									241 86	270 96	324 112	366 126	399 137	444 151	532 178
31									226 78	252 87	304 101	342 114	373 124	415 137	498 161
32									213 71	237 79	285 92	321 103	349 112	388 124	466 147

LRFD

STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES
Based On A 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	18K3	18K4	18K5	18K6	18K7	18K9	18K10	20K3	20K4	20K5	20K6	20K7	20K9	20K10	22K4	22K5	22K6	22K7	22K9	22K10	22K11
Depth (in.)	18	18	18	18	18	18	18	20	20	20	20	20	20	20	22	22	22	22	22	22	22
Approx. Wt. (lbs./ft.)	6.4	7.2	7.7	8.4	8.9	10.1	11.6	6.5	7.2	7.7	8.4	8.9	10.1	11.6	7.3	7.7	8.5	9.0	10.2	11.7	11.9
Span (ft.)																					
↓																					
18	825 550	825 550	825 550	825 550	825 550	825 550	825 550														
19	771 494	825 523	825 523	825 523	825 523	825 523	825 523	825 550	825 550	825 550	825 550	825 550	825 550	825 550							
20	694 423	825 490	825 490	825 490	825 490	825 490	825 490	775 517	825 550	825 550	825 550	825 550	825 550	825 550							
21	630 364	759 426	825 460	825 460	825 460	825 460	825 460	702 453	825 520	825 520	825 520	825 520	825 520	825 520	825 550	825 550	825 550	825 550	825 550	825 550	825 550
22	573 316	690 370	777 414	825 438	825 438	825 438	825 438	639 393	771 461	825 490	825 490	825 490	825 490	825 490	825 548	825 548	825 548	825 548	825 548	825 548	825 548
23	523 276	630 323	709 362	774 393	825 418	825 418	825 418	583 344	703 402	793 451	825 468	825 468	825 468	825 468	777 491	825 518	825 518	825 518	825 518	825 518	825 518
24	480 242	577 284	651 318	709 345	789 382	825 396	825 396	535 302	645 353	727 396	792 430	825 448	825 448	825 448	712 431	804 483	825 495	825 495	825 495	825 495	825 495
25	441 214	532 250	600 281	652 305	727 337	825 377	825 377	493 266	594 312	669 350	729 380	811 421	825 426	825 426	657 381	739 427	805 464	825 474	825 474	825 474	825 474
26	408 190	492 222	553 249	603 271	672 299	807 354	825 361	456 236	549 277	618 310	673 337	750 373	825 405	825 405	606 338	682 379	744 411	825 454	825 454	825 454	825 454
27	378 169	454 198	513 222	558 241	622 267	747 315	825 347	421 211	508 247	573 277	624 301	694 333	825 389	825 389	561 301	633 337	688 367	768 406	825 432	825 432	825 432
28	351 151	423 177	477 199	519 216	577 239	694 282	822 331	391 189	472 221	532 248	579 269	645 298	775 353	825 375	522 270	588 302	640 328	712 364	825 413	825 413	825 413
29	327 136	394 159	444 179	483 194	538 215	646 254	766 298	364 170	439 199	495 223	540 242	601 268	723 317	825 359	486 242	547 272	597 295	664 327	798 387	825 399	825 399
30	304 123	367 144	414 161	451 175	502 194	603 229	715 269	340 153	411 179	462 201	504 218	561 242	675 286	799 336	453 219	511 245	556 266	619 295	745 349	825 385	825 385
31	285 111	343 130	387 146	421 158	469 175	564 207	669 243	318 138	384 162	433 182	471 198	525 219	631 259	748 304	424 198	478 222	520 241	580 267	697 316	825 369	825 369
32	267 101	322 118	363 132	396 144	441 159	529 188	627 221	298 126	360 147	406 165	442 179	492 199	592 235	702 276	397 180	448 201	489 219	544 242	654 287	775 337	823 355
33	252 92	303 108	342 121	372 131	414 145	498 171	589 201	280 114	339 134	381 150	415 163	463 181	556 214	660 251	373 164	421 183	459 199	511 221	615 261	729 307	798 334
34	237 84	285 98	321 110	349 120	390 132	468 156	555 184	264 105	318 122	358 137	391 149	435 165	523 195	621 229	352 149	397 167	432 182	481 202	579 239	687 280	774 314
35	223 77	268 90	303 101	330 110	367 121	441 143	523 168	249 96	300 112	339 126	369 137	411 151	493 179	585 210	331 137	373 153	408 167	454 185	546 219	648 257	741 292
36	211 70	253 82	286 92	312 101	348 111	417 132	495 154	235 88	283 103	319 115	348 125	388 139	466 164	553 193	313 126	354 141	385 153	429 169	516 201	612 236	700 269
37								222 81	268 95	303 106	330 115	367 128	441 151	523 178	297 116	334 130	364 141	406 156	487 185	579 217	663 247
38								211 74	255 87	286 98	312 106	348 118	418 139	496 164	280 107	316 119	345 130	384 144	462 170	549 200	628 228
39								199 69	241 81	271 90	297 98	330 109	397 129	471 151	267 98	300 110	327 120	364 133	438 157	520 185	595 211
40								190 64	229 75	258 84	282 91	313 101	376 119	447 140	253 91	285 102	310 111	346 123	417 146	495 171	565 195
41															241 85	271 95	295 103	330 114	396 135	471 159	538 181
42															229 79	259 88	282 96	313 106	378 126	448 148	513 168
43															219 73	247 82	268 89	300 99	360 117	427 138	489 157
44															208 68	235 76	256 83	286 92	343 109	408 128	466 146

LRFD

STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES
Based On A 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	24K4	24K5	24K6	24K7	24K8	24K9	24K10	24K12	26K5	26K6	26K7	26K8	26K9	26K10	26K12
Depth (In.)	24	24	24	24	24	24	24	24	26	26	26	26	26	26	26
Approx. Wt. (lbs./ft.)	7.8	7.9	8.5	9.0	9.4	10.3	11.7	13.5	8.1	8.6	9.0	9.7	10.4	11.8	13.7
Span (ft.) ↓															
23	825 550	825 550	825 550	825 550	825 550	825 550	825 550	825 550							
24	780 516	825 544	825 544	825 544	825 544	825 544	825 544	825 544							
25	718 456	810 511	825 520	825 520	825 520	825 520	825 520	825 520	825 550	825 550	825 550	825 550	825 550	825 550	825 550
26	663 405	748 453	814 493	825 499	825 499	825 499	825 499	825 499	813 535	825 541	825 541	825 541	825 541	825 541	825 541
27	615 361	693 404	754 439	825 479	825 479	825 479	825 479	825 479	753 477	820 519	825 522	825 522	825 522	825 522	825 522
28	571 323	643 362	700 393	781 436	825 456	825 456	825 456	825 456	699 427	762 464	825 501	825 501	825 501	825 501	825 501
29	531 290	600 325	652 354	727 392	804 429	825 436	825 436	825 436	651 384	709 417	790 463	825 479	825 479	825 479	825 479
30	496 262	559 293	609 319	679 353	750 387	816 419	825 422	825 422	607 346	661 377	738 417	816 457	825 459	825 459	825 459
31	465 237	523 266	570 289	636 320	702 350	765 379	825 410	825 410	568 314	619 341	690 378	763 413	825 444	825 444	825 444
32	435 215	490 241	535 262	595 290	658 318	717 344	823 393	823 393	534 285	580 309	648 343	715 375	778 407	823 431	823 431
33	409 196	462 220	502 239	559 265	619 289	673 313	798 368	798 368	501 259	546 282	609 312	672 342	732 370	798 404	798 404
34	385 179	435 201	472 218	526 242	582 264	634 286	753 337	774 344	472 237	514 257	573 285	633 312	688 338	774 378	774 378
35	363 164	409 184	445 200	496 221	549 242	598 262	709 308	751 324	445 217	484 236	540 261	597 286	649 310	751 356	751 356
36	343 150	387 169	421 183	469 203	519 222	565 241	670 283	730 306	420 199	457 216	510 240	564 263	613 284	729 334	730 334
37	324 138	366 155	399 169	444 187	490 205	534 222	634 260	711 290	397 183	433 199	483 221	534 242	580 262	690 308	711 315
38	307 128	346 143	378 156	421 172	465 189	507 204	601 240	691 275	376 169	411 184	457 204	505 223	550 241	654 284	691 299
39	292 118	328 132	358 144	399 159	441 174	480 189	570 222	673 261	357 156	390 170	433 188	480 206	522 223	619 262	673 283
40	277 109	312 122	340 133	379 148	420 161	456 175	541 206	657 247	340 145	370 157	412 174	456 191	496 207	589 243	657 269
41	264 101	297 114	324 124	361 137	399 150	435 162	516 191	640 235	322 134	352 146	393 162	433 177	472 192	561 225	640 256
42	252 94	283 106	309 115	343 127	379 139	414 151	490 177	625 224	307 125	336 136	373 150	412 164	450 178	534 210	625 244
43	240 88	270 98	294 107	328 118	363 130	394 140	468 165	609 213	294 116	319 126	357 140	394 153	429 166	508 195	610 232
44	229 82	258 92	280 100	313 110	346 121	376 131	447 154	580 199	280 108	306 118	340 131	376 143	409 155	486 182	597 222
45	219 76	246 86	268 93	298 103	330 113	360 122	427 144	555 185	268 101	291 110	325 122	360 133	391 145	465 170	583 212
46	208 71	235 80	256 87	286 97	316 106	345 114	408 135	531 174	256 95	279 103	310 114	343 125	375 135	444 159	570 203
47	199 67	225 75	246 82	274 90	303 99	330 107	391 126	508 163	246 89	267 96	298 107	328 117	358 127	426 149	553 192
48	192 63	216 70	235 77	262 85	291 93	316 101	375 118	487 153	235 83	256 90	285 100	315 110	343 119	408 140	529 180
49									225 78	246 85	274 94	303 103	330 112	391 131	508 169
50									216 73	235 80	262 89	291 97	316 105	375 124	487 159
51									208 69	226 75	252 83	279 91	304 99	361 116	469 150
52									199 65	217 71	243 79	268 86	292 93	346 110	451 142

LRFD

STANDARD LOAD TABLE/OPEN WEB STEEL JOISTS, K-SERIES
Based On A 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	28K6	28K7	28K8	28K9	28K10	28K12	30K7	30K8	30K9	30K10	30K11	30K12
Depth (In.)	28	28	28	28	28	28	30	30	30	30	30	30
Approx. Wt. (lbs./ft.)	8.9	9.2	9.8	10.5	11.8	14.5	9.6	10.0	10.6	11.9	13.3	15.0
Span (ft.)												
27	825 550	825 550	825 550	825 550	825 550	825 550						
28	822 541	825 543	825 543	825 543	825 543	825 543						
29	766 486	825 522	825 522	825 522	825 522	825 522	825 550	825 550	825 550	825 550	825 550	825 550
30	715 439	796 486	825 500	825 500	825 500	825 500	825 543	825 543	825 543	825 543	825 543	825 543
31	669 397	745 440	825 480	825 480	825 480	825 480	801 508	825 520	825 520	825 520	825 520	825 520
32	627 361	699 400	772 438	823 463	823 463	823 463	751 461	823 500	823 500	823 500	823 500	823 500
33	589 329	657 364	726 399	790 432	798 435	798 435	706 420	780 460	798 468	798 468	798 468	798 468
34	555 300	618 333	684 364	744 395	774 410	774 410	664 384	735 420	774 441	774 441	774 441	774 441
35	523 275	583 305	645 333	702 361	751 389	751 389	627 351	693 384	751 415	751 415	751 415	751 415
36	495 252	550 280	609 306	663 332	730 366	730 366	592 323	654 353	712 383	730 392	730 392	730 392
37	468 232	522 257	576 282	627 305	711 344	711 344	559 297	619 325	673 352	711 374	711 374	711 374
38	444 214	493 237	546 260	594 282	691 325	691 325	531 274	586 300	639 325	691 353	691 353	691 353
39	420 198	469 219	519 240	564 260	670 306	673 308	504 253	556 277	606 300	673 333	673 333	673 333
40	399 183	445 203	492 222	535 241	636 284	657 291	478 234	529 256	576 278	657 315	657 315	657 315
41	379 170	424 189	468 206	510 224	606 263	640 277	454 217	502 238	547 258	640 300	640 300	640 300
42	361 158	403 175	445 192	486 208	576 245	625 264	433 202	480 221	522 240	619 282	625 284	625 284
43	345 147	385 163	426 179	463 194	550 228	610 252	414 188	457 206	498 223	591 263	610 270	610 270
44	330 137	367 152	406 167	442 181	525 212	597 240	394 176	436 192	475 208	564 245	597 258	597 258
45	315 128	351 142	388 156	423 169	501 198	583 229	376 164	417 179	454 195	538 229	583 246	583 246
46	301 120	336 133	372 146	405 158	480 186	570 219	361 153	399 168	435 182	516 214	570 236	570 236
47	288 112	321 125	355 136	387 148	459 174	558 210	345 144	382 157	415 171	493 201	558 226	558 226
48	276 105	309 117	340 128	370 139	441 163	547 201	331 135	366 148	399 160	472 188	543 215	547 216
49	265 99	295 110	327 120	355 130	423 153	535 193	318 127	351 139	382 150	454 177	520 202	535 207
50	255 93	283 103	313 113	342 123	405 144	525 185	304 119	337 130	367 141	436 166	499 190	525 199
51	244 88	273 97	301 106	328 115	390 136	507 175	292 112	324 123	352 133	418 157	480 179	514 192
52	235 83	262 92	289 100	315 109	375 128	487 165	282 106	312 116	339 126	402 148	462 169	504 184
53	226 78	252 87	279 95	304 103	360 121	469 156	271 100	300 109	327 119	387 140	444 159	495 177
54	217 74	243 82	268 89	292 97	348 114	451 147	261 94	288 103	313 112	373 132	427 150	486 170
55	210 70	234 77	259 85	282 92	334 108	435 139	252 89	277 98	303 106	360 125	412 142	468 161
56	202 66	226 73	249 80	271 87	322 102	420 132	243 84	268 92	292 100	346 118	397 135	451 153
57							234 80	259 88	282 95	334 112	384 128	435 145
58							226 76	250 83	271 90	322 106	370 121	420 137
59							219 72	241 79	262 86	312 101	358 115	406 130
60							211 69	234 75	253 81	301 96	346 109	393 124

STANDARD ASD LOAD TABLE

OPEN WEB STEEL JOISTS, K-SERIES

Based on a 50 ksi Maximum Yield Strength
 Adopted by the Steel Joist Institute November 4, 1985
 Revised to May 18, 2010 – Effective December 31, 2010

The **BLACK** figures in the Load Table give the TOTAL safe uniformly distributed load-carrying capacities, in pounds per linear foot, of **ASD K-Series** Steel Joists.

The approximate joist weights, in pounds per linear foot, given in the Load Table may be added to the other building weights to determine the DEAD load. In all cases the DEAD load, including the joist self-weight, must be deducted from the TOTAL load to determine the LIVE load. The approximate joist weights do not include accessories.

The **RED** figures in the Load Table represent the uniform load, in pounds per linear foot, which will produce an approximate joist deflection of 1/360 of the span. This load can be linearly prorated to obtain the uniform load for supplementary deflection criteria (i.e. a uniform load which will produce a joist deflection of 1/240 of the span may be obtained by multiplying the **RED** figure by 360/240). In no case shall the prorated load exceed the TOTAL load-carrying capacity of the joist.

Where the joist span is in the **RED SHADED** area of the Load Table, the row of bridging nearest the mid span shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until this row of bolted diagonal bridging is completely installed. The **RED SHADED** area extends up through 60'-0".

The approximate gross moment of inertia (not adjusted for shear deformation), in inches⁴, of a standard joist listed in the Load Table may be determined as follows:

$$I_j = 26.767(W)(L^3)(10^{-6}), \text{ where } W = \text{RED figure in the Load Table, and}$$

$$L = (\text{span} - 0.33) \text{ in feet.}$$

The TOTAL safe uniformly distributed load-carrying capacities, in pounds per linear foot, of **ASD K-Series** Steel Joists shall not exceed 550 plf for spans shorter than what is explicitly shown in the Load Table. The maximum prorated RED load shall not exceed 550 plf (the TOTAL load-carrying capacity of the joist as given in the Standard **ASD** Load Table for Open Web Steel Joists, **K-Series**).

Loads for span increments not explicitly given in the Load Table may be determined using linear interpolation between the load values given in adjacent span columns.

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

STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES
Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	10K1	12K1	12K3	12K5	14K1	14K3	14K4	14K6	16K2	16K3	16K4	16K5	16K6	16K7	16K9
Depth (in.)	10	12	12	12	14	14	14	14	16	16	16	16	16	16	16
Approx. Wt (lbs./ft.)	5.0	5.0	5.7	7.1	5.2	6.0	6.7	7.7	5.5	6.3	7.0	7.5	8.1	8.6	10.0
Span (ft.)															
10	550														
	550														
11	550														
	542														
12	550	550	550	550											
	455	550	550	550											
13	479	550	550	550											
	363	510	510	510											
14	412	500	550	550	550	550	550	550							
	289	425	463	463	550	550	550	550							
15	358	434	543	550	511	550	550	550							
	234	344	428	434	475	507	507	507							
16	313	380	476	550	448	550	550	550	550	550	550	550	550	550	550
	192	282	351	396	390	467	467	467	550	550	550	550	550	550	550
17	277	336	420	550	395	495	550	550	512	550	550	550	550	550	550
	159	234	291	366	324	404	443	443	488	526	526	526	526	526	526
18	246	299	374	507	352	441	530	550	456	508	550	550	550	550	550
	134	197	245	317	272	339	397	408	409	456	490	490	490	490	490
19	221	268	335	454	315	395	475	550	408	455	547	550	550	550	550
	113	167	207	269	230	287	336	383	347	386	452	455	455	455	455
20	199	241	302	409	284	356	428	525	368	410	493	550	550	550	550
	97	142	177	230	197	246	287	347	297	330	386	426	426	426	426
21		218	273	370	257	322	388	475	333	371	447	503	548	550	550
		123	153	198	170	212	248	299	255	285	333	373	405	406	406
22		199	249	337	234	293	353	432	303	337	406	458	498	550	550
		106	132	172	147	184	215	259	222	247	289	323	351	385	385
23		181	227	308	214	268	322	395	277	308	371	418	455	507	550
		93	116	150	128	160	188	226	194	216	252	282	307	339	363
24		166	208	282	196	245	295	362	254	283	340	384	418	465	550
		81	101	132	113	141	165	199	170	189	221	248	269	298	346
25					180	226	272	334	234	260	313	353	384	428	514
					100	124	145	175	150	167	195	219	238	263	311
26					166	209	251	308	216	240	289	326	355	395	474
					88	110	129	156	133	148	173	194	211	233	276
27					154	193	233	285	200	223	268	302	329	366	439
					79	98	115	139	119	132	155	173	188	208	246
28					143	180	216	265	186	207	249	281	306	340	408
					70	88	103	124	106	118	138	155	168	186	220
29									173	193	232	261	285	317	380
									95	106	124	139	151	167	198
30									161	180	216	244	266	296	355
									86	96	112	126	137	151	178
31									151	168	203	228	249	277	332
									78	87	101	114	124	137	161
32									142	158	190	214	233	259	311
									71	79	92	103	112	124	147



STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES
Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	18K3	18K4	18K5	18K6	18K7	18K9	18K10	20K3	20K4	20K5	20K6	20K7	20K9	20K10	22K4	22K5	22K6	22K7	22K9	22K10	22K11
Depth (in.)	18	18	18	18	18	18	18	20	20	20	20	20	20	20	22	22	22	22	22	22	22
Approx. Wt. (lbs./ft.)	6.4	7.2	7.7	8.4	8.9	10.1	11.6	6.5	7.2	7.7	8.4	8.9	10.1	11.6	7.3	7.7	8.5	9.0	10.2	11.7	11.9
Span (ft.)																					
↓																					
18	550 550	550 550	550 550	550 550	550 550	550 550	550 550														
19	514 494	550 523	550 523	550 523	550 523	550 523	550 523	550 550	550 550	550 550	550 550	550 550	550 550	550 550							
20	463 423	550 490	550 490	550 490	550 490	550 490	550 490	517 517	550 550	550 550	550 550	550 550	550 550	550 550							
21	420 364	506 426	550 460	550 460	550 460	550 460	550 460	468 453	550 520	550 520	550 520	550 520	550 520	550 520	550 550	550 550	550 550	550 550	550 550	550 550	550 550
22	382 316	460 370	518 414	550 438	550 438	550 438	550 438	426 393	514 461	550 490	550 490	550 490	550 490	550 490	550 548	550 548	550 548	550 548	550 548	550 548	550 548
23	349 276	420 323	473 362	516 393	550 418	550 418	550 418	389 344	469 402	529 451	550 468	550 468	550 468	550 468	518 491	550 518	550 518	550 518	550 518	550 518	550 518
24	320 242	385 284	434 318	473 345	526 382	550 396	550 396	357 302	430 353	485 396	528 430	550 448	550 448	550 448	475 431	536 483	550 495	550 495	550 495	550 495	550 495
25	294 214	355 250	400 281	435 305	485 337	550 377	550 377	329 266	396 312	446 350	486 380	541 421	550 426	550 426	438 381	493 427	537 464	550 474	550 474	550 474	550 474
26	272 190	328 222	369 249	402 271	448 299	538 354	550 361	304 236	366 277	412 310	449 337	500 373	550 405	550 405	404 338	455 379	496 411	550 454	550 454	550 454	550 454
27	252 169	303 198	342 222	372 241	415 267	498 315	550 347	281 211	339 247	382 277	416 301	463 333	550 389	550 389	374 301	422 337	459 367	512 406	550 432	550 432	550 432
28	234 151	282 177	318 199	346 216	385 239	463 282	548 331	261 189	315 221	355 248	386 269	430 298	517 353	550 375	348 270	392 302	427 328	475 364	550 413	550 413	550 413
29	218 136	263 159	296 179	322 194	359 215	431 254	511 298	243 170	293 199	330 223	360 242	401 268	482 317	550 359	324 242	365 272	398 295	443 327	532 387	550 399	550 399
30	203 123	245 144	276 161	301 175	335 194	402 229	477 269	227 153	274 179	308 201	336 218	374 242	450 286	533 336	302 219	341 245	371 266	413 295	497 349	550 385	550 385
31	190 111	229 130	258 146	281 158	313 175	376 207	446 243	212 138	256 162	289 182	314 198	350 219	421 259	499 304	283 198	319 222	347 241	387 267	465 316	550 369	550 369
32	178 101	215 118	242 132	264 144	294 159	353 188	418 221	199 126	240 147	271 165	295 179	328 199	395 235	468 276	265 180	299 201	326 219	363 242	436 287	517 337	549 355
33	168 92	202 108	228 121	248 131	276 145	332 171	393 201	187 114	226 134	254 150	277 163	309 181	371 214	440 251	249 164	281 183	306 199	341 221	410 261	486 307	532 334
34	158 84	190 98	214 110	233 120	260 132	312 156	370 184	176 105	212 122	239 137	261 149	290 165	349 195	414 229	235 149	265 167	288 182	321 202	386 239	458 280	516 314
35	149 77	179 90	202 101	220 110	245 121	294 143	349 168	166 96	200 112	226 126	246 137	274 151	329 179	390 210	221 137	249 153	272 167	303 185	364 219	432 257	494 292
36	141 70	169 82	191 92	208 101	232 111	278 132	330 154	157 88	189 103	213 115	232 125	259 139	311 164	369 193	209 126	236 141	257 153	286 169	344 201	408 236	467 269
37								148 81	179 95	202 106	220 115	245 128	294 151	349 178	198 116	223 130	243 141	271 156	325 185	386 217	442 247
38								141 74	170 87	191 98	208 106	232 118	279 139	331 164	187 107	211 119	230 130	256 144	308 170	366 200	419 228
39								133 69	161 81	181 90	198 98	220 109	265 129	314 151	178 98	200 110	218 120	243 133	292 157	347 185	397 211
40								127 64	153 75	172 84	188 91	209 101	251 119	298 140	169 91	190 102	207 111	231 123	278 146	330 171	377 195
41															161 85	181 95	197 103	220 114	264 135	314 159	359 181
42															153 79	173 88	188 96	209 106	252 126	299 148	342 168
43															146 73	165 82	179 89	200 99	240 117	285 138	326 157
44															139 68	157 76	171 83	191 92	229 109	272 128	311 146



STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES
Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	24K4	24K5	24K6	24K7	24K8	24K9	24K10	24K12	26K5	26K6	26K7	26K8	26K9	26K10	26K12
Depth (In.)	24	24	24	24	24	24	24	24	26	26	26	26	26	26	26
Approx. Wt. (lbs./ft.)	7.8	7.9	8.5	9.0	9.4	10.3	11.7	13.5	8.1	8.6	9.0	9.7	10.4	11.8	13.7
Span (ft.) ↓															
23	550 550	550 550	550 550	550 550	550 550	550 550	550 550	550 550							
24	520 516	550 544	550 544	550 544	550 544	550 544	550 544	550 544							
25	479 456	540 511	550 520	550 520	550 520	550 520	550 520	550 520	550 550	550 550	550 550	550 550	550 550	550 550	550 550
26	442 405	499 453	543 493	550 499	550 499	550 499	550 499	550 499	542 535	550 541	550 541	550 541	550 541	550 541	550 541
27	410 361	462 404	503 439	550 479	550 479	550 479	550 479	550 479	502 477	547 519	550 522	550 522	550 522	550 522	550 522
28	381 323	429 362	467 393	521 436	550 456	550 456	550 456	550 456	466 427	508 464	550 501	550 501	550 501	550 501	550 501
29	354 290	400 325	435 354	485 392	536 429	550 436	550 436	550 436	434 384	473 417	527 463	550 479	550 479	550 479	550 479
30	331 262	373 293	406 319	453 353	500 387	544 419	550 422	550 422	405 346	441 377	492 417	544 457	550 459	550 459	550 459
31	310 237	349 266	380 289	424 320	468 350	510 379	550 410	550 410	379 314	413 341	460 378	509 413	550 444	550 444	550 444
32	290 215	327 241	357 262	397 290	439 318	478 344	549 393	549 393	356 285	387 309	432 343	477 375	519 407	549 431	549 431
33	273 196	308 220	335 239	373 265	413 289	449 313	532 368	532 368	334 259	364 282	406 312	448 342	488 370	532 404	532 404
34	257 179	290 201	315 218	351 242	388 264	423 286	502 337	516 344	315 237	343 257	382 285	422 312	459 338	516 378	516 378
35	242 164	273 184	297 200	331 221	366 242	399 262	473 308	501 324	297 217	323 236	360 261	398 286	433 310	501 356	501 356
36	229 150	258 169	281 183	313 203	346 222	377 241	447 283	487 306	280 199	305 216	340 240	376 263	409 284	486 334	487 334
37	216 138	244 155	266 169	296 187	327 205	356 222	423 260	474 290	265 183	289 199	322 221	356 242	387 262	460 308	474 315
38	205 128	231 143	252 156	281 172	310 189	338 204	401 240	461 275	251 169	274 184	305 204	337 223	367 241	436 284	461 299
39	195 118	219 132	239 144	266 159	294 174	320 189	380 222	449 261	238 156	260 170	289 188	320 206	348 223	413 262	449 283
40	185 109	208 122	227 133	253 148	280 161	304 175	361 206	438 247	227 145	247 157	275 174	304 191	331 207	393 243	438 269
41	176 101	198 114	216 124	241 137	266 150	290 162	344 191	427 235	215 134	235 146	262 162	289 177	315 192	374 225	427 256
42	168 94	189 106	206 115	229 127	253 139	276 151	327 177	417 224	205 125	224 136	249 150	275 164	300 178	356 210	417 244
43	160 88	180 98	196 107	219 118	242 130	263 140	312 165	406 213	196 116	213 126	238 140	263 153	286 166	339 195	407 232
44	153 82	172 92	187 100	209 110	231 121	251 131	298 154	387 199	187 108	204 118	227 131	251 143	273 155	324 182	398 222
45	146 76	164 86	179 93	199 103	220 113	240 122	285 144	370 185	179 101	194 110	217 122	240 133	261 145	310 170	389 212
46	139 71	157 80	171 87	191 97	211 106	230 114	272 135	354 174	171 95	186 103	207 114	229 125	250 135	296 159	380 203
47	133 67	150 75	164 82	183 90	202 99	220 107	261 126	339 163	164 89	178 96	199 107	219 117	239 127	284 149	369 192
48	128 63	144 70	157 77	175 85	194 93	211 101	250 118	325 153	157 83	171 90	190 100	210 110	229 119	272 140	353 180
49									150 78	164 85	183 94	202 103	220 112	261 131	339 169
50									144 73	157 80	175 89	194 97	211 105	250 124	325 159
51									139 69	151 75	168 83	186 91	203 99	241 116	313 150
52									133 65	145 71	162 79	179 86	195 93	231 110	301 142



STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES
Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	28K6	28K7	28K8	28K9	28K10	28K12	30K7	30K8	30K9	30K10	30K11	30K12
Depth (in.)	28	28	28	28	28	28	30	30	30	30	30	30
Approx. Wt. (lbs./ft.)	8.9	9.2	9.8	10.5	11.8	14.5	9.6	10.0	10.6	11.9	13.3	15.0
Span (ft.) ↓												
27	550 550	550 550	550 550	550 550	550 550	550 550						
28	548 541	550 543	550 543	550 543	550 543	550 543						
29	511 486	550 522	550 522	550 522	550 522	550 522	550 550	550 550	550 550	550 550	550 550	550 550
30	477 439	531 486	550 500	550 500	550 500	550 500	550 543	550 543	550 543	550 543	550 543	550 543
31	446 397	497 440	550 480	550 480	550 480	550 480	534 508	550 520	550 520	550 520	550 520	550 520
32	418 361	466 400	515 438	549 463	549 463	549 463	501 461	549 500	549 500	549 500	549 500	549 500
33	393 329	438 364	484 399	527 432	532 435	532 435	471 420	520 460	532 468	532 468	532 468	532 468
34	370 300	412 333	456 364	496 395	516 410	516 410	443 384	490 420	516 441	516 441	516 441	516 441
35	349 275	389 305	430 333	468 361	501 389	501 389	418 351	462 384	501 415	501 415	501 415	501 415
36	330 252	367 280	406 306	442 332	487 366	487 366	395 323	436 353	475 383	487 392	487 392	487 392
37	312 232	348 257	384 282	418 305	474 344	474 344	373 297	413 325	449 352	474 374	474 374	474 374
38	296 214	329 237	364 260	396 282	461 325	461 325	354 274	391 300	426 325	461 353	461 353	461 353
39	280 198	313 219	346 240	376 260	447 306	449 308	336 253	371 277	404 300	449 333	449 333	449 333
40	266 183	297 203	328 222	357 241	424 284	438 291	319 234	353 256	384 278	438 315	438 315	438 315
41	253 170	283 189	312 206	340 224	404 263	427 277	303 217	335 238	365 258	427 300	427 300	427 300
42	241 158	269 175	297 192	324 208	384 245	417 264	289 202	320 221	348 240	413 282	417 284	417 284
43	230 147	257 163	284 179	309 194	367 228	407 252	276 188	305 206	332 223	394 263	407 270	407 270
44	220 137	245 152	271 167	295 181	350 212	398 240	263 176	291 192	317 208	376 245	398 258	398 258
45	210 128	234 142	259 156	282 169	334 198	389 229	251 164	278 179	303 195	359 229	389 246	389 246
46	201 120	224 133	248 146	270 158	320 186	380 219	241 153	266 168	290 182	344 214	380 236	380 236
47	192 112	214 125	237 136	258 148	306 174	372 210	230 144	255 157	277 171	329 201	372 226	372 226
48	184 105	206 117	227 128	247 139	294 163	365 201	221 135	244 148	266 160	315 188	362 215	365 216
49	177 99	197 110	218 120	237 130	282 153	357 193	212 127	234 139	255 150	303 177	347 202	357 207
50	170 93	189 103	209 113	228 123	270 144	350 185	203 119	225 130	245 141	291 166	333 190	350 199
51	163 88	182 97	201 106	219 115	260 136	338 175	195 112	216 123	235 133	279 157	320 179	343 192
52	157 83	175 92	193 100	210 109	250 128	325 165	188 106	208 116	226 126	268 148	308 169	336 184
53	151 78	168 87	186 95	203 103	240 121	313 156	181 100	200 109	218 119	258 140	296 159	330 177
54	145 74	162 82	179 89	195 97	232 114	301 147	174 94	192 103	209 112	249 132	285 150	324 170
55	140 70	156 77	173 85	188 92	223 108	290 139	168 89	185 98	202 106	240 125	275 142	312 161
56	135 66	151 73	166 80	181 87	215 102	280 132	162 84	179 92	195 100	231 118	265 135	301 153
57							156 80	173 88	188 95	223 112	256 128	290 145
58							151 76	167 83	181 90	215 106	247 121	280 137
59							146 72	161 79	175 86	208 101	239 115	271 130
60							141 69	156 75	169 81	201 96	231 109	262 124

LRFD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS K-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	10K1	12K1	12K3	12K5	14K1	14K3	14K4	14K6	16K2	16K3	16K4	16K5	16K6	16K7	16K9
DEPTH (mm)	254	305	305	305	356	356	356	356	406	406	406	406	406	406	406
APPROX. WT. (kN/m)	0.07	0.07	0.08	0.10	0.08	0.09	0.10	0.11	0.08	0.09	0.10	0.11	0.12	0.13	0.15
SPAN (mm)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)														
3048	12.03 8.02														
3353	12.03 7.90														
3658	12.03 6.64	12.03 8.02	12.03 8.02	12.03 8.02											
3962	10.48 5.29	12.03 7.44	12.03 7.44	12.03 7.44											
4267	9.01 4.21	10.94 6.20	12.03 6.75	12.03 6.75	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02							
4572	7.83 3.41	9.50 5.02	11.88 6.24	12.03 6.33	11.18 6.93	12.03 7.39	12.03 7.39	12.03 7.39							
4877	6.85 2.80	8.31 4.11	10.42 5.12	12.03 5.77	9.80 5.69	12.03 6.81	12.03 6.81	12.03 6.81	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02
5182	6.06 2.32	7.35 3.41	9.19 4.24	12.03 5.34	8.64 4.72	10.83 5.89	12.03 6.46	12.03 6.46	11.20 7.12	12.03 7.67	12.03 7.67	12.03 7.67	12.03 7.67	12.03 7.67	12.03 7.67
5486	5.38 1.95	6.54 2.87	8.18 3.57	11.09 4.62	7.70 3.96	9.65 4.94	11.60 5.79	12.03 5.95	9.98 5.96	11.12 6.65	12.03 7.15	12.03 7.15	12.03 7.15	12.03 7.15	12.03 7.15
5791	4.83 1.64	5.86 2.43	7.33 3.02	9.93 3.92	6.89 3.35	8.64 4.18	10.39 4.90	12.03 5.58	8.93 5.06	9.96 5.63	11.97 6.59	12.03 6.64	12.03 6.64	12.03 6.64	12.03 6.64
6096	4.35 1.41	5.27 2.07	6.61 2.58	8.95 3.35	6.21 2.87	7.79 3.59	9.36 4.18	11.49 5.06	8.05 4.33	8.97 4.81	10.79 5.63	12.03 6.21	12.03 6.21	12.03 6.21	12.03 6.21
6401		4.77 1.79	5.97 2.23	8.09 2.88	5.62 2.48	7.04 3.09	8.49 3.61	10.39 4.36	7.28 3.72	8.12 4.15	9.78 4.85	11.01 5.44	11.99 5.91	12.03 5.92	12.03 5.92
6706		4.35 1.54	5.45 1.92	7.37 2.51	5.12 2.14	6.41 2.68	7.72 3.13	9.45 3.77	6.63 3.23	7.37 3.60	8.88 4.21	10.02 4.71	10.90 5.12	12.03 5.61	12.03 5.61
7010		3.96 1.35	4.96 1.69	6.74 2.18	4.68 1.86	5.86 2.33	7.04 2.74	8.64 3.29	6.06 2.83	6.74 3.15	8.12 3.67	9.15 4.11	9.96 4.48	11.09 4.94	12.03 5.29
7315		3.63 1.18	4.55 1.47	6.17 1.92	4.29 1.64	5.36 2.05	6.45 2.40	7.92 2.90	5.56 2.48	6.19 2.75	7.44 3.22	8.40 3.61	9.15 3.92	10.17 4.34	12.03 5.04
7620					3.94 1.45	4.94 1.80	5.95 2.11	7.31 2.55	5.12 2.18	5.69 2.43	6.85 2.84	7.72 3.19	8.40 3.47	9.36 3.83	11.25 4.53
7925					3.63 1.28	4.57 1.60	5.49 1.88	6.74 2.27	4.72 1.94	5.25 2.15	6.32 2.52	7.13 2.83	7.77 3.07	8.64 3.40	10.37 4.02
8230					3.37 1.15	4.22 1.43	5.10 1.67	6.23 2.02	4.37 1.73	4.88 1.92	5.86 2.26	6.61 2.52	7.20 2.74	8.01 3.03	9.61 3.59
8534					3.13 1.02	3.94 1.28	4.72 1.50	5.80 1.80	4.07 1.54	4.53 1.72	5.45 2.01	6.15 2.26	6.69 2.45	7.44 2.71	8.93 3.21
8839									3.78 1.38	4.22 1.54	5.07 1.80	5.71 2.02	6.23 2.20	6.93 2.43	8.31 2.88
9144									3.52 1.25	3.94 1.40	4.72 1.63	5.34 1.83	5.82 1.99	6.47 2.20	7.77 2.59
9449									3.30 1.13	3.67 1.26	4.44 1.47	4.99 1.66	5.45 1.80	6.06 1.99	7.26 2.34
9754									3.10 1.03	3.45 1.15	4.15 1.34	4.68 1.50	5.10 1.63	5.66 1.80	6.80 2.14

LRFD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS K-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	18K3	18K4	18K5	18K6	18K7	18K9	18K10	20K3	20K4	20K5	20K6	20K7	20K9	20K10	22K4	22K5	22K6	22K7	22K9	22K10	22K11
DEPTH (mm)	457	457	457	457	457	457	457	508	508	508	508	508	508	508	559	559	559	559	559	559	559
APPROX. WT. (kN/m)	0.09	0.11	0.11	0.12	0.13	0.15	0.17	0.09	0.11	0.11	0.12	0.13	0.15	0.17	0.11	0.11	0.12	0.13	0.15	0.17	0.17
SPAN (mm)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)																				
5486	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02														
5791	11.25 7.20	12.03 7.63	12.03 7.63	12.03 7.63	12.03 7.63	12.03 7.63	12.03 7.63	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02							
6096	10.13 6.17	12.03 7.15	12.03 7.15	12.03 7.15	12.03 7.15	12.03 7.15	12.03 7.15	12.03 7.54	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02							
6401	9.19 5.31	11.07 6.21	12.03 6.71	12.03 6.71	12.03 6.71	12.03 6.71	12.03 6.71	10.24 6.61	12.03 7.58	12.03 7.58	12.03 7.58	12.03 7.58	12.03 7.58	12.03 7.58	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02
6706	8.36 4.61	10.06 5.39	11.33 6.04	12.03 6.39	12.03 6.39	12.03 6.39	12.03 6.39	9.32 5.73	11.25 6.72	12.03 7.15	12.03 7.15	12.03 7.15	12.03 7.15	12.03 7.15	12.03 7.99	12.03 7.99	12.03 7.99	12.03 7.99	12.03 7.99	12.03 7.99	12.03 7.99
7010	7.63 4.02	9.19 4.71	10.35 5.28	11.29 5.73	12.03 6.10	12.03 6.10	12.03 6.10	8.51 5.02	10.26 5.86	11.58 6.58	12.03 6.82	12.03 6.82	12.03 6.82	12.03 6.82	11.33 7.16	12.03 7.55	12.03 7.55	12.03 7.55	12.03 7.55	12.03 7.55	12.03 7.55
7315	7.00 3.53	8.42 4.14	9.50 4.64	10.35 5.03	11.51 5.57	12.03 5.77	12.03 5.77	7.81 4.40	9.41 5.15	10.61 5.77	11.55 6.27	12.03 6.53	12.03 6.53	12.03 6.53	10.39 6.28	11.73 7.04	12.03 7.22	12.03 7.22	12.03 7.22	12.03 7.22	12.03 7.22
7620	6.43 3.12	7.77 3.64	8.75 4.10	9.52 4.45	10.61 4.91	12.03 5.50	12.03 5.50	7.20 3.88	8.66 4.55	9.76 5.10	10.63 5.54	11.84 6.14	12.03 6.21	12.03 6.21	9.58 5.56	10.79 6.23	11.75 6.77	12.03 6.91	12.03 6.91	12.03 6.91	12.03 6.91
7925	5.95 2.77	7.18 3.23	8.07 3.63	8.80 3.95	9.80 4.36	11.77 5.16	12.03 5.26	6.65 3.44	8.01 4.04	9.01 4.52	9.82 4.91	10.94 5.44	12.03 5.91	12.03 5.91	8.84 4.93	9.96 5.53	10.85 5.99	12.03 6.62	12.03 6.62	12.03 6.62	12.03 6.62
8230	5.51 2.46	6.63 2.88	7.48 3.23	8.14 3.51	9.08 3.89	10.90 4.59	12.03 5.06	6.15 3.07	7.42 3.60	8.36 4.04	9.10 4.39	10.13 4.85	12.03 5.67	12.03 5.67	8.18 4.39	9.23 4.91	10.04 5.35	11.20 5.92	12.03 6.30	12.03 6.30	12.03 6.30
8534	5.12 2.20	6.17 2.58	6.96 2.90	7.57 3.15	8.42 3.48	10.13 4.11	11.99 4.83	5.71 2.75	6.89 3.22	7.77 3.61	8.44 3.92	9.41 4.34	11.31 5.15	12.03 5.47	7.61 3.94	8.58 4.40	9.34 4.78	10.39 5.31	12.03 6.02	12.03 6.02	12.03 6.02
8839	4.77 1.98	5.75 2.32	6.47 2.61	7.04 2.83	7.85 3.13	9.43 3.70	11.18 4.34	5.31 2.48	6.41 2.90	7.22 3.25	7.88 3.53	8.77 3.91	10.55 4.62	12.03 5.23	7.09 3.53	7.99 3.96	8.71 4.30	9.69 4.77	11.64 5.64	12.03 5.82	12.03 5.82
9144	4.44 1.79	5.36 2.10	6.04 2.34	6.58 2.55	7.33 2.83	8.80 3.34	10.44 3.92	4.96 2.23	5.99 2.61	6.74 2.93	7.35 3.18	8.18 3.53	9.85 4.17	11.66 4.90	6.61 3.19	7.46 3.57	8.12 3.88	9.04 4.30	10.87 5.09	12.03 5.61	12.03 5.61
9449	4.15 1.61	5.01 1.89	5.64 2.13	6.15 2.30	6.85 2.55	8.23 3.02	9.76 3.54	4.64 2.01	5.60 2.36	6.32 2.65	6.87 2.88	7.66 3.19	9.21 3.77	10.92 4.43	6.19 2.88	6.98 3.23	7.59 3.51	8.47 3.89	10.17 4.61	12.03 5.38	12.03 5.38
9754	3.89 1.47	4.70 1.72	5.29 1.92	5.77 2.10	6.43 2.32	7.72 2.74	9.15 3.22	4.35 1.83	5.25 2.14	5.93 2.40	6.45 2.61	7.18 2.90	8.64 3.42	10.24 4.02	5.80 2.62	6.54 2.93	7.13 3.19	7.94 3.53	9.54 4.18	11.31 4.91	12.01 5.18
10058	3.67 1.34	4.42 1.57	4.99 1.76	5.42 1.91	6.04 2.11	7.26 2.49	8.60 2.93	4.09 1.66	4.94 1.95	5.56 2.18	6.06 2.37	6.76 2.64	8.12 3.12	9.63 3.66	5.45 2.39	6.15 2.67	6.69 2.90	7.46 3.22	8.97 3.80	10.63 4.48	11.64 4.87
10363	3.45 1.22	4.15 1.43	4.68 1.60	5.10 1.75	5.69 1.92	6.82 2.27	8.09 2.68	3.85 1.53	4.64 1.78	5.23 1.99	5.71 2.17	6.34 2.40	7.63 2.84	9.06 3.34	5.14 2.17	5.80 2.43	6.30 2.65	7.02 2.94	8.44 3.48	10.02 4.08	11.29 4.58
10668	3.26 1.12	3.91 1.31	4.42 1.47	4.81 1.60	5.36 1.76	6.43 2.08	7.63 2.45	3.63 1.40	4.37 1.63	4.94 1.83	5.38 1.99	5.99 2.20	7.20 2.61	8.53 3.06	4.83 1.99	5.45 2.23	5.95 2.43	6.63 2.69	7.96 3.19	9.45 3.75	10.81 4.26
10973	3.08 1.02	3.69 1.19	4.18 1.34	4.55 1.47	5.07 1.61	6.08 1.92	7.22 2.24	3.43 1.28	4.13 1.50	4.66 1.67	5.07 1.82	5.66 2.02	6.80 2.39	8.07 2.81	4.57 1.83	5.16 2.05	5.62 2.23	6.26 2.46	7.53 2.93	8.93 3.44	10.22 3.92
11278								3.23 1.18	3.91 1.38	4.42 1.54	4.81 1.67	5.36 1.86	6.43 2.20	7.63 2.59	4.33 1.69	4.88 1.89	5.31 2.05	5.93 2.27	7.11 2.69	8.44 3.16	9.67 3.60
11582								3.08 1.07	3.72 1.26	4.18 1.43	4.55 1.54	5.07 1.72	6.10 2.02	7.24 2.39	4.09 1.56	4.61 1.73	5.03 1.89	5.60 2.10	6.74 2.48	8.01 2.91	9.17 3.32
11887								2.91 1.00	3.52 1.18	3.96 1.31	4.33 1.43	4.81 1.59	5.80 1.88	6.87 2.20	3.89 1.43	4.37 1.60	4.77 1.75	5.31 1.94	6.39 2.29	7.59 2.69	8.69 3.07
12192								2.78 0.93	3.34 1.09	3.76 1.22	4.11 1.32	4.57 1.47	5.49 1.73	6.52 2.04	3.69 1.32	4.15 1.48	4.53 1.61	5.05 1.79	6.08 2.13	7.22 2.49	8.25 2.84
12497															3.52 1.24	3.96 1.38	4.31 1.50	4.81 1.66	5.77 1.97	6.87 2.32	7.85 2.64
12802															3.34 1.15	3.78 1.28	4.11 1.40	4.57 1.54	5.51 1.83	6.54 2.15	7.48 2.45
13106															3.19 1.06	3.61 1.19	3.91 1.29	4.37 1.44	5.25 1.70	6.23 2.01	7.13 2.29
13411															3.04 0.99	3.43 1.10	3.74 1.21	4.18 1.34	5.01 1.59	5.95 1.86	6.80 2.13

LRFD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS K-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	24K4	24K5	24K6	24K7	24K8	24K9	24K10	24K12	26K5	26K6	26K7	26K8	26K9	26K10	26K12
DEPTH (mm)	610	610	610	610	610	610	610	610	660	660	660	660	660	660	660
APPROX. WT. (kN/m)	0.11	0.12	0.12	0.13	0.14	0.15	0.17	0.20	0.12	0.13	0.13	0.14	0.15	0.17	0.20
SPAN (mm)	LOADS SHOWN IN KILONETONS PER METER (kN/m)														
7010	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02							
7315	11.38 7.53	12.03 7.93	12.03 7.93	12.03 7.93	12.03 7.93	12.03 7.93	12.03 7.93	12.03 7.93							
7620	10.48 6.65	11.82 7.45	12.03 7.58	12.03 7.58	12.03 7.58	12.03 7.58	12.03 7.58	12.03 7.58	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02
7925	9.67 5.91	10.92 6.61	11.88 7.19	12.03 7.28	12.03 7.28	12.03 7.28	12.03 7.28	12.03 7.28	11.86 7.80	12.03 7.89	12.03 7.89	12.03 7.89	12.03 7.89	12.03 7.89	12.03 7.89
8230	8.97 5.26	10.11 5.89	11.01 6.40	12.03 6.99	12.03 6.99	12.03 6.99	12.03 6.99	12.03 6.99	10.98 6.96	11.97 7.57	12.03 7.61	12.03 7.61	12.03 7.61	12.03 7.61	12.03 7.61
8534	8.34 4.71	9.39 5.28	10.22 5.73	11.40 6.36	12.03 6.65	12.03 6.65	12.03 6.65	12.03 6.65	10.20 6.23	11.12 6.77	12.03 7.31	12.03 7.31	12.03 7.31	12.03 7.31	12.03 7.31
8839	7.74 4.23	8.75 4.74	9.52 5.16	10.61 5.72	11.73 6.26	12.03 6.36	12.03 6.36	12.03 6.36	9.50 5.60	10.35 6.08	11.53 6.75	12.03 6.99	12.03 6.99	12.03 6.99	12.03 6.99
9144	7.24 3.82	8.16 4.27	8.88 4.65	9.91 5.15	10.94 5.64	11.90 6.11	12.03 6.15	12.03 6.15	8.86 5.04	9.65 5.50	10.77 6.08	11.90 6.66	12.03 6.69	12.03 6.69	12.03 6.69
9449	6.78 3.45	7.63 3.88	8.31 4.21	9.28 4.67	10.24 5.10	11.16 5.53	12.03 5.98	12.03 5.98	8.29 4.58	9.04 4.97	10.06 5.51	11.14 6.02	12.03 6.47	12.03 6.47	12.03 6.47
9754	6.34 3.13	7.15 3.51	7.81 3.82	8.69 4.23	9.61 4.64	10.46 5.02	12.01 5.73	12.01 5.73	7.79 4.15	8.47 4.50	9.45 5.00	10.44 5.47	11.36 5.93	12.01 6.28	12.01 6.28
10058	5.97 2.86	6.74 3.21	7.33 3.48	8.16 3.86	9.04 4.21	9.82 4.56	11.64 5.37	11.64 5.37	7.31 3.77	7.96 4.11	8.88 4.55	9.80 4.99	10.68 5.39	11.64 5.89	11.64 5.89
10363	5.62 2.61	6.34 2.93	6.89 3.18	7.68 3.53	8.49 3.85	9.25 4.17	10.98 4.91	11.29 5.02	6.89 3.45	7.50 3.75	8.36 4.15	9.23 4.55	10.04 4.93	11.29 5.51	11.29 5.51
10668	5.29 2.39	5.97 2.68	6.50 2.91	7.24 3.22	8.01 3.53	8.73 3.82	10.35 4.49	10.96 4.72	6.50 3.16	7.07 3.44	7.88 3.80	8.71 4.17	9.47 4.52	10.96 5.19	10.96 5.19
10973	5.01 2.18	5.64 2.46	6.15 2.67	6.85 2.96	7.57 3.23	8.25 3.51	9.78 4.13	10.66 4.46	6.12 2.90	6.67 3.15	7.44 3.50	8.23 3.83	8.95 4.14	10.63 4.87	10.66 4.87
11278	4.72 2.01	5.34 2.26	5.82 2.46	6.47 2.72	7.15 2.99	7.79 3.23	9.25 3.79	10.37 4.23	5.80 2.67	6.32 2.90	7.04 3.22	7.79 3.53	8.47 3.82	10.06 4.49	10.37 4.59
11582	4.48 1.86	5.05 2.08	5.51 2.27	6.15 2.51	6.78 2.75	7.39 2.97	8.77 3.50	10.09 4.01	5.49 2.46	5.99 2.68	6.67 2.97	7.37 3.25	8.03 3.51	9.54 4.14	10.09 4.36
11887	4.26 1.72	4.79 1.92	5.23 2.10	5.82 2.32	6.43 2.53	7.00 2.75	8.31 3.23	9.82 3.80	5.21 2.27	5.69 2.48	6.32 2.74	7.00 3.00	7.61 3.25	9.04 3.82	9.82 4.13
12192	4.04 1.59	4.55 1.78	4.96 1.94	5.53 2.15	6.12 2.34	6.65 2.55	7.90 3.00	9.58 3.60	4.96 2.11	5.40 2.29	6.01 2.53	6.65 2.78	7.24 3.02	8.60 3.54	9.58 3.92
12497	3.85 1.47	4.33 1.66	4.72 1.80	5.27 1.99	5.82 2.18	6.34 2.36	7.53 2.78	9.34 3.42	4.70 1.95	5.14 2.13	5.73 2.36	6.32 2.58	6.89 2.80	8.18 3.28	9.34 3.73
12802	3.67 1.37	4.13 1.54	4.50 1.67	5.01 1.85	5.53 2.02	6.04 2.20	7.15 2.58	9.12 3.26	4.48 1.82	4.90 1.98	5.45 2.18	6.01 2.39	6.56 2.59	7.79 3.06	9.12 3.56
13106	3.50 1.28	3.94 1.43	4.29 1.56	4.79 1.72	5.29 1.89	5.75 2.04	6.82 2.40	8.88 3.10	4.29 1.69	4.66 1.83	5.21 2.04	5.75 2.23	6.26 2.42	7.42 2.84	8.90 3.38
13411	3.34 1.19	3.76 1.34	4.09 1.45	4.57 1.60	5.05 1.76	5.49 1.91	6.52 2.24	8.47 2.90	4.09 1.57	4.46 1.72	4.96 1.91	5.49 2.08	5.97 2.26	7.09 2.65	8.71 3.23
13716	3.19 1.10	3.59 1.25	3.91 1.35	4.35 1.50	4.81 1.64	5.25 1.78	6.23 2.10	8.09 2.69	3.91 1.47	4.24 1.60	4.75 1.78	5.25 1.94	5.71 2.11	6.78 2.48	8.51 3.09
14021	3.04 1.03	3.43 1.16	3.74 1.26	4.18 1.41	4.61 1.54	5.03 1.66	5.95 1.97	7.74 2.53	3.74 1.38	4.07 1.50	4.53 1.66	5.01 1.82	5.47 1.97	6.47 2.32	8.31 2.96
14326	2.91 0.97	3.28 1.09	3.59 1.19	4.00 1.31	4.42 1.44	4.81 1.56	5.71 1.83	7.42 2.37	3.59 1.29	3.89 1.40	4.35 1.56	4.79 1.70	5.23 1.85	6.21 2.17	8.07 2.80
14630	2.80 0.91	3.15 1.02	3.43 1.12	3.83 1.24	4.24 1.35	4.61 1.47	5.47 1.72	7.11 2.23	3.43 1.21	3.74 1.31	4.15 1.45	4.59 1.60	5.01 1.73	5.95 2.04	7.72 2.62
14935									3.28 1.13	3.59 1.24	4.00 1.37	4.42 1.50	4.81 1.63	5.71 1.91	7.42 2.46
15240									3.15 1.06	3.43 1.16	3.83 1.29	4.24 1.41	4.61 1.53	5.47 1.80	7.11 2.32
15545									3.04 1.00	3.30 1.09	3.67 1.21	4.07 1.32	4.44 1.44	5.27 1.69	6.85 2.18
15850									2.91 0.94	3.17 1.03	3.54 1.15	3.91 1.25	4.26 1.35	5.05 1.60	6.58 2.07

LRFD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS K-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	28K6	28K7	28K8	28K9	28K10	28K12	30K7	30K8	30K9	30K10	30K11	30K12
DEPTH (mm)	711	711	711	711	711	711	762	762	762	762	762	762
APPROX. WT. (kN/m)	0.13	0.13	0.14	0.15	0.17	0.21	0.14	0.15	0.15	0.17	0.19	0.22
SPAN (mm)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)											
8230	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02						
8534	11.99 7.89	12.03 7.92	12.03 7.92	12.03 7.92	12.03 7.92	12.03 7.92						
8839	11.18 7.09	12.03 7.61	12.03 7.61	12.03 7.61	12.03 7.61	12.03 7.61	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02	12.03 8.02
9144	10.44 6.40	11.62 7.09	12.03 7.29	12.03 7.29	12.03 7.29	12.03 7.29	12.03 7.92	12.03 7.92	12.03 7.92	12.03 7.92	12.03 7.92	12.03 7.92
9449	9.76 5.79	10.87 6.42	12.03 7.00	12.03 7.00	12.03 7.00	12.03 7.00	11.68 7.41	12.03 7.58	12.03 7.58	12.03 7.58	12.03 7.58	12.03 7.58
9754	9.15 5.26	10.20 5.83	11.27 6.39	12.01 6.75	12.01 6.75	12.01 6.75	10.96 6.72	12.01 7.29	12.01 7.29	12.01 7.29	12.01 7.29	12.01 7.29
10058	8.60 4.80	9.58 5.31	10.59 5.82	11.53 6.30	11.64 6.34	11.64 6.34	10.31 6.12	11.38 6.71	11.64 6.82	11.64 6.82	11.64 6.82	11.64 6.82
10363	8.09 4.37	9.01 4.85	9.98 5.31	10.85 5.76	11.29 5.98	11.29 5.98	9.69 5.60	10.72 6.12	11.29 6.43	11.29 6.43	11.29 6.43	11.29 6.43
10668	7.63 4.01	8.51 4.45	9.41 4.85	10.24 5.26	10.96 5.67	10.96 5.67	9.15 5.12	10.11 5.60	10.96 6.05	10.96 6.05	10.96 6.05	10.96 6.05
10973	7.22 3.67	8.03 4.08	8.88 4.46	9.67 4.84	10.66 5.34	10.66 5.34	8.64 4.71	9.54 5.15	10.39 5.58	10.66 5.72	10.66 5.72	10.66 5.72
11278	6.82 3.38	7.61 3.75	8.40 4.11	9.15 4.45	10.37 5.02	10.37 5.02	8.16 4.33	9.04 4.74	9.82 5.13	10.37 5.45	10.37 5.45	10.37 5.45
11582	6.47 3.12	7.20 3.45	7.96 3.79	8.66 4.11	10.09 4.74	10.09 4.74	7.74 3.99	8.55 4.37	9.32 4.74	10.09 5.15	10.09 5.15	10.09 5.15
11887	6.12 2.88	6.85 3.19	7.57 3.50	8.23 3.79	9.78 4.46	9.82 4.49	7.35 3.69	8.12 4.04	8.84 4.37	9.82 4.85	9.82 4.85	9.82 4.85
12192	0 2.67	6.50 2.96	7.18 3.23	7.81 3.51	9.28 4.14	9.58 4.24	6.98 3.41	7.72 3.73	8.40 4.05	9.58 4.59	9.58 4.59	9.58 4.59
12497	5.53 2.48	6.19 2.75	6.82 3.00	7.44 3.26	8.84 3.83	9.34 4.04	6.63 3.16	7.33 3.47	7.99 3.76	9.34 4.37	9.34 4.37	9.34 4.37
12802	5.27 2.30	5.88 2.55	6.50 2.80	7.09 3.03	8.40 3.57	9.12 3.85	6.32 2.94	7.00 3.22	7.61 3.50	9.04 4.11	9.12 4.14	9.12 4.14
13106	5.03 2.14	5.62 2.37	6.21 2.61	6.76 2.83	8.03 3.32	8.90 3.67	6.04 2.74	6.67 3.00	7.26 3.25	8.62 3.83	8.90 3.94	8.90 3.94
13411	4.81 1.99	5.36 2.21	5.93 2.43	6.45 2.64	7.66 3.09	8.71 3.50	5.75 2.56	6.37 2.80	6.93 3.03	8.23 3.57	8.71 3.76	8.71 3.76
13716	4.59 1.86	5.12 2.07	5.66 2.27	6.17 2.46	7.31 2.88	8.51 3.34	5.49 2.39	6.08 2.61	6.63 2.84	7.85 3.34	8.51 3.59	8.51 3.59
14021	4.40 1.75	4.90 1.94	5.42 2.13	5.91 2.30	7.00 2.71	8.31 3.19	5.27 2.23	5.82 2.45	6.34 2.65	7.53 3.12	8.31 3.44	8.31 3.44
14326	4.20 1.63	4.68 1.82	5.18 1.98	5.64 2.15	6.69 2.53	8.14 3.06	5.03 2.10	5.58 2.29	6.06 2.49	7.20 2.93	8.14 3.29	8.14 3.29
14630	4.02 1.53	4.50 1.70	4.96 1.86	5.40 2.02	6.43 2.37	7.99 2.93	4.83 1.97	5.34 2.15	5.82 2.33	6.89 2.74	7.92 3.13	7.99 3.15
14935	3.87 1.44	4.31 1.60	4.77 1.75	5.18 1.89	6.17 2.23	7.81 2.81	4.64 1.85	5.12 2.02	5.58 2.18	6.63 2.58	7.59 2.94	7.81 3.02
15240	3.72 1.35	4.13 1.50	4.57 1.64	4.99 1.79	5.91 2.10	7.66 2.69	4.44 1.73	4.92 1.89	5.36 2.05	6.37 2.42	7.28 2.77	7.66 2.90
15545	3.56 1.28	3.98 1.41	4.40 1.54	4.79 1.67	5.69 1.98	7.39 2.55	4.26 1.63	4.72 1.79	5.14 1.94	6.10 2.29	7.00 2.61	7.50 2.80
15850	3.43 1.21	3.83 1.34	4.22 1.45	4.59 1.59	5.47 1.86	7.11 2.40	4.11 1.54	4.55 1.69	4.94 1.83	5.86 2.15	6.74 2.46	7.35 2.68
16154	3.30 1.13	3.67 1.26	4.07 1.38	4.44 1.50	5.25 1.76	6.85 2.27	3.96 1.45	4.37 1.59	4.77 1.73	5.64 2.04	6.47 2.32	7.22 2.58
16459	3.17 1.07	3.54 1.19	3.91 1.29	4.26 1.41	5.07 1.66	6.58 2.14	3.80 1.37	4.20 1.50	4.57 1.63	5.45 1.92	6.23 2.18	7.09 2.48
16764	3.06 1.02	3.41 1.12	3.78 1.24	4.11 1.34	4.88 1.57	6.34 2.02	3.67 1.29	4.04 1.43	4.42 1.54	5.25 1.82	6.01 2.07	6.82 2.34
17069	2.95 0.96	3.30 1.06	3.63 1.16	3.96 1.26	4.70 1.48	6.12 1.92	3.54 1.22	3.91 1.34	4.26 1.45	5.05 1.72	5.80 1.97	6.58 2.23
17374							3.41 1.16	3.78 1.28	4.11 1.38	4.88 1.63	5.60 1.86	6.34 2.11
17678							3.30 1.10	3.65 1.21	3.96 1.31	4.70 1.54	5.40 1.76	6.12 1.99
17983							3.19 1.05	3.52 1.15	3.83 1.25	4.55 1.47	5.23 1.67	5.93 1.89
18288							3.08 1.00	3.41 1.09	3.69 1.18	4.40 1.40	5.05 1.59	5.73 1.80

ASD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS K-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	10K1	12K1	12K3	12K5	14K1	14K3	14K4	14K6	16K2	16K3	16K4	16K5	16K6	16K7	16K9
DEPTH (mm)	254	305	305	305	356	356	356	356	406	406	406	406	406	406	406
APPROX. WT. (kN/m)	0.07	0.07	0.08	0.10	0.08	0.09	0.10	0.11	0.08	0.09	0.10	0.11	0.12	0.13	0.15
SPAN (mm)	LOADS SHOWN IN KILONETONS PER METER (kN/m)														
3048	8.02 8.02														
3353	8.02 7.90														
3658	8.02 6.64	8.02 8.02	8.02 8.02	8.02 8.02											
3962	6.99 5.29	8.02 7.44	8.02 7.44	8.02 7.44											
4267	6.01 4.21	7.29 6.20	8.02 6.75	8.02 6.75	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02							
4572	5.22 3.41	6.33 5.02	7.92 6.24	8.02 6.33	7.45 6.93	8.02 7.39	8.02 7.39	8.02 7.39							
4877	4.56 2.80	5.54 4.11	6.94 5.12	8.02 5.77	6.53 5.69	8.02 6.81	8.02 6.81	8.02 6.81	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02
5182	4.04 2.32	4.90 3.41	6.12 4.24	8.02 5.34	5.76 4.72	7.22 5.89	8.02 6.46	8.02 6.46	7.47 7.12	8.02 7.67	8.02 7.67	8.02 7.67	8.02 7.67	8.02 7.67	8.02 7.67
5486	3.59 1.95	4.36 2.87	5.45 3.57	7.39 4.62	5.13 3.96	6.43 4.94	7.73 5.79	8.02 5.95	6.65 5.96	7.41 6.65	8.02 7.15	8.02 7.15	8.02 7.15	8.02 7.15	8.02 7.15
5791	3.22 1.64	3.91 2.43	4.88 3.02	6.62 3.92	4.59 3.35	5.76 4.18	6.93 4.90	8.02 5.58	5.95 5.06	6.64 5.63	7.98 6.59	8.02 6.64	8.02 6.64	8.02 6.64	8.02 6.64
6096	2.90 1.41	3.51 2.07	4.40 2.58	5.96 3.35	4.14 2.87	5.19 3.59	6.24 4.18	7.66 5.06	5.37 4.33	5.98 4.81	7.19 5.63	8.02 6.21	8.02 6.21	8.02 6.21	8.02 6.21
6401		3.18 1.79	3.98 2.23	5.39 2.88	3.75 2.48	4.69 3.09	5.66 3.61	6.93 4.36	4.85 3.72	5.41 4.15	6.52 4.85	7.34 5.44	7.99 5.91	8.02 5.92	8.02 5.92
6706		2.90 1.54	3.63 1.92	4.91 2.51	3.41 2.14	4.27 2.68	5.15 3.13	6.30 3.77	4.42 3.23	4.91 3.60	5.92 4.21	6.68 4.71	7.26 5.12	8.02 5.61	8.02 5.61
7010		2.64 1.35	3.31 1.69	4.49 2.18	3.12 1.86	3.91 2.33	4.69 2.74	5.76 3.29	4.04 2.83	4.49 3.15	5.41 3.67	6.10 4.11	6.64 4.48	7.39 4.94	8.02 5.29
7315		2.42 1.18	3.03 1.47	4.11 1.92	2.86 1.64	3.57 2.05	4.30 2.40	5.28 2.90	3.70 2.48	4.13 2.75	4.96 3.22	5.60 3.61	6.10 3.92	6.78 4.34	8.02 5.04
7620					2.62 1.45	3.29 1.80	3.96 2.11	4.87 2.55	3.41 2.18	3.79 2.43	4.56 2.84	5.15 3.19	5.60 3.47	6.24 3.83	7.50 4.53
7925					2.42 1.28	3.05 1.60	3.66 1.88	4.49 2.27	3.15 1.94	3.50 2.15	4.21 2.52	4.75 2.83	5.18 3.07	5.76 3.40	6.91 4.02
8230					2.24 1.15	2.81 1.43	3.40 1.67	4.15 2.02	2.91 1.73	3.25 1.92	3.91 2.26	4.40 2.52	4.80 2.74	5.34 3.03	6.40 3.59
8534					2.08 1.02	2.62 1.28	3.15 1.50	3.86 1.80	2.71 1.54	3.02 1.72	3.63 2.01	4.10 2.26	4.46 2.45	4.96 2.71	5.95 3.21
8839									2.52 1.38	2.81 1.54	3.38 1.80	3.80 2.02	4.15 2.20	4.62 2.43	5.54 2.88
9144									2.34 1.25	2.62 1.40	3.15 1.63	3.56 1.83	3.88 1.99	4.31 2.20	5.18 2.59
9449									2.20 1.13	2.45 1.26	2.96 1.47	3.32 1.66	3.63 1.80	4.04 1.99	4.84 2.34
9754									2.07 1.03	2.30 1.15	2.77 1.34	3.12 1.50	3.40 1.63	3.77 1.80	4.53 2.14

ASD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS K-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	18K3	18K4	18K5	18K6	18K7	18K9	18K10	20K3	20K4	20K5	20K6	20K7	20K9	20K10	22K4	22K5	22K6	22K7	22K9	22K10	22K11
DEPTH (mm)	457	457	457	457	457	457	457	508	508	508	508	508	508	508	559	559	559	559	559	559	559
APPROX. WT. (kN/m)	0.09	0.11	0.11	0.12	0.13	0.15	0.17	0.09	0.11	0.11	0.12	0.13	0.15	0.17	0.11	0.11	0.12	0.13	0.15	0.17	0.17
SPAN (mm)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)																				
5486	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02														
5791	7.50 7.20	8.02 7.63	8.02 7.63	8.02 7.63	8.02 7.63	8.02 7.63	8.02 7.63	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02							
6096	6.75 6.17	8.02 7.15	8.02 7.15	8.02 7.15	8.02 7.15	8.02 7.15	8.02 7.15	7.54 7.54	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02							
6401	6.12 5.31	7.38 6.21	8.02 6.71	8.02 6.71	8.02 6.71	8.02 6.71	8.02 6.71	6.82 6.61	8.02 7.58	8.02 7.58	8.02 7.58	8.02 7.58	8.02 7.58	8.02 7.58	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02
6706	5.57 4.61	6.71 5.39	7.55 6.04	8.02 6.39	8.02 6.39	8.02 6.39	8.02 6.39	6.21 5.73	7.50 6.72	8.02 7.15	8.02 7.15	8.02 7.15	8.02 7.15	8.02 7.15	7.99 7.99	8.02 7.99	8.02 7.99	8.02 7.99	8.02 7.99	8.02 7.99	8.02 7.99
7010	5.09 4.02	6.12 4.71	6.90 5.28	7.53 5.73	8.02 6.10	8.02 6.10	8.02 6.10	5.67 5.02	6.84 5.86	7.72 6.58	8.02 6.82	8.02 6.82	8.02 6.82	8.02 6.82	7.55 7.16	8.02 7.55	8.02 7.55	8.02 7.55	8.02 7.55	8.02 7.55	8.02 7.55
7315	4.67 3.53	5.61 4.14	6.33 4.64	6.90 5.03	7.67 5.57	8.02 5.77	8.02 5.77	5.21 4.40	6.27 5.15	7.07 5.77	7.70 6.27	8.02 6.53	8.02 6.53	8.02 6.53	6.93 6.28	7.82 7.04	8.02 7.22	8.02 7.22	8.02 7.22	8.02 7.22	8.02 7.22
7620	4.29 3.12	5.18 3.64	5.83 4.10	6.34 4.45	7.07 4.91	8.02 5.50	8.02 5.50	4.80 3.88	5.77 4.55	6.50 5.10	7.09 5.54	7.89 6.14	8.02 6.21	8.02 6.21	6.39 5.56	7.19 6.23	7.83 6.77	8.02 6.91	8.02 6.91	8.02 6.91	8.02 6.91
7925	3.96 2.77	4.78 3.23	5.38 3.63	5.86 3.95	6.53 4.36	7.85 5.16	8.02 5.26	4.43 3.44	5.34 4.04	6.01 4.52	6.55 4.91	7.29 5.44	8.02 5.91	8.02 5.91	5.89 4.93	6.64 5.53	7.23 5.99	8.02 6.62	8.02 6.62	8.02 6.62	8.02 6.62
8230	3.67 2.46	4.42 2.88	4.99 3.23	5.42 3.51	6.05 3.89	7.26 4.59	8.02 5.06	4.10 3.07	4.94 3.60	5.57 4.04	6.07 4.39	6.75 4.85	8.02 5.67	8.02 5.67	5.45 4.39	6.15 4.91	6.69 5.35	7.47 5.92	8.02 6.30	8.02 6.30	8.02 6.30
8534	3.41 2.20	4.11 2.58	4.64 2.90	5.04 3.15	5.61 3.48	6.75 4.11	7.99 4.83	3.80 2.75	4.59 3.22	5.18 3.61	5.63 3.92	6.27 4.34	7.54 5.15	8.02 5.47	5.07 3.94	5.72 4.40	6.23 4.78	6.93 5.31	8.02 6.02	8.02 6.02	8.02 6.02
8839	3.18 1.98	3.83 2.32	4.31 2.61	4.69 2.83	5.23 3.13	6.28 3.70	7.45 4.34	3.54 2.48	4.27 2.90	4.81 3.25	5.25 3.53	5.85 3.91	7.03 4.62	8.02 5.23	4.72 3.53	5.32 3.96	5.80 4.30	6.46 4.77	7.76 5.64	8.02 5.82	8.02 5.82
9144	2.96 1.79	3.57 2.10	4.02 2.34	4.39 2.55	4.88 2.83	5.86 3.34	6.96 3.92	3.31 2.23	3.99 2.61	4.49 2.93	4.90 3.18	5.45 3.53	6.56 4.17	7.77 4.90	4.40 3.19	4.97 3.57	5.41 3.88	6.02 4.30	7.25 5.09	8.02 5.61	8.02 5.61
9449	2.77 1.61	3.34 1.89	3.76 2.13	4.10 2.30	4.56 2.55	5.48 3.02	6.50 3.54	3.09 2.01	3.73 2.36	4.21 2.65	4.58 2.88	5.10 3.19	6.14 3.77	7.28 4.43	4.13 2.88	4.65 3.23	5.06 3.51	5.64 3.89	6.78 4.61	8.02 5.38	8.02 5.38
9754	2.59 1.47	3.13 1.72	3.53 1.92	3.85 2.10	4.29 2.32	5.15 2.74	6.10 3.22	2.90 1.83	3.50 2.14	3.95 2.40	4.30 2.61	4.78 2.90	5.76 3.42	6.82 4.02	3.86 2.62	4.36 2.93	4.75 3.19	5.29 3.53	6.36 4.18	7.54 4.91	8.01 5.18
10058	2.45 1.34	2.94 1.57	3.32 1.76	3.61 1.91	4.02 2.11	4.84 2.49	5.73 2.93	2.72 1.66	3.29 1.95	3.70 2.18	4.04 2.37	4.50 2.64	5.41 3.12	6.42 3.66	3.63 2.39	4.10 2.67	4.46 2.90	4.97 3.22	5.98 3.80	7.09 4.48	7.76 4.87
10363	2.30 1.22	2.77 1.43	3.12 1.60	3.40 1.75	3.79 1.92	4.55 2.27	5.39 2.68	2.56 1.53	3.09 1.78	3.48 1.99	3.80 2.17	4.23 2.40	5.09 2.84	6.04 3.34	3.42 2.17	3.86 2.43	4.20 2.65	4.68 2.94	5.63 3.48	6.68 4.08	7.53 4.58
10668	2.17 1.12	2.61 1.31	2.94 1.47	3.21 1.60	3.57 1.76	4.29 2.08	5.09 2.45	2.42 1.40	2.91 1.63	3.29 1.83	3.59 1.99	3.99 2.20	4.80 2.61	5.69 3.06	3.22 1.99	3.63 2.23	3.96 2.43	4.42 2.69	5.31 3.19	6.30 3.75	7.20 4.26
10973	2.05 1.02	2.46 1.19	2.78 1.34	3.03 1.47	3.38 1.61	4.05 1.92	4.81 2.24	2.29 1.28	2.75 1.50	3.10 1.67	3.38 1.82	3.77 2.02	4.53 2.39	5.38 2.81	3.05 1.83	3.44 2.05	3.75 2.23	4.17 2.46	5.02 2.93	5.95 3.44	6.81 3.92
11278								2.15 1.18	2.61 1.38	2.94 1.54	3.21 1.67	3.57 1.86	4.29 2.20	5.09 2.59	2.88 1.69	3.25 1.89	3.54 2.05	3.95 2.27	4.74 2.69	5.63 3.16	6.45 3.60
11582								2.05 1.07	2.48 1.26	2.78 1.43	3.03 1.54	3.38 1.72	4.07 2.02	4.83 2.39	2.72 1.56	3.07 1.73	3.35 1.89	3.73 2.10	4.49 2.48	5.34 2.91	6.11 3.32
11887								1.94 1.00	2.34 1.18	2.64 1.31	2.88 1.43	3.21 1.59	3.86 1.88	4.58 2.20	2.59 1.43	2.91 1.60	3.18 1.75	3.54 1.94	4.26 2.29	5.06 2.69	5.79 3.07
12192								1.85 0.93	2.23 1.09	2.51 1.22	2.74 1.32	3.05 1.47	3.66 1.73	4.34 2.04	2.46 1.32	2.77 1.48	3.02 1.61	3.37 1.79	4.05 2.13	4.81 2.49	5.50 2.84
12497															2.34 1.24	2.64 1.38	2.87 1.50	3.21 1.66	3.85 1.97	4.58 2.32	5.23 2.64
12802															2.23 1.15	2.52 1.28	2.74 1.40	3.05 1.54	3.67 1.83	4.36 2.15	4.99 2.45
13106															2.13 1.06	2.40 1.19	2.61 1.29	2.91 1.44	3.50 1.70	4.15 2.01	4.75 2.29
13411															2.02 0.99	2.29 1.10	2.49 1.21	2.78 1.34	3.34 1.59	3.96 1.86	4.53 2.13

ASD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS K-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	24K4	24K5	24K6	24K7	24K8	24K9	24K10	24K12	26K5	26K6	26K7	26K8	26K9	26K10	26K12
DEPTH (mm)	610	610	610	610	610	610	610	610	660	660	660	660	660	660	660
APPROX. WT. (kN/m)	0.11	0.12	0.12	0.13	0.14	0.15	0.17	0.20	0.12	0.13	0.13	0.14	0.15	0.17	0.20
SPAN (mm)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)														
7010	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02							
	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02							
7315	7.58	8.02	8.02	8.02	8.02	8.02	8.02	8.02							
	7.53	7.93	7.93	7.93	7.93	7.93	7.93	7.93							
7620	6.99	7.88	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02
	6.65	7.45	7.58	7.58	7.58	7.58	7.58	7.58	8.02	8.02	8.02	8.02	8.02	8.02	8.02
7925	6.45	7.28	7.92	8.02	8.02	8.02	8.02	8.02	7.90	8.02	8.02	8.02	8.02	8.02	8.02
	5.91	6.61	7.19	7.28	7.28	7.28	7.28	7.28	7.80	7.89	7.89	7.89	7.89	7.89	7.89
8230	5.98	6.74	7.34	8.02	8.02	8.02	8.02	8.02	7.32	7.98	8.02	8.02	8.02	8.02	8.02
	5.26	5.89	6.40	6.99	6.99	6.99	6.99	6.99	6.96	7.57	7.61	7.61	7.61	7.61	7.61
8534	5.56	6.26	6.81	7.60	8.02	8.02	8.02	8.02	6.80	7.41	8.02	8.02	8.02	8.02	8.02
	4.71	5.28	5.73	6.36	6.65	6.65	6.65	6.65	6.23	6.77	7.31	7.31	7.31	7.31	7.31
8839	5.16	5.83	6.34	7.07	7.82	8.02	8.02	8.02	6.33	6.90	7.69	8.02	8.02	8.02	8.02
	4.23	4.74	5.16	5.72	6.26	6.36	6.36	6.36	5.60	6.08	6.75	6.99	6.99	6.99	6.99
9144	4.83	5.44	5.92	6.61	7.29	7.93	8.02	8.02	5.91	6.43	7.18	7.93	8.02	8.02	8.02
	3.82	4.27	4.65	5.15	5.64	6.11	6.15	6.15	5.04	5.50	6.08	6.66	6.69	6.69	6.69
9449	4.52	5.09	5.54	6.18	6.82	7.44	8.02	8.02	5.53	6.02	6.71	7.42	8.02	8.02	8.02
	3.45	3.88	4.21	4.67	5.10	5.53	5.98	5.98	4.58	4.97	5.51	6.02	6.47	6.47	6.47
9754	4.23	4.77	5.21	5.79	6.40	6.97	8.01	8.01	5.19	5.64	6.30	6.96	7.57	8.01	8.01
	3.13	3.51	3.82	4.23	4.64	5.02	5.73	5.73	4.15	4.50	5.00	5.47	5.93	6.28	6.28
10058	3.98	4.49	4.88	5.44	6.02	6.55	7.76	7.76	4.87	5.31	5.92	6.53	7.12	7.76	7.76
	2.86	3.21	3.48	3.86	4.21	4.56	5.37	5.37	3.77	4.11	4.55	4.99	5.39	5.89	5.89
10363	3.75	4.23	4.59	5.12	5.66	6.17	7.32	7.53	4.59	5.00	5.57	6.15	6.69	7.53	7.53
	2.61	2.93	3.18	3.53	3.85	4.17	4.91	5.02	3.45	3.75	4.15	4.55	4.93	5.51	5.51
10668	3.53	3.98	4.33	4.83	5.34	5.82	6.90	7.31	4.33	4.71	5.25	5.80	6.31	7.31	7.31
	2.39	2.68	2.91	3.22	3.53	3.82	4.49	4.72	3.16	3.44	3.80	4.17	4.52	5.19	5.19
10973	3.34	3.76	4.10	4.56	5.04	5.50	6.52	7.10	4.08	4.45	4.96	5.48	5.96	7.09	7.10
	2.18	2.46	2.67	2.96	3.23	3.51	4.13	4.46	2.90	3.15	3.50	3.83	4.14	4.87	4.87
11278	3.15	3.56	3.88	4.31	4.77	5.19	6.17	6.91	3.86	4.21	4.69	5.19	5.64	6.71	6.91
	2.01	2.26	2.46	2.72	2.99	3.23	3.79	4.23	2.67	2.90	3.22	3.53	3.82	4.49	4.59
11582	2.99	3.37	3.67	4.10	4.52	4.93	5.85	6.72	3.66	3.99	4.45	4.91	5.35	6.36	6.72
	1.86	2.08	2.27	2.51	2.75	2.97	3.50	4.01	2.46	2.68	2.97	3.25	3.51	4.14	4.36
11887	2.84	3.19	3.48	3.88	4.29	4.67	5.54	6.55	3.47	3.79	4.21	4.67	5.07	6.02	6.55
	1.72	1.92	2.10	2.32	2.53	2.75	3.23	3.80	2.27	2.48	2.74	3.00	3.25	3.82	4.13
12192	2.69	3.03	3.31	3.69	4.08	4.43	5.26	6.39	3.31	3.60	4.01	4.43	4.83	5.73	6.39
	1.59	1.78	1.94	2.15	2.34	2.55	3.00	3.60	2.11	2.29	2.53	2.78	3.02	3.54	3.92
12497	2.56	2.88	3.15	3.51	3.88	4.23	5.02	6.23	3.13	3.42	3.82	4.21	4.59	5.45	6.23
	1.47	1.66	1.80	1.99	2.18	2.36	2.78	3.42	1.95	2.13	2.36	2.58	2.80	3.28	3.73
12802	2.45	2.75	3.00	3.34	3.69	4.02	4.77	6.08	2.99	3.26	3.63	4.01	4.37	5.19	6.08
	1.37	1.54	1.67	1.85	2.02	2.20	2.58	3.26	1.82	1.98	2.18	2.39	2.59	3.06	3.56
13106	2.33	2.62	2.86	3.19	3.53	3.83	4.55	5.92	2.86	3.10	3.47	3.83	4.17	4.94	5.93
	1.28	1.43	1.56	1.72	1.89	2.04	2.40	3.10	1.69	1.83	2.04	2.23	2.42	2.84	3.38
13411	2.23	2.51	2.72	3.05	3.37	3.66	4.34	5.64	2.72	2.97	3.31	3.66	3.98	4.72	5.80
	1.19	1.34	1.45	1.60	1.76	1.91	2.24	2.90	1.57	1.72	1.91	2.08	2.26	2.65	3.23
13716	2.13	2.39	2.61	2.90	3.21	3.50	4.15	5.39	2.61	2.83	3.16	3.50	3.80	4.52	5.67
	1.10	1.25	1.35	1.50	1.64	1.78	2.10	2.69	1.47	1.60	1.78	1.94	2.11	2.48	3.09
14021	2.02	2.29	2.49	2.78	3.07	3.35	3.96	5.16	2.49	2.71	3.02	3.34	3.64	4.31	5.54
	1.03	1.16	1.26	1.41	1.54	1.66	1.97	2.53	1.38	1.50	1.66	1.82	1.97	2.32	2.96
14326	1.94	2.18	2.39	2.67	2.94	3.21	3.80	4.94	2.39	2.59	2.90	3.19	3.48	4.14	5.38
	0.97	1.09	1.19	1.31	1.44	1.56	1.83	2.37	1.29	1.40	1.56	1.70	1.85	2.17	2.80
14630	1.86	2.10	2.29	2.55	2.83	3.07	3.64	4.74	2.29	2.49	2.77	3.06	3.34	3.96	5.15
	0.91	1.02	1.12	1.24	1.35	1.47	1.72	2.23	1.21	1.31	1.45	1.60	1.73	2.04	2.62
14935									2.18	2.39	2.67	2.94	3.21	3.80	4.94
									1.13	1.24	1.37	1.50	1.63	1.91	2.46
15240									2.10	2.29	2.55	2.83	3.07	3.64	4.74
									1.06	1.16	1.29	1.41	1.53	1.80	2.32
15545									2.02	2.20	2.45	2.71	2.96	3.51	4.56
									1.00	1.09	1.21	1.32	1.44	1.69	2.18
15850									1.94	2.11	2.36	2.61	2.84	3.37	4.39
									0.94	1.03	1.15	1.25	1.35	1.60	2.07

ASD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS K-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	28K6	28K7	28K8	28K9	28K10	28K12	30K7	30K8	30K9	30K10	30K11	30K12
DEPTH (mm)	711	711	711	711	711	711	762	762	762	762	762	762
APPROX. WT. (kN/m)	0.13	0.13	0.14	0.15	0.17	0.21	0.14	0.15	0.15	0.17	0.19	0.22
SPAN (mm)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)											
8230	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02						
8534	7.99 7.89	8.02 7.92	8.02 7.92	8.02 7.92	8.02 7.92	8.02 7.92						
8839	7.45 7.09	8.02 7.61	8.02 7.61	8.02 7.61	8.02 7.61	8.02 7.61	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02	8.02 8.02
9144	6.96 6.40	7.74 7.09	8.02 7.29	8.02 7.29	8.02 7.29	8.02 7.29	8.02 7.92	8.02 7.92	8.02 7.92	8.02 7.92	8.02 7.92	8.02 7.92
9449	6.50 5.79	7.25 6.42	8.02 7.00	8.02 7.00	8.02 7.00	8.02 7.00	7.79 7.41	8.02 7.58	8.02 7.58	8.02 7.58	8.02 7.58	8.02 7.58
9754	6.10 5.26	6.80 5.83	7.51 6.39	8.01 6.75	8.01 6.75	8.01 6.75	7.31 6.72	8.01 7.29	8.01 7.29	8.01 7.29	8.01 7.29	8.01 7.29
10058	5.73 4.80	6.39 5.31	7.06 5.82	7.69 6.30	7.76 6.34	7.76 6.34	6.87 6.12	7.58 6.71	7.76 6.82	7.76 6.82	7.76 6.82	7.76 6.82
10363	5.39 4.37	6.01 4.85	6.65 5.31	7.23 5.76	7.53 5.98	7.53 5.98	6.46 5.60	7.15 6.12	7.53 6.43	7.53 6.43	7.53 6.43	7.53 6.43
10668	5.09 4.01	5.67 4.45	6.27 4.85	6.82 5.26	7.31 5.67	7.31 5.67	6.10 5.12	6.74 5.60	7.31 6.05	7.31 6.05	7.31 6.05	7.31 6.05
10973	4.81 3.67	5.35 4.08	5.92 4.46	6.45 4.84	7.10 5.34	7.10 5.34	5.76 4.71	6.36 5.15	6.93 5.58	7.10 5.72	7.10 5.72	7.10 5.72
11278	4.55 3.38	5.07 3.75	5.60 4.11	6.10 4.45	6.91 5.02	6.91 5.02	5.44 4.33	6.02 4.74	6.55 5.13	6.91 5.45	6.91 5.45	6.91 5.45
11582	4.31 3.12	4.80 3.45	5.31 3.79	5.77 4.11	6.72 4.74	6.72 4.74	5.16 3.99	5.70 4.37	6.21 4.74	6.72 5.15	6.72 5.15	6.72 5.15
11887	4.08 2.88	4.56 3.19	5.04 3.50	5.48 3.79	6.52 4.46	6.55 4.49	4.90 3.69	5.41 4.04	5.89 4.37	6.55 4.85	6.55 4.85	6.55 4.85
12192	3.88 2.67	4.33 2.96	4.78 3.23	5.21 3.51	6.18 4.14	6.39 4.24	4.65 3.41	5.15 3.73	5.60 4.05	6.39 4.59	6.39 4.59	6.39 4.59
12497	3.69 2.48	4.13 2.75	4.55 3.00	4.96 3.26	5.89 3.83	6.23 4.04	4.42 3.16	4.88 3.47	5.32 3.76	6.23 4.37	6.23 4.37	6.23 4.37
12802	3.51 2.30	3.92 2.55	4.33 2.80	4.72 3.03	5.60 3.57	6.08 3.85	4.21 2.94	4.67 3.22	5.07 3.50	6.02 4.11	6.08 4.14	6.08 4.14
13106	3.35 2.14	3.75 2.37	4.14 2.61	4.50 2.83	5.35 3.32	5.93 3.67	4.02 2.74	4.45 3.00	4.84 3.25	5.74 3.83	5.93 3.94	5.93 3.94
13411	3.21 1.99	3.57 2.21	3.95 2.43	4.30 2.64	5.10 3.09	5.80 3.50	3.83 2.56	4.24 2.80	4.62 3.03	5.48 3.57	5.80 3.76	5.80 3.76
13716	3.06 1.86	3.41 2.07	3.77 2.27	4.11 2.46	4.87 2.88	5.67 3.34	3.66 2.39	4.05 2.61	4.42 2.84	5.23 3.34	5.67 3.59	5.67 3.59
14021	2.93 1.75	3.26 1.94	3.61 2.13	3.94 2.30	4.67 2.71	5.54 3.19	3.51 2.23	3.88 2.45	4.23 2.65	5.02 3.12	5.54 3.44	5.54 3.44
14326	2.80 1.63	3.12 1.82	3.45 1.98	3.76 2.15	4.46 2.53	5.42 3.06	3.35 2.10	3.72 2.29	4.04 2.49	4.80 2.93	5.42 3.29	5.42 3.29
14630	2.68 1.53	3.00 1.70	3.31 1.86	3.60 2.02	4.29 2.37	5.32 2.93	3.22 1.97	3.56 2.15	3.88 2.33	4.59 2.74	5.28 3.13	5.32 3.15
14935	2.58 1.44	2.87 1.60	3.18 1.75	3.45 1.89	4.11 2.23	5.21 2.81	3.09 1.85	3.41 2.02	3.72 2.18	4.42 2.58	5.06 2.94	5.21 3.02
15240	2.48 1.35	2.75 1.50	3.05 1.64	3.32 1.79	3.94 2.10	5.10 2.69	2.96 1.73	3.28 1.89	3.57 2.05	4.24 2.42	4.85 2.77	5.10 2.90
15545	2.37 1.28	2.65 1.41	2.93 1.54	3.19 1.67	3.79 1.98	4.93 2.55	2.84 1.63	3.15 1.79	3.42 1.94	4.07 2.29	4.67 2.61	5.00 2.80
15850	2.29 1.21	2.55 1.34	2.81 1.45	3.06 1.59	3.64 1.86	4.74 2.40	2.74 1.54	3.03 1.69	3.29 1.83	3.91 2.15	4.49 2.46	4.90 2.68
16154	2.20 1.13	2.45 1.26	2.71 1.38	2.96 1.50	3.50 1.76	4.56 2.27	2.64 1.45	2.91 1.59	3.18 1.73	3.76 2.04	4.31 2.32	4.81 2.58
16459	2.11 1.07	2.36 1.19	2.61 1.29	2.84 1.41	3.38 1.66	4.39 2.14	2.53 1.37	2.80 1.50	3.05 1.63	3.63 1.92	4.15 2.18	4.72 2.48
16764	2.04 1.02	2.27 1.12	2.52 1.24	2.74 1.34	3.25 1.57	4.23 2.02	2.45 1.29	2.69 1.43	2.94 1.54	3.50 1.82	4.01 2.07	4.55 2.34
17069	1.97 0.96	2.20 1.06	2.42 1.16	2.64 1.26	3.13 1.48	4.08 1.92	2.36 1.22	2.61 1.34	2.84 1.45	3.37 1.72	3.86 1.97	4.39 2.23
17374							2.27 1.16	2.52 1.28	2.74 1.38	3.25 1.63	3.73 1.86	4.23 2.11
17678							2.20 1.10	2.43 1.21	2.64 1.31	3.13 1.54	3.60 1.76	4.08 1.99
17983							2.13 1.05	2.34 1.15	2.55 1.25	3.03 1.47	3.48 1.67	3.95 1.89
18288							2.05 1.00	2.27 1.09	2.46 1.18	2.93 1.40	3.37 1.59	3.82 1.80

STANDARD LRFD LOAD TABLE

FOR KCS JOISTS

Based on a 50 ksi 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.) and Shear Capacity (lbs). The maximum uniformly distributed load capacity in **LRFD** shall not exceed 825 plf 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 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. 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	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 OPEN WEB STEEL JOISTS KCS BASED ON 345 MPa YIELD

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 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.) and Shear Capacity (lbs). The maximum uniformly distributed load capacity in **ASD** shall not exceed 550 plf 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. 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 OPEN WEB STEEL JOISTS KCS BASED ON 345 MPa YIELD

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

STANDARD ASD LOAD TABLE

STANDARD LRFD LOAD TABLE

FOR TOP CHORD EXTENSIONS (S TYPE) and (R TYPE)

Based on a 50 ksi Maximum Yield Strength
 ASD Load Table adopted by the Steel Joist Institute November 15, 1989
 LRFD Load Table adopted by the Steel Joist Institute May 1, 2000
 Revised to May 18, 2010 – Effective December 31, 2010

Joist extensions are commonly furnished to support a variety of overhang conditions. Two types are pictured below. The first is the TOP CHORD EXTENSION or "S" TYPE, which has only the top chord angles extended. The second is the EXTENDED END or "R" TYPE in which the standard 2½, (64 mm) end bearing depth is maintained over the entire length of the extension. The "S" TYPE extension is so designated because of its Simple nature whereas the "R" TYPE involves Reinforcing the top chord angles. The **specifying professional** should be aware that an "S" TYPE is more economical and should be specified whenever possible.

The following load tables are for K-Series TOP CHORD EXTENSIONS and EXTENDED ENDS for **ASD** and **LRFD** methods of design. The tabulated values are the maximum allowable uniform load in pounds per linear foot (kiloNewton/meter). The "S" and "I" numbers shown in the load tables are the Elastic Section Modulus and Moment of Inertia of the extension (Section) number with which they are associated.

In cases where it is not possible to meet specific job requirements with a 2½" (64 mm) deep "R" type extension (refer to "S" and "I" values in the Extended End Load Table), the depth of the extension must be increased to provide greater load-carrying capacity.

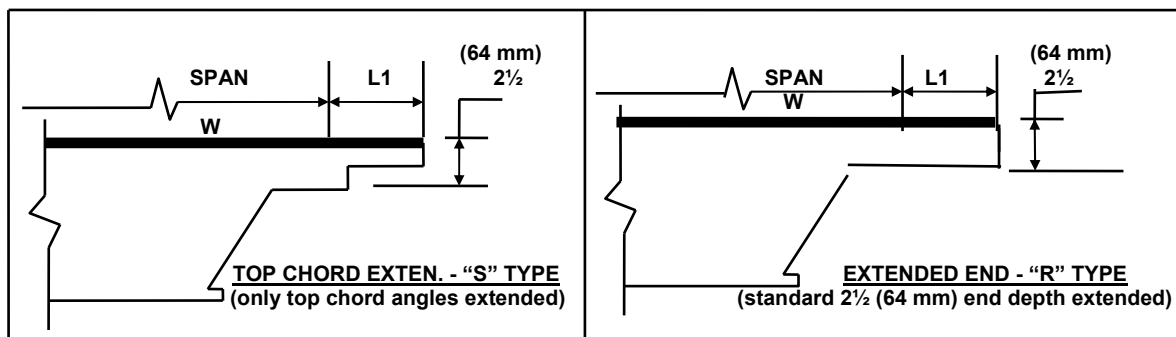
The "S" and "R" extension numbers are intended to be associated with Standard K-Series Joist Sizes of matching Section Number. When possible, the extension number should be limited to no more than the Standard K-Series Joist Section Number, for optimum economy.

When TOP CHORD EXTENSIONS or EXTENDED ENDS are specified the bracing requirements must be considered by the specifying professional.

It should be noted that an "R" TYPE extension must be specified when building details dictate a 2½, (64 mm) depth at the end of the extension. In the absence of specific instructions, the joist manufacturer may provide either type.

TOP CHORD EXTENSION

EXTENDED END



W = Uniform Load L1 = Length of Extension SPAN = See **K-Series** Standard Specification for Definition of Span

LRFD

TOP CHORD EXTENSION LOAD TABLE (R TYPE)
Based on a Yield Strength of 50 ksi
Pounds Per Linear Foot

TYPE	"S" (in. ³)	"I" (in. ⁴)	LENGTH (L1)											
			0'-6"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
R1	0.895	1.119	825	825	825	825	825	669	498	385	307	250	208	175
R2	0.923	1.157	825	825	825	825	825	690	514	399	318	259	216	181
R3	1.039	1.299	825	825	825	825	825	777	579	448	358	292	243	205
R4	1.147	1.433	825	825	825	825	825	825	639	495	394	321	267	225
R5	1.249	1.561	825	825	825	825	825	825	696	538	429	349	291	246
R6	1.352	1.690	825	825	825	825	825	825	753	583	465	379	315	265
R7	1.422	1.802	825	825	825	825	825	825	792	613	489	399	331	279
R8	1.558	1.948	825	825	825	825	825	825	825	672	535	436	363	306
R9	1.673	2.091	825	825	825	825	825	825	825	721	576	469	390	328
R10	1.931	2.414	825	825	825	825	825	825	825	825	664	541	450	379
R11	2.183	2.729	825	825	825	825	825	825	825	825	751	612	508	430
R12	2.413	3.016	825	825	825	825	825	825	825	825	825	676	562	475

LRFD

TOP CHORD EXTENSION LOAD TABLE (S TYPE)
Based on a Yield Strength of 50 ksi
Pounds Per Linear Foot

TYPE	"S" (in. ³)	"I" (in. ⁴)	LENGTH (L1)											
			0'-6"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"			
S1	0.099	0.088	825	544	267	157								
S2	0.127	0.138	825	700	343	202								
S3	0.144	0.156	825	793	388	229								
S4	0.160	0.172	825	825	432	255	168							
S5	0.176	0.188	825	825	474	280	184							
S6	0.192	0.204	825	825	517	306	202							
S7	0.241	0.306	825	825	649	384	253	180						
S8	0.266	0.332	825	825	717	424	280	198						
S9	0.288	0.358	825	825	777	459	303	214	160					
S10	0.380	0.544	825	825	825	606	400	283	211	163				
S11	0.438	0.622	825	825	825	699	460	327	243	189	150			
S12	0.494	0.696	825	825	825	789	520	369	274	213	169			



TOP CHORD EXTENSION LOAD TABLE (R TYPE)
Based on a Yield Strength of 50 ksi
Pounds Per Linear Foot

TYPE	"S" (in. ³)	"I" (in. ⁴)	LENGTH (L1)											
			0'-6"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
R1	0.895	1.119	550	550	550	550	550	446	332	257	205	167	139	117
R2	0.923	1.157	550	550	550	550	550	460	343	266	212	173	144	121
R3	1.039	1.299	550	550	550	550	550	518	386	299	239	195	162	137
R4	1.147	1.433	550	550	550	550	550	550	426	330	263	214	178	150
R5	1.249	1.561	550	550	550	550	550	550	464	359	286	233	194	164
R6	1.352	1.690	550	550	550	550	550	550	502	389	310	253	210	177
R7	1.422	1.802	550	550	550	550	550	550	528	409	326	266	221	186
R8	1.558	1.948	550	550	550	550	550	550	550	448	357	291	242	204
R9	1.673	2.091	550	550	550	550	550	550	550	481	384	313	260	219
R10	1.931	2.414	550	550	550	550	550	550	550	550	443	361	300	253
R11	2.183	2.729	550	550	550	550	550	550	550	550	501	408	339	287
R12	2.413	3.016	550	550	550	550	550	550	550	550	550	451	375	317



TOP CHORD EXTENSION LOAD TABLE (S TYPE)
Based on a Maximum Yield Strength of 50 ksi
Pounds Per Linear Foot

TYPE	"S" (in. ³)	"I" (in. ⁴)	LENGTH (L1)								
			0'-6"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"
S1	0.099	0.088	550	363	178	105					
S2	0.127	0.138	550	467	229	135					
S3	0.144	0.156	550	529	259	153					
S4	0.160	0.172	550	550	288	170	112				
S5	0.176	0.188	550	550	316	187	123				
S6	0.192	0.204	550	550	345	204	135				
S7	0.241	0.306	550	550	433	256	169	120			
S8	0.266	0.332	550	550	478	283	187	132			
S9	0.288	0.358	550	550	518	306	202	143	107		
S10	0.380	0.544	550	550	550	404	267	189	141	109	
S11	0.438	0.622	550	550	550	466	307	218	162	126	100
S12	0.494	0.696	550	550	550	526	347	246	183	142	113

ASD

METRIC LOAD TABLE FOR JOIST TOP CHORD EXTENSIONS R-TYPE BASED ON 345 MPa YIELD

TOP CHORD EXTENSION LENGTH (L1)			152	305	457	610	762	914	1067	1219	1372	1524	1676	1829
TYPE	S _x (mm ³)	I _x (mm ⁴)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)											
R1	14666	465762	8.02	8.02	8.02	8.02	8.02	6.50	4.84	3.75	2.99	2.43	2.02	1.70
R2	15125	481579	8.02	8.02	8.02	8.02	8.02	6.71	5.00	3.88	3.09	2.52	2.10	1.76
R3	17026	540684	8.02	8.02	8.02	8.02	8.02	7.55	5.63	4.36	3.48	2.84	2.36	1.98
R4	18796	596459	8.02	8.02	8.02	8.02	8.02	8.02	6.21	4.81	3.83	3.12	2.59	2.18
R5	20467	649737	8.02	8.02	8.02	8.02	8.02	8.02	6.77	5.23	4.17	3.40	2.83	2.39
R6	22155	703431	8.02	8.02	8.02	8.02	8.02	8.02	7.32	5.67	4.52	3.69	3.06	2.58
R7	23302	750049	8.02	8.02	8.02	8.02	8.02	8.02	7.70	5.96	4.75	3.88	3.22	2.71
R8	25531	810818	8.02	8.02	8.02	8.02	8.02	8.02	8.02	6.53	5.21	4.24	3.53	2.97
R9	27415	870339	8.02	8.02	8.02	8.02	8.02	8.02	8.02	7.01	5.60	4.56	3.79	3.19
R10	31643	1004782	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	6.46	5.26	4.37	3.69
R11	35773	1135895	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	7.31	5.95	4.94	4.18
R12	39542	1255353	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	8.02	6.58	5.47	4.62

LRFD

METRIC LOAD TABLE FOR JOIST TOP CHORD EXTENSIONS R-TYPE BASED ON 345 MPa YIELD

TOP CHORD EXTENSION LENGTH (L1)			152	305	457	610	762	914	1067	1219	1372	1524	1676	1829
TYPE	S _x (mm ³)	I _x (mm ⁴)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)											
R1	14666	465762	12.03	12.03	12.03	12.03	12.03	9.76	7.26	5.63	4.49	3.65	3.03	2.55
R2	15125	481579	12.03	12.03	12.03	12.03	12.03	10.06	7.50	5.82	4.64	3.78	3.15	2.64
R3	17026	540684	12.03	12.03	12.03	12.03	12.03	11.33	8.44	6.54	5.22	4.26	3.54	2.99
R4	18796	596459	12.03	12.03	12.03	12.03	12.03	12.03	9.32	7.22	5.74	4.68	3.89	3.28
R5	20467	649737	12.03	12.03	12.03	12.03	12.03	12.03	10.15	7.85	6.26	5.10	4.24	3.59
R6	22155	703431	12.03	12.03	12.03	12.03	12.03	12.03	10.98	8.51	6.78	5.54	4.59	3.87
R7	23302	750049	12.03	12.03	12.03	12.03	12.03	12.03	11.55	8.94	7.13	5.82	4.83	4.07
R8	25531	810818	12.03	12.03	12.03	12.03	12.03	12.03	12.03	9.80	7.82	6.36	5.29	4.46
R9	27415	870339	12.03	12.03	12.03	12.03	12.03	12.03	12.03	10.52	8.40	6.84	5.69	4.79
R10	31643	1004782	12.03	12.03	12.03	12.03	12.03	12.03	12.03	12.03	9.69	7.89	6.56	5.54
R11	35772	1135895	12.03	12.03	12.03	12.03	12.03	12.03	12.03	12.03	10.96	8.93	7.41	6.27
R12	39541	1255353	12.03	12.03	12.03	12.03	12.03	12.03	12.03	12.03	12.03	9.87	8.20	6.93

ASD

METRIC LOAD TABLE FOR JOIST TOP CHORD EXTENSIONS S-TYPE
BASED ON 345 MPa YIELD

TOP CHORD EXTENSION LENGTH (L1)			152	305	457	610	762	914	1067	1219	1372
TYPE	S _x (mm ³)	I _x (mm ⁴)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)								
S1	1622	36628	8.02	5.29	2.59	1.53					
S2	2081	57439	8.02	6.81	3.34	1.97					
S3	2359	64932	8.02	7.72	3.77	2.23					
S4	2621	71591	8.02	8.02	4.20	2.48	1.63				
S5	2884	78251	8.02	8.02	4.61	2.72	1.79				
S6	3146	84911	8.02	8.02	5.03	2.97	1.97				
S7	3949	127366	8.02	8.02	6.31	3.73	2.46	1.75			
S8	4358	138188	8.02	8.02	6.97	4.13	2.72	1.92			
S9	4719	149010	8.02	8.02	7.55	4.46	2.94	2.08	1.56		
S10	6227	226429	8.02	8.02	8.02	5.89	3.89	2.75	2.05	1.59	
S11	7177	258895	8.02	8.02	8.02	6.80	4.48	3.18	2.36	1.83	1.45
S12	8095	289697	8.02	8.02	8.02	7.67	5.06	3.59	2.67	2.07	1.64

LRFD

METRIC LOAD TABLE FOR JOIST TOP CHORD EXTENSIONS S-TYPE
BASED ON 345 MPa YIELD

TOP CHORD EXTENSION LENGTH (L1)			152	305	457	610	762	914	1067	1219	1372
TYPE	S _x (mm ³)	I _x (mm ⁴)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)								
S1	1622	36628	12.03	7.93	3.89	2.29					
S2	2081	57439	12.03	10.21	5.00	2.94					
S3	2359	64932	12.03	11.57	5.66	3.34					
S4	2621	71591	12.03	12.03	6.30	3.72	2.45				
S5	2884	78251	12.03	12.03	6.91	4.08	2.68				
S6	3146	84911	12.03	12.03	7.54	4.46	2.94				
S7	3949	127366	12.03	12.03	9.47	5.60	3.69	2.62			
S8	4358	138188	12.03	12.03	10.46	6.18	4.08	2.88			
S9	4719	149010	12.03	12.03	11.33	6.69	4.42	3.12	2.33		
S10	6227	226429	12.03	12.03	12.03	8.84	5.83	4.13	3.07	2.37	
S11	7177	258895	12.03	12.03	12.03	10.20	6.71	4.77	3.54	2.75	2.18
S12	8095	289697	12.03	12.03	12.03	11.51	7.58	5.38	3.99	3.10	2.46

STANDARD ASD LOAD TABLE

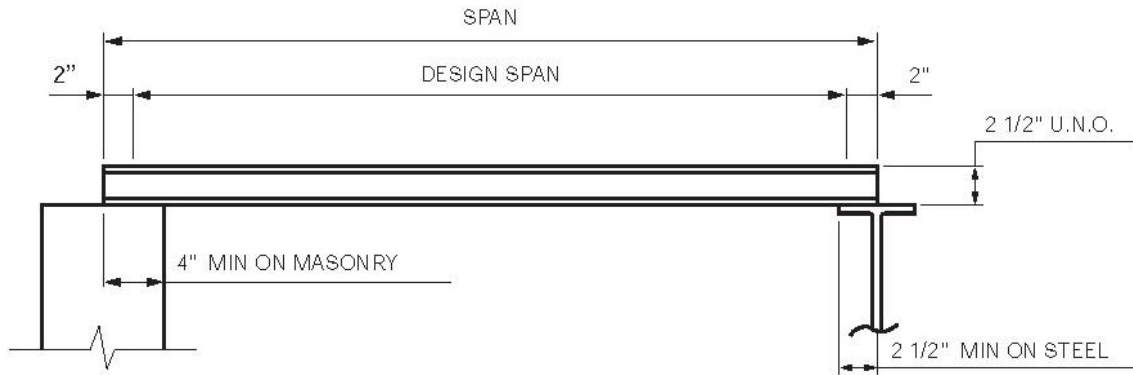
STANDARD LRFD LOAD TABLE

FOR JOIST SUBSTITUTES AND OUTRIGGERS

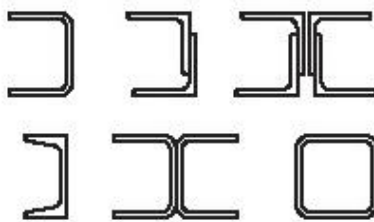
Based on a 50 ksi Maximum Yield Strength
 LRFD Load Table adopted by the Steel Joist Institute May 1, 2001
 Revised to May 18, 2010 – Effective December 31, 2010

JOIST SUBSTITUTES, SIMPLE SPAN LOAD TABLES

Joist substitutes are 2.5 inch (64 mm) deep sections intended for use in very short spans (less than 10 feet (3.05 m)) where Open Web Steel Joists are impractical. They are commonly specified to span over hallways and short spans in skewed bays.



Joist substitutes are solid members that can be manufactured from material conforming to the Steel Joist Institute Standard Specifications and can be made of hot rolled or cold-formed channels or HSS as shown below.



Full lateral support to the compressive flange is provided by attachments to the deck. Caution must be exercised during erection since joist substitutes exhibit some degree of instability. After erection and before loads of any description are placed on the joist substitutes, the ends must be attached to the supports per the SJI Standard Specification for Open Web Steel Joists, **K-Series** and the deck installed and attached to the top flange.

The Simple Span Joist Substitutes Load Tables list uniform loads based on **LRFD** and **ASD** methods of design and are shown in U.S. Customary Units.

The **BLACK** figures in the **LRFD** Load Table gives the TOTAL safe factored uniformly distributed load-carrying capacity in pounds per linear foot, of 2.5 Inch Joist Substitutes. The **BLACK** figures in the **ASD** Load Table gives the TOTAL safe uniformly distributed load-carrying capacity in pounds per linear foot, of 2.5 Inch Joist Substitutes.

The **RED** figures in the Load Table represent the unfactored, uniform load, in pounds per linear foot, which will produce an approximate joist substitute deflection of 1/360 of the span. This load can be linearly prorated to obtain the unfactored, uniform load for supplementary deflection criteria (i.e. an unfactored uniform load which will produce a joist substitute deflection of 1/240 of the span may be obtained by multiplying the **RED** figure by 360/240). In no case shall the prorated, unfactored load exceed the unfactored TOTAL load-carrying capacity of the joist substitute as given in the **ASD** Load Table for 2.5 Inch Simple Span Joist Substitutes, **K-Series**.

Minimum section properties shall be provided for the particular 2.5K type specified even at shorter spans where the developed load capacity may exceed 550 plf (**ASD**) or 825 plf (**LRFD**).

2.5K JOIST SUBSTITUTES PROPERTIES			
2.5K TYPE	2.5K1	2.5K2	2.5K3
S in³	0.62	0.86	1.20
I in⁴	0.77	1.07	1.50
Approx. Wt. (lbs/ft)	3.0	4.2	6.4

LRFD

LOAD TABLES FOR 2.5 INCH SIMPLE SPAN JOIST SUBSTITUTES, K-SERIES			
Based on a Yield Strength of 50 ksi			
Designation	2.5K1	2.5K2	2.5K3
Span (ft-in)	Pounds per Linear Foot		
4'-0"	825	825	825
	550	550	550
5'-0"	825	825	825
	326	452	550
6'-0"	579	803	825
	182	253	354
7'-0"	419	581	810
	112	155	218
8'-0"	316	439	612
	73	102	143
9'-0"	0	343	479
	0	71	99
10'-0"	0	0	385
	0	0	71

ASD

LOAD TABLES FOR 2.5 INCH SIMPLE SPAN JOIST SUBSTITUTES, K-SERIES			
Based on a Yield Strength of 50 ksi			
Designation	2.5K1	2.5K2	2.5K3
Span (ft-in)	Pounds per Linear Foot		
4'-0"	550	550	550
	550	550	550
5'-0"	550	550	550
	326	452	550
6'-0"	386	536	550
	182	253	354
7'-0"	279	387	540
	112	155	218
8'-0"	211	293	408
	73	102	143
9'-0"	0	229	320
	0	71	99
10'-0"	0	0	257
	0	0	71

The Simple Span Joist Substitutes Load Tables list uniform loads based on **LRFD** and **ASD** methods of design and are shown in S.I. Metric Units.

The **BLACK** figures in the **LRFD** Load Table gives the TOTAL safe factored uniformly distributed load-carrying capacity in kilonewtons per meter, of 64 mm Joist Substitutes. The **BLACK** figures in the **ASD** Load Table gives the TOTAL safe uniformly distributed load-carrying capacity in kilonewtons per meter, of 64 mm Joist Substitutes.

The **RED** figures in the Load Table represent the unfactored, uniform load, in kilonewtons per meter, which will produce an approximate joist substitute deflection of 1/360 of the span. This load can be linearly prorated to obtain the unfactored, uniform load for supplementary deflection criteria (i.e. an unfactored uniform load which will produce a joist substitute deflection of 1/240 of the span may be obtained by multiplying the **RED** figure by 360/240). In no case shall the prorated, unfactored load exceed the unfactored TOTAL load-carrying capacity of the joist substitute as given in the **ASD** Load Table for 64 mm Simple Span Joist Substitutes, **K-Series**.

Minimum section properties shall be provided for the particular 2.5K type specified even at shorter spans where the developed load capacity may exceed 8.02 kN/m (**ASD**) or 12.03 kN/m (**LRFD**).

2.5K JOIST SUBSTITUTES PROPERTIES			
2.5K TYPE	2.5K1	2.5K2	2.5K3
S mm ³	10160	14093	19664
I mm ⁴	320498	445368	624347
Approx. Wt. (kN/m)	0.44	0.61	0.93

LRFD

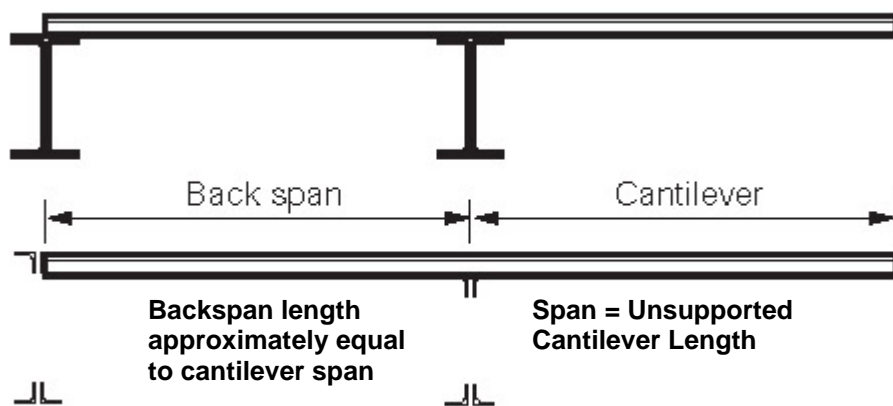
LOAD TABLES FOR 64 MM SIMPLE SPAN JOIST SUBSTITUTES, K-SERIES			
Based on a Yield Strength of 345 Mpa			
Designation	2.5K1	2.5K2	2.5K3
Span (mm)	KiloNewtons per Meter (kN/m)		
1219	12.03	12.03	12.03
	8.02	8.02	8.02
1524	12.03	12.03	12.03
	4.75	6.60	8.02
1829	8.45	11.72	12.03
	2.65	3.68	5.16
2134	6.11	8.46	11.82
	1.62	2.26	3.17
2438	4.61	6.41	8.93
	1.07	1.48	2.08
2743	0.00	5.01	6.99
	0.00	1.03	1.44
3048	0.00	0.00	5.61
	0.00	0.00	1.04

ASD

LOAD TABLES FOR 64 MM SIMPLE SPAN JOIST SUBSTITUTES, K-SERIES			
Based on a Yield Strength of 345 Mpa			
Designation	2.5K1	2.5K2	2.5K3
Span (mm)	KiloNewtons per Meter (kN/m)		
1219	8.02	8.02	8.02
	8.02	8.02	8.02
1524	8.02	8.02	8.02
	4.75	6.60	8.02
1829	5.63	7.81	8.02
	2.65	3.68	5.16
2134	4.07	5.64	7.88
	1.62	2.26	3.17
2438	3.07	4.27	5.95
	1.07	1.48	2.08
2743	0.00	3.34	4.66
	0.00	1.03	1.44
3048	0.00	0.00	3.75
	0.00	0.00	1.04

JOIST SUBSTITUTES, OUTRIGGERS LOAD TABLES

Joist substitutes may be used in an outrigger condition where the member is overhanging one support as illustrated below where a portion is the back span and the remainder is the cantilever span or outrigger. Joist substitutes used in this configuration are 2.5 inch (64 mm) deep sections.



The Joist Outriggers Load Tables list uniform loads based on **LRFD** and **ASD** methods of design and are shown in U.S. Customary

The **BLACK** figures in the **LRFD** Load Table gives the TOTAL safe factored uniformly distributed load-carrying capacity in pounds per linear foot, of 2.5 Inch Joist Outriggers. The **BLACK** figures in the **ASD** Load Table gives the TOTAL safe uniformly distributed load-carrying capacity in pounds per linear foot, of 2.5 Inch Joist Outriggers.

Serviceability requirements must be checked by the specifying professional. When calculating the actual live load deflection at the end of the cantilever it is necessary to consider the length of the back span.

Minimum section properties shall be provided for the particular 2.5K type specified even at shorter spans where the developed load capacity may exceed 550 plf (**ASD**) or 825 plf (**LRFD**).

LRFD

LOAD TABLES FOR 2.5 INCH JOIST OUTRIGGERS, K-SERIES									
OUTRIGGER TYPE	TOTAL ALLOWABLE LOAD FOR UNSUPPORTED CANTILEVER, PLF								
	SPAN (ft-in)								
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
2.5K1	825	744	517	380	291	230	186	154	129
2.5K2	825	825	717	527	403	319	258	213	179
2.5K3	825	825	825	735	563	444	360	298	250

ASD

LOAD TABLES FOR 2.5 INCH JOIST OUTRIGGERS, K-SERIES									
OUTRIGGER TYPE	TOTAL ALLOWABLE LOAD FOR UNSUPPORTED CANTILEVER, PLF								
	SPAN (ft-in)								
	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
2.5K1	550	496	344	253	194	153	124	102	86
2.5K2	550	550	478	351	269	212	172	142	119
2.5K3	550	550	550	490	375	296	240	198	167

The Joist Outriggers Load Tables list uniform loads based on **LRFD** and **ASD** methods of design and are shown in S.I. Metric Units.

The **BLACK** figures in the **LRFD** Load Table gives the TOTAL safe factored uniformly distributed load-carrying capacity in kilonewtons per meter, of 64 mm Joist Outriggers. The **BLACK** figures in the **ASD** Load Table gives the TOTAL safe uniformly distributed load-carrying capacity in kilonewtons per meter, of 64 mm Joist Outriggers.

Serviceability requirements must be checked by the specifying professional. When calculating the actual live load deflection at the end of the cantilever it is necessary to consider the length of the back span.

Minimum section properties shall be provided for the particular 2.5K type specified even at shorter spans where the developed load capacity may exceed 8.02 kN/m (**ASD**) or 12.03 kN/m (**LRFD**).

LRFD

LOAD TABLES FOR 64 MM JOIST OUTRIGGERS, K-SERIES									
OUTRIGGER TYPE	TOTAL ALLOWABLE LOAD FOR UNSUPPORTED CANTILEVER, kN/m								
	SPAN (mm)								
	610	762	914	167	1219	1372	1524	1676	1229
2.5K1	12.03	10.85	7.53	5.54	4.23	3.35	2.70	2.24	1.88
2.5K2	12.03	12.03	10.46	7.68	5.88	4.64	3.77	3.11	2.61
2.5K3	12.03	12.03	12.03	10.71	8.21	6.48	5.25	4.34	3.65

ASD

LOAD TABLES FOR 64 MM JOIST OUTRIGGERS, K-SERIES									
OUTRIGGER TYPE	TOTAL ALLOWABLE LOAD FOR UNSUPPORTED CANTILEVER, kN/m								
	SPAN (mm)								
	610	762	914	167	1219	1372	1524	1676	1229
2.5K1	8.02	7.23	5.02	3.69	2.82	2.23	1.80	1.49	1.25
2.5K2	8.02	8.02	6.97	5.12	3.92	3.09	2.51	2.07	1.74
2.5K3	8.02	8.02	8.02	7.14	5.47	4.32	3.50	2.89	2.43

STANDARD LRFD LOAD TABLE

LONGSPAN STEEL JOISTS, LH-SERIES

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

The **BLACK** figures in the Load Table give the TOTAL safe factored uniformly distributed load-carrying capacities, in pounds per linear foot, of **LRFD LH-Series** Steel Joists.

The approximate joist weights, in pounds per linear foot, given in the Load Table may be added to the other building weights to determine the unfactored DEAD load. In all cases the factored DEAD load, including the joist self-weight, must be deducted from the TOTAL load to determine the factored LIVE load. The approximate joist weights do not include accessories.

The **RED** figures in the Load Table represent the unfactored, uniform load, in pounds per linear foot, which will produce an approximate joist deflection of 1/360 of the span. This load can be linearly prorated to obtain the unfactored, uniform load for supplementary deflection criteria (i.e. an unfactored uniform load which will produce a joist deflection of 1/240 of the span may be obtained by multiplying the **RED** figures by 360/240). In no case shall the prorated, unfactored load exceed the unfactored TOTAL load-carrying capacity of the joist as given in the Standard **ASD** Load Table for Longspan Steel Joists, **LH-Series**.

The Load Table applies to joists with either parallel chords or pitched top chords. Joists can have a top chord pitch up to 1/2 inch per foot. If the pitch exceeds this limit, the Load Table does not apply. When top chords are pitched, the load-carrying capacities are determined by the nominal depth of the joists at the center of the span. Sloped parallel-chord joists shall use span as defined by the length along the slope.

Where the joist span is in the **RED SHADED** area of the Load Table, the row of bridging nearest the mid span shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until this row of bolted diagonal bridging is completely installed. The **RED SHADED** area extends up through 60'-0".

Where the joist span is in the **BLUE SHADED** area of the Load Table, all rows of bridging shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until the two rows of bridging nearest the third points are completely installed. The **BLUE SHADED** area starts after 60'-0" and extends up through 100'-0".

The approximate gross moment of inertia (not adjusted for shear deformation), in inches⁴, of a standard joist listed in the Load Table may be determined as follows:

$$I_j = 26.767(W)(L^3)(10^{-6}), \text{ where } W = \text{RED figure in the Load Table, and}$$

$$L = (\text{span} - 0.33) \text{ in feet.}$$

Loads for span increments not explicitly given in the Load Table may be determined using linear interpolation between the load values given in adjacent span columns.

*The safe factored uniform load for the spans shown in the SAFE LOAD Column is equal to (SAFE LOAD) / (span). The TOTAL safe factored uniformly distributed load-carrying capacity, for spans less than those shown in the SAFE LOAD Column are given in the MAX LOAD Column.

To solve for an unfactored RED figure for spans shown in the SAFE LOAD Column (or lesser spans), multiply the unfactored RED figure of the shortest span shown in the Load Table by (the shortest span shown in the Load Table – 0.33 feet)² and divide by (the actual span – 0.33 feet)². In no case shall the calculated unfactored load exceed the unfactored TOTAL load-carrying capacity of the joist as determined from the Standard **ASD** Load Table for Longspan Steel Joists, **LH-Series**.

LRFD

STANDARD LOAD TABLE FOR LONGSPAN STEEL JOISTS, LH-SERIES																			
Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)																			
Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists only)	Depth in inches	Max Load (plf) < 22	SAFE LOAD* in Lbs. Between	SPAN IN FEET														
					22-25	26	27	28	29	30	31	32	33	34	35	36			
18LH02	10	18	829	18240	702	663	627	586	550	517	486	459	433	409	388				
					313	284	259	234	212	193	175	160	147	135	124				
18LH03	11	18	919	20220	781	739	700	657	613	573	538	505	475	448	424				
					348	317	289	262	236	213	194	177	161	148	136				
18LH04	12	18	1070	23550	906	856	802	750	703	660	619	582	547	516	487				
					403	367	329	296	266	242	219	200	182	167	153				
18LH05	15	18	1210	26610	1026	972	921	871	814	762	714	672	631	595	562				
					454	414	378	345	311	282	256	233	212	195	179				
18LH06	15	18	1430	31470	1213	1123	1044	972	907	849	796	748	705	664	627				
					526	469	419	377	340	307	280	254	232	212	195				
18LH07	17	18	1485	32670	1260	1213	1170	1089	1017	952	892	838	789	744	703				
					553	513	476	428	386	349	317	288	264	241	222				
18LH08	19	18	1548	34050	1314	1264	1218	1176	1137	1075	1020	961	906	856	810				
					577	534	496	462	427	387	351	320	292	267	246				
18LH09	21	18	1658	36480	1404	1351	1302	1257	1215	1174	1138	1069	1006	949	897				
					616	571	527	491	458	418	380	346	316	289	266				
			< 23	23-25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
20LH02	10	20	747	17190	663	655	646	615	582	547	516	487	460	436	412	393	373	355	337
					306	303	298	274	250	228	208	190	174	160	147	136	126	117	108
20LH03	11	20	793	18240	703	694	687	678	651	621	592	558	528	499	474	448	424	403	382
					337	333	317	302	280	258	238	218	200	184	169	156	143	133	123
20LH04	12	20	972	22350	861	849	837	792	744	700	660	624	589	558	529	502	477	454	433
					428	406	386	352	320	291	265	243	223	205	189	174	161	149	139
20LH05	14	20	1045	24030	924	913	903	892	856	816	769	726	687	651	616	585	556	529	504
					459	437	416	395	366	337	308	281	258	238	219	202	187	173	161
20LH06	15	20	1394	32070	1233	1186	1144	1084	1018	952	894	840	790	745	703	666	631	598	568
					606	561	521	477	427	386	351	320	292	267	246	226	209	192	178
20LH07	17	20	1487	34200	1317	1267	1221	1179	1140	1066	1000	940	885	834	789	745	706	670	637
					647	599	556	518	484	438	398	362	331	303	278	256	236	218	202
20LH08	19	20	1534	35280	1362	1309	1263	1219	1177	1140	1083	1030	981	931	882	837	795	754	718
					669	619	575	536	500	468	428	395	365	336	309	285	262	242	225
20LH09	21	20	1679	38610	1485	1429	1377	1329	1284	1242	1203	1167	1132	1068	1009	954	904	858	816
					729	675	626	581	542	507	475	437	399	366	336	309	285	264	244
20LH10	23	20	1810	41640	1602	1542	1486	1434	1386	1341	1297	1258	1221	1186	1122	1060	1005	954	906
					786	724	673	626	585	545	510	479	448	411	377	346	320	296	274

LRFD

STANDARD LOAD TABLE FOR LONGSPAN STEEL JOISTS, LH-SERIES

Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists only)	Depth in inches	Max Load (plf)	SAFELOAD* in Lbs. Between	SPAN IN FEET																	
24LH03	11	24	601	17430	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48			
					513	508	504	484	460	439	418	400	382	366	351	336	322	310	298			
24LH04	12	24	737	21360	235	226	218	204	188	175	162	152	141	132	124	116	109	102	96			
					628	597	568	540	514	490	468	447	427	409	393	376	361	346	333			
24LH05	13	24	789	22890	288	265	246	227	210	195	182	169	158	148	138	130	122	114	107			
					673	669	660	628	598	570	544	520	496	475	456	436	420	403	387			
24LH06	16	24	1061	30780	308	297	285	264	244	226	210	196	182	171	160	150	141	132	124			
					906	868	832	795	756	720	685	655	625	598	571	546	522	501	480			
24LH07	17	24	1166	33810	411	382	356	331	306	284	263	245	228	211	197	184	172	161	152			
					997	957	919	882	847	811	774	736	702	669	639	610	583	559	535			
24LH08	18	24	1243	36060	452	421	393	367	343	320	297	276	257	239	223	208	195	182	171			
					1060	1015	973	933	895	858	817	780	745	712	682	652	625	600	576			
24LH09	21	24	1464	42450	480	447	416	388	362	338	314	292	272	254	238	222	208	196	184			
					1248	1212	1177	1146	1096	1044	994	948	903	861	822	786	751	720	690			
24LH10	23	24	1547	44850	562	530	501	460	424	393	363	337	313	292	272	254	238	223	209			
					1323	1284	1248	1213	1182	1152	1105	1053	1002	955	912	873	834	799	766			
24LH11	25	24	1630	47280	596	559	528	500	474	439	406	378	351	326	304	285	266	249	234			
					1390	1350	1312	1276	1243	1210	1180	1152	1101	1051	1006	963	924	885	850			
					624	588	555	525	498	472	449	418	388	361	337	315	294	276	259			
				< 34	34-41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56		
28LH05	13	28	623	21180	505	484	465	445	429	412	397	382	367	355	342	330	319	309	298			
					219	205	192	180	169	159	150	142	133	126	119	113	107	102	97			
28LH06	16	28	828	28140	672	643	618	592	568	546	525	505	486	469	451	436	421	406	393			
					289	270	253	238	223	209	197	186	175	166	156	148	140	133	126			
28LH07	17	28	934	31770	757	726	696	667	640	615	591	568	547	528	508	490	474	457	442			
					326	305	285	267	251	236	222	209	197	186	176	166	158	150	142			
28LH08	18	28	1001	34020	810	775	744	712	684	657	630	604	580	556	535	516	496	478	462			
					348	325	305	285	268	252	236	222	209	196	185	175	165	156	148			
28LH09	21	28	1232	41880	1000	958	918	879	844	810	778	748	721	694	669	645	622	601	580			
					428	400	375	351	329	309	291	274	258	243	228	216	204	193	183			
28LH10	23	28	1347	45810	1093	1056	1018	976	937	900	864	831	799	769	742	715	690	666	643			
					466	439	414	388	364	342	322	303	285	269	255	241	228	215	204			
28LH11	25	28	1445	49140	1170	1143	1104	1066	1023	982	943	907	873	841	810	781	753	727	702			
					498	475	448	423	397	373	351	331	312	294	278	263	249	236	223			
28LH12	27	28	1587	53970	1285	1255	1227	1200	1173	1149	1105	1063	1023	984	948	913	880	849	819			
					545	520	496	476	454	435	408	383	361	340	321	303	285	270	256			
28LH13	30	28	1654	56250	1342	1311	1281	1252	1224	1198	1173	1149	1126	1083	1041	1002	964	930	897			
					569	543	518	495	472	452	433	415	396	373	352	332	314	297	281			
				< 39	39-46	47-49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
32LH06	14	32	647	25230	507	489	472	456	441	426	412	399	385	373	363	351	340	330	321			
					211	199	189	179	169	161	153	145	138	131	125	119	114	108	104			
32LH07	16	32	728	28380	568	549	529	511	493	477	462	447	432	418	406	393	381	370	360			
					235	223	211	200	189	179	170	162	154	146	140	133	127	121	116			
32LH08	17	32	790	30810	616	595	574	553	535	517	499	483	468	453	439	426	412	400	388			
					255	242	229	216	205	194	184	175	167	159	151	144	137	131	125			
32LH09	21	32	992	38670	774	747	720	694	670	648	627	606	586	568	550	534	517	502	487			
					319	302	285	270	256	243	230	219	208	198	189	180	172	164	157			
32LH10	21	32	1096	42750	856	825	796	768	742	717	693	667	645	624	603	583	564	546	529			
					352	332	315	297	282	267	254	240	228	217	206	196	186	178	169			
32LH11	24	32	1201	46830	937	903	870	840	811	783	757	732	709	687	664	643	624	604	585			
					385	363	343	325	308	292	277	263	251	239	227	216	206	196	187			
32LH12	27	32	1409	54960	1101	1068	1032	996	961	928	897	867	838	811	786	762	738	715	694			
					450	428	406	384	364	345	327	311	295	281	267	255	243	232	221			
32LH13	30	32	1572	61320	1225	1201	1177	1156	1113	1072	1035	999	964	931	900	871	843	816	790			
					500	480	461	444	420	397	376	354	336	319	304	288	275	262	249			
32LH14	33	32	1618	63120	1264	1239	1215	1192	1170	1149	1107	1069	1032	997	964	933	903	874	846			
					515	495	476	458	440	417	395	374	355	337	321	304	290	276	264			
32LH15	35	32	1673	65250	1305	1279	1255	1231	1207	1186	1164	1144	1125	1087	1051	1017	984	952	924			
					532	511	492	473	454	438	422	407	393	374	355	338	322	306	292			
				< 43	43-46	47-56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
36LH07	16	36	590	25350	438	424	411	399	387	376	366	355	345	336	327	318	310	301	294			
					177	168	160	153	146	140	134	128	122	117	112	107	103	99	95			
36LH08	18	36	649	27900	481	466	453	439	426	414	402	390	379	369	358	349	340	331	322			
					194	185	176	168	160	153	146	140	134	128	123	118	113	109	104			
36LH09	21	36	832	35760	616	597	579	561	544	528	513	499	484	471	459	445	433	423	412			
					247	235	224	214	204	195	186	179	171	163	157	150	144	138	133			
36LH10	21	36	916	39390	681	660	639	619	601	583	567	550	535	520	507	492	480	466	454			
					273	260	248	236	225	215	206	197	188	180	173	165	159	152	146			
36LH11	23	36	1000	42990	742	720	697	676	657	637	618	601	583	567	552	537	522	508	495			
					297	283	269	257	246	234	224	214	205	196	188	1						

LRFD

STANDARD LOAD TABLE FOR LONGSPAN STEEL JOISTS, LH-SERIES

Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists Only)	Depth in inches	Max Load (plf) < 48	SAFELOAD* in Lbs. Between		SPAN IN FEET															
				48-59	60-65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
40LH08	16	40	521	25020	25020	381	370	361	351	342	333	325	316	309	301	294	288	280	274	267	
						150	144	138	132	127	122	117	112	108	104	100	97	93	90	86	
40LH09	21	40	685	32880	32880	498	484	472	459	447	436	424	414	403	394	384	375	366	358	349	
						196	188	180	173	166	160	153	147	141	136	131	126	122	118	113	
40LH10	21	40	754	36180	36180	550	535	520	507	493	481	469	457	445	435	424	414	403	393	382	
						216	207	198	190	183	176	169	162	156	150	144	139	134	129	124	
40LH11	22	40	823	39510	39510	598	582	567	552	537	523	510	498	484	472	462	450	439	429	418	
						234	224	215	207	198	190	183	176	169	163	157	151	145	140	135	
40LH12	25	40	1002	48090	48090	729	708	688	670	652	636	619	603	588	573	559	546	532	519	507	
						285	273	261	251	241	231	222	213	205	197	189	182	176	169	163	
40LH13	30	40	1181	56700	56700	859	835	813	792	771	750	730	712	694	676	660	643	628	613	598	
						334	320	307	295	283	271	260	250	241	231	223	214	207	199	192	
40LH14	35	40	1351	64830	64830	984	957	930	904	880	856	834	813	792	772	753	735	717	699	682	
						383	367	351	336	323	309	297	285	273	263	252	243	233	225	216	
40LH15	36	40	1511	72510	72510	1101	1068	1036	1006	978	949	924	898	874	850	828	807	786	766	747	
						427	408	390	373	357	342	328	315	302	290	279	268	258	248	239	
40LH16	42	40	1665	79920	79920	1212	1194	1176	1158	1141	1126	1095	1065	1036	1009	982	957	933	909	886	
						469	455	441	428	416	404	387	371	356	342	329	316	304	292	282	
			< 53	53-59	60-73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	
44LH09	19	44	569	30150	30150	408	397	388	379	370	363	354	346	339	331	324	316	310	303	297	
						158	152	146	141	136	131	127	122	118	114	110	106	103	99	96	
44LH10	21	44	628	33300	33300	450	439	429	418	408	399	390	381	373	364	357	349	342	334	327	
						174	168	162	155	150	144	139	134	130	125	121	117	113	110	106	
44LH11	22	44	679	36000	36000	487	475	465	453	442	433	423	414	403	396	387	378	370	363	354	
						188	181	175	168	162	157	151	146	140	136	131	127	123	119	115	
44LH12	25	44	842	44610	44610	603	589	574	561	547	534	520	508	496	484	472	462	450	439	430	
						232	224	215	207	200	192	185	179	172	166	160	155	149	144	139	
44LH13	30	44	998	52890	52890	715	699	681	666	649	634	619	606	592	579	565	553	541	529	519	
						275	265	254	246	236	228	220	212	205	198	191	185	179	173	167	
44LH14	31	44	1148	60870	60870	823	801	780	759	739	721	703	685	669	654	637	622	609	594	580	
						315	302	291	279	268	259	249	240	231	223	215	207	200	193	187	
44LH15	36	44	1336	70830	70830	958	934	912	889	868	847	826	805	786	768	750	732	714	699	682	
						366	352	339	326	314	303	292	281	271	261	252	243	234	227	219	
44LH16	42	44	1541	81660	81660	1105	1078	1051	1026	1002	978	955	933	912	891	870	852	832	814	796	
						421	405	390	375	362	348	336	324	313	302	291	282	272	263	255	
44LH17	47	44	1655	87690	87690	1185	1170	1153	1138	1125	1098	1072	1048	1024	1000	978	957	936	915	895	
						450	438	426	415	405	390	376	363	351	338	327	316	305	295	285	
			< 57	57-59	60-81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	
48LH10	21	48	528	30120	30120	369	361	354	346	339	331	325	318	312	306	300	294	288	282	277	
						141	136	132	127	123	119	116	112	108	105	102	99	96	93	90	
48LH11	22	48	573	32670	32670	399	390	382	373	366	358	351	343	337	330	324	318	312	306	300	
						152	147	142	137	133	129	125	120	117	113	110	106	103	100	97	
48LH12	25	48	724	41250	41250	504	493	483	472	462	451	442	433	424	415	408	399	391	384	376	
						191	185	179	173	167	161	156	151	147	142	138	133	129	126	122	
48LH13	29	48	867	49410	49410	603	589	576	564	552	540	529	517	507	498	487	477	468	459	450	
						228	221	213	206	199	193	187	180	175	170	164	159	154	150	145	
48LH14	32	48	1023	58290	58290	712	696	681	666	651	637	624	610	598	585	574	562	550	540	529	
						269	260	251	243	234	227	220	212	206	199	193	187	181	176	171	
48LH15	36	48	1176	67020	67020	817	799	781	765	748	732	717	702	687	672	658	645	633	619	607	
						308	298	287	278	269	260	252	244	236	228	221	214	208	201	195	
48LH16	42	48	1355	77250	77250	943	922	901	882	864	844	826	810	792	777	760	745	730	715	702	
						355	343	331	320	310	299	289	280	271	263	255	247	239	232	225	
48LH17	47	48	1522	86760	86760	1059	1035	1012	990	969	948	928	909	889	871	853	837	820	804	787	
						397	383	371	358	346	335	324	314	304	294	285	276	268	260	252	

STANDARD ASD LOAD TABLE

LONGSPAN STEEL JOISTS, LH-SERIES

Based on a 50 ksi Maximum Yield Strength
 Adopted by the Steel Joist Institute May 25, 1983
 Revised to May 18, 2010 – Effective December 31, 2010

The **BLACK** figures in the Load Table give the TOTAL safe uniformly distributed load-carrying capacities, in pounds per linear foot, of **ASD LH-Series** Steel Joists.

The approximate joist weights, in pounds per linear foot, given in the Load Table may be added to the other building weights to determine the DEAD load. In all cases the DEAD load, including the joist self-weight, must be deducted from the TOTAL load to determine the LIVE load. The approximate joist weights do not include accessories.

The **RED** figures in the Load Table represent the uniform load, in pounds per linear foot, which will produce an approximate joist deflection of 1/360 of the span. This load can be linearly prorated to obtain the uniform load for supplementary deflection criteria (i.e. a uniform load that will produce a joist deflection of 1/240 of the span may be obtained by multiplying the **RED** figures by 360/240). In no case shall the prorated load exceed the TOTAL load-carrying capacity of the joist.

The Load Table applies to joists with either parallel chords or pitched top chords. Joists can have a top chord pitch up to 1/2 inch per foot. If the pitch exceeds this limit, the Load Table does not apply. When top chords are pitched, the load-carrying capacities are determined by the nominal depth of the joists at the center of the span. Sloped parallel-chord joists shall use span as defined by the length along the slope.

Where the joist span is in the **RED SHADED** area of the Load Table, the row of bridging nearest the mid span shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until this row of bolted diagonal bridging is completely installed. The **RED SHADED** area extends up through 60'–0".

Where the joist span is in the **BLUE SHADED** area of the Load Table, all rows of bridging shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until the two rows of bridging nearest the third points are completely installed. The **BLUE SHADED** area starts after 60'–0" and extends up through 100'–0".

The approximate gross moment of inertia (not adjusted for shear deformation), in inches⁴, of a standard joist listed in the Load Table may be determined as follows:

$$I_j = 26.767(W)(L^3)(10^{-6}), \text{ where } W = \text{RED figure in the Load Table, and}$$

$$L = (\text{span} - 0.33) \text{ in feet.}$$

Loads for span increments not explicitly given in the Load Table may be determined using linear interpolation between the load values given in adjacent span columns.

*The safe uniform load for the spans shown in the SAFE LOAD Column is equal to (SAFE LOAD) / (span). The TOTAL safe uniformly distributed load-carrying capacity, for spans less than those shown in the SAFE LOAD Column are given in the MAX LOAD Column.

To solve for a **RED** figure for spans shown in the SAFE LOAD Column (or lesser spans), multiply the RED figure of the shortest span shown in the Load Table by (the shortest span shown in the Load Table – 0.33 feet)² and divide by (the actual span – 0.33 feet)². In no case shall the calculated load exceed the TOTAL load-carrying capacity of the joist.



STANDARD LOAD TABLE FOR LONGSPAN STEEL JOISTS LH-SERIES

Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists only)	Depth in inches	Max Load (plf) < 22	SAFE LOAD* in Lbs. Between	SPAN IN FEET														
					22-25	26	27	28	29	30	31	32	33	34	35	36			
18LH02	10	18	553	12160	468	442	418	391	367	345	324	306	289	273	259				
					313	284	259	234	212	193	175	160	147	135	124				
18LH03	11	18	613	13480	521	493	467	438	409	382	359	337	317	299	283				
					348	317	289	262	236	213	194	177	161	148	136				
18LH04	12	18	714	15700	604	571	535	500	469	440	413	388	365	344	325				
					403	367	329	296	266	242	219	200	182	167	153				
18LH05	15	18	806	17740	684	648	614	581	543	508	476	448	421	397	375				
					454	414	378	345	311	282	256	233	212	195	179				
18LH06	15	18	954	20980	809	749	696	648	605	566	531	499	470	443	418				
					526	469	419	377	340	307	280	254	232	212	195				
18LH07	17	18	990	21780	840	809	780	726	678	635	595	559	526	496	469				
					553	513	476	428	386	349	317	288	264	241	222				
18LH08	19	18	1032	22700	876	843	812	784	758	717	680	641	604	571	540				
					577	534	496	462	427	387	351	320	292	267	246				
18LH09	21	18	1105	24320	936	901	868	838	810	783	759	713	671	633	598				
					616	571	527	491	458	418	380	346	316	289	266				
			< 23	23-25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
20LH02	10	20	498	11460	442	437	431	410	388	365	344	325	307	291	275	262	249	237	225
					306	303	298	274	250	228	208	190	174	160	147	136	126	117	108
20LH03	11	20	529	12160	469	463	458	452	434	414	395	372	352	333	316	299	283	269	255
					337	333	317	302	280	258	238	218	200	184	169	156	143	133	123
20LH04	12	20	648	14900	574	566	558	528	496	467	440	416	393	372	353	335	318	303	289
					428	406	386	352	320	291	265	243	223	205	189	174	161	149	139
20LH05	14	20	697	16020	616	609	602	595	571	544	513	484	458	434	411	390	371	353	336
					459	437	416	395	366	337	308	281	258	238	219	202	187	173	161
20LH06	15	20	930	21380	822	791	763	723	679	635	596	560	527	497	469	444	421	399	379
					606	561	521	477	427	386	351	320	292	267	246	226	209	192	178
20LH07	17	20	991	22800	878	845	814	786	760	711	667	627	590	556	526	497	471	447	425
					647	599	556	518	484	438	398	362	331	303	278	256	236	218	202
20LH08	19	20	1023	23520	908	873	842	813	785	760	722	687	654	621	588	558	530	503	479
					669	619	575	536	500	468	428	395	365	336	309	285	262	242	225
20LH09	21	20	1119	25740	990	953	918	886	856	828	802	778	755	712	673	636	603	572	544
					729	675	626	581	542	507	475	437	399	366	336	309	285	264	244
20LH10	23	20	1207	27760	1068	1028	991	956	924	894	865	839	814	791	748	707	670	636	604
					786	724	673	626	585	545	510	479	448	411	377	346	320	296	274

ASD

STANDARD LOAD TABLE FOR LONGSPAN STEEL JOISTS^{LH}-SERIES

Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists only)	Depth in inches	Max Load (plf) < 29	SAFELOAD* in Lbs. Between	SPAN IN FEET																
					29-33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
24LH03	11	24	401	11620	342	339	336	323	307	293	279	267	255	244	234	224	215	207	199		
					235	226	218	204	188	175	162	152	141	132	124	116	109	102	96		
24LH04	12	24	491	14240	419	398	379	360	343	327	312	298	285	273	262	251	241	231	222		
					288	265	246	227	210	195	182	169	158	148	138	130	122	114	107		
24LH05	13	24	526	15260	449	446	440	419	399	380	363	347	331	317	304	291	280	269	258		
					308	297	285	264	244	226	210	196	182	171	160	150	141	132	124		
24LH06	16	24	708	20520	604	579	555	530	504	480	457	437	417	399	381	364	348	334	320		
					411	382	356	331	306	284	263	245	228	211	197	184	172	161	152		
24LH07	17	24	777	22540	665	638	613	588	565	541	516	491	468	446	426	407	389	373	357		
					452	421	393	367	343	320	297	276	257	239	223	208	195	182	171		
24LH08	18	24	829	24040	707	677	649	622	597	572	545	520	497	475	455	435	417	400	384		
					480	447	416	388	362	338	314	292	272	254	238	222	208	196	184		
24LH09	21	24	976	28300	832	808	785	764	731	696	663	632	602	574	548	524	501	480	460		
					562	530	501	460	424	393	363	337	313	292	272	254	238	223	209		
24LH10	23	24	1031	29900	882	856	832	809	788	768	737	702	668	637	608	582	556	533	511		
					596	559	528	500	474	439	406	378	351	326	304	285	266	249	234		
24LH11	25	24	1087	31520	927	900	875	851	829	807	787	768	734	701	671	642	616	590	567		
					624	588	555	525	498	472	449	418	388	361	337	315	294	276	259		
			< 34	34-41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56		
28LH05	13	28	415	14120	337	323	310	297	286	275	265	255	245	237	228	220	213	206	199		
					219	205	192	180	169	159	150	142	133	126	119	113	107	102	97		
28LH06	16	28	552	18760	448	429	412	395	379	364	350	337	324	313	301	291	281	271	262		
					289	270	253	238	223	209	197	186	175	166	156	148	140	133	126		
28LH07	17	28	623	21180	505	484	464	445	427	410	394	379	365	352	339	327	316	305	295		
					326	305	285	267	251	236	222	209	197	186	176	166	158	150	142		
28LH08	18	28	667	22680	540	517	496	475	456	438	420	403	387	371	357	344	331	319	308		
					348	325	305	285	268	252	236	222	209	196	185	175	165	156	148		
28LH09	21	28	821	27920	667	639	612	586	563	540	519	499	481	463	446	430	415	401	387		
					428	400	375	351	329	309	291	274	258	243	228	216	204	193	183		
28LH10	23	28	898	30540	729	704	679	651	625	600	576	554	533	513	495	477	460	444	429		
					466	439	414	388	364	342	322	303	285	269	255	241	228	215	204		
28LH11	25	28	964	32760	780	762	736	711	682	655	629	605	582	561	540	521	502	485	468		
					498	475	448	423	397	373	351	331	312	294	278	263	249	236	223		
28LH12	27	28	1058	35980	857	837	818	800	782	766	737	709	682	656	632	609	587	566	546		
					545	520	496	476	454	435	408	383	361	340	321	303	285	270	256		
28LH13	30	28	1103	37500	895	874	854	835	816	799	782	766	751	722	694	668	643	620	598		
					569	543	518	495	472	452	433	415	396	373	352	332	314	297	281		
			< 39	39-46	47-49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	
32LH06	14	32	431	16820	338	326	315	304	294	284	275	266	257	249	242	234	227	220	214		
					211	199	189	179	169	161	153	145	138	131	125	119	114	108	104		
32LH07	16	32	485	18920	379	366	353	341	329	318	308	298	288	279	271	262	254	247	240		
					235	223	211	200	189	179	170	162	154	146	140	133	127	121	116		
32LH08	17	32	527	20540	411	397	383	369	357	345	333	322	312	302	293	284	275	267	259		
					255	242	229	216	205	194	184	175	167	159	151	144	137	131	125		
32LH09	21	32	661	25780	516	498	480	463	447	432	418	404	391	379	367	356	345	335	325		
					319	302	285	270	256	243	230	219	208	198	189	180	172	164	157		
32LH10	21	32	731	28500	571	550	531	512	495	478	462	445	430	416	402	389	376	364	353		
					352	332	315	297	282	267	254	240	228	217	206	196	186	178	169		
32LH11	24	32	801	31220	625	602	580	560	541	522	505	488	473	458	443	429	416	403	390		
					385	363	343	325	308	292	277	263	251	239	227	216	206	196	187		
32LH12	27	32	939	36640	734	712	688	664	641	619	598	578	559	541	524	508	492	477	463		
					450	428	406	384	364	345	327	311	295	281	267	255	243	232	222		
32LH13	30	32	1048	40880	817	801	785	771	742	715	690	666	643	621	600	581	562	544	527		
					500	480	461	444	420	397	376	354	336	319	304	288	275	262	249		
32LH14	33	32	1079	42080	843	826	810	795	780	766	738	713	688	665	643	622	602	583	564		
					515	495	476	458	440	417	395	374	355	337	321	304	290	276	264		
32LH15	35	32	1115	43500	870	853	837	821	805	791	776	763	750	725	701	678	656	635	616		
					532	511	492	473	454	438	422	407	393	374	355	338	322	306	292		
			< 43	43-46	47-56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
36LH07	16	36	393	16900	292	283	274	266	258	251	244	237	230	224	218	212	207	201	196		
					177	168	160	153	146	140	134	128	122	117	112	107	103	99	95		
36LH08	18	36	433	18600	321	311	302	293	284	276	268	260	253	246	239	233	227	221	215		
					194	185	176	168	160	153	146	140	134	128	123	118	113	109	104		
36LH09	21	36	554	23840	411	398	386	374	363	352	342	333	323	314	306	297	289	282	275		
					247	235	224	214	204	195	186	179	171	163	157	150	144	138	133		
36LH10	21	36	611	26260	454	440	426	413	401	389	378	367	357	347	338	328	320	311	303		
					273	260	248	236	225	215	206	197	188	180	173	165	159	152	146		
36LH11	23	36	667	28660	495	480	465	451	438	425	412	401	389	378	368	358	348				

STANDARD LOAD TABLE FOR LONGSPAN STEEL JOISTS^{LH}-SERIES

Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists Only)	Depth in inches	Max Load (plf) < 48	SAFELOAD* in Lbs. Between																
				SPAN IN FEET																
				48-59	60-65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40LH08	16	40	348	16680	16680	254	247	241	234	228	222	217	211	206	201	196	192	187	183	178
						150	144	138	132	127	122	117	112	108	104	100	97	93	90	86
40LH09	21	40	457	21920	21920	332	323	315	306	298	291	283	276	269	263	256	250	244	239	233
						196	188	180	173	166	160	153	147	141	136	131	126	122	118	113
40LH10	21	40	503	24120	24120	367	357	347	338	329	321	313	305	297	290	283	276	269	262	255
						216	207	198	190	183	176	169	162	156	150	144	139	134	129	124
40LH11	22	40	549	26340	26340	399	388	378	368	358	349	340	332	323	315	308	300	293	286	279
						234	224	215	207	198	190	183	176	169	163	157	151	145	140	135
40LH12	25	40	668	32060	32060	486	472	459	447	435	424	413	402	392	382	373	364	355	346	338
						285	273	261	251	241	231	222	213	205	197	189	182	176	169	163
40LH13	30	40	788	37800	37800	573	557	542	528	514	500	487	475	463	451	440	429	419	409	399
						334	320	307	295	283	271	260	250	241	231	223	214	207	199	192
40LH14	35	40	900	43220	43220	656	638	620	603	587	571	556	542	528	515	502	490	478	466	455
						383	367	351	336	323	309	297	285	273	263	252	243	233	225	216
40LH15	36	40	1007	48340	48340	734	712	691	671	652	633	616	599	583	567	552	538	524	511	498
						427	408	390	373	357	342	328	315	302	290	279	268	258	248	239
40LH16	42	40	1110	53280	53280	808	796	784	772	761	751	730	710	691	673	655	638	622	606	591
						469	455	441	428	416	404	387	371	356	342	329	316	304	292	282
				< 53	53-59	60-73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
44LH09	19	44	379	20100	20100	272	265	259	253	247	242	236	231	226	221	216	211	207	202	198
						158	152	146	141	136	131	127	122	118	114	110	106	103	99	96
44LH10	21	44	419	22200	22200	300	293	286	279	272	266	260	254	249	243	238	233	228	223	218
						174	168	162	155	150	144	139	134	130	125	121	117	113	110	106
44LH11	22	44	453	24000	24000	325	317	310	302	295	289	282	276	269	264	258	252	247	242	236
						188	181	175	168	162	157	151	146	140	136	131	127	123	119	115
44LH12	25	44	561	29740	29740	402	393	383	374	365	356	347	339	331	323	315	308	300	293	287
						232	224	215	207	200	192	185	179	172	166	160	155	149	144	139
44LH13	30	44	665	35260	35260	477	466	454	444	433	423	413	404	395	386	377	369	361	353	346
						275	265	254	246	236	228	220	212	205	198	191	185	179	173	167
44LH14	31	44	766	40580	40580	549	534	520	506	493	481	469	457	446	436	425	415	406	396	387
						315	302	291	279	268	259	249	240	231	223	215	207	200	193	187
44LH15	36	44	891	47220	47220	639	623	608	593	579	565	551	537	524	512	500	488	476	466	455
						366	352	339	326	314	303	292	281	271	261	252	243	234	227	219
44LH16	42	44	1027	54440	54440	737	719	701	684	668	652	637	622	608	594	580	568	555	543	531
						421	405	390	375	362	348	336	324	313	302	291	282	272	263	255
44LH17	47	44	1103	58460	58460	790	780	769	759	750	732	715	699	683	667	652	638	624	610	597
						450	438	426	415	405	390	376	363	351	338	327	316	305	295	285
				< 57	57-59	60-81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
48LH10	21	48	352	20080	20080	246	241	236	231	226	221	217	212	208	204	200	196	192	188	185
						141	136	132	127	123	119	116	112	108	105	102	99	96	93	90
48LH11	22	48	382	21780	21780	266	260	255	249	244	239	234	229	225	220	216	212	208	204	200
						152	147	142	137	133	129	125	120	117	113	110	106	103	100	97
48LH12	25	48	482	27500	27500	336	329	322	315	308	301	295	289	283	277	272	266	261	256	251
						191	185	179	173	167	161	156	151	147	142	138	133	129	126	122
48LH13	29	48	578	32940	32940	402	393	384	376	368	360	353	345	338	332	325	318	312	306	300
						228	221	213	206	199	193	187	180	175	170	164	159	154	150	145
48LH14	32	48	682	38860	38860	475	464	454	444	434	425	416	407	399	390	383	375	367	360	353
						269	260	251	243	234	227	220	212	206	199	193	187	181	176	171
48LH15	36	48	784	44680	44680	545	533	521	510	499	488	478	468	458	448	439	430	422	413	405
						308	298	287	278	269	260	252	244	236	228	221	214	208	201	195
48LH16	42	48	904	51500	51500	629	615	601	588	576	563	551	540	528	518	507	497	487	477	468
						355	343	331	320	310	299	289	280	271	263	255	247	239	232	225
48LH17	47	48	1015	57840	57840	706	690	675	660	646	632	619	606	593	581	569	558	547	536	525
						397	383	371	358	346	335	324	314	304	294	285	276	268	260	252

STANDARD LRFD LOAD TABLE

DEEP LONGSPAN STEEL JOISTS, DLH-SERIES

Based on a 50 ksi Maximum Yield Strength

Spans up to and including 144 ft. adopted by the Steel Joist Institute May 1, 2000

Spans greater than 144 ft. up to and including 240 ft. adopted by the Steel Joist Institute May 18, 2010

Revised to May 18, 2010 – Effective December, 31, 2010

The **BLACK** figures in the Load Table give the TOTAL safe factored uniformly distributed load-carrying capacities, in pounds per linear foot, of **LRFD DLH-Series** Steel Joists.

The approximate joist weights, in pounds per linear foot, given in the Load Table may be added to the other building weights to determine the unfactored DEAD load. In all cases the factored DEAD load, including the joist self-weight, must be deducted from the TOTAL load to determine the factored LIVE load. The approximate joist weights do not include accessories.

The **RED** figures in the Load Table represent the unfactored, uniform load, in pounds per linear foot, which will produce an approximate joist deflection of 1/360 of the span. This load can be linearly prorated to obtain the unfactored, uniform load for supplementary deflection criteria (i.e. the unfactored uniform load which will produce a joist deflection of 1/240 of the span may be obtained by multiplying the **RED** figures by 360/240). In no case shall the prorated, unfactored load exceed the unfactored TOTAL load-carrying capacity of the joist as given in the Standard **ASD** Load Table for Deep Longspan Steel Joists, **DLH-Series**.

The Load Table applies to joists with either parallel chords or pitched top chords. Joists can have a top chord pitch up to 1/2 inch per foot. If the pitch exceeds this limit, the Load Table does not apply. When top chords are pitched, the load-carrying capacities are determined by the nominal depth of the joists at the center of the span. Sloped parallel-chord joists shall use span as defined by the length along the slope.

Where the joist span is in the **BLUE SHADED** area of the Load Table, all rows of bridging shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until the two rows of bridging nearest the third points are completely installed. The **BLUE SHADED** area starts after 60'-0" and extends up through 100'-0".

Where the joist span is in the **GRAY SHADED** area of the Load Table, all rows of bridging shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until all rows of bridging are completely installed. The **GRAY SHADED** area starts after 100'-0" and extends up through 240'-0".

The approximate gross moment of inertia (not adjusted for shear deformation), in inches⁴, of a standard joist listed in the Load Table may be determined as follows:

$$I_j = 26.767(W)(L^3)(10^{-6}), \text{ where } W = \text{RED figure in the Load Table, and}$$

$$L = (\text{span} - 0.33) \text{ in feet.}$$

Loads for span increments not explicitly given in the Load Table may be determined using linear interpolation between the load values given in adjacent span columns.

*The safe factored uniform load for the spans shown in the SAFE LOAD Column is equal to (SAFE LOAD) / (span). The TOTAL safe factored uniformly distributed load-carrying capacity, for spans less than those shown in the SAFE LOAD Column are given in the MAX LOAD Column.

To solve for an unfactored **RED** figure for spans shown in the SAFE LOAD Column (or lesser spans), multiply the unfactored **RED** figure of the shortest span shown in the Load Table by (the shortest span shown in the Load Table - 0.33 feet)² and divide by (the actual span - 0.33 feet)². In no case shall the calculated unfactored load exceed the unfactored TOTAL load-carrying capacity of the joist as determined from the Standard **ASD** Load Table for Deep Longspan Steel Joists, **DLH-Series**.



STANDARD LOAD TABLE LONGSPAN STEEL JOISTS, DLH-SERIES

Based on a 50 ksi Maximum Yield Strength - Loads Shown in Pounds per Linear Foot (plf)

Joist Designation	Approx. Wt in Lbs. Per Linear Ft (Joists only)	Depth in inches	Max Load plf	SAFE LOAD* in Lbs. Between	SPAN IN FEET																			
					< 62	62-89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104			
52DLH10	25	52	648	40200	447	436	427	418	409	400	391	384	376	369	361	354	346	340	334					
					171	165	159	154	150	145	140	136	132	128	124	120	116	114	110					
52DLH11	26	52	712	44130	490	480	469	459	448	439	430	421	412	405	396	388	381	373	366					
					187	181	174	169	164	158	153	149	144	140	135	132	128	124	120					
52DLH12	29	52	794	49230	547	535	523	513	501	490	480	471	460	451	442	433	426	417	409					
					204	197	191	185	179	173	168	163	158	153	149	144	140	135	132					
52DLH13	34	52	964	59760	664	649	636	621	609	595	583	571	559	549	537	526	516	507	496					
					247	239	231	224	216	209	203	197	191	185	180	174	170	164	159					
52DLH14	39	52	1103	68370	760	745	729	714	699	685	670	657	645	631	619	607	595	585	573					
					276	266	258	249	242	234	227	220	213	207	201	194	189	184	178					
52DLH15	42	52	1239	76800	853	835	817	799	783	766	750	735	720	705	691	676	664	651	639					
					311	301	291	282	272	264	256	247	240	233	226	219	213	207	201					
52DLH16	45	52	1335	82800	921	901	882	862	844	826	810	792	777	760	745	730	717	702	688					
					346	335	324	314	304	294	285	276	267	260	252	245	237	230	224					
52DLH17	52	52	1537	95310	1059	1036	1014	991	970	951	930	912	892	874	858	840	823	808	792					
					395	381	369	357	346	335	324	315	304	296	286	279	270	263	255					
				<67	67-97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112				
56DLH11	26	56	631	42300	432	424	415	408	400	393	385	379	372	366	358	352	346	340	334					
					169	163	158	153	148	145	140	136	133	129	125	122	118	115	113					
56DLH12	30	56	725	48600	496	486	477	468	459	450	442	433	426	417	409	402	394	388	381					
					184	178	173	168	163	158	153	150	145	141	137	133	130	126	123					
56DLH13	34	56	879	58860	601	591	579	568	558	547	537	526	516	507	496	487	478	471	462					
					223	216	209	204	197	191	186	181	175	171	166	161	157	152	149					
56DLH14	39	56	993	66540	679	666	652	640	628	616	604	594	582	571	562	552	541	532	523					
					249	242	234	228	221	214	209	202	196	190	186	181	175	171	167					
56DLH15	42	56	1135	76020	777	762	747	732	717	703	690	676	664	651	639	628	616	604	594					
					281	272	264	256	248	242	234	228	221	215	209	204	198	192	188					
56DLH16	46	56	1224	82020	838	822	805	789	774	759	744	730	717	703	690	678	666	654	642					
					313	304	294	285	277	269	262	254	247	240	233	227	221	214	209					
56DLH17	51	56	1411	94530	964	945	927	907	891	873	856	840	823	808	793	780	765	751	738					
					356	345	335	325	316	306	298	289	281	273	266	258	251	245	238					
				< 71	71-99	100-105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120			
60DLH12	29	60	659	46800	46800	442	433	426	418	411	405	397	391	384	378	372	366	360	354	348				
					168	163	158	154	150	146	142	138	134	131	128	124	121	118	115					
60DLH13	35	60	801	56880	56880	537	526	517	508	499	490	483	474	466	459	451	444	436	429	423				
					203	197	191	187	181	176	171	167	163	158	154	151	147	143	139					
60DLH14	40	60	890	63210	63210	597	586	574	564	555	544	534	525	516	507	498	490	481	474	465				
					216	210	205	199	193	189	183	178	173	170	165	161	156	152	148					
60DLH15	43	60	1045	74190	74190	700	687	675	663	651	640	628	618	607	597	588	577	568	559	550				
					255	248	242	235	228	223	216	210	205	200	194	190	185	180	175					
60DLH16	46	60	1149	81570	81570	769	756	741	727	714	702	690	676	666	654	642	631	621	610	600				
					285	277	269	262	255	247	241	235	228	223	217	211	206	201	196					
60DLH17	52	60	1320	93750	93750	885	868	853	837	822	807	793	778	765	751	739	726	714	702	690				
					324	315	306	298	290	283	275	267	261	254	247	241	235	228	223					
60DLH18	59	60	1524	108180	108180	1021	1002	984	966	948	931	915	898	883	867	852	838	823	810	796				
					366	357	346	337	327	319	310	303	294	286	279	272	266	259	252					
				< 76	76-99	100-113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128			
64DLH12	31	64	594	45120	45120	396	388	382	376	370	364	358	352	346	342	336	331	327	321	316				
					153	150	146	142	138	135	132	129	125	122	119	116	114	111	109					
64DLH13	34	64	720	54750	54750	481	472	465	457	450	442	436	429	421	415	409	403	396	390	385				
					186	181	176	171	168	163	159	155	152	148	144	141	137	134	131					
64DLH14	40	64	825	62730	62730	550	540	531	523	514	505	498	489	481	474	466	459	451	444	438				
					199	193	189	184	179	174	171	166	162	158	154	151	147	143	140					
64DLH15	43	64	946	71910	71910	631	621	610	600	591	580	571	562	553	544	537	528	520	511	504				
					234	228	223	217	211	206	201	196	191	187	182	177	173	170	165					
64DLH16	46	64	1065	80940	80940	711	699	687	675	664	652	642	631	621	610	601	591	582	573	564				
					262	254	248	242	235	229	224	218	213	208	203	198	193	189	184					
64DLH17	52	64	1227	93270	93270	819	804	790	777	763	751	738	726	714	702	691	681	669	658	648				
					298	290	283	275	268	262	255	248	243	237	231	226	220	215	210					
64DLH18	59	64	1417	107700	107700	945	928	912	897	880	867	852	838	823	810	798	784	772	760	748				
					337	328	320	311	304	296	288	282	274	267	261	255	249	243	237					
				< 81	81-99	100-121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136			
68DLH13	37	68	650	52650	52650	432	426	418	412	406	400	394	388	382	378	372	366	361	355	351				
					171	168	164	159	155	152	149	145	142	138	135	133	130	127	124					
68DLH14	40	68	749	60630	60630	498	490	483	475	468	462	454	448	441	435	429	421	41						



STANDARD LOAD TABLE LONGSPAN STEEL JOISTS, LRFD DLH-SERIES

Based on a 50 ksi Maximum Yield Strength - Loads Shown in Pounds per Linear Foot (plf)

Joist Designation	Approx. Wt in Lbs. Per Linear Ft (Joists only)	Depth in inches	Max Load (plf)	SAFE LOAD* in Lbs. Between		SPAN IN FEET																	
				< 81	81-99	100-111	112	115	118	121	124	127	130	133	136	139	142	145	148	151	155	160	
				78240	78240	699	663	632	602	575	549	525	503	482	461	443	425	408	392	371	347		
80DLH15	40	80	966	78240	78240	321	296	275	255	236	220	205	193	179	167	157	147	139	130	120	109		
80DLH16	46	80	1161	94020	94020	375	347	321	297	276	257	240	224	209	196	184	172	162	152	141	128		
80DLH17	53	80	1341	108630	108630	451	416	386	358	332	309	288	269	252	235	221	207	195	183	169	154		
80DLH18	60	80	1518	122760	122760	516	477	441	409	380	354	330	308	288	270	253	237	223	210	194	176		
80DLH19	67	80	1768	143220	143220	578	533	493	458	425	396	369	344	322	301	280	263	246	230	217	197		
80DLH20	75	80	1987	160980	160980	646	596	552	512	475	443	412	385	360	337	316	297	279	263	243	220		
			< 89	89-99	100-120	121	124	127	130	133	136	139	142	145	148	151	155	160	165	170	175		
88DLH16	46	88	1048	93270	93270	361	335	313	291	272	254	238	223	210	197	186	172	156	143	130	119		
88DLH17	51	88	1185	105450	105450	404	370	349	325	304	284	266	249	234	220	207	191	173	159	146	132		
88DLH18	58	88	1359	120930	120930	460	427	397	370	346	323	303	284	267	250	236	218	199	181	165	152		
88DLH19	65	88	1572	139890	139890	521	484	450	420	392	367	343	322	302	284	267	248	225	205	187	172		
88DLH20	76	88	1808	160950	160950	623	579	539	502	469	438	410	385	361	340	320	296	269	246	224	206		
88DLH21	89	88	2231	198540	198540	724	673	626	584	545	509	477	447	419	1143	1097	1053	999	936	880	827		
			< 97	97-99	100-129	130	133	136	139	142	145	148	151	155	160	165	170	175	180	185	190		
96DLH17	52	96	1085	105270	105270	389	363	339	318	298	280	263	247	229	208	190	173	159	146	134	124		
96DLH18	58	96	1222	118500	118500	443	413	386	362	340	319	300	282	261	237	216	198	181	166	153	141		
96DLH19	66	96	1460	141660	141660	502	469	438	410	385	361	340	320	296	269	246	224	206	189	174	161		
96DLH20	74	96	1644	159420	159420	569	531	496	465	436	409	385	362	336	305	277	254	233	214	196	181		
96DLH21	90	96	2062	200010	200010	698	652	610	571	535	503	473	445	412	374	341	312	286	263	242	224		
96DLH22	102	96	2310	224070	224070	819	768	721	678	638	590	536	489	447	410	377	347	320	296	274	254		
			< 105	105-138	139	142	145	148	151	155	160	165	170	175	180	185	190	195	200	205			
104DLH18	59	104	1100	115470		831	798	768	734	708	674	635	601	568	537	508	482	458	435	414	394		
104DLH19	67	104	1337	140430		911	871	833	797	761	727	686	648	613	581	552	524	497	473				
104DLH20	75	104	1504	157890		1146	1107	1071	1032	992	944	886	833	784	739	698	660	626	593	563	535		
104DLH21	90	104	1890	198480		1434	1376	1322	1271	1220	1160	1091	1028	970	917	866	821	779	740	703	668		
104DLH22	104	104	2119	222540		1772	1712	1644	1578	1514	1437	1348	1267	1192	1125	1062	1004	952	902	857	814		
104DLH23	109	104	2334	245100		2119	2051	1980	1908	1832	1751	1665	1574	1479	1383	1287	1192	1100	1008	916	824		
			< 113	113-147	148	151	155	160	165	170	175	180	185	190	195	200	205	210	215	220			
112DLH19	67	112	1223	138150		935	900	857	805	759	716	677	643	610	579	549	523	498	476	454	433		
112DLH20	76	112	1384	156360		1065	1032	985	927	873	824	780	740	702	667	632	603	574	547	522	500		
112DLH21	91	112	1743	196950		1337	1287	1223	1150	1083	1022	966	913	867	823	782	744	709	676	645	616		
112DLH22	104	112	1956	221010		1499	1451	1392	1321	1250	1181	1117	1057	1002	952	904	860	820	782	745	712		
112DLH23	110	112	2155	243540		1653	1601	1535	1454	1369	1288	1214	1147	1086	1030	977	928	882	839	800	763		
112DLH24	131	112	2555	286660		1956	1895	1818	1727	1631	1539	1455	1379	1307	1241	1179	1123	1070	1019	972	928		
			< 121	121-165	166	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240			
120DLH20	77	120	1229	148650		896	856	808	766	726	691	658	627	598	570	544	521	498	477	457	439		
120DLH21	92	120	1528	184860		1122	1072	1012	959	908	864	821	782	745	710	678	648	620	593	569	545		
120DLH22	104	120	1751	211920		1283	1235	1169	1106	1049	997	949	903	860	821	783	749	716	686	657	629		
120DLH23	111	120	1938	234480		1415	1361	1287	1219	1157	1099	1046	995	948	903	862	822	786	751	719	689		
120DLH24	132	120	2298	278070		1676	1610	1522	1441	1367	1300	1237	1177	1122	1070	1022	977	934	894	857	821		
120DLH25	152	120	2633	318630		1926	1847	1748	1656	1571	1492	1418	1350	1287	1228	1173	1122	1073	1026	983	943		

STANDARD ASD LOAD TABLE

DEEP LONGSPAN STEEL JOISTS, DLH-SERIES

Based on a 50 ksi Maximum Yield Strength

Spans up to and including 144 ft. adopted by the Steel Joist Institute May 25, 1983

Spans greater than 144 ft. up to and including 240 ft. adopted by the Steel Joist Institute May 18, 2010

Revised to May 18, 2010 – Effective December 31, 2010

The **BLACK** figures in the Load Table give the TOTAL safe uniformly distributed load-carrying capacities, in pounds per linear foot, of **ASD DLH-Series** Steel Joists.

The approximate joist weights, in pounds per linear foot, given in the Load Table may be added to the other building weights to determine the DEAD load. In all cases the DEAD load, including the joist self-weight, must be deducted from the TOTAL load to determine the LIVE load. The approximate joist weights do not include accessories.

The **RED** figures in the Load Table represent the uniform load, in pounds per linear foot, which will produce an approximate joist deflection of 1/360 of the span. This load can be linearly prorated to obtain the uniform load for supplementary deflection criteria (i.e. a uniform load which will produce a joist deflection of 1/240 of the span may be obtained by multiplying the **RED** figures by 360/240). In no case shall the prorated load exceed the TOTAL load-carrying capacity of the joist.

The Load Table applies to joists with either parallel chords or pitched top chords. Joists can have a top chord pitch up to 1/2 inch per foot. If the pitch exceeds this limit, the Load Table does not apply. When top chords are pitched, the load-carrying capacities are determined by the nominal depth of the joists at the center of the span. Sloped parallel-chord joists shall use span as defined by the length along the slope.

Where the joist span is in the **BLUE SHADED** area of the Load Table, all rows of bridging shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until the two rows of bridging nearest the third points are completely installed. The **BLUE SHADED** area starts after 60'-0" and extends up through 100'-0".

Where the joist span is in the **GRAY SHADED** area of the Load Table, all rows of bridging shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until all rows of bridging are completely installed. The **GRAY SHADED** area starts after 100'-0" and extends up through 240'-0".

The approximate gross moment of inertia (not adjusted for shear deformation), in inches⁴, of a standard joist listed in the Load Table may be determined as follows:

$$I_j = 26.767(W)(L^3)(10^{-6}), \text{ where } W = \text{RED figure in the Load Table, and}$$

$$L = (\text{span} - 0.33) \text{ in feet.}$$

Loads for span increments not explicitly given in the Load Table may be determined using linear interpolation between the load values given in adjacent span columns.

*The safe uniform load for the spans shown in the SAFE LOAD Column is equal to (SAFE LOAD) / (span). The TOTAL safe uniformly distributed load-carrying capacity, for spans less than those shown in the SAFE LOAD Column are given in the MAX LOAD Column.

To solve for a **RED** figure for spans shown in the SAFE LOAD Column (or lesser spans), multiply the **RED** figure of the shortest span shown in the Load Table by (the shortest span shown in the Load Table - 0.33 feet)² and divide by (the actual span - 0.33 feet)². In no case shall the calculated load exceed the TOTAL load-carrying capacity of the joist.



STANDARD LOAD TABLE LONGSPAN STEEL JOISTS, DLH-SERIES

Based on a 50 ksi Maximum Yield Strength - Loads Shown in Pounds per Linear Foot (plf)

Joist Designation	Approx. Wt in Lbs. Per Linear Ft (Joists only)	Depth in inches	Max Load plf	SAFE LOAD* in Lbs. Between	SPAN IN FEET																	
					90	91	92	93	94	95	96	97	98	99	100	101	102	103	104			
52DLH10	25	52	432	26800	<62	62-89	298	291	285	279	273	267	261	256	251	246	241	236	231	227	223	
					171	165	159	154	150	145	140	136	132	128	124	120	116	114	110			
52DLH11	26	52	475	29420	298	291	285	279	273	267	261	256	251	246	241	236	231	227	223			
					187	181	174	169	164	158	153	149	144	140	135	132	128	124	120	116	114	110
52DLH12	29	52	529	32820	365	357	349	342	334	327	320	314	307	301	295	289	284	278	273			
					204	197	191	185	179	173	168	163	158	153	149	144	140	135	132	128	124	120
52DLH13	34	52	643	39840	443	433	424	414	406	397	389	381	373	366	358	351	344	338	331			
					247	239	231	224	216	209	203	197	191	185	180	174	170	164	159	154	149	144
52DLH14	39	52	735	45580	507	497	486	476	466	457	447	438	430	421	413	405	397	390	382			
					276	266	258	249	242	234	227	220	213	207	201	194	189	184	178	173	168	163
52DLH15	42	52	826	51200	569	557	545	533	522	511	500	490	480	470	461	451	443	434	426			
					311	301	291	282	272	264	256	247	240	233	226	219	213	207	201	195	189	184
52DLH16	45	52	890	55200	614	601	588	575	563	551	540	528	518	507	497	487	478	468	459			
					346	335	324	314	304	294	285	276	267	260	252	245	237	230	224	218	212	206
52DLH17	52	52	1025	63540	706	691	676	661	647	634	620	608	595	583	572	560	549	539	528			
					395	381	369	357	346	335	324	315	304	296	286	279	270	263	255	249	243	237
					<67	67-97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	
56DLH11	26	56	421	28200	288	283	277	272	267	262	257	253	248	244	239	235	231	227	223			
					169	163	158	153	149	145	140	136	133	129	125	122	118	115	113	110	107	104
56DLH12	30	56	484	32400	331	324	318	312	306	300	295	289	284	278	273	268	263	259	254			
					184	178	173	168	163	158	153	150	145	141	137	133	130	126	123	119	115	111
56DLH13	34	56	586	39240	401	394	386	379	372	365	358	351	344	338	331	325	319	314	308			
					223	216	209	204	197	191	186	181	175	171	166	161	157	152	149	145	140	136
56DLH14	39	56	662	44360	453	444	435	427	419	411	403	396	388	381	375	368	361	355	349			
					249	242	234	228	221	214	209	202	196	190	186	181	175	171	167	163	159	155
56DLH15	42	56	756	50680	518	508	498	488	478	469	460	451	443	434	426	419	411	403	396			
					281	272	264	256	248	242	234	228	221	215	209	204	198	192	188	184	179	175
56DLH16	46	56	816	54680	559	548	537	526	516	506	496	487	478	469	460	452	444	436	428			
					313	304	294	285	277	269	262	254	247	240	233	227	221	214	209	203	197	191
56DLH17	51	56	941	63020	643	630	618	605	594	582	571	560	549	539	529	520	510	501	492			
					356	345	335	325	316	306	298	289	281	273	266	258	251	245	238	232	226	220
					<71	71-99	100-105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
60DLH12	29	60	439	31200	295	289	284	279	274	270	265	261	256	252	248	244	240	236	232			
					168	163	158	154	150	146	142	138	134	131	128	124	121	118	115	112	109	106
60DLH13	35	60	534	37920	358	351	345	339	333	327	322	316	311	306	301	296	291	286	282			
					203	197	191	187	181	176	171	167	163	158	154	151	147	143	140	136	132	128
60DLH14	40	60	594	42140	398	391	383	376	370	363	356	350	344	338	332	327	321	316	310			
					216	210	205	199	193	189	183	178	173	170	165	161	156	152	149	145	141	137
60DLH15	43	60	697	49460	467	458	450	442	434	427	419	412	405	398	392	385	379	373	367			
					255	248	242	235	228	223	216	210	205	200	194	190	185	180	175	170	165	160
60DLH16	46	60	766	54380	513	504	494	485	476	468	460	451	444	436	428	421	414	407	400			
					285	277	269	262	255	247	241	235	228	223	217	211	206	201	196	191	186	181
60DLH17	52	60	880	62500	590	579	569	558	548	538	529	519	510	501	493	484	476	468	460			
					324	315	306	298	290	283	275	267	261	254	247	241	235	228	223	217	211	206
60DLH18	59	60	1016	72120	681	668	656	644	632	621	610	599	589	578	568	559	549	540	531			
					366	357	346	337	327	319	310	303	294	286	279	272	266	259	252	246	240	234
					<76	76-99	100-113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
64DLH12	31	64	396	30080	264	259	255	251	247	243	239	235	231	228	224	221	218	214	211	209		
					153	150	146	142	138	135	132	129	125	122	119	116	114	111	109	106	103	100
64DLH13	34	64	480	36500	321	315	310	305	300	295	291	286	281	277	273	269	264	260	257			
					186	181	176	171	168	163	159	155	152	148	144	141	137	134	131	128	124	121
64DLH14	40	64	550	41820	367	360	354	349	343	337	332	326	321	316	311	306	301	296	292			
					199	193	189	184	179	174	171	166	162	158	154	151	147	143	140	136	132	128
64DLH15	43	64	631	47940	421	414	407	400	394	387	381	375	369	363	358	352	347	341	336			
					234	228	223	217	211	206	201	196	191	187	182	177	173	170	165	161	156	152
64DLH16	46	64	710	53960	474	466	458	450	443	435	428	421	414	407	401	394	388	382	376			
					262	254	248	242	235	229	224	218	213	208	203	198	193	189	184	179	175	170
64DLH17	52	64	818	62180	546	536	527	518	509	501	492	484	476	468	461	454	446	439	432			
					298	290	283	275	268	262	255	248	243	237	231	226	220	215	210	205	200	195
64DLH18	59	64	945	71800	630	619	608	598	587	578	568	559	549	540	532	523	515	507	499			
					337	328	320	311	304	296	288	282	274	267	261	255	249	243	237	231	225	219
					<81	81-99	100-121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136
68DLH13	37	68	433	35100	288	284	279	275	271	267	263	259	255	252	248	244	241	237	234			
					171	168	164	159	155	152	149	145	142	138	135	133	130	127	124	121	118	115
68DLH14	40	68	499	40420	332	327	322	317	312	308	303	299	294	290	286	281	277	273	269			
					184	179	175	171	167	163	159	155	152	148	145	141	138	135	133	130	127	124
68DLH15	44	68	560	45320	372	365	360	354	348	343	337	332	327	322	317	312	308	303	299			
					206	201	196	191	187	182	178	174	170	166	162	158	155	152	148	145	141	137
68DLH16	49	68	663	53740	441	433	427	420	413	407	400	394	388	382	376	371	365	360	354			
					242	236	230	225	219	214	209	204	199	195	190	186	182	178	174	170	166	162
68DLH17	55	68	748	60560	497	489	481	474	467	460	453	446	439	433	427	420	414	408	403			
					275	268	262	256	249	244	238	232	228	222	217	212	208	203	198	193	188	183
68DLH18	61	68	865	70100	575	566	557	549	540	532	524	516	508	501	493	486	479	472	465			

**STANDARD LOAD TABLE LONGSPAN STEEL JOISTS, DLH-SERIES**

Based on a 50 ksi Maximum Yield Strength - Loads Shown in Pounds per Linear Foot (plf)

Joist Designation	Approx. Wt in Lbs. Per Linear Ft (Joists only)	Depth in inches	Max Load plf	SAFE LOAD* in Lbs. Between																		
				SPAN IN FEET																		
				< 81	81-99	100-111	112	115	118	121	124	127	130	133	136	139	142	145	148	151	155	160
80DLH15	40	80	644	52160	52160	466	442	421	401	383	366	350	335	321	307	295	283	272	261	247	231	
						321	296	275	255	236	220	205	192	179	167	157	147	139	130	120	109	
80DLH16	46	80	774	62680	62680	560	535	509	485	461	439	419	400	383	366	350	336	322	309	293	275	
						375	347	321	297	276	257	240	224	209	196	184	172	162	152	141	128	
80DLH17	53	80	894	72420	72420	647	617	587	559	533	510	487	466	446	427	410	393	378	363	345	323	
						451	416	386	358	332	309	288	269	252	235	221	207	195	183	169	154	
80DLH18	60	80	1010	81840	81840	731	696	662	631	602	575	550	526	504	482	463	444	427	410	389	366	
						516	477	441	409	380	354	330	308	288	270	253	237	223	210	194	176	
80DLH19	67	80	1179	95480	95480	853	812	773	736	701	670	640	612	585	560	537	516	495	476	451	423	
						578	533	493	458	425	396	369	344	322	301	283	266	250	235	217	197	
80DLH20	75	80	1325	107320	107320	964	921	882	845	807	771	736	704	674	645	618	594	570	547	520	487	
						646	596	552	512	475	443	412	385	360	337	316	297	279	263	243	220	
			< 89	89-99	100-120	121	124	127	130	133	136	139	142	145	148	151	155	160	165	170	175	
88DLH16	46	88	699	62180	62180	514	490	467	447	428	410	394	378	363	349	335	318	299	281	265	251	
						361	336	313	291	272	254	238	223	210	197	186	172	156	143	130	119	
88DLH17	51	88	790	70300	70300	581	553	526	502	479	458	439	420	403	386	371	352	330	310	292	274	
						404	375	349	325	304	284	266	249	234	220	207	191	173	159	146	133	
88DLH18	58	88	906	80620	80620	667	635	605	577	551	527	504	483	463	444	426	404	379	356	335	316	
						460	427	397	370	346	323	303	284	267	250	236	218	199	181	165	152	
88DLH19	65	88	1048	93260	93260	771	734	699	666	636	608	582	557	534	513	492	467	438	411	387	364	
						521	484	450	420	392	367	343	322	302	284	267	248	225	205	187	172	
88DLH20	76	88	1206	107300	107300	889	854	821	789	755	723	694	665	639	614	590	560	527	495	467	440	
						623	579	539	502	469	438	410	385	361	340	320	296	269	246	224	206	
88DLH21	89	88	1487	132340	132340	1099	1045	996	950	907	867	829	794	762	731	702	666	624	586	551	519	
						724	673	626	584	545	509	477	447	420	395	372	344	313	285	261	239	
			< 97	97-99	100-129	130	133	136	139	142	145	148	151	155	160	165	170	175	180	185	190	
96DLH17	52	96	724	70180	70180	540	517	496	474	456	438	421	405	385	362	339	320	302	284	269	255	
						389	363	339	318	298	280	263	247	229	208	190	173	159	146	134	124	
96DLH18	58	96	814	79000	79000	608	583	559	535	513	493	475	457	435	410	386	364	344	326	308	292	
						443	413	386	362	340	319	300	282	261	237	216	198	181	166	153	141	
96DLH19	66	96	974	94440	94440	727	697	667	638	611	585	561	539	512	480	451	424	401	378	357	338	
						502	469	438	410	385	361	340	320	296	269	246	224	206	189	174	161	
96DLH20	74	96	1096	106280	106280	824	789	754	722	691	662	635	610	579	543	510	481	453	428	405	382	
						569	531	496	465	436	409	385	362	336	305	277	254	233	214	196	181	
96DLH21	90	96	1375	133340	133340	1027	982	940	900	864	829	797	766	728	684	643	605	571	539	510	482	
						698	652	610	571	535	503	473	445	412	374	341	312	286	263	242	224	
96DLH22	102	96	1540	149380	149380	1150	1108	1067	1028	991	957	921	886	843	792	745	702	664	627	594	562	
						811	757	708	663	622	584	549	517	479	435	396	362	332	305	281	259	
			< 105	105-138		139	142	145	148	151	155	160	165	170	175	180	185	190	195	200	205	
104DLH18	59	104	733	76980		554	532	512	489	472	450	423	400	378	358	339	321	305	290	276	263	
						426	400	375	353	332	307	279	255	233	213	195	180	167	154	142	132	
104DLH19	67	104	892	93620		674	647	622	598	574	546	513	485	457	432	409	387	368	350	332	315	
						484	453	426	401	377	349	317	289	265	242	222	204	189	175	162	150	
104DLH20	75	104	1002	105260		764	738	714	688	661	629	591	555	522	493	465	440	417	395	375	357	
						548	513	483	453	427	395	359	327	299	274	251	232	214	198	184	170	
104DLH21	90	104	1260	132320		956	917	881	847	813	773	727	685	647	611	578	547	519	493	469	446	
						673	632	593	558	525	486	442	403	368	337	307	284	263	244	226	209	
104DLH22	104	104	1413	148360		1071	1034	999	966	934	893	841	792	747	706	668	633	600	570	542	516	
						783	734	689	648	610	564	513	468	428	392	359	331	306	283	262	244	
104DLH23	109	104	1556	163400		1181	1141	1096	1052	1009	956	899	845	795	750	708	670	635	602	571	543	
						819	768	721	678	638	590	536	489	447	410	377	347	320	296	274	254	
			< 113	113-147		148	151	155	160	165	170	175	180	185	190	195	200	205	210	215	220	
112DLH19	67	112	815	91900		623	600	571	537	506	478	451	428	406	386	366	348	332	317	303	289	
						466	439	406	369	336	308	281	259	238	220	203	189	175	162	151	142	
112DLH20	76	112	922	104000		710	688	657	618	582	549	520	493	468	445	422	402	383	365	348	333	
						528	497	459	418	381	348	319	293	270	249	231	213	198	184	171	160	
112DLH21	91	112	1162	131000		891	858	816	767	722	681	644	610	578	549	521	496	473	450	430	411	
						650	612	566	514	469	429	393	361	333	306	283	263	244	227	211	198	
112DLH22	104	112	1304	147000		999	967	928	880	833	787	744	705	668	635	602	574	546	521	497	474	
						755	711	657	598	545	498	457	419	386	356	329	306	283	264	246	229	
112DLH23	110	112	1437	162000		1102	1067	1023	970	913	859	810	765	724	686	651	618	588	560	533	509	

LRFD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS LH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)															
SPAN IN MILIMETERS			< 6706	6706-7620	7925	8230	8534	8839	9144	9449	9754	10058	10363	10668	10973					
18LH02	0.15	457	12.10	81.1	10.24 4.56	9.67 4.14	9.15 3.77	8.55 3.41	8.03 3.09	7.55 2.81	7.09 2.55	6.69 2.33	6.32 2.14	5.97 1.97	5.66 1.80					
18LH03	0.16	457	13.41	89.9	11.40 5.07	10.79 4.62	10.22 4.21	9.58 3.82	8.95 3.44	8.36 3.10	7.85 2.83	7.37 2.58	6.93 2.34	6.54 2.15	6.19 1.98					
18LH04	0.18	457	15.62	104.75	13.22 5.88	12.49 5.35	11.71 4.80	10.94 4.31	10.26 3.88	9.63 3.53	9.04 3.19	8.49 2.91	7.99 2.65	7.53 2.43	7.11 2.23					
18LH05	0.22	457	17.66	118.36	14.97 6.62	14.18 6.04	13.44 5.51	12.71 5.03	11.88 4.53	11.12 4.11	10.42 3.73	9.80 3.40	9.21 3.09	8.69 2.84	8.20 2.61					
18LH06	0.22	457	20.87	139.98	17.70 7.67	16.39 6.84	15.23 6.11	14.18 5.50	13.24 4.96	12.39 4.48	11.62 4.08	10.92 3.70	10.28 3.38	9.69 3.09	9.15 2.84					
18LH07	0.25	457	21.67	145.32	18.38 8.07	17.70 7.48	17.07 6.94	15.89 6.24	14.84 5.63	13.90 5.09	13.02 4.62	12.23 4.20	11.51 3.85	10.85 3.51	10.26 3.23					
18LH08	0.28	457	22.59	151.46	19.17 8.42	18.45 7.79	17.77 7.23	17.16 6.74	16.59 6.23	15.69 5.64	14.88 5.12	14.03 4.67	13.22 4.26	12.49 3.89	11.82 3.59					
18LH09	0.31	457	24.20	162.27	20.48 8.98	19.72 8.33	19.00 7.69	18.34 7.16	17.73 6.68	17.14 6.10	16.61 5.54	15.60 5.04	14.68 4.61	13.85 4.21	13.09 3.88					
SPAN IN MILIMETERS			< 7010	7010-7620	7925	8230	8534	8839	9144	9449	9754	10058	10363	10668	10973	11278	11582	11887	12192	
20LH02	0.15	508	10.90	76.46	9.67 4.46	9.56 4.42	9.43 4.34	8.97 3.99	8.49 3.64	7.99 3.32	7.53 3.03	7.11 2.77	6.72 2.53	6.37 2.33	6.01 2.14	5.73 1.98	5.45 1.83	5.18 1.70	4.92 1.57	
20LH03	0.16	508	11.58	81.13	10.26 4.91	10.13 4.85	10.02 4.62	9.89 4.40	9.50 4.08	9.06 3.76	8.64 3.47	8.14 3.18	7.70 2.91	7.28 2.68	6.91 2.46	6.54 2.27	6.19 2.08	5.88 1.94	5.58 1.79	
20LH04	0.18	508	14.18	99.41	12.56 6.24	12.39 5.92	12.21 5.63	11.55 5.13	10.85 4.67	10.22 4.24	9.63 3.86	9.10 3.54	8.60 3.25	8.14 2.99	7.72 2.75	7.33 2.53	6.96 2.34	6.63 2.17	6.32 2.02	
20LH05	0.20	508	15.25	106.89	13.48 6.69	13.33 6.37	13.17 6.07	13.02 5.76	12.49 5.34	11.90 4.91	11.23 4.49	10.59 4.10	10.02 3.76	9.50 3.47	8.99 3.19	8.53 2.94	8.12 2.72	7.72 2.52	7.35 2.34	
20LH06	0.22	508	20.35	142.65	17.99 8.84	17.31 8.18	16.70 7.60	15.82 6.96	14.86 6.23	13.90 5.63	13.04 5.12	12.25 4.67	11.53 4.26	10.87 3.89	10.26 3.59	9.71 3.29	9.21 3.05	8.73 2.80	8.29 2.59	
20LH07	0.25	508	21.70	152.12	19.22 9.44	18.49 8.74	17.81 8.11	17.20 7.55	16.63 7.06	15.56 6.39	14.60 5.80	13.72 5.28	12.91 4.83	12.17 4.42	11.51 4.05	10.87 3.73	10.31 3.44	9.78 3.18	9.30 2.94	
20LH08	0.28	508	22.39	156.93	19.87 9.76	19.11 9.03	18.43 8.39	17.79 7.82	17.18 7.29	16.63 6.82	15.80 6.24	15.03 5.76	14.31 5.32	13.59 4.90	12.87 4.50	12.21 4.15	11.60 3.82	11.01 3.53	10.48 3.28	
20LH09	0.31	508	24.51	171.74	21.67 10.63	20.86 9.85	20.09 9.13	19.39 8.47	18.73 7.90	18.12 7.39	17.55 6.93	17.03 6.37	16.52 5.82	15.58 5.34	14.73 4.90	13.92 4.50	13.20 4.15	12.52 3.85	11.90 3.56	
20LH10	0.34	508	26.42	185.22	23.37 11.47	22.50 10.56	21.69 9.82	20.92 9.13	20.22 8.53	19.57 7.95	18.93 7.44	18.36 6.99	17.81 6.53	17.31 5.99	16.37 5.50	15.47 5.04	14.66 4.67	13.92 4.31	13.22 3.99	
SPAN IN MILIMETERS			< 8839	8839-10058	10363	10668	10973	11278	11582	11887	12192	12497	12802	13106	13411	13716	14021	14326	14630	
24LH03	0.16	610	8.77	77.53	7.48 3.42	7.42 3.29	7.35 3.18	7.07 2.97	6.72 2.74	6.41 2.55	6.10 2.36	5.84 2.21	5.58 2.05	5.34 1.92	5.12 1.80	4.90 1.69	4.70 1.59	4.53 1.48	4.35 1.40	
24LH04	0.18	610	10.76	95.01	9.17 4.20	8.71 3.86	8.29 3.59	7.88 3.31	7.50 3.06	7.15 2.84	6.82 2.65	6.52 2.46	6.23 2.30	5.97 2.15	5.73 2.01	5.49 1.89	5.27 1.78	5.05 1.66	4.85 1.56	
24LH05	0.19	610	11.51	101.81	9.82 4.49	9.76 4.33	9.63 4.15	9.17 3.85	8.73 3.56	8.31 3.29	7.94 3.06	7.59 2.86	7.24 2.65	6.93 2.49	6.65 2.33	6.37 2.18	6.12 2.05	5.88 1.92	5.64 1.80	
24LH06	0.23	610	15.49	136.91	13.22 5.99	12.67 5.57	12.14 5.19	11.60 4.83	11.03 4.46	10.50 4.14	10.00 3.83	9.56 3.57	9.12 3.32	8.73 3.07	8.34 2.87	7.96 2.68	7.61 2.51	7.31 2.34	7.00 2.21	
24LH07	0.25	610	17.02	150.39	14.55 6.59	13.96 6.14	13.41 5.73	12.87 5.35	12.36 5.00	11.84 4.67	11.29 4.33	10.74 4.02	10.24 3.75	9.76 3.48	9.32 3.25	8.90 3.03	8.51 2.84	8.16 2.65	7.81 2.49	
24LH08	0.26	610	18.14	160.40	15.47 7.00	14.82 6.52	14.20 6.07	13.61 5.66	13.06 5.28	12.52 4.93	11.93 4.58	11.38 4.26	10.87 3.96	10.39 3.70	9.96 3.47	9.52 3.23	9.12 3.03	8.75 2.86	8.40 2.68	
24LH09	0.31	610	21.36	188.82	18.21 8.20	17.68 7.73	17.18 7.31	16.72 6.71	16.00 6.18	15.23 5.73	14.51 5.29	13.83 4.91	13.17 4.56	12.56 4.26	11.99 3.96	11.47 3.70	10.96 3.47	10.50 3.25	10.06 3.05	
24LH10	0.34	610	22.58	199.50	19.30 8.69	18.73 8.15	18.21 7.70	17.70 7.29	17.24 6.91	16.81 6.40	16.13 5.92	15.36 5.51	14.62 5.12	13.94 4.75	13.30 4.43	12.74 4.15	12.17 3.88	11.66 3.63	11.18 3.41	
24LH11	0.36	610	23.79	210.31	20.29 9.10	19.70 8.58	19.15 8.09	18.62 7.66	18.14 7.26	17.66 6.88	17.22 6.55	16.81 6.10	16.06 5.66	15.34 5.26	14.68 4.91	14.05 4.59	13.48 4.29	12.91 4.02	12.41 3.77	

LRFD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS LH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)		LOADS SHOWN IN KILONEWTONS PER METER (kN/m)																
SPAN IN MILLIMETERS			< 10363	10363-12497		12802	13106	13411	13716	14021	14326	14630	14935	15240	15545	15850	16154	16459	16764	17069		
28LH05	0.19	711	9.09	94.21		7.37 3.19	7.07 2.99	6.78 2.80	6.50 2.62	6.26 2.46	6.01 2.32	5.80 2.18	5.58 2.07	5.36 1.94	5.18 1.83	4.99 1.73	4.81 1.64	4.66 1.56	4.50 1.48	4.35 1.41		
28LH06	0.23	711	12.08	125.17		9.80 4.21	9.39 3.94	9.01 3.69	8.64 3.47	8.29 3.25	7.96 3.05	7.66 2.87	7.37 2.71	7.09 2.55	6.85 2.42	6.58 2.27	6.37 2.15	6.15 2.04	5.93 1.94	5.73 1.83		
28LH07	0.25	711	13.63	141.32		11.05 4.75	10.59 4.45	10.15 4.15	9.74 3.89	9.34 3.66	8.97 3.44	8.62 3.23	8.29 3.05	7.99 2.87	7.70 2.71	7.42 2.56	7.15 2.42	6.91 2.30	6.67 2.18	6.45 2.07		
28LH08	0.26	711	14.61	151.32		11.82 5.07	11.31 4.74	10.85 4.45	10.39 4.15	9.98 3.91	9.58 3.67	9.19 3.44	8.82 3.23	8.47 3.05	8.12 2.86	7.81 2.69	7.53 2.55	7.24 2.40	6.98 2.27	6.74 2.15		
28LH09	0.31	711	17.98	186.29		14.60 6.24	13.98 5.83	13.39 5.47	12.82 5.12	12.32 4.80	11.82 4.50	11.36 4.24	10.92 3.99	10.52 3.76	10.13 3.54	9.76 3.32	9.41 3.15	9.08 2.97	8.77 2.81	8.47 2.67		
28LH10	0.34	711	19.65	203.77		15.95 6.80	15.41 6.40	14.86 6.04	14.25 5.66	13.68 5.31	13.13 4.99	12.60 4.69	12.12 4.42	11.66 4.15	11.23 3.92	10.83 3.72	10.44 3.51	10.06 3.32	9.71 3.13	9.39 2.97		
28LH11	0.36	711	21.09	218.58		17.07 7.26	16.68 6.93	16.11 6.53	15.56 6.17	14.92 5.79	14.33 5.44	13.76 5.12	13.24 4.83	12.74 4.55	12.28 4.29	11.82 4.05	11.40 3.83	10.98 3.63	10.61 3.44	10.24 3.25		
28LH12	0.39	711	23.16	240.07		18.76 7.95	18.32 7.58	17.90 7.23	17.51 6.94	17.11 6.62	16.76 6.34	16.13 5.95	15.52 5.58	14.92 5.26	14.36 4.96	13.83 4.68	13.33 4.42	12.84 4.15	12.39 3.94	11.95 3.73		
28LH13	0.44	711	24.14	250.21		19.59 8.30	19.13 7.92	18.69 7.55	18.27 7.22	17.86 6.88	17.49 6.59	17.11 6.31	16.76 6.05	16.44 5.77	15.80 5.44	15.19 5.13	14.62 4.84	14.07 4.58	13.57 4.33	13.09 4.10		
SPAN IN MILLIMETERS			< 11887	11887-14021	14326-14935		15240	15545	15850	16154	16459	16764	17069	17374	17678	17983	18288	18593	18898	19202	19507	
32LH06	0.20	813	9.44	112.22	112.22		7.39 3.07	7.13 2.90	6.89 2.75	6.65 2.61	6.43 2.46	6.21 2.34	6.01 2.23	5.82 2.11	5.62 2.01	5.45 1.91	5.29 1.82	5.12 1.73	4.96 1.66	4.81 1.57	4.68 1.51	
32LH07	0.23	813	10.63	126.24	126.24		8.29 3.42	8.01 3.25	7.72 3.07	7.46 2.91	7.20 2.75	6.96 2.61	6.74 2.48	6.52 2.36	6.30 2.24	6.10 2.13	5.93 2.04	5.73 1.94	5.56 1.85	5.40 1.76	5.25 1.69	
32LH08	0.25	813	11.53	137.04		8.99 3.72	8.69 3.53	8.38 3.34	8.07 3.15	7.81 2.99	7.55 2.83	7.28 2.68	7.04 2.55	6.82 2.43	6.61 2.32	6.41 2.20	6.21 2.10	6.01 1.99	5.84 1.91	5.66 1.82		
32LH09	0.31	813	14.48	172.01		11.29 4.65	10.90 4.40	10.50 4.15	10.13 3.94	9.78 3.73	9.45 3.54	9.15 3.35	8.84 3.19	8.55 3.03	8.29 2.88	8.03 2.75	7.79 2.62	7.55 2.51	7.33 2.39	7.11 2.29		
32LH10	0.31	813	16.00	190.16		12.49 5.13	12.03 4.84	11.62 4.59	11.20 4.33	10.83 4.11	10.46 3.89	10.11 3.70	9.74 3.50	9.41 3.32	9.10 3.16	8.80 3.00	8.51 2.86	8.23 2.71	7.96 2.59	7.72 2.46		
32LH11	0.35	813	17.53	208.31		13.68 5.61	13.17 5.29	12.69 5.00	12.25 4.74	11.84 4.49	11.42 4.26	11.05 4.04	10.68 3.83	10.35 3.66	10.02 3.48	9.69 3.31	9.39 3.15	9.10 3.00	8.82 2.86	8.53 2.72		
32LH12	0.39	813	20.57	244.47		16.06 6.56	15.58 6.24	15.06 5.92	14.53 5.60	14.03 5.31	13.55 5.03	13.09 4.77	12.65 4.53	12.23 4.30	11.84 4.10	11.47 3.89	11.12 3.72	10.77 3.54	10.44 3.38	10.13 3.22		
32LH13	0.44	813	22.94	272.76		17.88 7.29	17.53 7.00	17.18 6.72	16.87 6.47	16.24 6.12	15.65 5.79	15.10 5.48	14.57 5.16	14.07 4.90	13.59 4.65	13.13 4.43	12.71 4.20	12.30 4.01	11.90 3.82	11.53 3.63		
32LH14	0.48	813	23.62	280.77		18.45 7.51	18.08 7.22	17.73 6.94	17.40 6.68	17.07 6.42	16.76 6.08	16.15 5.76	15.60 5.45	15.06 5.18	14.55 4.91	14.07 4.68	13.61 4.43	13.17 4.23	12.76 4.02	12.34 3.85		
32LH15	0.51	813	24.42	290.24		19.04 7.76	18.67 7.45	18.32 7.18	17.97 6.90	17.62 6.62	17.31 6.39	16.98 6.15	16.70 5.93	16.41 5.73	15.87 5.45	15.34 5.18	14.84 4.93	14.36 4.69	13.90 4.46	13.48 4.26		
SPAN IN MILLIMETERS			< 13106	13106-14021	14326-17069	17374		17678	17983	18288	18593	18898	19202	19507	19812	20117	20422	20726	21031	21336	21641	21946
36LH07	0.23	914	8.61	112.76	112.76		6.39 2.58	6.19 2.45	5.99 2.33	5.82 2.23	5.64 2.13	5.49 2.04	5.34 1.95	5.18 1.86	5.03 1.78	4.90 1.70	4.77 1.63	4.64 1.56	4.53 1.50	4.40 1.44	4.29 1.38	
36LH08	0.26	914	9.47	124.10	124.10		7.02 2.83	6.80 2.69	6.61 2.56	6.41 2.45	6.21 2.33	6.04 2.23	5.86 2.13	5.69 2.04	5.53 1.95	5.38 1.86	5.23 1.79	5.10 1.72	4.96 1.64	4.83 1.59	4.70 1.51	
36LH09	0.31	914	12.14	159.06	159.06		8.99 3.60	8.71 3.42	8.44 3.26	8.18 3.12	7.94 2.97	7.70 2.84	7.48 2.71	7.28 2.61	7.07 2.49	6.87 2.37	6.69 2.29	6.50 2.18	6.32 2.10	6.17 2.01	6.01 1.94	
36LH10	0.31	914	13.37	175.21		9.93 3.98	9.63 3.79	9.32 3.61	9.04 3.44	8.77 3.28	8.51 3.13	8.27 3.00	8.03 2.87	7.81 2.74	7.59 2.62	7.39 2.52	7.18 2.40	7.00 2.32	6.80 2.21	6.63 2.13		
36LH11	0.34	914	14.60	191.22		10.83 4.33	10.50 4.13	10.17 3.92	9.87 3.75	9.58 3.59	9.30 3.41	9.01 3.26	8.77 3.12	8.51 2.99	8.27 2.86	8.05 2.74	7.83 2.62	7.61 2.52	7.42 2.42	7.22 2.32		
36LH12	0.36	914	17.46	228.86		12.98 5.16	12.58 4.93	12.19 4.69	11.82 4.48	11.44 4.26	11.12 4.07	10.79 3.89	10.46 3.72	10.15 3.54	9.85 3.38	9.56 3.23	9.28 3.10	9.01 2.97	8.75 2.84	8.51 2.72		
36LH13	0.44	914	20.53	269.16		15.25 6.05	14.77 5.76	14.31 5.48	13.87 5.23	13.46 4.99	13.04 4.77	12.67 4.55	12.30 4.34	11.95 4.15	11.62 3.98	11.29 3.82	10.98 3.66	10.68 3.50	10.39 3.37	10.13 3.23		
36LH14	0.53	914	22.63	296.65		16.81 6.65	16.52 6.33	15.95 6.01	15.45 5.72	14.95 5.44	14.46 5.19	14.03 4.94	13.59 4.71	13.17 4.50	12.78 4.30	12.41 4.13	12.06 3.94	11.71 3.77	11.38 3.60	11.05 3.45		
36LH15	0.53	914	23.86	312.79		17.70 7.00	17.40 6.77	17.09 6.53	16.83 6.33	16.28 6.02	15.78 5.74	15.27 5.47	14.82 5.22	14.36 4.99	13.94 4.77	13.52 4.55	13.13 4.36	12.76 4.17	12.41 3.99	12.06 3.83		

LRFD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS LH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)															
SPAN IN MILIMETERS			< 14630	14630-17983	18288-19812	20117	20422	20726	21031	21336	21641	21946	22250	22555	22860	23165	23470	23774	24079	24384
40LH08	0.23	1016	7.61	111.29	111.29	5.56	5.40	5.27	5.12	4.99	4.85	4.75	4.61	4.50	4.40	4.29	4.20	4.09	4.00	3.89
						2.18	2.10	2.01	1.92	1.85	1.78	1.70	1.63	1.57	1.51	1.45	1.41	1.35	1.31	1.25
40LH90	0.31	1016	10.00	146.25	146.25	7.26	7.07	6.89	6.69	6.52	6.37	6.19	6.04	5.88	5.75	5.60	5.47	5.34	5.23	5.10
						2.86	2.74	2.62	2.52	2.42	2.33	2.23	2.14	2.05	1.98	1.91	1.83	1.78	1.72	1.64
40LH10	0.31	1016	11.01	160.93	160.93	8.03	7.81	7.59	7.39	7.20	7.02	6.85	6.67	6.50	6.34	6.19	6.04	5.88	5.73	5.58
						3.15	3.02	2.88	2.77	2.67	2.56	2.46	2.36	2.27	2.18	2.10	2.02	1.95	1.88	1.80
40LH11	0.32	1016	12.01	175.74	175.74	8.73	8.49	8.27	8.05	7.83	7.63	7.44	7.26	7.07	6.89	6.74	6.56	6.41	6.26	6.10
						3.41	3.26	3.13	3.02	2.88	2.77	2.67	2.56	2.46	2.37	2.29	2.20	2.11	2.04	1.97
40LH12	0.36	1016	14.62	213.91	213.91	10.63	10.33	10.04	9.78	9.52	9.28	9.04	8.80	8.58	8.36	8.16	7.96	7.77	7.57	7.39
						4.15	3.98	3.80	3.66	3.51	3.37	3.23	3.10	2.99	2.87	2.75	2.65	2.56	2.46	2.37
40LH13	0.44	1016	17.24	252.21	252.21	12.54	12.19	11.86	11.55	11.25	10.94	10.66	10.39	10.13	9.87	9.63	9.39	9.17	8.95	8.73
						4.87	4.67	4.48	4.30	4.13	3.95	3.79	3.64	3.51	3.37	3.25	3.12	3.02	2.90	2.80
40LH14	0.51	1016	19.72	288.37	288.37	14.36	13.96	13.57	13.20	12.84	12.49	12.17	11.86	11.55	11.27	10.98	10.72	10.46	10.20	9.96
						5.58	5.35	5.12	4.90	4.71	4.50	4.33	4.15	3.98	3.83	3.67	3.54	3.40	3.28	3.15
40LH15	0.53	1016	22.05	322.54	322.54	16.06	15.58	15.12	14.68	14.27	13.85	13.48	13.11	12.76	12.41	12.08	11.77	11.47	11.18	10.90
						6.23	5.95	5.69	5.44	5.21	4.99	4.78	4.59	4.40	4.23	4.07	3.91	3.76	3.61	3.48
40LH16	0.61	1016	24.29	355.50	355.50	17.68	17.42	17.16	16.89	16.65	16.44	15.98	15.54	15.12	14.73	14.33	13.96	13.61	13.26	12.93
						6.84	6.64	6.43	6.24	6.07	5.89	5.64	5.41	5.19	4.99	4.80	4.61	4.43	4.26	4.11
SPAN IN MILIMETERS			< 16154	16154-17983	18288-22250	22555	22860	23165	23470	23774	24079	24384	24689	24994	25298	25603	25908	26213	26518	26822
44LH09	0.28	1118	8.31	134.11	134.11	5.95	5.80	5.66	5.53	5.40	5.29	5.16	5.05	4.94	4.83	4.72	4.61	4.53	4.42	4.33
						2.30	2.21	2.13	2.05	1.98	1.91	1.85	1.78	1.72	1.66	1.60	1.54	1.50	1.44	1.40
44LH10	0.31	1118	9.17	148.12	148.12	6.56	6.41	6.26	6.10	5.95	5.82	5.69	5.56	5.45	5.31	5.21	5.10	4.99	4.88	4.77
						2.53	2.45	2.36	2.26	2.18	2.10	2.02	1.95	1.89	1.82	1.76	1.70	1.64	1.60	1.54
44LH11	0.32	1118	9.91	160.13	160.13	7.11	6.93	6.78	6.61	6.45	6.32	6.17	6.04	5.88	5.77	5.64	5.51	5.40	5.29	5.16
						2.74	2.64	2.55	2.45	2.36	2.29	2.20	2.13	2.04	1.98	1.91	1.85	1.79	1.73	1.67
44LH12	0.36	1118	12.29	198.43	198.43	8.80	8.60	8.38	8.18	7.99	7.79	7.59	7.42	7.24	7.07	6.89	6.74	6.56	6.41	6.28
						3.38	3.26	3.13	3.02	2.91	2.80	2.69	2.61	2.51	2.42	2.33	2.26	2.17	2.10	2.02
44LH13	0.44	1118	14.57	235.26	235.26	10.44	10.20	9.93	9.71	9.47	9.25	9.04	8.84	8.64	8.44	8.25	8.07	7.90	7.72	7.57
						4.01	3.86	3.70	3.59	3.44	3.32	3.21	3.09	2.99	2.88	2.76	2.69	2.61	2.52	2.43
44LH14	0.45	1118	16.76	270.76	270.76	12.01	11.68	11.38	11.07	10.79	10.52	10.26	10.00	9.76	9.54	9.30	9.08	8.88	8.66	8.47
						4.59	4.40	4.24	4.07	3.91	3.77	3.63	3.50	3.37	3.25	3.13	3.02	2.91	2.81	2.72
44LH15	0.53	1118	19.50	315.06	315.06	13.98	13.63	13.30	12.98	12.67	12.36	12.06	11.75	11.47	11.20	10.94	10.68	10.42	10.20	9.96
						5.34	5.13	4.94	4.75	4.58	4.42	4.26	4.10	3.95	3.80	3.67	3.54	3.41	3.31	3.19
44LH16	0.61	1118	22.49	363.24	363.24	16.13	15.73	15.34	14.97	14.62	14.27	13.94	13.61	13.30	13.00	12.69	12.43	12.14	11.88	11.62
						6.14	5.91	5.69	5.47	5.28	5.07	4.90	4.72	4.56	4.40	4.24	4.11	3.96	3.83	3.72
44LH17	0.69	1118	24.16	390.06	390.06	17.29	17.07	16.83	16.61	16.41	16.02	15.65	15.30	14.95	14.60	14.27	13.96	13.65	13.35	13.06
						6.56	6.39	6.21	6.05	5.91	5.69	5.48	5.29	5.12	4.93	4.77	4.61	4.45	4.30	4.15
SPAN IN MILIMETERS			< 17374	17374-17983	18288-24689	24994	25298	25603	25908	26213	26518	26822	27127	27432	27737	28042	28346	28651	28956	29261
48LH10	0.31	1219	7.70	133.98	133.98	5.38	5.27	5.16	5.05	4.94	4.83	4.75	4.64	4.55	4.46	4.37	4.29	4.20	4.11	4.04
						2.05	1.98	1.92	1.85	1.79	1.73	1.69	1.63	1.57	1.53	1.48	1.44	1.40	1.35	1.31
48LH11	0.32	1219	8.36	145.32	145.32	5.82	5.69	5.58	5.45	5.34	5.23	5.12	5.01	4.92	4.81	4.72	4.64	4.55	4.46	4.37
						2.21	2.14	2.07	1.99	1.94	1.88	1.82	1.75	1.70	1.64	1.60	1.54	1.50	1.45	1.41
48LH12	0.36	1219	10.57	183.48	183.48	7.35	7.20	7.04	6.89	6.74	6.58	6.45	6.32	6.19	6.06	5.95	5.82	5.71	5.60	5.49
						2.78	2.69	2.61	2.52	2.43	2.34	2.27	2.20	2.14	2.07	2.01	1.94	1.88	1.83	1.78
48LH13	0.42	1219	12.65	219.78	219.78	8.80	8.60	8.40	8.23	8.05	7.88	7.72	7.55	7.39	7.26	7.11	6.96	6.82	6.69	6.56
						3.32	3.22	3.10	3.00	2.90	2.81	2.72	2.62	2.55	2.48	2.39	2.32	2.24	2.18	2.11
48LH14	0.47	1219	14.92	259.28	259.28	10.39	10.15	9.93	9.71	9.50	9.30	9.10	8.90	8.73	8.53	8.38	8.20	8.03	7.88	7.72
						3.92	3.79	3.66	3.54	3.41	3.31	3.21	3.09	3.00	2.90	2.81	2.72	2.64	2.56	2.49
48LH15	0.53	1219	17.16	298.11	298.11	11.93	11.66	11.40	11.16	10.92	10.68	10.46	10.24	10.02	9.80	9.61	9.41	9.23	9.04	8.86
						4.49	4.34	4.18	4.05	3.92	3.79	3.67	3.56	3.44	3.32	3.22	3.12	3.03	2.93	2.84
48LH16	0.61	1219	19.78	343.62	343.62	13.76	13.46	13.15	12.87	12.60	12.32	12.06	11.82	11.55	11.33	11.09	10.87	10.66	10.44	10.24
						5.18	5.00	4.83	4.67	4.52	4.36	4.21	4.08	3.95	3.83	3.72	3.60	3.48	3.38	3.28
48LH17	0.69	1219	22.21	385.92	385.92	15.45	15.10	14.77	14.44	14.14	13.83	13.55	13.26	12.98	12.71	12.45	12.21	11.97	11.73	11.49
						5.79	5.58	5.41	5.22	5.04	4.88	4.72	4.58	4.43	4.29	4.15	4.02	3.91	3.79	3.67

LRFD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS DLH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION		APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)		LOADS SHOWN IN KILONEWTONS PER METER (kN/m)															
SPAN IN MILIMETERS			< 18898	18271278-89		27432	27737	28042	28346	28651	28956	29261	29566	29870	30175	30480	30785	31090	31394	31699		
52DLH10	0.36	1321	9.45	178.81		6.52 2.49	6.37 2.40	6.23 2.32	6.10 2.24	5.97 2.18	5.84 2.11	5.71 2.04	5.60 1.98	5.49 1.92	5.38 1.86	5.27 1.80	5.16 1.75	5.05 1.69	4.96 1.66	4.88 1.60		
52DLH11	0.38	1321	10.39	196.30		7.15 2.72	7.00 2.64	6.85 2.53	6.69 2.46	6.54 2.39	6.41 2.30	6.28 2.23	6.15 2.17	6.01 2.10	5.91 2.04	5.77 1.97	5.66 1.92	5.56 1.86	5.45 1.80	5.34 1.75		
52DLH12	0.42	1321	11.59	218.98		7.99 2.97	7.81 2.87	7.63 2.78	7.48 2.69	7.31 2.61	7.15 2.52	7.00 2.45	6.87 2.37	6.72 2.30	6.58 2.23	6.45 2.17	6.32 2.10	6.21 2.04	6.08 1.97	5.97 1.92		
52DLH13	0.50	1321	14.07	265.82		9.69 3.60	9.47 3.48	9.28 3.37	9.06 3.26	8.88 3.15	8.69 3.05	8.51 2.96	8.34 2.87	8.16 2.78	8.01 2.69	7.83 2.62	7.68 2.53	7.53 2.48	7.39 2.39	7.24 2.32		
52DLH14	0.57	1321	16.10	304.12		11.09 4.02	10.87 3.88	10.63 3.76	10.42 3.63	10.20 3.53	10.00 3.41	9.78 3.31	9.58 3.21	9.41 3.10	9.21 3.02	9.04 2.93	8.86 2.83	8.69 2.75	8.53 2.68	8.36 2.59		
52DLH15	0.61	1321	18.08	341.62		12.45 4.53	12.19 4.39	11.93 4.24	11.66 4.11	11.42 3.96	11.18 3.85	10.94 3.73	10.72 3.60	10.50 3.50	10.28 3.40	10.09 3.29	9.87 3.19	9.69 3.10	9.50 3.02	9.32 2.93		
52DLH16	0.66	1321	19.48	368.31		13.44 5.04	13.15 4.88	12.87 4.72	12.58 4.58	12.32 4.43	12.06 4.29	11.82 4.15	11.55 4.02	11.33 3.89	11.09 3.79	10.87 3.67	10.66 3.57	10.46 3.45	10.24 3.35	10.04 3.26		
52DLH17	0.76	1321	22.43	423.96		15.45 5.76	15.12 5.56	14.79 5.38	14.46 5.21	14.16 5.04	13.87 4.88	13.57 4.72	13.30 4.59	13.02 4.43	12.76 4.31	12.52 4.17	12.25 4.07	12.01 3.94	11.79 3.83	11.55 3.72		
SPAN IN MILIMETERS			<20422	20422-29566		29870	30175	30480	30785	31090	31394	31699	32004	32309	32614	32918	33223	33528	33833	34138		
56DLH11	0.38	1422	9.21	188.15		6.30 2.46	6.19 2.37	6.06 2.30	5.95 2.23	5.84 2.17	5.73 2.11	5.62 2.04	5.53 1.98	5.42 1.94	5.34 1.88	5.23 1.82	5.14 1.78	5.05 1.72	4.96 1.67	4.88 1.64		
56DLH12	0.44	1422	10.58	216.18		7.24 2.68	7.09 2.59	6.96 2.52	6.82 2.45	6.69 2.37	6.56 2.30	6.45 2.23	6.32 2.18	6.21 2.11	6.08 2.05	5.97 1.99	5.86 1.94	5.75 1.89	5.66 1.83	5.56 1.79		
56DLH13	0.50	1422	12.82	261.82		8.77 3.25	8.62 3.15	8.44 3.05	8.29 2.97	8.14 2.87	7.99 2.78	7.83 2.71	7.68 2.64	7.53 2.55	7.39 2.49	7.24 2.42	7.11 2.34	6.98 2.29	6.87 2.21	6.74 2.17		
56DLH14	0.57	1422	14.49	295.98		9.91 3.63	9.71 3.53	9.52 3.41	9.34 3.32	9.17 3.22	8.99 3.12	8.82 3.05	8.66 2.94	8.49 2.86	8.34 2.77	8.20 2.71	8.05 2.64	7.90 2.55	7.77 2.49	7.63 2.43		
56DLH15	0.61	1422	16.57	338.15		11.33 4.10	11.12 3.96	10.90 3.85	10.68 3.73	10.46 3.61	10.26 3.53	10.06 3.41	9.87 3.32	9.69 3.22	9.50 3.13	9.32 3.05	9.17 2.97	8.99 2.88	8.82 2.80	8.66 2.74		
56DLH16	0.67	1422	17.86	364.84		12.23 4.56	11.99 4.43	11.75 4.29	11.51 4.15	11.29 4.04	11.07 3.92	10.85 3.82	10.66 3.70	10.46 3.60	10.26 3.50	10.06 3.40	9.89 3.31	9.71 3.22	9.54 3.12	9.36 3.05		
56DLH17	0.74	1422	20.59	420.49		14.07 5.19	13.79 5.03	13.52 4.88	13.24 4.74	13.00 4.61	12.74 4.46	12.49 4.34	12.25 4.21	12.01 4.10	11.79 3.98	11.58 3.88	11.38 3.76	11.16 3.66	10.96 3.57	10.77 3.47		
SPAN IN MILIMETERS			< 21641	21641-30175	30480-32004	32309	32614	32918	33223	33528	33833	34138	34442	34747	35052	35357	35662	35966	36271	36576		
60DLH12	0.42	1524	9.62	208.17	208.17	6.45 2.45	6.32 2.37	6.21 2.30	6.10 2.24	5.99 2.18	5.91 2.13	5.80 2.07	5.71 2.01	5.60 1.95	5.51 1.91	5.42 1.86	5.34 1.80	5.25 1.76	5.16 1.72	5.07 1.67		
60DLH13	0.51	1524	11.68	253.01	253.01	7.83 2.96	7.68 2.87	7.55 2.78	7.42 2.72	7.28 2.64	7.15 2.56	7.04 2.49	6.91 2.43	6.80 2.37	6.69 2.30	6.58 2.24	6.47 2.20	6.37 2.14	6.26 2.08	6.17 2.02		
60DLH14	0.58	1524	12.99	281.17	281.17	8.71 3.15	8.55 3.06	8.38 2.99	8.23 2.90	8.09 2.81	7.94 2.75	7.79 2.67	7.66 2.59	7.53 2.52	7.39 2.48	7.26 2.40	7.15 2.34	7.02 2.27	6.91 2.21	6.78 2.17		
60DLH15	0.63	1524	15.25	330.01	330.01	10.22 3.72	10.02 3.61	9.85 3.53	9.67 3.42	9.50 3.32	9.34 3.25	9.17 3.15	9.01 3.06	8.86 2.99	8.71 2.91	8.58 2.83	8.42 2.77	8.29 2.69	8.16 2.62	8.03 2.55		
60DLH16	0.67	1524	16.76	362.84	362.84	11.23 4.15	11.03 4.04	10.81 3.92	10.61 3.82	10.42 3.72	10.24 3.60	10.06 3.51	9.87 3.42	9.71 3.32	9.54 3.25	9.36 3.16	9.21 3.07	9.06 3.00	8.90 2.93	8.75 2.86		
60DLH17	0.76	1524	19.26	417.02	417.02	12.91 4.72	12.67 4.59	12.45 4.46	12.21 4.34	11.99 4.23	11.77 4.13	11.58 4.01	11.36 3.89	11.16 3.80	10.96 3.70	10.79 3.60	10.59 3.51	10.42 3.42	10.24 3.32	10.06 3.25		
60DLH18	0.86	1524	22.24	481.20	481.20	14.90 5.34	14.62 5.21	14.36 5.04	14.09 4.91	13.83 4.77	13.59 4.65	13.35 4.52	13.11 4.42	12.89 4.29	12.65 4.17	12.43 4.07	12.23 3.96	12.01 3.88	11.82 3.77	11.62 3.67		
SPAN IN MILIMETERS			<23165	23165-30175	30480-34442	34747	35052	35357	35662	35966	36271	36576	36881	37186	37490	37795	38100	38405	38710	39014		
64DLH12	0.45	1626	8.66	200.70	200.70	5.77 2.23	5.66 2.18	5.58 2.13	5.49 2.07	5.40 2.01	5.31 1.97	5.23 1.92	5.14 1.88	5.05 1.82	4.99 1.78	4.90 1.73	4.83 1.69	4.77 1.66	4.68 1.61	4.61 1.59		
64DLH13	0.50	1626	10.50	243.54	243.54	7.02 2.71	6.89 2.64	6.78 2.56	6.67 2.49	6.56 2.45	6.45 2.37	6.37 2.32	6.26 2.26	6.15 2.21	6.06 2.15	5.97 2.10	5.88 2.05	5.77 1.99	5.69 1.95	5.62 1.91		
64DLH14	0.58	1626	12.03	279.03	279.03	8.03 2.90	7.88 2.81	7.74 2.75	7.63 2.68	7.50 2.61	7.37 2.53	7.26 2.49	7.13 2.42	7.02 2.36	6.91 2.30	6.80 2.24	6.69 2.20	6.58 2.14	6.47 2.08	6.39 2.04		
64DLH15	0.63	1626	13.81	319.87	319.87	9.21 3.41	9.06 3.32	8.90 3.25	8.75 3.16	8.62 3.07	8.47 3.00	8.34 2.93	8.20 2.86	8.07 2.78	7.94 2.72	7.83 2.65	7.70 2.58	7.59 2.52	7.46 2.48	7.35 2.40		
64DLH16	0.67	1626	15.54	360.03	360.03	10.37 3.82	10.20 3.70	10.02 3.61	9.85 3.53	9.69 3.42	9.52 3.34	9.36 3.26	9.21 3.18	9.06 3.10	8.90 3.03	8.77 2.96	8.62 2.88	8.49 2.81	8.36 2.75	8.23 2.68		
64DLH17	0.76	1626	17.90	414.88	414.88	11.95 4.34	11.73 4.23	11.53 4.13	11.33 4.01	11.14 3.91	10.96 3.82	10.77 3.72	10.59 3.61	10.42 3.54	10.24 3.45	10.09 3.37	9.93 3.29	9.76 3.21	9.61 3.13	9.45 3.06		
64DLH18	0.86	1626	20.68	479.07	479.07	13.79 4.91	13.55 4.78	13.30 4.67	13.09 4.53	12.84 4.43	12.65 4.31	12.43 4.20	12.23 4.11	12.01 3.99	11.82 3.89	11.64 3.80	11.44 3.72	11.27 3.63	11.09 3.54	10.92 3.45		

LRFD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS DLH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)																
SPAN IN MILIMETERS			< 24689	24689-30175	30480-36881	37186	37490	37795	38100	38405	38710	39014	39319	39624	39929	40234	40538	40843	41148	41453	
68DLH13	0.54	1727	9.49	234.19	234.19	6.30 2.49	6.21 2.45	6.10 2.39	6.01 2.32	5.93 2.26	5.84 2.21	5.75 2.17	5.66 2.11	5.58 2.07	5.51 2.01	5.42 1.97	5.34 1.94	5.27 1.89	5.18 1.85	5.12 1.80	
68DLH14	0.58	1727	10.93	269.69	269.69	7.26 2.68	7.15 2.61	7.04 2.55	6.93 2.49	6.82 2.43	6.74 2.37	6.63 2.32	6.54 2.26	6.43 2.21	6.34 2.15	6.26 2.11	6.15 2.05	6.06 2.01	5.97 1.97	5.88 1.94	
68DLH15	0.64	1727	12.25	302.39	302.39	8.14 3.00	7.99 2.93	7.88 2.86	7.74 2.78	7.61 2.72	7.50 2.65	7.37 2.59	7.26 2.53	7.15 2.48	7.04 2.42	6.93 2.36	6.82 2.30	6.74 2.26	6.63 2.21	6.54 2.15	
68DLH16	0.72	1727	14.52	358.57	358.57	9.65 3.53	9.47 3.44	9.34 3.35	9.19 3.28	9.04 3.19	8.90 3.12	8.75 3.05	8.62 2.97	8.49 2.90	8.36 2.84	8.23 2.77	8.12 2.71	7.99 2.65	7.88 2.59	7.74 2.53	
68DLH17	0.80	1727	16.36	404.07	404.07	10.87 4.01	10.70 3.91	10.52 3.82	10.37 3.73	10.22 3.63	10.06 3.56	9.91 3.47	9.76 3.38	9.61 3.32	9.47 3.23	9.34 3.16	9.19 3.09	9.06 3.03	8.93 2.96	8.82 2.88	
68DLH18	0.89	1727	18.95	467.73	467.73	12.58 4.53	12.39 4.43	12.19 4.33	12.01 4.21	11.82 4.13	11.64 4.02	11.47 3.92	11.29 3.83	11.12 3.75	10.96 3.66	10.79 3.59	10.63 3.50	10.48 3.41	10.33 3.35	10.17 3.28	
68DLH19	0.98	1727	21.82	538.59	538.59	14.49 5.15	14.25 5.02	14.03 4.90	13.81 4.78	13.59 4.67	13.37 4.56	13.15 4.45	12.95 4.34	12.76 4.24	12.56 4.15	12.36 4.05	12.19 3.96	11.99 3.88	11.82 3.79	11.64 3.70	
SPAN IN MILIMETERS			< 25908	25908-30175	30480-39319	39624	39929	40234	40538	40843	41148	41453	41758	42062	42367	42672	42977	43282	43586	43891	
72DLH14	0.60	1829	10.13	262.22	262.22	6.63 2.49	6.52 2.43	6.43 2.37	6.34 2.32	6.23 2.26	6.15 2.21	6.06 2.17	5.99 2.13	5.91 2.08	5.82 2.02	5.73 1.98	5.66 1.94	5.58 1.91	5.51 1.86	5.42 1.82	
72DLH14	0.64	1829	11.59	300.38	300.38	7.59 2.78	7.48 2.72	7.35 2.67	7.24 2.59	7.13 2.53	7.04 2.49	6.93 2.43	6.82 2.37	6.74 2.33	6.63 2.27	6.54 2.21	6.45 2.18	6.37 2.14	6.26 2.08	6.17 2.04	
72DLH16	0.73	1829	13.39	347.22	347.22	8.77 3.28	8.64 3.19	8.53 3.12	8.40 3.05	8.27 2.99	8.16 2.91	8.05 2.86	7.94 2.78	7.83 2.74	7.72 2.67	7.61 2.61	7.50 2.55	7.39 2.49	7.31 2.46	7.20 2.40	
72DLH17	0.82	1829	15.08	390.59	390.59	9.87 3.73	9.74 3.64	9.58 3.57	9.45 3.48	9.32 3.40	9.19 3.32	9.06 3.26	8.93 3.18	8.80 3.10	8.69 3.05	8.55 2.99	8.44 2.91	8.34 2.86	8.23 2.78	8.12 2.74	
72DLH18	0.86	1829	17.66	457.58	457.58	11.55 4.21	11.38 4.13	11.20 4.02	11.05 3.94	10.87 3.86	10.72 3.76	10.57 3.67	10.48 3.60	10.28 3.53	10.13 3.44	10.00 3.37	9.85 3.31	9.71 3.23	9.58 3.16	9.45 3.09	
72DLH19	1.02	1829	20.70	536.45	536.45	13.55 4.78	13.33 4.68	13.13 4.56	12.93 4.46	12.74 4.37	12.54 4.27	12.36 4.17	12.19 4.08	12.01 3.99	11.84 3.91	11.66 3.83	11.51 3.75	11.33 3.66	11.18 3.60	11.03 3.51	
SPAN IN MILIMETERS			< 24689	24689-30175	30480-33833	34138	35052	35966	36881	37795	38710	39624	40538	41453	42367	43282	44196	45110	46025	47244	48768
80DLH15	0.58	2032	14.09	348.02	348.02	10.20 4.68	9.67 4.31	9.21 4.01	8.77 3.72	8.38 3.44	8.01 3.21	7.66 2.99	7.33 2.80	7.02 2.61	6.72 2.43	6.45 2.29	6.19 2.14	5.95 2.02	5.71 1.89	5.42 1.75	5.07 1.59
80DLH16	0.67	2032	16.94	418.22	418.22	12.25 5.47	11.71 5.06	11.14 4.68	10.61 4.33	10.09 4.02	9.61 3.75	9.17 3.50	8.75 3.26	8.38 3.05	8.01 2.86	7.66 2.68	7.35 2.51	7.04 2.36	6.76 2.21	6.41 2.05	5.99 1.86
80DLH17	0.77	2032	19.57	483.21	483.21	14.16 6.58	13.50 6.07	12.84 5.63	12.23 5.22	11.66 4.84	11.16 4.50	10.66 4.20	10.20 3.92	9.76 3.67	9.34 3.42	8.97 3.22	8.60 3.02	8.27 2.84	7.94 2.67	7.55 2.46	7.08 2.24
80DLH18	0.88	2032	22.15	546.06	546.06	16.00 7.53	15.23 6.96	14.49 6.43	13.81 5.96	13.17 5.54	12.58 5.16	12.03 4.81	11.51 4.49	11.03 4.20	10.55 3.94	10.13 3.69	9.71 3.45	9.34 3.25	8.97 3.06	8.53 2.83	8.00 2.56
80DLH19	0.98	2032	25.80	637.07	637.07	18.67 8.43	17.77 7.77	16.92 7.19	16.11 6.68	15.34 6.20	14.66 5.77	14.01 5.38	13.39 5.02	12.80 4.69	12.25 4.39	11.75 4.13	11.29 3.88	10.83 3.64	10.42 3.42	9.88 3.16	9.27 2.87
80DLH20	1.09	2032	29.00	716.07	716.07	21.10 9.42	20.16 8.69	19.30 8.05	18.49 7.47	17.66 6.93	16.87 6.46	16.11 6.01	15.41 5.61	14.75 5.25	14.11 4.91	13.52 4.61	13.00 4.33	12.47 4.07	11.97 3.83	11.38 3.54	10.67 3.21
SPAN IN MILIMETERS			< 27127	27127-30175	30480-36576	36881	37795	38710	39624	40538	41453	42367	43282	44196	45110	46025	47244	48768	50292	51816	53340
88DLH16	0.67	2235	15.30	414.88	414.88	11.25 5.26	10.72 4.90	10.22 4.56	9.78 4.24	9.36 3.96	8.97 3.70	8.62 3.47	8.27 3.25	7.94 3.06	7.63 2.87	7.33 2.71	6.96 2.51	6.54 2.27	6.16 2.08	5.81 1.89	5.49 1.73
88DLH17	0.74	2235	17.29	469.06	469.06	12.71 5.89	12.10 5.47	11.51 5.09	10.98 4.74	10.48 4.43	10.02 4.14	9.61 3.88	9.19 3.63	8.82 3.41	8.44 3.21	8.12 3.02	7.70 2.78	7.22 2.52	6.78 2.32	6.38 2.13	6.01 1.94
88DLH18	0.85	2235	19.83	537.92	537.92	14.60 6.71	13.90 6.23	13.24 5.79	12.63 5.39	12.06 5.04	11.53 4.71	11.03 4.42	10.57 4.14	10.13 3.89	9.71 3.64	9.32 3.44	8.86 3.18	8.31 2.90	7.81 2.64	7.34 2.40	6.91 2.21
88DLH19	0.95	2235	22.94	622.26	622.26	16.87 7.60	16.06 7.06	15.30 6.56	14.57 6.12	13.92 5.72	13.30 5.35	12.74 5.00	12.19 4.69	11.68 4.40	11.23 4.14	10.77 3.89	10.23 3.61	9.58 3.28	9.01 2.99	8.47 2.72	7.99 2.51
88DLH20	1.11	2235	26.39	715.94	715.94	19.46 9.09	18.69 8.44	17.97 7.86	17.27 7.32	16.52 6.84	15.82 6.39	15.19 5.98	14.55 5.61	13.98 5.26	13.44 4.96	12.91 4.67	12.28 4.31	11.53 3.92	10.85 3.59	10.22 3.26	9.63 3.00
88DLH21	1.30	2235	32.56	883.14	883.14	24.05 10.56	22.87 9.82	21.80 9.13	20.79 8.52	19.85 7.95	18.97 7.42	18.14 6.96	17.38 6.52	16.68 6.12	16.00 5.76	15.36 5.42	14.57 5.02	13.65 4.56	12.84 4.15	12.07 3.80	11.37 3.48

LRFD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS DLH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)																
SPAN IN MILIMETERS			< 29566	29566-30175	30480-39319	39624	40538	41453	42367	43282	44196	45110	46025	47244	48768	50292	51816	53340	54864	56388	57912
96DLH17	0.76	2438	15.84	468.26	468.26	11.82	11.31	10.85	10.37	9.98	9.58	9.21	8.86	8.44	7.91	7.43	7.00	6.60	6.23	5.90	5.58
						5.67	5.29	4.94	4.64	4.34	4.08	3.83	3.60	3.34	3.03	2.77	2.52	2.32	2.13	1.95	1.80
96DLH18	0.85	2438	17.84	527.11	527.11	13.30	12.76	12.23	11.71	11.23	10.79	10.39	10.00	9.53	8.97	8.44	7.96	7.53	7.12	6.76	6.39
						6.46	6.02	5.63	5.28	4.96	4.65	4.37	4.11	3.80	3.45	3.15	2.88	2.64	2.42	2.23	2.05
96DLH19	0.96	2438	21.31	630.13	630.13	15.91	15.25	14.60	13.96	13.37	12.80	12.28	11.79	11.20	10.50	9.87	9.28	8.77	8.26	7.82	7.39
						7.32	6.84	6.39	5.98	5.61	5.26	4.96	4.67	4.31	3.92	3.59	3.26	3.00	2.75	2.53	2.34
96DLH20	1.08	2438	23.99	709.13	709.13	18.03	17.27	16.50	15.80	15.12	14.49	13.90	13.35	12.67	11.90	11.18	10.52	9.93	9.36	8.86	8.38
						8.30	7.74	7.23	6.78	6.36	5.96	5.61	5.28	4.90	4.45	4.04	3.70	3.40	3.12	2.86	2.64
96DLH21	1.31	2438	30.09	889.68	889.68	22.48	21.49	20.57	19.70	18.91	18.14	17.44	16.76	15.95	14.97	14.09	13.25	12.49	11.81	11.16	10.57
						10.18	9.51	8.90	8.33	7.80	7.34	6.90	6.49	6.01	5.45	4.97	4.55	4.17	3.83	3.53	3.26
96DLH22	1.49	2438	33.71	996.71	996.71	25.17	24.25	23.35	22.50	21.69	20.94	20.16	19.39	18.45	17.33	16.32	15.38	14.52	13.74	12.99	12.30
						11.83	11.04	10.33	9.67	9.07	8.52	8.01	7.54	6.99	6.34	5.77	5.28	4.84	4.45	4.10	3.77
SPAN IN MILIMETERS			< 32004	32004-42062		42367	43282	44196	45110	46025	47244	48768	50292	51816	53340	54864	56388	57912	59436	60960	62484
104DLH18	0.86	2642	16.06	513.63		12.12	11.64	11.20	10.70	10.33	9.84	9.27	8.77	8.29	7.83	7.42	7.04	6.69	6.34	6.04	5.75
						6.21	5.83	5.47	5.15	4.84	4.48	4.07	3.72	3.40	3.10	2.84	2.62	2.43	2.24	2.07	1.92
104DLH19	0.98	2642	19.51	624.66		14.75	14.16	13.61	13.09	12.56	11.95	11.24	10.61	10.01	9.45	8.95	8.48	8.05	7.65	7.26	6.91
						7.06	6.61	6.21	5.85	5.50	5.09	4.62	4.21	3.86	3.53	3.23	2.97	2.75	2.55	2.36	2.18
104DLH20	1.09	2642	21.95	702.32		16.72	16.15	15.63	15.06	14.46	13.78	12.93	12.16	11.44	10.79	10.19	9.63	9.14	8.66	8.22	7.81
						7.99	7.48	7.04	6.61	6.23	5.76	5.23	4.77	4.36	3.99	3.66	3.38	3.12	2.88	2.68	2.48
104DLH21	1.31	2642	27.58	882.88		20.92	20.07	19.28	18.54	17.79	16.93	15.92	15.00	14.16	13.38	12.64	11.98	11.37	10.80	10.26	9.75
						9.82	9.22	8.65	8.14	7.66	7.09	6.45	5.88	5.37	4.91	4.48	4.14	3.83	3.56	3.29	3.05
104DLH22	1.52	2642	30.93	989.90		23.44	22.63	21.86	21.14	20.44	19.56	18.41	17.35	16.36	15.45	14.61	13.85	13.15	12.47	11.85	11.29
						11.42	10.71	10.05	9.45	8.90	8.23	7.48	6.82	6.24	5.72	5.23	4.83	4.46	4.13	3.82	3.56
104DLH23	1.59	2642	34.06	1090		25.85	24.97	23.99	23.02	22.08	20.97	19.67	18.49	17.40	16.41	15.49	14.65	13.90	13.17	12.51	11.88
						11.95	11.20	10.52	9.89	9.31	8.61	7.82	7.13	6.52	5.98	5.50	5.06	4.67	4.31	3.99	3.70
SPAN IN MILIMETERS			< 34442	34442-44806		45110	46025	47244	48768	50292	51816	53340	54864	56388	57912	59436	60960	62484	64008	65532	67056
112DLH19	0.98	2845	17.85	614.52		13.63	13.13	12.51	11.75	11.07	10.45	9.88	9.39	8.90	8.44	8.01	7.63	7.26	6.95	6.63	6.32
						6.80	6.40	5.92	5.38	4.90	4.49	4.10	3.77	3.47	3.21	2.96	2.75	2.55	2.36	2.20	2.07
112DLH20	1.11	2845	20.20	695.52		15.54	15.06	14.38	13.52	12.74	12.03	11.38	10.80	10.24	9.74	9.23	8.80	8.38	7.99	7.61	7.30
						7.70	7.25	6.69	6.10	5.56	5.07	4.65	4.27	3.94	3.63	3.37	3.10	2.88	2.68	2.49	2.33
112DLH21	1.33	2845	25.43	876.07		19.50	18.78	17.85	16.79	15.80	14.92	14.09	13.35	12.65	12.01	11.41	10.85	10.35	9.87	9.41	8.99
						9.48	8.93	8.26	7.50	6.84	6.26	5.73	5.26	4.85	4.46	4.13	3.83	3.56	3.31	3.07	2.88
112DLH22	1.52	2845	28.54	983.10		21.86	21.16	20.31	19.28	18.24	17.24	16.30	15.43	14.62	13.90	13.20	12.55	11.97	11.41	10.87	10.39
						11.01	10.37	9.58	8.72	7.95	7.26	6.66	6.11	5.63	5.19	4.80	4.46	4.13	3.85	3.59	3.34
112DLH23	1.61	2845	31.45	1083		24.12	23.35	22.40	21.22	19.98	18.80	17.72	16.74	15.84	15.03	14.26	13.55	12.87	12.25	11.68	11.14
						11.52	10.85	10.04	9.12	8.33	7.61	6.97	6.40	5.89	5.44	5.03	4.67	4.33	4.02	3.75	3.48
112DLH24	1.91	2845	37.29	1284		28.54	27.64	26.53	25.21	23.80	22.46	21.23	20.13	19.08	18.11	17.20	16.39	15.62	14.87	14.18	13.55
						13.96	13.14	12.17	11.06	10.08	9.22	8.44	7.76	7.13	6.58	6.10	5.64	5.23	4.87	4.53	4.24
SPAN IN MILIMETERS			< 36881	36881-50292		50597	51816	53340	54864	56388	57912	59436	60960	62484	64008	65532	67056	68580	70104	71628	73152
120DLH20	1.12	3048	17.94	661.22		13.06	12.49	11.79	11.18	10.59	10.09	9.61	9.15	8.73	8.31	7.94	7.61	7.26	6.96	6.67	6.41
						6.27	5.83	5.35	4.93	4.53	4.18	3.86	3.59	3.32	3.09	2.88	2.69	2.51	2.34	2.20	2.07
120DLH21	1.34	3048	22.30	822.29		16.37	15.65	14.77	14.00	13.25	12.60	11.98	11.41	10.87	10.36	9.89	9.45	9.05	8.66	8.31	7.96
						7.73	7.20	6.59	6.07	5.58	5.15	4.75	4.42	4.10	3.82	3.56	3.31	3.09	2.90	2.71	2.52
120DLH22	1.52	3048	25.56	942.66		18.71	18.03	17.06	16.14	15.31	14.55	13.85	13.17	12.55	11.98	11.42	10.93	10.45	10.01	9.58	9.18
						8.98	8.37	7.67	7.04	6.49	5.99	5.54	5.13	4.77	4.43	4.13	3.86	3.60	3.37	3.16	2.97
120DLH23	1.62	3048	28.28	1043		20.64	19.86	18.78	17.79	16.89	16.04	15.27	14.52	13.83	13.17	12.58	11.99	11.47	10.96	10.50	10.06
						9.39	8.77	8.04	7.38	6.80	6.27	5.79	5.38	4.97	4.64	4.31	4.02	3.76	3.51	3.31	3.10
120DLH24	1.93	3048	33.53	1237		24.45	23.50	22.21	21.03	19.95	18.97	18.05	17.18	16.37	15.62	14.92	14.26	13.63	13.04	12.51	11.98
						11.39	10.62	9.73	8.94	8.24	7.60	7.03	6.52	6.04	5.63	5.23	4.88	4.56	4.27	4.01	3.76
120DLH25	2.22	3048	38.43	1417		28.10	26.96	25.51	24.16	22.93	21.78	20.70	19.70	18.78	17.92	17.11	16.37	15.66	14.97	14.35	13.76
						13.35	12.44	11.41	10.47	9.64	8.90	8.23	7.63	7.07	6.59	6.14	5.73	5.35	5.02	4.69	4.40

ASD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS LH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)															
SPAN IN MILLIMETERS			< 6706	6706-7620	7925	8230	8534	8839	9144	9449	9754	10058	10363	10668	10973					
18LH02	0.15	457	8.07	54.0	6.82 4.56	6.45 4.14	6.10 3.77	5.70 3.41	5.35 3.09	5.03 2.81	4.72 2.55	4.46 2.33	4.21 2.14	3.98 1.97	3.77 1.80					
18LH03	0.16	457	8.95	59.9	7.60 5.07	7.19 4.62	6.81 4.21	6.39 3.82	5.96 3.44	5.57 3.10	5.23 2.83	4.91 2.58	4.62 2.34	4.36 2.15	4.13 1.98					
18LH04	0.18	457	10.42	69.8	8.81 5.88	8.33 5.35	7.80 4.80	7.29 4.31	6.84 3.88	6.42 3.53	6.02 3.19	5.66 2.91	5.32 2.65	5.02 2.43	4.74 2.23					
18LH05	0.22	457	11.76	78.9	9.98 6.62	9.45 6.04	8.96 5.51	8.47 5.03	7.92 4.53	7.41 4.11	6.94 3.73	6.53 3.40	6.14 3.09	5.79 2.84	5.47 2.61					
18LH06	0.22	457	13.92	93.3	11.80 7.67	10.93 6.84	10.15 6.11	9.45 5.50	8.82 4.96	8.26 4.48	7.74 4.08	7.28 3.70	6.85 3.38	6.46 3.09	6.10 2.84					
18LH07	0.25	457	14.45	96.8	12.25 8.07	11.80 7.48	11.38 6.94	10.59 6.24	9.89 5.63	9.26 5.09	8.68 4.62	8.15 4.20	7.67 3.85	7.23 3.51	6.84 3.23					
18LH08	0.28	457	15.06	100.9	12.78 8.42	12.30 7.79	11.85 7.23	11.44 6.74	11.06 6.23	10.46 5.64	9.92 5.12	9.35 4.67	8.81 4.26	8.33 3.89	7.88 3.59					
18LH09	0.31	457	16.13	108.1	13.65 8.98	13.14 8.33	12.66 7.69	12.22 7.16	11.82 6.68	11.42 6.10	11.07 5.54	10.40 5.04	9.79 4.61	9.23 4.21	8.72 3.88					
SPAN IN MILLIMETERS			< 7010	7010-7620	7925	8230	8534	8839	9144	9449	9754	10058	10363	10668	10973	11278	11582	11887	12192	
20LH02	0.15	508	7.27	50.9	6.45 4.46	6.37 4.42	6.28 4.34	5.98 3.99	5.66 3.64	5.32 3.32	5.02 3.03	4.74 2.77	4.48 2.53	4.24 2.33	4.01 2.14	3.82 1.98	3.63 1.83	3.45 1.70	3.28 1.57	
20LH03	0.16	508	7.72	54.0	6.84 4.91	6.75 4.85	6.68 4.62	6.59 4.40	6.33 4.08	6.04 3.76	5.76 3.47	5.42 3.18	5.13 2.91	4.85 2.68	4.61 2.46	4.36 2.27	4.13 2.08	3.92 1.94	3.72 1.79	
20LH04	0.18	508	9.46	66.2	8.37 6.24	8.26 5.92	8.14 5.63	7.70 5.13	7.23 4.67	6.81 4.24	6.42 3.86	6.07 3.54	5.73 3.25	5.42 2.99	5.15 2.75	4.88 2.53	4.64 2.34	4.42 2.17	4.21 2.02	
20LH05	0.20	508	10.17	71.2	8.98 6.69	8.88 6.37	8.78 6.07	8.68 5.76	8.33 5.34	7.93 4.91	7.48 4.49	7.06 4.10	6.68 3.76	6.33 3.47	5.99 3.19	5.69 2.94	5.41 2.72	5.15 2.52	4.90 2.34	
20LH06	0.22	508	13.57	95.1	11.99 8.84	11.54 8.18	11.13 7.60	10.55 6.96	9.90 6.23	9.26 5.63	8.69 5.12	8.17 4.67	7.69 4.26	7.25 3.89	6.84 3.59	6.47 3.29	6.14 3.05	5.82 2.80	5.53 2.59	
20LH07	0.25	508	14.46	101.4	12.81 9.44	12.33 8.74	11.87 8.11	11.47 7.55	11.09 7.06	10.37 6.39	9.73 5.80	9.15 5.28	8.61 4.83	8.11 4.42	7.67 4.05	7.25 3.73	6.87 3.44	6.52 3.18	6.20 2.94	
20LH08	0.28	508	14.93	104.6	13.25 9.76	12.74 9.03	12.28 8.39	11.86 7.82	11.45 7.29	11.09 6.82	10.53 6.24	10.02 5.76	9.54 5.32	9.06 4.90	8.58 4.50	8.14 4.15	7.73 3.82	7.34 3.53	6.99 3.28	
20LH09	0.31	508	16.33	114.4	14.44 10.63	13.90 9.85	13.39 9.13	12.93 8.47	12.49 7.90	12.08 7.39	11.70 6.93	11.35 6.37	11.01 5.82	10.39 5.34	9.82 4.90	9.28 4.50	8.80 4.15	8.34 3.85	7.93 3.56	
20LH10	0.34	508	17.61	123.4	15.58 11.47	15.00 10.56	14.46 9.82	13.95 9.13	13.48 8.53	13.04 7.95	12.62 7.44	12.24 6.99	11.87 6.53	11.54 5.99	10.91 5.50	10.31 5.04	9.77 4.67	9.28 4.31	8.81 3.99	
SPAN IN MILLIMETERS			< 8839	8839-10058		10668	10973	11278	11582	11887	12192	12497	12802	13106	13411	13716	14021	14326	14630	
24LH03	0.16	610	5.85	51.6	4.99 3.42	4.94 3.29	4.90 3.18	4.71 2.97	4.48 2.74	4.27 2.55	4.07 2.36	3.89 2.21	3.72 2.05	3.56 1.92	3.41 1.80	3.26 1.69	3.13 1.59	3.02 1.48	2.90 1.40	
24LH04	0.18	610	7.17	63.3	6.11 4.20	5.80 3.86	5.53 3.59	5.25 3.31	5.00 3.06	4.77 2.84	4.55 2.65	4.34 2.46	4.15 2.30	3.98 2.15	3.82 2.01	3.66 1.89	3.51 1.78	3.37 1.66	3.23 1.56	
24LH05	0.19	610	7.68	67.8	6.55 4.49	6.50 4.33	6.42 4.15	6.11 3.85	5.82 3.56	5.54 3.29	5.29 3.06	5.06 2.86	4.83 2.65	4.62 2.49	4.43 2.33	4.24 2.18	4.08 2.05	3.92 1.92	3.76 1.80	
24LH06	0.23	610	10.33	91.2	8.81 5.99	8.44 5.57	8.09 5.19	7.73 4.83	7.35 4.46	7.00 4.14	6.66 3.83	6.37 3.57	6.08 3.32	5.82 3.07	5.56 2.87	5.31 2.68	5.07 2.51	4.87 2.34	4.67 2.21	
24LH07	0.25	610	11.34	100.2	9.70 6.59	9.31 6.14	8.94 5.73	8.58 5.35	8.24 5.00	7.89 4.67	7.53 4.33	7.16 4.02	6.82 3.75	6.50 3.48	6.21 3.25	5.93 3.03	5.67 2.84	5.44 2.65	5.21 2.49	
24LH08	0.26	610	12.10	106.9	10.31 7.00	9.88 6.52	9.47 6.07	9.07 5.66	8.71 5.28	8.34 4.93	7.95 4.58	7.58 4.26	7.25 3.96	6.93 3.70	6.64 3.47	6.34 3.23	6.08 3.03	5.83 2.86	5.60 2.68	
24LH09	0.31	610	14.24	125.8	12.14 8.20	11.79 7.73	11.45 7.31	11.14 6.71	10.66 6.18	10.15 5.73	9.67 5.29	9.22 4.91	8.78 4.56	8.37 4.26	7.99 3.96	7.64 3.70	7.31 3.47	7.00 3.25	6.71 3.05	
24LH10	0.34	610	15.05	133.0	12.87 8.69	12.49 8.15	12.14 7.70	11.80 7.29	11.49 6.91	11.20 6.40	10.75 5.92	10.24 5.51	9.74 5.12	9.29 4.75	8.87 4.43	8.49 4.15	8.11 3.88	7.77 3.63	7.45 3.41	
24LH11	0.36	610	15.86	140.2	13.52 9.10	13.13 8.58	12.76 8.09	12.41 7.66	12.09 7.26	11.77 6.88	11.48 6.55	11.20 6.10	10.71 5.66	10.23 5.26	9.79 4.91	9.36 4.59	8.98 4.29	8.63 4.02	8.27 3.77	

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS LH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)		LOADS SHOWN IN KILONEWTONS PER METER (kN/m)															
SPAN IN MILLIMETERS			< 10363	10363-12497		12802	13106	13411	13716	14021	14326	14630	14935	15240	15545	15850	16154	16459	16764	17069	
28LH05	0.19	711	6.06	62.8		4.91 3.19	4.71 2.99	4.52 2.80	4.33 2.62	4.17 2.46	4.01 2.32	3.86 2.18	3.72 2.07	3.57 1.94	3.45 1.83	3.32 1.73	3.21 1.64	3.10 1.56	3.00 1.48	2.90 1.41	
28LH06	0.23	711	8.06	83.4		6.53 4.21	6.26 3.94	6.01 3.69	5.76 3.47	5.53 3.25	5.31 3.05	5.10 2.87	4.91 2.71	4.72 2.55	4.56 2.42	4.39 2.27	4.24 2.15	4.10 2.04	3.95 1.94	3.82 1.83	
28LH07	0.25	711	9.09	94.2		7.36 4.75	7.06 4.45	6.77 4.15	6.49 3.89	6.23 3.66	5.98 3.44	5.74 3.23	5.53 3.05	5.32 2.87	5.13 2.71	4.94 2.56	4.77 2.42	4.61 2.30	4.45 2.18	4.30 2.07	
28LH08	0.26	711	9.73	100.8		7.88 5.07	7.54 4.74	7.23 4.45	6.93 4.15	6.65 3.91	6.39 3.67	6.12 3.44	5.88 3.23	5.64 3.05	5.41 2.86	5.21 2.69	5.02 2.55	4.83 2.40	4.65 2.27	4.49 2.15	
28LH09	0.31	711	11.98	124.1		9.73 6.24	9.32 5.83	8.93 5.47	8.55 5.12	8.21 4.80	7.88 4.50	7.57 4.24	7.28 3.99	7.01 3.76	6.75 3.54	6.50 3.32	6.27 3.15	6.05 2.97	5.85 2.81	5.64 2.67	
28LH10	0.34	711	13.11	135.8		10.63 6.80	10.27 6.40	9.90 6.04	9.50 5.66	9.12 5.31	8.75 4.99	8.40 4.69	8.08 4.42	7.77 4.15	7.48 3.92	7.22 3.72	6.96 3.51	6.71 3.32	6.47 3.13	6.26 2.97	
28LH11	0.36	711	14.07	145.7		11.38 7.26	11.12 6.93	10.74 6.53	10.37 6.17	9.95 5.79	9.55 5.44	9.17 5.12	8.82 4.83	8.49 4.55	8.18 4.29	7.88 4.05	7.60 3.83	7.32 3.63	7.07 3.44	6.82 3.25	
28LH12	0.39	711	15.44	160.0		12.50 7.95	12.21 7.58	11.93 7.23	11.67 6.94	11.41 6.62	11.17 6.34	10.75 5.95	10.34 5.58	9.95 5.26	9.57 4.96	9.22 4.68	8.88 4.42	8.56 4.15	8.26 3.94	7.96 3.73	
28LH13	0.44	711	16.10	166.8		13.06 8.30	12.75 7.92	12.46 7.55	12.18 7.22	11.90 6.88	11.66 6.59	11.41 6.31	11.17 6.05	10.96 5.77	10.53 5.44	10.12 5.13	9.74 4.84	9.38 4.58	9.04 4.33	8.72 4.10	
SPAN IN MILLIMETERS			< 11887	11887-14021	14326-14935	15240	15545	15850	16154	16459	16764	17069	17374	17678	17983	18288	18593	18898	19202	19507	
32LH06	0.20	813	6.29	74.8	74.8	4.93 3.07	4.75 2.90	4.59 2.75	4.43 2.61	4.29 2.46	4.14 2.34	3.88 2.23	3.75 2.11	3.63 1.91	3.53 1.82	3.41 1.73	3.31 1.66	3.21 1.57	3.12 1.51		
32LH07	0.23	813	7.08	84.1	84.1	5.53 3.42	5.34 3.25	5.15 3.07	4.97 2.91	4.80 2.75	4.64 2.61	4.49 2.48	4.34 2.36	4.20 2.24	4.07 2.13	3.95 2.04	3.82 1.94	3.70 1.85	3.60 1.76	3.50 1.69	
32LH08	0.25	813	7.69	91.3		5.99 3.72	5.79 3.53	5.58 3.34	5.38 3.15	5.21 2.99	5.03 2.83	4.85 2.68	4.69 2.55	4.55 2.43	4.40 2.32	4.27 2.20	4.14 2.10	4.01 1.99	3.89 1.91	3.77 1.82	
32LH09	0.31	813	9.65	114.6		7.53 4.65	7.26 4.40	7.00 4.15	6.75 3.94	6.52 3.73	6.30 3.54	6.10 3.35	5.89 3.19	5.70 3.03	5.53 2.88	5.35 2.75	5.19 2.62	5.03 2.51	4.88 2.39	4.74 2.29	
32LH10	0.31	813	10.67	126.7		8.33 5.13	8.02 4.84	7.74 4.59	7.47 4.33	7.22 4.11	6.97 3.89	6.74 3.70	6.49 3.50	6.27 3.32	6.07 3.16	5.86 3.00	5.67 2.86	5.48 2.71	5.31 2.59	5.15 2.46	
32LH11	0.35	813	11.69	138.8		9.12 5.61	8.78 5.29	8.46 5.00	8.17 4.74	7.89 4.49	7.61 4.26	7.36 4.04	7.12 3.83	6.90 3.66	6.68 3.48	6.46 3.31	6.26 3.15	6.07 3.00	5.88 2.86	5.69 2.72	
32LH12	0.39	813	13.70	162.9		10.71 6.56	10.39 6.24	10.04 5.92	9.69 5.60	9.35 5.31	9.03 5.03	8.72 4.77	8.43 4.53	8.15 4.30	7.89 4.10	7.64 3.89	7.41 3.72	7.18 3.54	6.96 3.38	6.75 3.22	
32LH13	0.44	813	15.29	181.8		11.92 7.29	11.68 7.00	11.45 6.72	11.25 6.47	10.82 6.12	10.43 5.79	10.06 5.48	9.71 5.16	9.38 4.90	9.06 4.65	8.75 4.43	8.47 4.20	8.20 4.01	7.93 3.82	7.69 3.63	
32LH14	0.48	813	15.75	187.1		12.30 7.51	12.05 7.22	11.82 6.94	11.60 6.68	11.38 6.42	11.17 6.08	10.77 5.76	10.40 5.45	10.04 5.18	9.70 4.91	9.38 4.68	9.07 4.43	8.78 4.23	8.50 4.02	8.23 3.85	
32LH15	0.51	813	16.27	193.4		12.69 7.76	12.44 7.45	12.21 7.18	11.98 6.90	11.74 6.62	11.54 6.39	11.32 6.15	11.13 5.93	10.94 5.73	10.58 5.45	10.23 5.18	9.89 4.93	9.57 4.69	9.26 4.46	8.98 4.26	
SPAN IN MILLIMETERS			< 13106	13106-14021	14326-17374	17374	17678	17983	18288	18593	18898	19202	19507	19812	20117	20422	20726	21031	21336	21641	21946
36LH07	0.23	914	5.74	75.1	75.1	4.26 2.58	4.13 2.45	3.99 2.33	3.88 2.23	3.76 2.13	3.66 2.04	3.56 1.95	3.45 1.86	3.35 1.78	3.26 1.70	3.18 1.63	3.09 1.56	3.02 1.50	2.93 1.44	2.86 1.38	
36LH08	0.26	914	6.32	82.7	82.7	4.68 2.83	4.53 2.69	4.40 2.56	4.27 2.45	4.14 2.33	4.02 2.23	3.91 2.13	3.79 2.04	3.69 1.95	3.59 1.86	3.48 1.79	3.40 1.72	3.31 1.64	3.22 1.59	3.13 1.51	
36LH09	0.31	914	8.09	106.0	106.0	5.99 3.60	5.80 3.42	5.63 3.26	5.45 3.12	5.29 2.97	5.13 2.84	4.99 2.71	4.85 2.61	4.71 2.49	4.58 2.37	4.46 2.29	4.33 2.18	4.21 2.10	4.11 2.01	4.01 1.94	
36LH10	0.31	914	8.92	116.8		6.62 3.98	6.42 3.79	6.21 3.61	6.02 3.44	5.85 3.28	5.67 3.13	5.51 3.00	5.35 2.87	5.21 2.74	5.06 2.62	4.93 2.52	4.78 2.40	4.67 2.32	4.53 2.21	4.42 2.13	
36LH11	0.34	914	9.73	127.4		7.22 4.33	7.00 4.13	6.78 3.92	6.58 3.75	6.39 3.59	6.20 3.41	6.01 3.26	5.85 3.12	5.67 2.99	5.51 2.86	5.37 2.74	5.22 2.62	5.07 2.52	4.94 2.42	4.81 2.32	
36LH12	0.36	914	11.65	152.5		8.65 5.16	8.39 4.93	8.12 4.69	7.88 4.48	7.63 4.26	7.41 4.07	7.19 3.89	6.97 3.72	6.77 3.54	6.56 3.38	6.37 3.23	6.18 3.10	6.01 2.97	5.83 2.84	5.67 2.72	
36LH13	0.44	914	13.69	179.4		10.17 6.05	9.85 5.76	9.54 5.48	9.25 5.23	8.97 4.99	8.69 4.77	8.44 4.55	8.20 4.34	7.96 4.15	7.74 3.98	7.53 3.82	7.32 3.66	7.12 3.50	6.93 3.37	6.75 3.23	
36LH14	0.53	914	15.09	197.7		11.20 6.65	11.01 6.33	10.63 6.01	10.30 5.72	9.96 5.44	9.64 5.19	9.35 4.94	9.06 4.71	8.78 4.50	8.52 4.30	8.27 4.13	8.04 3.94	7.80 3.77	7.58 3.60	7.36 3.45	
36LH15	0.53	914	15.91	208.5		11.80 7.00	11.60 6.77	11.39 6.53	11.22 6.33	10.85 6.02	10.52 5.74	10.18 5.47	9.88 5.22	9.57 4.99	9.29 4.77	9.01 4.55	8.75 4.36	8.50 4.17	8.27 3.99	8.04 3.83	

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS LH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)	LOADS SHOWN IN KILONETONS PER METER (kN/m)															
SPAN IN MILLIMETERS			< 14630	14630-17983	18288-19812	20117	20422	20726	21031	21336	21641	21946	22250	22555	22860	23165	23470	23774	24079	24384
40LH08	0.23	1016	5.08	74.1	74.1	3.70	3.60	3.51	3.41	3.32	3.23	3.16	3.07	3.00	2.93	2.86	2.80	2.72	2.67	2.59
						2.18	2.10	2.01	1.92	1.85	1.78	1.70	1.63	1.57	1.51	1.45	1.41	1.35	1.31	1.25
40LH09	0.31	1016	6.67	97.5	97.5	4.84	4.71	4.59	4.46	4.34	4.24	4.13	4.02	3.92	3.83	3.73	3.64	3.56	3.48	3.40
						2.86	2.74	2.62	2.52	2.42	2.33	2.23	2.14	2.05	1.98	1.91	1.83	1.78	1.72	1.64
40LH10	0.31	1016	7.34	107.2	107.2	5.35	5.21	5.06	4.93	4.80	4.68	4.56	4.45	4.33	4.23	4.13	4.02	3.92	3.82	3.72
						3.15	3.02	2.88	2.77	2.67	2.56	2.46	2.36	2.27	2.18	2.10	2.02	1.95	1.88	1.80
40LH11	0.32	1016	8.01	117.1	117.1	5.82	5.66	5.51	5.37	5.22	5.09	4.96	4.84	4.71	4.59	4.49	4.37	4.27	4.17	4.07
						3.41	3.26	3.13	3.02	2.88	2.77	2.67	2.56	2.46	2.37	2.29	2.20	2.11	2.04	1.97
40LH12	0.36	1016	9.75	142.6	142.6	7.09	6.88	6.69	6.52	6.34	6.18	6.02	5.86	5.72	5.57	5.44	5.31	5.18	5.04	4.93
						4.15	3.98	3.80	3.66	3.51	3.37	3.23	3.10	2.99	2.87	2.75	2.65	2.56	2.46	2.37
40LH13	0.44	1016	11.50	168.1	168.1	8.36	8.12	7.90	7.70	7.50	7.29	7.10	6.93	6.75	6.58	6.42	6.26	6.11	5.96	5.82
						4.87	4.67	4.48	4.30	4.13	3.95	3.79	3.64	3.51	3.37	3.25	3.12	3.02	2.90	2.80
40LH14	0.51	1016	13.13	192.2	192.2	9.57	9.31	9.04	8.80	8.56	8.33	8.11	7.90	7.70	7.51	7.32	7.15	6.97	6.80	6.64
						5.58	5.35	5.12	4.90	4.71	4.50	4.33	4.15	3.98	3.83	3.67	3.54	3.40	3.28	3.15
40LH15	0.53	1016	14.70	215.0	215.0	10.71	10.39	10.08	9.79	9.51	9.23	8.98	8.74	8.50	8.27	8.05	7.85	7.64	7.45	7.26
						6.23	5.95	5.69	5.44	5.21	4.99	4.78	4.59	4.40	4.23	4.07	3.91	3.76	3.61	3.48
40LH16	0.61	1016	16.20	237.0	237.0	11.79	11.61	11.44	11.26	11.10	10.96	10.65	10.36	10.08	9.82	9.55	9.31	9.07	8.84	8.62
						6.84	6.64	6.43	6.24	6.07	5.89	5.64	5.41	5.19	4.99	4.80	4.61	4.43	4.26	4.11
SPAN IN MILLIMETERS			< 16154	16154-17983	18288-22250	22555	22860	23165	23470	23774	24079	24384	24689	24994	25298	25603	25908	26213	26518	26822
44LH09	0.28	1118	5.53	89.4	89.4	3.96	3.86	3.77	3.69	3.60	3.53	3.44	3.37	3.29	3.22	3.15	3.07	3.02	2.94	2.88
						2.30	2.21	2.13	2.05	1.98	1.91	1.85	1.78	1.72	1.66	1.60	1.54	1.50	1.44	1.40
44LH10	0.31	1118	6.11	98.7	98.7	4.37	4.27	4.17	4.07	3.96	3.88	3.79	3.70	3.63	3.54	3.47	3.40	3.32	3.25	3.18
						2.53	2.45	2.36	2.26	2.18	2.10	2.02	1.95	1.89	1.82	1.76	1.70	1.64	1.60	1.54
44LH11	0.32	1118	6.61	106.7	106.7	4.74	4.62	4.52	4.40	4.30	4.21	4.11	4.02	3.92	3.85	3.76	3.67	3.60	3.53	3.44
						2.74	2.64	2.55	2.45	2.36	2.29	2.20	2.13	2.04	1.98	1.91	1.85	1.79	1.73	1.67
44LH12	0.36	1118	8.19	132.2	132.2	5.86	5.73	5.58	5.45	5.32	5.19	5.06	4.94	4.83	4.71	4.59	4.49	4.37	4.27	4.18
						3.38	3.26	3.13	3.02	2.91	2.80	2.69	2.61	2.51	2.42	2.33	2.26	2.17	2.10	2.02
44LH13	0.44	1118	9.70	156.8	156.8	6.96	6.80	6.62	6.47	6.31	6.17	6.02	5.89	5.76	5.63	5.50	5.38	5.26	5.15	5.04
						4.01	3.86	3.70	3.59	3.44	3.32	3.21	3.09	2.99	2.88	2.78	2.69	2.61	2.52	2.43
44LH14	0.45	1118	11.18	180.5	180.5	8.01	7.79	7.58	7.38	7.19	7.01	6.84	6.66	6.50	6.36	6.20	6.05	5.92	5.77	5.64
						4.59	4.40	4.24	4.07	3.91	3.77	3.63	3.50	3.37	3.25	3.13	3.02	2.91	2.81	2.72
44LH15	0.53	1118	13.00	210.0	210.0	9.32	9.09	8.87	8.65	8.44	8.24	8.04	7.83	7.64	7.47	7.29	7.12	6.94	6.80	6.64
						5.34	5.13	4.94	4.75	4.58	4.42	4.26	4.10	3.95	3.80	3.67	3.54	3.41	3.31	3.19
44LH16	0.61	1118	14.99	242.1	242.1	10.75	10.49	10.23	9.98	9.74	9.51	9.29	9.07	8.87	8.66	8.46	8.28	8.09	7.92	7.74
						6.14	5.91	5.69	5.47	5.28	5.07	4.90	4.72	4.56	4.40	4.24	4.11	3.96	3.83	3.72
44LH17	0.69	1118	16.10	260.0	260.0	11.52	11.38	11.22	11.07	10.94	10.68	10.43	10.20	9.96	9.73	9.51	9.31	9.10	8.90	8.71
						6.56	6.39	6.21	6.05	5.91	5.69	5.48	5.29	5.12	4.93	4.77	4.61	4.45	4.30	4.15
SPAN IN MILLIMETERS			< 17374	17374-17983	18288-24689	24994	25298	25603	25908	26213	26518	26822	27127	27432	27737	28042	28346	28651	28956	29261
48LH10	0.31	1219	5.14	89.3	89.3	3.59	3.51	3.44	3.37	3.29	3.22	3.16	3.09	3.03	2.97	2.91	2.86	2.80	2.74	2.69
						2.05	1.98	1.92	1.85	1.79	1.73	1.69	1.63	1.57	1.53	1.48	1.44	1.40	1.35	1.31
48LH11	0.32	1219	5.57	96.8	96.8	3.88	3.79	3.72	3.63	3.56	3.48	3.41	3.34	3.28	3.21	3.15	3.09	3.03	2.97	2.91
						2.21	2.14	2.07	1.99	1.94	1.88	1.82	1.75	1.70	1.64	1.60	1.54	1.50	1.45	1.41
48LH12	0.36	1219	7.03	122.3	122.3	4.90	4.80	4.69	4.59	4.49	4.39	4.30	4.21	4.13	4.04	3.96	3.88	3.80	3.73	3.66
						2.78	2.69	2.61	2.52	2.43	2.34	2.27	2.20	2.14	2.07	2.01	1.94	1.88	1.83	1.78
48LH13	0.42	1219	8.44	146.5	146.5	5.86	5.73	5.60	5.48	5.37	5.25	5.15	5.03	4.93	4.84	4.74	4.64	4.55	4.46	4.37
						3.32	3.22	3.10	3.00	2.90	2.81	2.72	2.62	2.55	2.48	2.39	2.32	2.24	2.18	2.11
48LH14	0.47	1219	9.95	172.8	172.8	6.93	6.77	6.62	6.47	6.33	6.20	6.07	5.93	5.82	5.69	5.58	5.47	5.35	5.25	5.15
						3.92	3.79	3.66	3.54	3.41	3.31	3.21	3.09	3.00	2.90	2.81	2.72	2.64	2.56	2.49
48LH15	0.53	1219	11.44	198.7	198.7	7.95	7.77	7.60	7.44	7.28	7.12	6.97	6.82	6.68	6.53	6.40	6.27	6.15	6.02	5.91
						4.49	4.34	4.18	4.05	3.92	3.79	3.67	3.56	3.44	3.32	3.22	3.12	3.03	2.93	2.84
48LH16	0.61	1219	13.19	229.0	229.0	9.17	8.97	8.77	8.58	8.40	8.21	8.04	7.88	7.70	7.55	7.39	7.25	7.10	6.96	6.82
						5.18	5.00	4.83	4.67	4.52	4.36	4.21	4.08	3.95	3.83	3.72	3.60	3.48	3.38	3.28
48LH17	0.69	1219	14.81	257.2	257.2	10.30	10.06	9.85	9.63	9.42	9.22	9.03	8.84	8.65	8.47	8.30	8.14	7.98	7.82	7.66
						5.79	5.58	5.41	5.22	5.04	4.88	4.72	4.58	4.43	4.29	4.15	4.02	3.91	3.79	3.67

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS DLH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION		APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)		LOADS SHOWN IN KILONEWTONS PER METER (kN/m)															
SPAN IN MILIMETERS			< 18898	62-89		27432	27737	28042	28346	28651	28956	29261	29566	29870	30175	30480	30785	31090	31394	31699		
52DLH10	0.36	1321	6.30	119.2	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			
52DLH11	0.38	1321	6.93	130.8	4.77 2.72	4.67 2.64	4.56 2.53	4.46 2.46	4.36 2.39	4.27 2.30	4.18 2.23	4.10 2.17	4.01 2.10	3.94 2.04	3.85 1.97	3.77 1.92	3.70 1.86	3.63 1.80	3.56 1.75			
52DLH12	0.42	1321	7.72	145.9	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			
52DLH13	0.50	1321	9.38	177.2	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			
52DLH14	0.57	1321	10.73	202.7	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			
52DLH15	0.61	1321	12.05	227.7	8.30 4.53	8.12 4.39	7.95 4.24	7.77 4.11	7.61 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			
52DLH16	0.66	1321	12.99	245.5	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			
52DLH17	0.76	1321	14.96	282.6	10.30 5.76	10.08 5.56	9.86 5.38	9.64 5.21	9.44 5.04	9.25 4.88	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			
SPAN IN MILIMETERS			<20422	20422-29566		29870	30175	30480	30785	31090	31394	31699	32004	32309	32614	32918	33223	33528	33833	34138		
56DLH11	0.38	1422	6.14	125.4	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 1.94	3.56 1.88	3.48 1.82	3.42 1.78	3.37 1.71	3.31 1.67	3.25 1.64			
56DLH12	0.44	1422	7.06	144.1	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 1.94	3.83 1.89	3.77 1.83	3.70 1.79			
56DLH13	0.50	1422	8.55	174.5	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			
56DLH14	0.57	1422	9.66	197.3	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			
56DLH15	0.61	1422	11.03	225.4	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			
56DLH16	0.67	1422	11.91	243.2	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			
56DLH17	0.74	1422	13.73	280.3	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			
SPAN IN MILIMETERS			< 21641	21641-30175	30480-32004	32309	32614	32918	33223	33528	33833	34138	34442	34747	35052	35357	35662	35966	36271	36576		
60DLH12	0.42	1524	6.41	138.7	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			
60DLH13	0.51	1524	7.79	168.6	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			
60DLH14	0.58	1524	8.67	187.4	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			
60DLH15	0.63	1524	10.17	220.0	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			
60DLH16	0.67	1524	11.18	241.8	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 3.00	5.93 2.93	5.83 2.86			
60DLH17	0.76	1524	12.84	278.0	8.61 4.72	8.44 4.59	8.30 4.46	8.14 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			
60DLH18	0.86	1524	14.83	320.8	9.93 5.34	9.74 5.21	9.57 5.04	9.39 4.91	9.22 4.77	9.06 4.65	8.90 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			
SPAN IN MILIMETERS			<23165	23165-30175	30480-34442	34747	35052	35357	35662	35966	36271	36576	36881	37186	37490	37795	38100	38405	38710	39014		
64DLH12	0.45	1626	5.78	133.8	3.85 2.23	3.77 2.18	3.72 2.13	3.66 2.07	3.60 1.97	3.54 1.92	3.48 1.88	3.42 1.82	3.37 1.78	3.32 1.73	3.26 1.69	3.22 1.66	3.18 1.61	3.12 1.59	3.07			
64DLH13	0.50	1626	7.01	162.3	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			
64DLH14	0.58	1626	8.03	186.0	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 2.49	4.75 2.42	4.68 2.36	4.61 2.30	4.53 2.24	4.46 2.20	4.39 2.14	4.31 2.08	4.26 2.04			
64DLH15	0.63	1626	9.21	213.2	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 2.93	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			
64DLH16	0.67	1626	10.36	240.0	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			
64DLH17	0.76	1626	11.94	276.5	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			
64DLH18	0.86	1626	13.79	319.3	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			

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS DLH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION		APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)															
SPAN IN MILIMETERS			< 24689	24689-30175	30480-36881	37186	37490	37795	38100	38405	38710	39014	39319	39624	39929	40234	40538	40843	41148	41453	
68DLH13	0.54	1727	6.32	156.1	156.1	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	
68DLH14	0.58	1727	7.28	179.7	179.7	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 2.01	3.98 1.97	3.92 1.94	
68DLH15	0.64	1727	8.17	201.5	201.5	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 2.26	4.42 2.21	4.36 2.15	
68DLH16	0.72	1727	9.68	239.0	239.0	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 2.84	5.48 2.77	5.41 2.71	5.32 2.65	5.25 2.59	5.16 2.53	
68DLH17	0.80	1727	10.92	269.3	269.3	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	
68DLH18	0.89	1727	12.62	311.8	311.8	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	
68DLH19	0.98	1727	14.55	359.0	359.0	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	
SPAN IN MILIMETERS			< 25908	25908-30175	30480-39319	39624	39929	40234	40538	40843	41148	41453	41758	42062	42367	42672	42977	43282	43586	43891	
72DLH14	0.60	1829	6.74	174.8	174.8	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 2.13	3.99 2.08	3.94 2.02	3.88 1.98	3.82 1.94	3.77 1.91	3.72 1.86	3.67 1.82	3.61 1.78	
72DLH14	0.64	1829	7.73	200.2	200.2	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	
72DLH16	0.73	1829	8.93	231.4	231.4	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	
72DLH17	0.82	1829	10.06	260.3	260.3	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	
72DLH18	0.86	1829	11.78	305.0	305.0	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	
72DLH19	1.02	1829	13.81	357.6	357.6	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	
SPAN IN MILIMETERS			< 24689	24689-30175	30480-33833	34138	35052	35966	36881	37795	38710	39624	40538	41453	42367	43282	44196	45110	46025	47244	48768
80DLH15	0.58	2032	9.40	232.0	232.0	6.80 4.68	6.45 4.31	6.14 4.01	5.85 3.72	5.58 3.44	5.34 3.21	5.10 2.99	4.88 2.80	4.68 2.61	4.48 2.43	4.30 2.29	4.13 2.14	3.96 2.02	3.80 1.89	3.60 1.75	3.37 1.59
80DLH16	0.67	2032	11.30	278.8	278.8	8.17 5.47	7.80 5.06	7.42 4.68	7.07 4.33	6.72 4.02	6.40 3.75	6.11 3.50	5.83 3.26	5.58 3.05	5.34 2.86	5.10 2.68	4.90 2.51	4.69 2.36	4.50 2.21	4.27 2.05	4.01 1.86
80DLH17	0.77	2032	13.05	322.1	322.1	9.44 6.58	9.00 6.07	8.56 5.63	8.15 5.22	7.77 4.84	7.44 4.50	7.10 4.20	6.80 3.92	6.50 3.67	6.23 3.42	5.98 3.22	5.73 3.02	5.51 2.84	5.29 2.67	5.03 2.46	4.71 2.24
80DLH18	0.88	2032	14.74	364.0	364.0	10.66 7.53	10.15 6.96	9.66 6.43	9.20 5.96	8.78 5.54	8.39 5.16	8.02 4.81	7.67 4.49	7.35 4.20	7.03 3.94	6.75 3.69	6.47 3.45	6.23 3.25	5.98 3.06	5.67 2.83	5.34 2.56
80DLH19	0.98	2032	17.21	424.7	424.7	12.44 8.43	11.85 7.77	11.28 7.19	10.74 6.68	10.23 6.20	9.77 5.77	9.34 5.38	8.93 5.02	8.53 4.69	8.17 4.39	7.83 4.13	7.53 3.88	7.22 3.64	6.94 3.42	6.58 3.16	6.17 2.87
80DLH20	1.09	2032	19.34	477.3	477.3	14.06 9.42	13.44 8.69	12.87 8.05	12.33 7.47	11.77 6.93	11.25 6.46	10.74 6.01	10.27 5.61	9.83 5.25	9.41 4.91	9.01 4.61	8.66 4.33	8.31 4.07	7.98 3.83	7.58 3.54	7.10 3.21
SPAN IN MILIMETERS			< 27127	27127-30175	30480-36576	36881	37795	38710	39624	40538	41453	42367	43282	44196	45110	46025	47244	48768	50292	51816	53340
88DLH16	0.67	2235	10.20	276.5	276.5	7.50 5.26	7.15 4.90	6.81 4.56	6.52 4.24	6.24 3.96	5.98 3.70	5.74 3.47	5.51 3.25	5.29 3.06	5.09 2.87	4.88 2.71	4.64 2.51	4.36 2.27	4.10 2.08	3.86 1.89	3.66 1.73
88DLH17	0.74	2235	11.53	312.7	312.7	8.47 5.89	8.07 5.47	7.67 5.09	7.32 4.74	6.99 4.43	6.68 4.14	6.40 3.88	6.12 3.63	5.88 3.41	5.63 3.21	5.41 3.02	5.13 2.78	4.81 2.52	4.52 2.32	4.26 2.13	3.99 1.94
88DLH18	0.85	2235	13.22	358.6	358.6	9.73 6.71	9.26 6.23	8.82 5.79	8.42 5.39	8.04 5.04	7.69 4.71	7.35 4.42	7.04 4.14	6.75 3.89	6.47 3.64	6.21 3.44	5.89 3.18	5.53 2.90	5.19 2.64	4.88 2.40	4.61 2.21
88DLH19	0.95	2235	15.29	414.8	414.8	11.25 7.60	10.71 7.06	10.20 6.56	9.71 6.12	9.28 5.72	8.87 5.35	8.49 5.00	8.12 4.69	7.79 4.40	7.48 4.14	7.18 3.89	6.81 3.61	6.39 3.28	5.99 2.99	5.64 2.72	5.31 2.51
88DLH20	1.11	2235	17.60	477.2	477.2	12.97 9.09	12.46 8.44	11.98 7.86	11.51 7.32	11.01 6.84	10.55 6.39	10.12 5.98	9.70 5.61	9.32 5.26	8.96 4.96	8.61 4.67	8.17 4.31	7.69 3.92	7.22 3.59	6.81 3.26	6.42 3.00
88DLH21	1.30	2235	21.70	588.3	588.3	16.03 10.56	15.25 9.82	14.53 9.13	13.86 8.52	13.23 7.95	12.65 7.42	12.09 6.96	11.58 6.52	11.12 6.12	10.66 5.76	10.24 5.42	9.71 5.02	9.10 4.56	8.55 4.15	8.04 3.80	7.57 3.48

ASD

METRIC LOAD TABLE FOR OPEN WEB STEEL JOISTS DLH-SERIES BASED ON 345 MPa YIELD

JOIST DESIGNATION	APPROX. WT. (kN/m)	DEPTH (mm)	MAX. LOAD (kN/m)	SAFE LOAD* (kN)	LOADS SHOWN IN KILONEWTONS PER METER (kN/m)																
SPAN IN MILIMETERS			< 29566	29566-30175	30480-39319	39624	40538	41453	42367	43282	44196	45110	46025	47244	48768	50292	51816	53340	54864	56388	57912
96DLH17	0.76	2438	10.57	312.1	312.1	7.88 5.67	7.54 5.29	7.23 4.94	6.91 4.64	6.65 4.34	6.39 4.08	6.14 3.83	5.91 3.60	5.61 3.34	5.28 3.03	4.94 2.77	4.67 2.52	4.40 2.32	4.14 2.13	3.92 1.95	3.72 1.80
96DLH18	0.85	2438	11.88	351.4	351.4	8.87 6.46	8.50 6.02	8.15 5.63	7.80 5.28	7.48 4.96	7.19 4.65	6.93 4.37	6.66 4.11	6.34 3.80	5.98 3.45	5.63 3.15	5.31 2.88	5.02 2.64	4.75 2.42	4.49 2.23	4.26 2.05
96DLH19	0.96	2438	14.21	420.0	420.0	10.60 7.32	10.17 6.84	9.73 6.39	9.31 5.98	8.91 5.61	8.53 5.26	8.18 4.96	7.86 4.67	7.47 4.31	7.00 3.92	6.58 3.59	6.18 3.26	5.85 3.00	5.51 2.75	5.21 2.53	4.93 2.34
96DLH20	1.08	2438	15.99	472.7	472.7	12.02 8.30	11.51 7.74	11.00 7.23	10.53 6.78	10.08 6.36	9.66 5.96	9.26 5.61	8.90 5.28	8.44 4.90	7.92 4.45	7.44 4.04	7.01 3.70	6.61 3.40	6.24 3.12	5.91 2.86	5.57 2.64
96DLH21	1.31	2438	20.07	593.1	593.1	14.98 10.18	14.33 9.51	13.71 8.90	13.13 8.33	12.60 7.80	12.09 7.34	11.63 6.90	11.17 6.49	10.62 6.01	9.98 5.45	9.38 4.97	8.82 4.55	8.33 4.17	7.86 3.83	7.44 3.53	7.03 3.26
96DLH22	1.49	2438	22.47	664.4	664.4	16.78 11.83	16.17 11.04	15.57 10.33	15.00 9.67	14.46 9.07	13.96 8.52	13.44 8.01	12.93 7.54	12.30 6.99	11.55 6.34	10.87 5.77	10.24 5.28	9.69 4.64	9.15 4.45	8.66 4.10	8.20 3.77
SPAN IN MILIMETERS			< 32004	32004-42062		42367	43282	44196	45110	46025	47244	48768	50292	51816	53340	54864	56388	57912	59436	60960	62484
104DLH18	0.86	2642	10.70	342.4		8.08 6.21	7.76 5.83	7.47 5.47	7.13 5.15	6.88 4.84	6.56 4.48	6.17 4.07	5.83 3.72	5.51 3.40	5.22 3.10	4.94 2.84	4.68 2.62	4.45 2.43	4.23 2.24	4.02 2.07	3.83 1.92
104DLH19	0.98	2642	13.02	416.4		9.83 7.06	9.44 6.61	9.07 6.21	8.72 5.85	8.37 5.50	7.96 5.09	7.48 4.62	7.07 4.21	6.66 3.86	6.30 3.53	5.96 3.23	5.64 2.97	5.37 2.75	5.10 2.55	4.84 2.36	4.59 2.18
104DLH20	1.09	2642	14.62	468.2		11.14 7.99	10.77 7.48	10.42 7.04	10.04 6.61	9.64 6.23	9.17 5.76	8.62 5.23	8.09 4.77	7.61 4.36	7.19 3.99	6.78 3.66	6.42 3.38	6.08 3.12	5.76 2.88	5.47 2.68	5.21 2.48
104DLH21	1.31	2642	18.39	588.5		13.95 9.82	13.38 9.22	12.85 8.65	12.36 8.14	11.86 7.66	11.28 7.09	10.60 6.45	9.99 5.88	9.44 5.37	8.91 4.91	8.43 4.48	7.98 4.14	7.57 3.83	7.19 3.56	6.84 3.29	6.50 3.05
104DLH22	1.52	2642	20.62	659.9		15.63 11.42	15.09 10.71	14.57 10.05	14.09 9.45	13.63 8.90	13.03 8.23	12.27 7.48	11.55 6.82	10.90 6.24	10.30 5.72	9.74 5.23	9.23 4.83	8.75 4.46	8.31 4.13	7.90 3.82	7.53 3.56
104DLH23	1.59	2642	22.71	726.8		17.23 11.95	16.65 11.20	15.99 10.52	15.35 9.89	14.72 9.31	13.95 8.61	13.11 7.82	12.33 7.13	11.60 6.52	10.94 5.98	10.33 5.50	9.77 5.06	9.26 4.67	8.78 4.31	8.33 3.99	7.92 3.70
SPAN IN MILIMETERS			< 34442	34442-44806		45110	46025	47244	48768	50292	51816	53340	54864	56388	57912	59436	60960	62484	64008	65532	67056
112DLH19	0.98	2845	11.89	409.6		9.09 6.80	8.75 6.40	8.33 5.92	7.83 5.38	7.38 4.90	6.97 4.49	6.58 4.10	6.24 3.77	5.92 3.47	5.63 3.21	5.34 2.96	5.07 2.75	4.84 2.55	4.62 2.36	4.42 2.20	4.21 2.07
112DLH20	1.11	2845	13.46	463.6		10.36 7.70	10.04 7.25	9.58 6.69	9.01 6.10	8.49 5.56	8.01 5.07	7.58 4.65	7.19 4.27	6.82 3.94	6.49 3.63	6.15 3.37	5.86 3.10	5.58 2.88	5.32 2.68	5.07 2.49	4.85 2.33
112DLH21	1.33	2845	16.96	584.0		13.00 9.48	12.52 8.93	11.90 8.26	11.19 7.50	10.53 6.84	9.93 6.26	9.39 5.73	8.90 5.26	8.43 4.85	8.01 4.46	7.60 4.13	7.23 3.83	6.90 3.56	6.56 3.31	6.27 3.07	5.99 2.88
112DLH22	1.52	2845	19.03	655.4		14.57 11.01	14.11 10.37	13.54 9.58	12.84 8.72	12.15 7.95	11.48 7.26	10.85 6.66	10.28 6.11	9.74 5.63	9.26 5.19	8.78 4.80	8.37 4.46	7.96 4.13	7.60 3.85	7.25 3.59	6.91 3.34
112DLH23	1.61	2845	20.97	722.2		16.08 11.52	15.57 10.85	14.92 10.04	14.15 9.12	13.32 8.33	12.53 7.61	11.82 6.97	11.16 6.40	10.56 5.89	10.01 5.44	9.50 5.03	9.01 4.67	8.58 4.33	8.17 4.02	7.77 3.75	7.42 3.48
112DLH24	1.91	2845	24.85	856.0		19.03 13.96	18.43 13.14	17.68 12.17	16.79 11.06	15.86 10.08	14.97 9.22	14.15 8.44	13.41 7.76	12.71 7.13	12.08 6.58	11.47 6.10	10.91 5.64	10.40 5.23	9.92 4.87	9.45 4.53	9.03 4.24
SPAN IN MILIMETERS			< 36881	36881-50292		50597	51816	53340	54864	56388	57912	59436	60960	62484	64008	65532	67056	68580	70104	71628	73152
120DLH20	1.12	3048	11.95	440.8		8.71 6.27	8.33 5.83	7.85 5.35	7.44 4.93	7.06 4.53	6.72 4.18	6.39 3.86	6.10 3.59	5.82 3.32	5.54 3.09	5.28 2.88	5.06 2.69	4.84 2.51	4.64 2.34	4.45 2.20	4.26 2.07
120DLH21	1.34	3048	14.87	548.1		10.91 7.73	10.42 7.20	9.85 6.59	9.32 6.07	8.84 5.58	8.40 5.15	7.99 4.75	7.60 4.42	7.25 4.10	6.91 3.82	6.59 3.56	6.30 3.31	6.04 3.09	5.77 2.90	5.53 2.71	5.29 2.55
120DLH22	1.52	3048	17.05	628.4		12.47 8.98	12.01 8.37	11.36 7.67	10.75 7.04	10.20 6.49	9.70 5.99	9.22 5.54	8.78 5.13	8.37 4.77	7.98 4.43	7.61 4.13	7.28 3.86	6.96 3.60	6.66 3.37	6.39 3.16	6.12 2.97
120DLH23	1.62	3048	18.86	695.3		13.76 9.39	13.23 8.77	12.52 8.04	11.86 7.38	11.25 6.80	10.69 6.27	10.17 5.79	9.69 5.38	9.22 4.97	8.78 4.64	8.37 4.31	7.99 4.02	7.64 3.76	7.31 3.51	6.99 3.31	6.69 3.10
120DLH24	1.93	3048	22.36	824.6		16.30 11.39	15.65 10.62	14.81 9.73	14.02 8.94	13.30 8.24	12.65 7.60	12.02 7.03	11.45 6.52	10.91 6.04	10.40 5.63	9.93 5.23	9.50 4.88	9.09 4.56	8.69 4.27	8.33 4.01	7.99 3.76
120DLH25	2.22	3048	25.63	944.8		18.73 13.35	17.96 12.44	17.00 11.41	16.11 10.47	15.27 9.64	14.50 8.90	13.80 8.23	13.13 7.63	12.52 7.07	11.95 6.59	11.41 6.14	10.91 5.73	10.43 5.35	9.98 5.02	9.57 4.69	9.16 4.40



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