IMPORTANT INFORMATION & GENERAL NOTES

CODES

Simpson Strong-Tie® connectors are recognized by most code agencies. Agencies that recognize some or all of our products include CCMC, ICBO, BOCA, SBCCI; the City of Los Angeles, California; State of Wisconsin; and State of Florida.

The factored resistances shown in this catalogue comply with the National Building Code of Canada (NBCC 2005).

Department of State Architecture, State of California: The DSA of California is no longer issuing Product Acceptance Reports on wood to wood connections – joist hangers. AC25-2, a new acceptance criteria drafted by the DSA, specifically states, companies with current ICBO code reports and/or third party witnessed testing will be recognized as acceptable structural connections for DSA specified projects. Further to AC25-2, the DSA is requiring that those companies who are supplying the aforementioned products to State specified projects be ISO9001 certified.

Call Simpson Strong-Tie or visit the code agencies' web sites for the current evaluation reports if recognition or approval is to be based on the report. Specific reductions and restrictions may be required by other code agencies.

CCMC—Canadian Construction Materials Centre: Nos. CCMC 12862-R, 12863-R.

International Code Council:

NER—209, 393, 413, 421, 422, 432, 443, 469, 499, 694.

ER—1211, 3631, 4546, 4935, 4945, 5053, 5090, 5117, 5268, 5275, 5313, 5328, 5349, 5357, 5485, 5537, 5655, 5656, 5672, 5708, 5709, 5791, 5824, 5938, 5952, 6119.

ESR—1056, 1679, 1772, 2105, 2106, 2138, 2236, 2320, 2329, 2330.

ES—2207, 9603C.

City of Los Angeles, CA—Nos. RR 22086, 24682, 24818, 24947, 24949, 25064, 25074, 25076, 25119, 25120, 25149, 25158, 25185, 25236, 25248, 25279, 25281, 25293, 25300, 25318, 25427, 25459, 25469, 25489, 25528, 25540, 25552, 25560, 25568, 25625, 25667.

State of Florida—FL474, 503, 538, 1423, 1463, 1725, 1901, 2304, 2355, 3750, 3751, 4432, 5113, 5415, 5550, 5805, 5806, 5808, 6477, 6482, 7089, 8239.

State of Wisconsin—No. 200043-N.

TERMS & CONDITIONS OF SALE

PRODUCT USE

Products in this catalogue are designed and manufactured for the specific purposes shown, and should not be used with other connectors not approved by a qualified Designer. Modifications to products or changes in installation procedures should only be made by a qualified Designer. The performance of such modified products or altered installation procedures is the sole responsibility of the Designer.

INDEMNITY

Customers or Designers modifying products or installation procedures, or designing non-catalogue products for fabrication by Simpson Strong-Tie Company Inc. shall, regardless of specific instructions to the user, indemnify, defend, and hold harmless Simpson Strong-Tie Company Inc. for any and all claimed loss or damage occasioned in whole or in part by non-catalogue or modified products.

NON-CATALOGUE AND MODIFIED PRODUCTS

Consult Simpson Strong-Tie Company Inc. for applications for which there is no catalogue product, or for connectors for use in hostile environments, with excessive wood shrinkage, or with abnormal loading or erection requirements.

Non-catalogue products designed by the customer will be fabricated by Simpson Strong-Tie in accordance with customer specifications.

Simpson Strong-Tie cannot and does not make any representations regarding the suitability of use or load-carrying capacities of non-catalogue products. Simpson Strong-Tie provides no warranty, express or implied, on non-catalogue products.

F.O.B. Shipping Point unless otherwise specified.

WARNING

Simpson Strong-Tie Company Inc. structural connectors, anchors, and other products are designed and tested to provide specified design capacities. To obtain optimal performance from Simpson Strong-Tie Company Inc. products and achieve maximum factored resistances, the products must be properly installed and used in accordance with the installation instructions and design limits provided by Simpson Strong-Tie Company Inc. To ensure proper installation and use, designers and installers must carefully read the following General Notes, General Instructions For The Installer and General Instructions For The Designer, as well as consult the applicable catalogue pages for specific product installation instructions and notes.

Proper product installation requires careful attention to all notes and instructions, including these basic rules:

1. Be familiar with the application and correct use of the connector.
2. Follow all installation instructions provided in the applicable catalogue, web-site, Installer's Pocket Guide or any other Simpson Strong-Tie publications.
3. Install all required fasteners per installation instructions provided by Simpson Strong-Tie Company Inc.: a) use proper fastener type; b) use proper fastener quantity; c) fill all fastener holes; d) do not overdrive or underdrive nails, including when using gun nailers; and e) ensure screws are completely driven.
4. Only bend products that are specifically designed to be bent. For those products that required bending, do not bend more than once.
5. Cut joists to the correct length, do not "short-cut". The gap between the end of the joist and the header material should be no greater than ⅛" unless otherwise noted.

In addition to following the basic rules provided above as well as all notes, warnings and instructions provided in the catalogue, installers, designers, engineers and consumers should consult the Simpson Strong-Tie Company Inc. website at ***www.strongtie.com*** to obtain additional design and installation information, including:

- Instructional builder/contractor training kits containing an instructional video, an instructor guide and a student guide in both English and Spanish;
- Installer's Pocket Guide *(form S-INSTALL)* which is designed specifically for installers and uses detailed graphics and minimal text in both English and Spanish to explain visually how to install many key products;
- Information on workshops Simpson conducts at various training centers throughout the country;
- Product specific installation videos;
- Specialty catalogues;
- Code reports;
- Technical fliers and bulletins;
- Master format specifications;
- Material safety data sheets;
- Corrosion information;
- Connector selection guides for engineered wood products *(by manufacturer)*;
- Simpson Strong-Tie connector selector software;
- Simpson Strong-Tie Autocad menu; and
- Answers to frequently asked questions and technical topics.

Failure to follow fully all of the notes and instructions provided by Simpson Strong-Tie Company Inc. may result in improper installation of products. Improperly installed products may not perform to the specifications set forth in this catalogue and may reduce a structure's ability to resist the movement, stress, and loading that occurs from gravity loads as well as impact events such as earthquakes and high velocity winds.

Simpson Strong-Tie Company Inc. does not guarantee the performance or safety of products that are modified, improperly installed or not used in accordance with the design and load limits set forth in this catalogue.

IMPORTANT INFORMATION & GENERAL NOTES

FACTORED RESISTANCE DETERMINATION METHOD

The factored resistance is the maximum factored static load that can be imposed on a connection. Factored resistances in this catalogue are determined using calculations and/or one or more of the following methods: static load tests in wood assemblies; static load tests in steel jigs; static load tests of products embedded in concrete or masonry. Some tests include only portions of a product such as purlin anchor tests, where only the embedded hook is tested, not the nailed or bolted section of the strap, which is calculated.

Testing to determine factored resistances in this catalogue is not done on connection systems in buildings. Testing is conducted under the supervision of an independent laboratory. Some factored resistances are determined using calculations without testing. Tested and calculated factored resistances are determined in accordance with **the appropriate material design standards, including CSA O86-01, CSA S16-01, CSA S136S1-04 and CSA A23.3-04.**

For detailed information regarding how Simpson Strong-Tie tests specific products, contact your Simpson Strong-Tie representative or the company.

GENERAL NOTES

These general notes are provided to ensure proper installation of Simpson Strong-Tie Company Inc. products and must be followed fully.

a. Simpson Strong-Tie Company Inc. reserves the right to change specifications, designs, and models without notice or liability for such changes.

b. Steel used for each Simpson Strong-Tie product is individually selected based on the product's steel specifications, including strength, thickness, formability, coating, and weldability. Contact Simpson Strong-Tie for steel information on specific products.

c. Unless otherwise noted, dimensions are in inches, resistances are in pounds.

d. Unless otherwise noted, bolts and nails cannot be combined. 8d (0.131x2½"), 10d (0.148x3") and 16d (0.162x3½") specify common nails that meet the requirement of CSA B111. When a shorter nail is specified, it will be noted *(for example 8dx1½)*. Refer to page 16 for more nail info.

e. Unless otherwise noted, factored resistances are for Douglas Fir-Larch under continuously dry conditions (K_S=1.00). Factored resistances for other species or conditions must be adjusted according to CSA O86-01.

The following material properties were used to generate the resistances in this catalogue in accordance with CSA O86-01. For LVL and other engineered wood products verify with the manufacturer that their material properties meet or exceed the values shown in the table below.

Species	ϕ F_{cp}	Specific Gravity
Douglas Fir-Larch (D.Fir-L)	812 psi (5.60 MPa)	0.49
Spruce-Pine-Fir (S-P-F)	615 psi (4.24 MPa)	0.42
Hem-Fir (HF)	533 psi (3.68 MPa)	0.46
D.Fir-L Glulam	812 psi (5.60 MPa)	0.49
Spruce-Pine Glulam	672 psi (4.64 MPa)	0.44
LVL	1092 psi (7.53 MPa)	0.50
Parallam® PSL	1092 psi (7.53 MPa)	0.50
TimberStrand® LSL (E=1.3x10^6)	992 psi (6.84 MPa)	0.50
TimberStrand® LSL (E>1.5x10^6)	1092 psi (7.53 MPa)	0.50

f. Simpson Strong-Tie Company Inc. will manufacture non-catalogue products provided prior approval is obtained and an engineering drawing is included with the order. Steel specified on the drawings as ⅛", 3⁄16", and ¼" will be 11 gauge (0.120"), 7 gauge (0.179"), and 3 gauge (0.239"), respectively. The minimum yield and tensile strengths are 33 ksi and 52 ksi, respectively.

g. All references to bolts or machine bolts (MBs) are for structural quality through bolts equal to or better than American Society of Testing and Materials ASTM Standard A307, Grade A or Society of Automotive Engineers standard SAEJ429, Grade 2. RFB is A307, Grade C; SSTB is ASTM A36.

h. Unless otherwise noted, bending steel in the field may cause fractures at the bend line. Fractured steel will not carry load and must be replaced.

i. A fastener that splits the wood will not take the factored load. Evaluate splits to determine if the connection will perform as required. Dry wood may split more easily and should be evaluated as required. If wood tends to split, consider pre-boring holes with diameters not exceeding .75 of the nail diameter.

j. Wood shrinks and expands as it loses and gains moisture, particularly perpendicular to its grain. Take wood shrinkage into account when designing and installing connections. Simpson Strong-Tie manufactures products to fit common dry lumber dimensions.If you need a connector with dimensions other than those listed in this catalogue, Simpson Strong-Tie may be able to vary connector dimensions; contact Simpson Strong-Tie. The effects of wood shrinkage are increased in multiple lumber connections, such as floor-to-floor installations. This may result in the vertical rod nuts becoming loose, requiring post-installation tightening.

k. Top flange hangers may cause unevenness. Possible remedies should be evaluated by a professional and include using a face mount hanger, and routering the beam or cutting the subfloor to accommodate the top flange thickness.

l. Built-up lumber *(multiple members)* must be fastened together to act as one unit to resist the applied load *(excluding the connector fasteners)*. This must be determined by the Designer/Engineer of Record.

m. Do Not Overload. Do not exceed catalogue factored resistances, which would jeopardize the connection.

n. Some model configurations may differ from those shown in this catalogue. Contact Simpson Strong-Tie for details.

o. Hanger Options – some combinations of hanger options are not available. In some cases, combinations of these options may not be installable. Horizontal loads induced by sloped joists must be resisted by other members in the structural system. A qualified Designer must always evaluate each connection, including carried and carrying member limitations, before specifying the product. Fill all fastener holes with fastener types specified in the tables, unless otherwise noted. Hanger configurations, height, and fastener schedules may vary from the tables depending on joist size, skew and slope. See the tabulated factored resistance for the non-modified hanger, and adjust as indicated. Gauge may vary from that specified depending on the manufacturing process used. U and W hangers normally have single stirrups; occasionally, the seat may be welded. B, GLT, HGLT, HW, LBV, W and WNP hangers for sloped seat installations are assumed backed. To order a custom non-backed hanger, contact the Simpson Strong-Tie.

p. Simpson Strong-Tie will calculate the net height for a sloped seat. The customer must provide the H1 joist height before slope.

q. Truss plates shown are not manufactured by Simpson Strong-Tie.

r. Do not weld products listed in this catalogue unless this publication specifically identifies a product as acceptable for welding or unless specific approval for welding is provided in writing by Simpson Strong-Tie. Some steels have poor weldability and a tendancy to crack when welded. Cracked steel will not carry load and must be replaced.

WE ARE ISO 9001-2000 REGISTERED

Simpson Strong-Tie is an ISO 9001-2000 registered company. ISO 9001-2000 is an internationally-recognized quality assurance system which lets our domestic and international customers know that they can count on the consistent quality of Simpson Strong-Tie products and services.