



THE STRENGTH OF A STEEL LOAD-RATED CONNECTION COMBINES WITH THE NATURAL BEAUTY OF WOOD IN THE TU CONCEALED BEAM HANGER. PROVIDES AN AESTHETICALLY ATTRACTIVE CONNECTION FOR EXPOSED BEAMS.

MATERIAL: 3.5mm pre-galvanised mild steel; Dowels-mild steel.

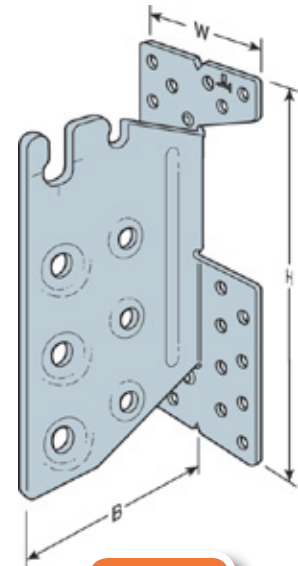
INSTALLATION:

- Use all specified fasteners. See "General Notes" (page 12).
- Pins aligned across the grain may cause splitting if the wood shrinks excessively. Use only in glulam, composite timber or well dried timber. Verify that the header can take the required fasteners specified in the table.
- Attach to the supporting beam with 5.0 x 40mm screws (supplied).
- Specify dowel length and TU size to fit the application.
- Preparation of carried beam is best done off-site with cutting and boring tools.
- Holes in beam should be same diameter as dowel to ensure tight fit.
- Centre the TU within height of carried beam.
- Centre pins within the width of the carried member
- For a sloped installation the TU hanger remains as standard and the timber is cut and angled to suit the slope.
- Recommended for internal dry environments.

OPTIONS: Contact Simpson Strong-Tie for details of special installation tools.

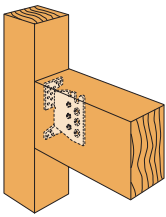
- The standard install will leave a 5mm gap between carried and supporting beams.
- Pocket installation gives a fully concealed connection. See opposite.
- Skewed installation up to 60°. Sloped installation maximum 45°.
- Options: Skewed TU available. To be factory ordered.
- Additional screws are available to order.

TU20 (other sizes similar)
U.S. Patent 5,062,733

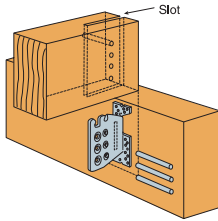


Model No.	Minimum Joist Height	Connector Dimensions			Fasteners			Safe Working Loads (kN)				Characteristic Capacity (kN)			
								Dowel Embedment Length (mm)				Dowel Embedment Length (mm)			
		W	H	B	Header Screw	Joist Dowels Qty.	Joist Dowels Dia.	60	80	100	120	60	80	100	120
Standard Installation															
TU12	120	40	96	101	6	4	8	2.6	3.6	4.3	n/a	7.8	8.4	9.1	n/a
TU16	160	60	134	108	18	3	12	3.4	4.8	6.1	7.5	19.0	19.4	20.1	21.1
TU20	200	60	174	108	22	4	12	5.5	7.7	9.8	12.0	27.5	28.0	29.0	30.4
TU24	240	60	214	108	26	5	12	8.0	11.1	14.2	17.4	36.1	36.7	38.0	39.7
TU28	280	60	254	108	30	6	12	10.7	14.9	19.2	21.5	44.7	45.4	47.0	48.9
Skewed Installation															
TU12	120	40	96	101	6	4	8	2.5	2.5	2.5	n/a	6.7	7.3	8.0	n/a
TU16	160	60	134	108	18	3	12	3.4	4.8	6.1	6.1	15.6	16.0	16.7	17.5
TU20	200	60	174	108	22	4	12	5.5	7.7	9.8	9.8	23.5	24.0	25.0	26.3
TU24	240	60	214	108	26	5	12	8.0	11.1	13.3	13.3	31.9	32.6	34.0	35.8
TU28	280	60	254	108	30	6	12	10.7	14.9	16.3	16.3	40.7	41.6	43.4	45.6
Sloped Installation															
TU12	160	40	96	101	6	4	8	2.3	3.1	3.9	n/a	7.8	8.4	9.1	n/a
TU16	190	60	134	108	18	3	12	3.0	4.1	5.3	5.3	18.1	18.5	19.0	19.6
TU20	225	60	174	108	22	4	12	4.8	6.7	8.5	8.5	26.3	26.9	27.6	28.5
TU24	260	60	214	108	26	5	12	6.9	9.6	12.3	12.3	34.8	25.6	36.4	37.6
TU28	295	60	254	108	30	6	12	9.3	12.9	16.6	16.6	43.3	44.2	45.3	46.7
Skewed and Sloped Installation															
TU12	160	40	96	101	6	4	8	2.3	2.5	2.5	n/a	6.5	6.9	7.3	n/a
TU16	190	60	134	108	18	3	12	3.0	4.1	5.3	5.3	16.3	16.6	17.0	17.5
TU20	225	60	174	108	22	4	12	4.8	6.7	8.5	8.5	24.3	24.8	25.4	26.1
TU24	260	60	214	108	26	5	12	6.9	9.6	12.3	12.3	32.9	33.6	34.4	35.5
TU28	295	60	254	108	30	6	12	9.3	12.9	16.3	16.3	42.0	42.9	43.9	45.3

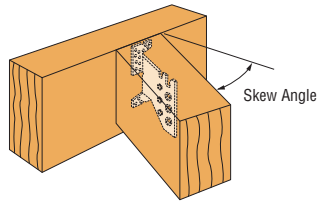
Beam-to-Post



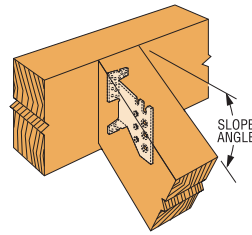
Beam-to-Beam



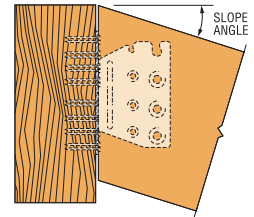
Skewed Beam-to-Beam



Sloped Beam-to-Beam



Sloped Beam-to-Beam



INSTALLATION PROCEDURE FOR A CONCEALED CONNECTOR:

ATTACH CONNECTOR TO HEADER

- Position the connector at the pre determined height and screw the connector to the header or post.
- Fill all holes with screws supplied.

PREPARE THE BEAM

- Cut the beam to the length specified.
- Cut a slot into the end of the beam. Slot width for TU12 is 6mm and 9mm for all others.
- Cut the slot 3mm deeper than the TU and short of the beam height for concealed connector. This allows the connector to be hidden from below. Otherwise cut the slot 3mm deeper than the TU and through the entire beam height.
- **Fully Concealed Only:** Rout a pocket into the beam end. The pocket should be 6mm deep. Enough to hide the thickness of the TU and the screw heads. This eliminates the gap between the beam & header (see Pocket Installation Illustration).

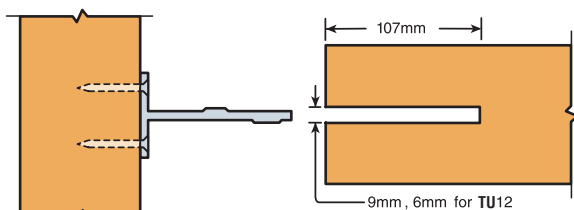
DRILL BEAM DOWEL HOLES

- Position drill guide to provide the proper dowel end distance & height. Clamp in place (Drill guide available from Simpson Strong-Tie).
- Drill the dowel holes to the required diameter. Dowel hole diameter for the TU12 is 8mm and 12mm for all others.

INSTALL BEAMS

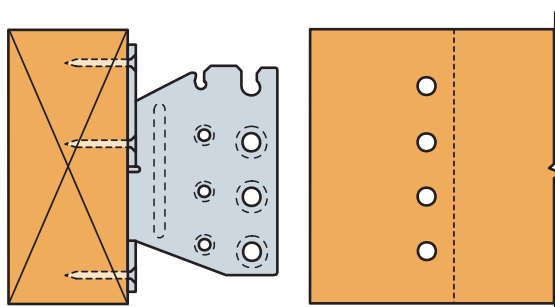
- Install top dowel into the carried beam first. Slip beam into place and install the remaining dowels working from the top downwards.
- **Fully Concealed Only:** To hide exposed dowel holes when the installation is complete, glue and plug the holes.

STANDARD INSTALLATION



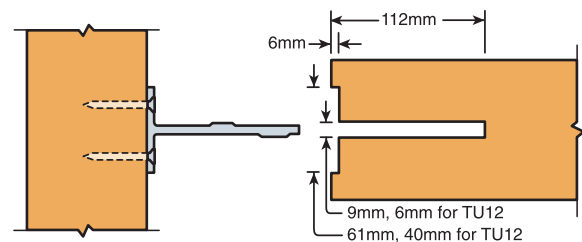
Top View

Cut a slot into the end of the beam



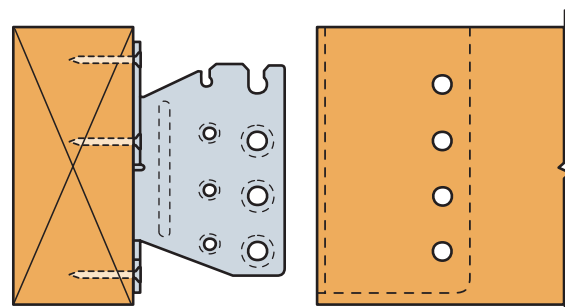
Side View

POCKET (CONCEALED)



Top View

Cut a slot and rout a pocket into the end of the beam



Side View