

Gutmann Twinloc

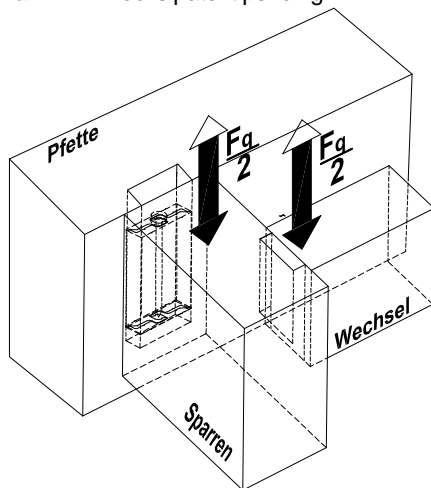
Gutmann Twinloc is designed to connect posts and rails for vertical facades, or purlins and rafters of wooden roof structures with wood face widths ranging from 50 mm to 80 mm. Please refer to the specific Technical Datasheet for precise specifications for the use on vertical facades.

The connection must transmit all loads occurring from the individual parts of the support framework safely and detectably. In addition, the high demands placed on the visual design of wood constructions mean that the connection between rafters and purlins must remain permanently closed even without a joint.

Gutmann Twinloc meets these demands perfectly and remains “brilliantly simple – simply brilliant!” in design and assembly.

Technical Features

- ▶ Extremely sturdy due to perfect form and force fits.
- ▶ Increased load-bearing capacity using simple means.
- ▶ Easy to assemble: rail is hooked in from the side or inserted from the rear.
- ▶ Quick connection: central connecting bolt secures in all three dimensions.
- ▶ Versatile applications: Several connector lengths to suit the rafter height.
- ▶ Easy to assemble with drill and mill template.
- ▶ Precision fitting: system bracket provides depth stop.
- ▶ Perfect visual design: concealed framework on three sides.
- ▶ Closed joints by tightening only one screw to full connector length.
- ▶ Easy to mount: two identical connector parts.
- ▶ Identical mounting for single and double connections.
- ▶ Torsional protection against offset glass load by shear plates.
- ▶ Guaranteed stability.
- ▶ **Gutmann Twinloc** is patent pending.



Building Inspectorate Regulations

In Germany, post-rail connectors used in facade systems are subject to qualification by a general Building Inspectorate Approval (BIA).






Gutmann Twinloc was tested by Prof. Dr. Ing. Blass at the University of Karlsruhe. The general Building Inspectorate Approval No. 9.1-682 was granted in January 2007 and amended for application in roofs in December 2007.

Please refer to the latest “Technical Datasheet: Statical Data” from Gutmann or the Building Inspectorate Approval for detailed statical data.



Twinloc Connector






Gutmann Twinloc: Connectors for Wooden Roof Structures

Connector type	Min. rafter height for 20° roof incline, ca.: (1)	Load-bearing capacity F _q (2)	
		Standard	Heavy-duty
 TL 41	80 mm	342 kg	342 kg
 TL 59	100 mm	514 kg	514 kg
 TL 77	120 mm	514 kg	686 kg
 TL 95	135 mm	514 kg	858 kg
 TL 131	170 mm	686 kg	1202 kg

(1) Larger rafter heights are obtained by linking connectors.

(2) Maximum load-bearing capacity F_q is specified as maximum total bearing power of a rafter with two identical connectors for the load direction along the connector axis for apparent wood densities >= 430 kg/m³.

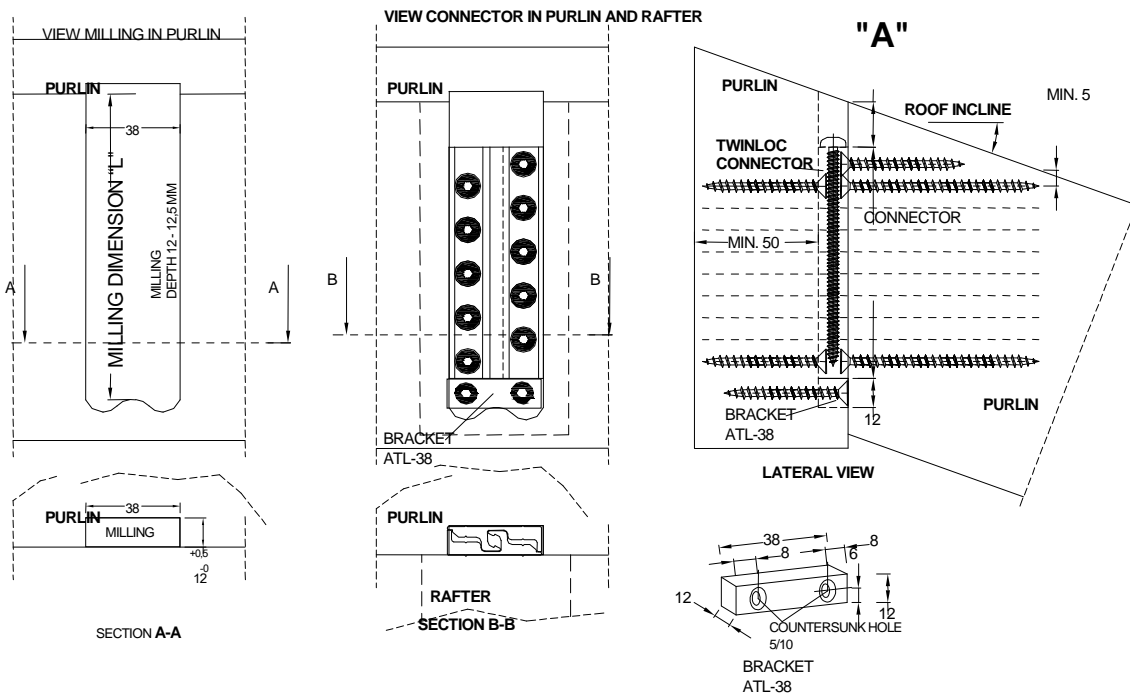
Gutmann Twinloc: Accessories

Item	Application
 Wood screw 5/50 with BIA	For posts Packs of 100 pcs
 Wood screw 5/80 with BIA	For rails Packs of 100 pcs
 Connecting pin VTL-135	Pin for linking connectors Packs of 20 pcs
 Auflage ATL-38	Auflage für Sparren-Pfetten-Verbindung, VE's a 10 Stck
 Fräs- und Bohrschablone	Fräsung am Riegel, Vorbohren am Pfosten

Mounting the Gutmann Twinloc Connector Using the Twinloc Drill and Mill Template

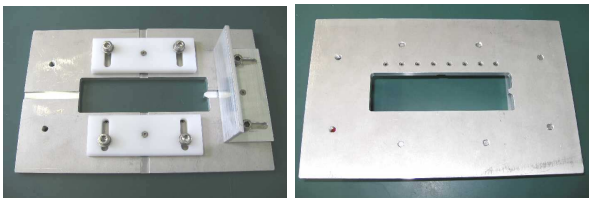
To mount the **Gutmann Twinloc**, first mill a recess into the purlin. Screw the two identical connector parts to the purlin and the rafter head using wood screws. The connectors hook together during mounting and the system connecting screw produces a massive tensioning force in all three dimensions. For exact placement and positioning of the rafter during mounting, the system bracket ATL-38 is screwed in with wood screws 5/50.

Connections of trimmings and rafters may either be milled exactly like the rails in post-rail connections face-side in the trimming, or they may be milled in the rafter.



Milling

Use a commercial hand router (cutter diameter 14 mm, guide ring diameter 24 mm) and the Twinloc template to mill a recess 12 to 12.5 mm deep. Angle and flat stoppers can be replaced as required on the base plate.



Template bottom

Template top

Table: Milling and mounting dimensions

Roof incline	Dimensions "A" (mm)	Milling dimensions „L“ (mm)
Up to 10°	6	6 + connector + 12
Up to 20°	20	20 + connector + 12
Up to 30°	35	35 + connector + 12
Up to 40°	55	55 + connector + 12

Screwing the connectors together

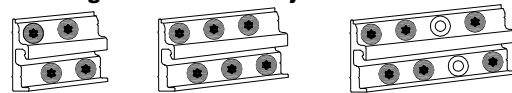
Always use 5/80 long screws in the runner and 5/50 screws in the cross rail. Pre-drill bores of 3 mm diameter for the screws (the template may be used).

A distinction is made between standard and heavy-duty screws for joining connectors to the wood components.

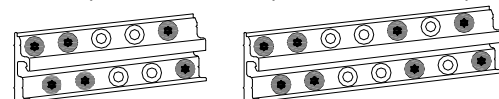
A heavy-duty joint uses all the bores on the connector.

A standard joint uses the bores as shown in the drawings below.

Drawing: Standard screw joint



TL 41: 4 pcs screws TL 59: 6 pcs screws TL 77: 6 pcs screws



TL 95: 6 pcs screws

TL 131: 8 pcs screws

Always screw group with 4 pcs screws on glass load side (= outer side of wood).

After mounting the bracket ATL-38, the rafter (trimming) is pushed in from the top or hooked in from the side and then driven in with a connecting bolt.