

SHARP CLAMP

MOMENT CONNECTION FOR PANELS



VIDEO

SERVICE CLASS

SC1

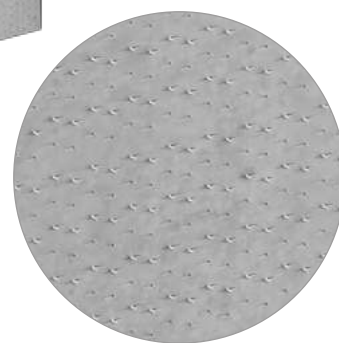
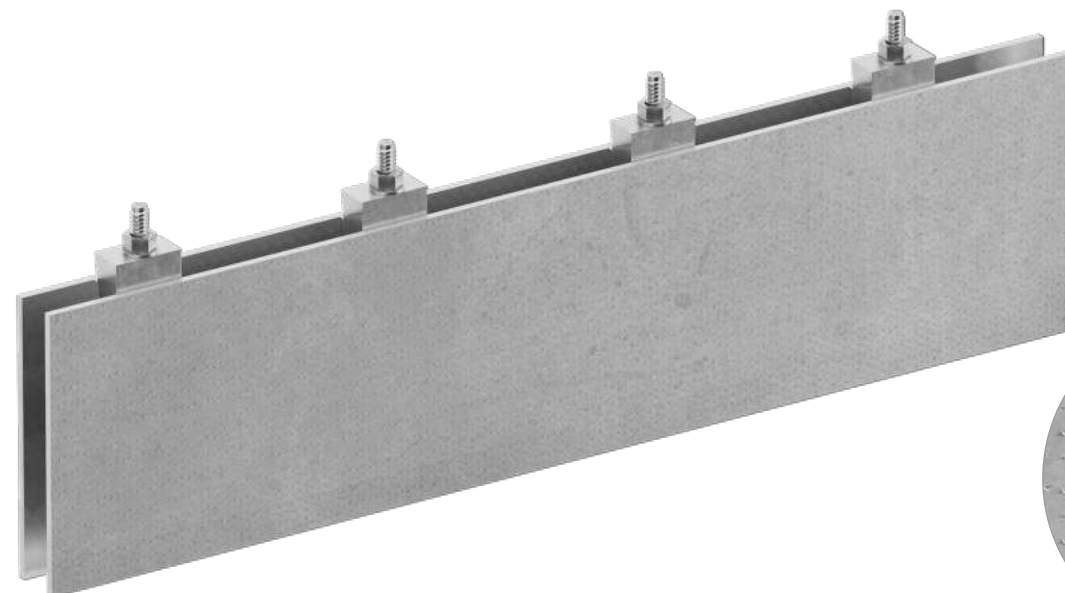
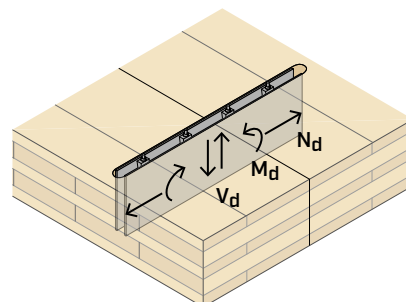
SC2

MATERIAL

S355
Fe/Zn12c

S355 + Fe/Zn12c carbon steel

EXTERNAL LOADS



FIELDS OF USE

Moment resistant connection between CLT panels.

The high stiffness of SHARP METAL technology allows for stress-resistant connections outside the panel plane with high stiffness.

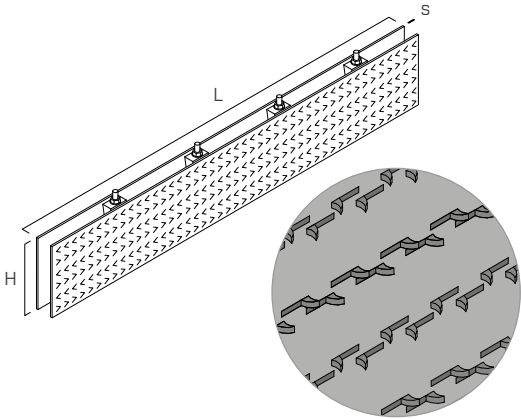
Can be applied to:

- CLT or LVL panel floors

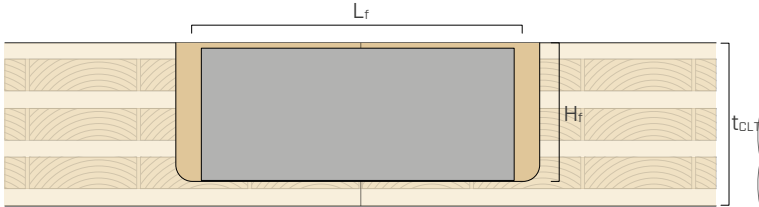
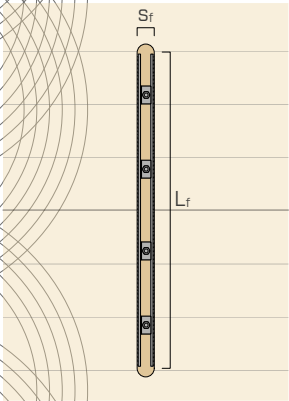
CODES AND DIMENSIONS

SHARP CLAMP | TIMBER-TO-TIMBER JOINTS

CODE	H [mm]	L [mm]	s [mm]	H [in]	L [in]	s [in]	pcs
CLAMP120	120	480	6	4 3/4	19	1/4	1
CLAMP160	160	640	6	6 1/4	25 3/16	1/4	1
CLAMP200	200	800	6	8	31 1/2	1/4	1
CLAMP240	240	960	6	9 1/2	37 13/16	1/4	1



GROOVED GEOMETRY



CODE	t _{CLT,min} [mm]	H _{f,min} [mm]	L _{f,min} [mm]	S _f [mm]	t _{CLT,min} [in]	H _{f,min} [in]	L _{f,min} [in]	S _f [in]
CLAMP120	140	130	500	45	5 1/2	5 1/8	19 3/4	1 3/4
CLAMP160	180	170	660	45	7 1/8	6 3/4	26	1 3/4
CLAMP200	220	210	820	45	8 5/8	8 1/4	32 5/16	1 3/4
CLAMP240	260	250	980	45	10 1/4	10	38 9/16	1 3/4

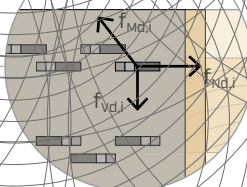
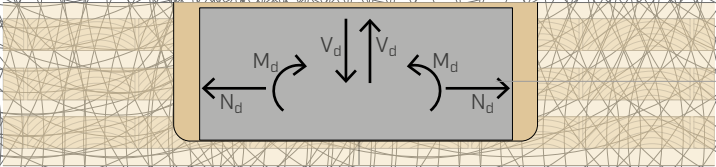
MOMENT JOINT WITH PLATES

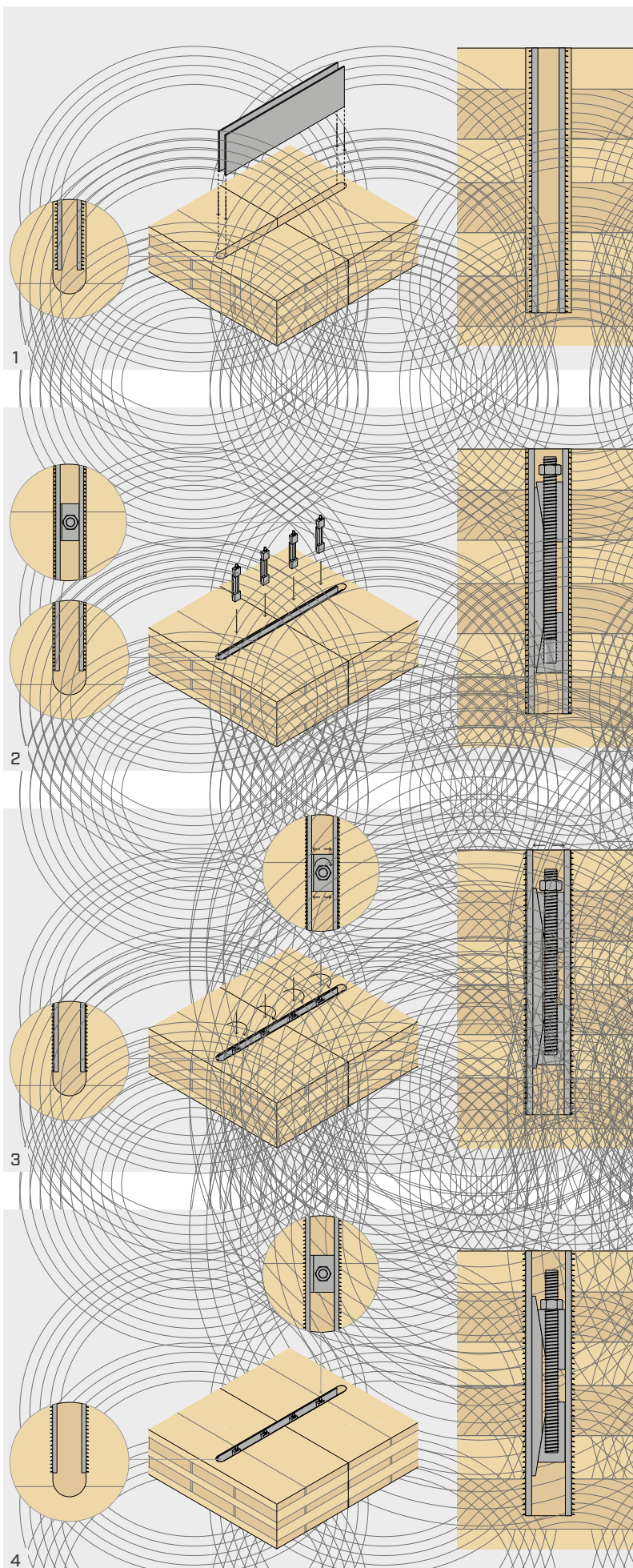
The innovative SHARP CLAMP technology is based on the exclusive use of SHARP METAL plates to create semi-rigid joints between CLT panels. The semi-rigid connection can transfer both shear forces and bending moments by exploiting a stress distribution along the panel thickness.

The high strength combined with the stiffness of the system makes it a valid alternative to glued joints, simplifying application and control.

The system is not significantly affected by the adherence condition on the surface and can be applied in wider temperature and humidity ranges than resin systems.

Furthermore, the application is very effective in extreme climates, as it does not require preparation, taping or sealing, and no curing time.





The first fundamental operation is to check the alignment of the panels and the processing that makes the joint.

In order to ensure proper functioning of the SHARP CLAMP connection, it is essential that the inner surfaces of the routing are parallel and flat. In addition, if the pocket is not through, proper cleaning of the bottom of the pocket is prescribed to avoid obstacles to full penetration of the hooks.

The plates that make up the system must be inserted inside the routing and positioned centrally at the joint line.

After positioning the plates, the wedges are inserted, which, by means of a horizontal shift, allow the hooks to be attached.

These elements must be arranged symmetrically and with even spacing to ensure constant pressure along the length of the plates.

The plates fastening to the timber surfaces is achieved by tightening the nut so that the lower wedge is brought closer to the upper wedge, creating the expansion effect of the system. To ensure correct operation, the bolts must be tightened in sequence, working in successive increments so that the pressure on each portion is even.

The last step involves verifying the correct installation of the SHARP CLAMP plates. This operation consists of checking the hook penetration and its homogeneity along the entire length of the plate and in the transverse direction. This operation is extremely simple, since it consists of checking visually or with simple instruments the distance between the steel plate and the timber.