

FEATURES FOR THE SHERPA EFCON

The main purpose of the SHERPA EFCON facade connector is to fix timber constructions to a load-bearing subbase such as exterior walls of new or existing buildings. It enables mounting and fixing of prefab facade elements in timber construction for building ecologically high-grade and energy efficient building envelopes.

The SHERPA EFCON facade connector consists of two components. This connector enables fixing and adjusting facade elements in a friction-type and precise manner. Horizontal and vertical wind forces, dead load and earthquake loads, if any, can be diverted to the substructure.

		Rated values for carrying capability in kN with C24 ¹⁾²⁾					
		R _{1,d} compression	R _{1,d} tension	R _{2,d}			
k _{mod}		1,0	1,0	0,6	0,7	0,8	0,9
screw lengths	140	22,4	16,9	17,7	20,6	22,8	22,8
	160		20,2	20,6	22,8		
	180			22,8			
	200						
¹⁾ y _M = 1,3				Failure of steel elements			

¹⁾ $y_M = 1,3$

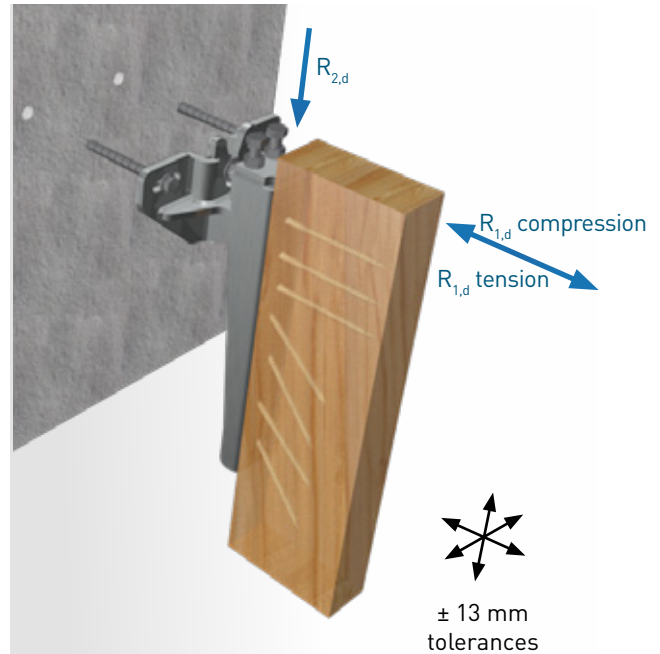
Failure of steel elements

²⁾ The connection to the supporting structure must be proven separately. Evidence for combined stress is additionally necessary.

		Rated values for carrying capability in kN with C24 ^{2) 3)}					
		R _{1,d} compression	R _{1,d} tension	R _{2,d}			
k _{mod}		1,0	1,0	0,6	0,7	0,8	0,9
Screw lengths	140	27,2	20,2	21,8	22,8	22,8	22,8
	160						
	180						
	200						
3) y _M = 1,25				Failure of steel elements			

³⁾ $y_M = 1,25$

Failure of steel elements



EFCON component 1 for supporting structure	
Dimensions (b/h/l)	210 / 135 / 95 mm
Drill holes	2x elongated hole 13,2 x 40 mm
Fasteners	2 pcs. expansion anchor or screw anchor bolts or injection anchor
Material	S235 JR-Fe/Zn12/C



EFCON component 2 for facade element	
Dimensions (b/h/l)	60 / 365 / 54 mm
Fasteners metal	1 pc. hexagon screw ⁴⁾ M12x1.5x70 8.8 as per MBN 10105 incl. nut with flange M12x1.5 as per MBN 13023
Height adjustment metal	2 pcs. hexagon screw ⁴⁾ M12 8.8 as per EN ISO 4017 incl. counter nut M12 as per EN ISO 4032
Fasteners wood	4 pcs. c 45° 7 pcs. special screws 8x 120/140/160/180



⁴⁾ width across flat AF 18

ASSEMBLY INSTRUCTIONS

- According to the substructure, component 1 is fixed with screw anchors, expansion anchors or injection anchors to the load-bearing exterior wall or ceiling. The „ears“ of component 1 serve as guiding aid for positioning the flange head screw of component 2 when hanging it up.
- In the factory, component 2 on the facade element is fixed to the timber frame construction rack by means of three horizontal and four 45° slanted, fully threaded screws. The prefab facade elements are hung by connecting the two components.
- The vertical adjusting screws and horizontal flange head screw enable setting the right position in two directions. The oblong holes of component 1 enable positioning in the 3rd direction. Due to the more than 13 mm tolerance in the 3 directions, roughness and imperfections of the substructure could be compensated for.