Product data sheet – EiSYS-H

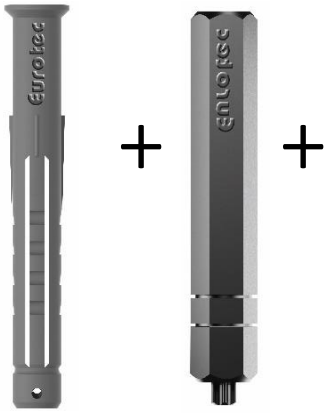
Product description

The EiSYS-H façade/adjusting screw for timber is an adjustable screw for fastening a support structure to a ventilated façade.

The screw is fastened to the substructure (e.g. wooden beam/timber frame, KS stone, concrete and masonry).

The freely rotating second threaded sleeve at the top of the screw allows for the adjustment of the spacing between the anchor base and the counter batten. Insulation thickness from 60 mm to 300 mm can be handled easily.

For soft and pressure-resistant insulation materials, e.g. WDVS (ETICS) with external plaster, as a rear-ventilated construction with a lathe bar structure made of wood, aluminium or a slate surface as façade cladding.



Advantages

- Can be mounted on various surfaces
- The conductivity of austenitic high-grade steels is much lower than that of conv steel/aluminium
- Suitable for new buildings, repairs and redevelopments
- Various possible with façade claddings
- Insulation thickness of 60 - 300 mm possible
- Economical
  - → Reduction of labour expenses due to time savings
  - → Reduction of material costs
- The distance between the counter batten and the anchoring base can be easily adjusted via the adjustment sleeve
- User-friendly, simple and time-saving installation

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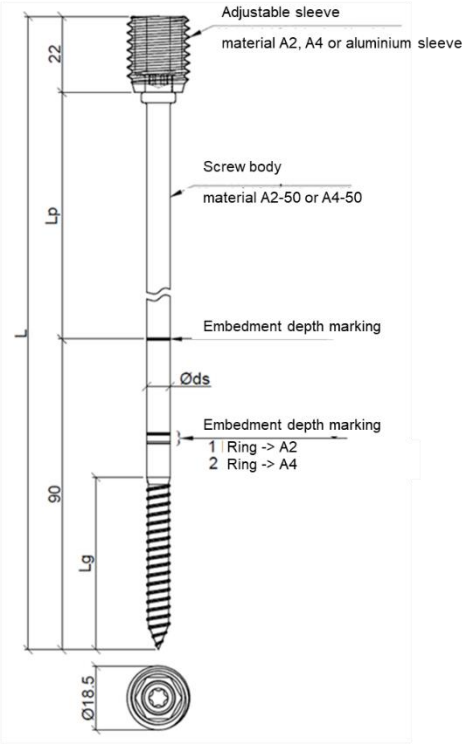
Material

Austenitic high-grade steel A4/Aluminium

The adjusting sleeve of the screw is made of aluminium.



- Very low conductivity
- Suitable for service classes 1 and 2 according to DIN EN 1995 euro code 5
- Corrosion-resistant
- Good resistance against mechanical stress
- Not suitable for timbers containing tannins

Thermal conductivity λ in $\frac{W}{m*K}$ of metals in façade engineering

- Aluminium alloy according to EN 57: **100 – 235** $\frac{W}{m*K}$
- Structural steel according to EN 10025: **40 – 60** $\frac{W}{m*K}$
- High-grade steel (austenitic A2/A4) according to EN 10027: **15** $\frac{W}{m*K}$

Product table

- **EiSYS-H**
  Façade/adjusting screw for timber

EiSYS-H					
Art.no.	Dimensions Ød x L [mm]	Thread length Lg [mm]	Diameter adjustment sleeve [mm]	for insulation thickness[a] up to [mm]	PU [unit]
946080	7,0 x 198	50	18,5	60	50
946081	7,0 x 218	50	18,5	80	50
946082	7,0 x 238	50	18,5	100	50
946083	7,0 x 258	50	18,5	120	50
946084	7,0 x 278	50	18,5	140	50
946085	7,0 x 298	50	18,5	160	50
946086	7,0 x 318	50	18,5	180	50
946087	7,0 x 338	50	18,5	200	50
946088	7,0 x 358	50	18,5	220	50
946089	7,0 x 378	50	18,5	240	50
946090	7,0 x 398	50	18,5	260	50
946091	7,0 x 418	50	18,5	280	50
946092	7,0 x 438	50	18,5	300	50

[a] and for counter batten thickness 40 mm

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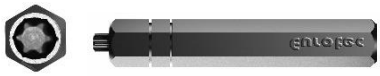
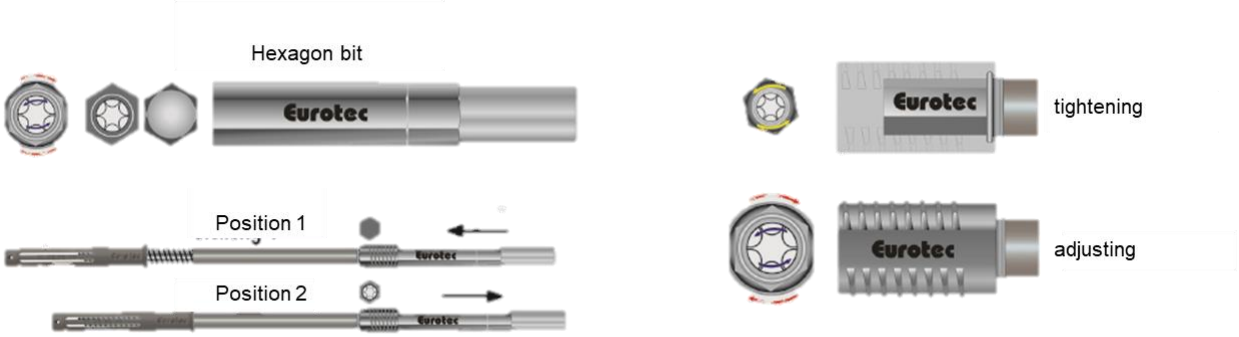
Product table

- EiSYS-H insertion tool

The tool is suitable for the screwing of EiSYS-H into the substrate as well as for the adjustment of the substructure by the adjustment sleeve.



EiSYS-H insertion tool				
Art.no.	Dimensions H x L [mm]	Drive	Material	PU [unit]
946096	70 x 14	SW 12/TX 30	Tool steel High speed steel	1



Product table

- EiSYS dowel

The dowel has been tested for tension, shear and pressure.
Suitable for normal concrete, lightweight concrete, sand-lime bricks and bricks.

EiSYS dowel			
Art.no.	Dimensions H x L [mm]	Drive	Material
945405	10,0 x 80	Polyamide nylon	50

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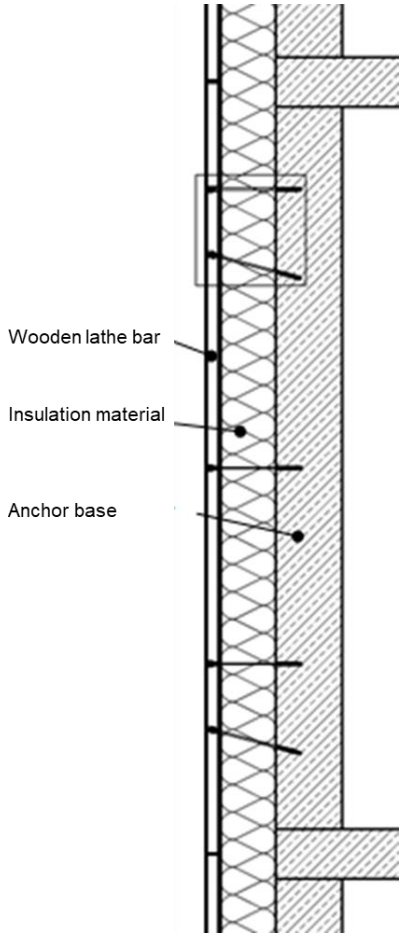
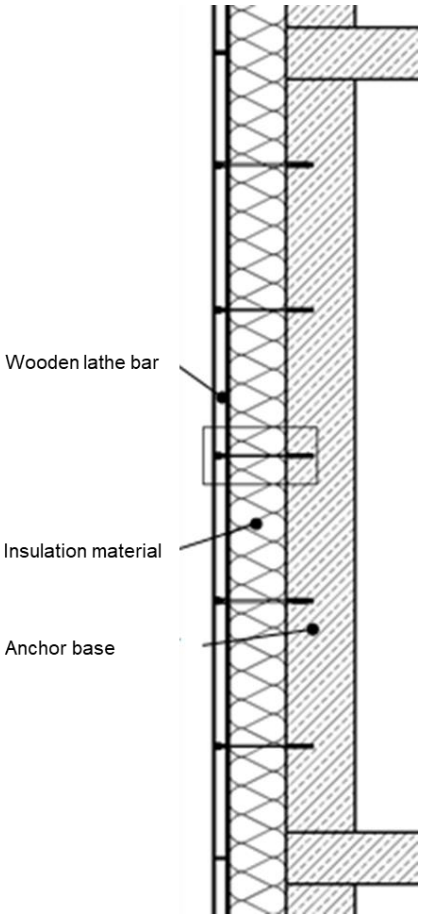
Instructions for use

Selection of the screw fitting

EiSYS-H – Timber framing screw fitting
(screw fitting angle 90° and 75°)



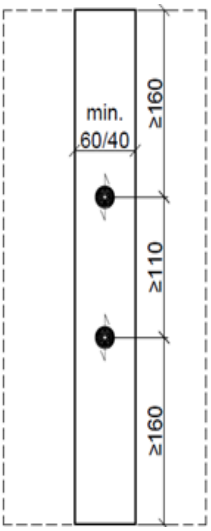
EiSYS-H in mounted state – horizontal screw fitting
(screw fitting angle 90°)



Edge and axial distance

The following edge distances in the wooden substructure (min. 60/40 mm) must be observed:

- Required edge distance (top)
  ≥ 160 mm
- Non-required edge distance (bottom)
  ≥ 160 mm
- Centre distance ≥ 110 mm



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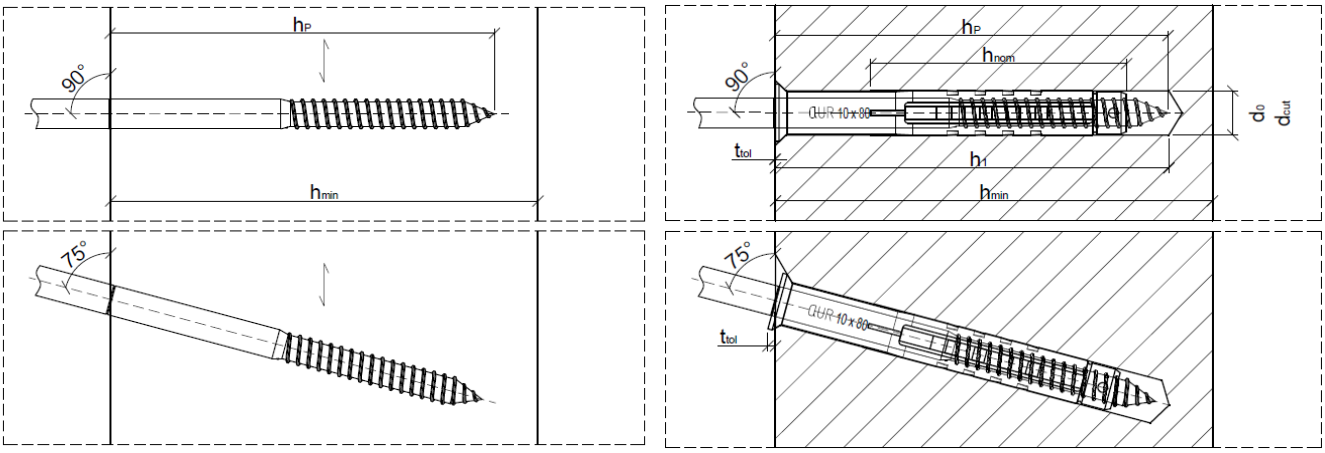
Detail anchor point in timber, concrete and brickwork

Anchor point in timber as well as in cracked and contoured concrete and brickwork.



ERD SK Frame anchor 10 x 80 mm

A more or less pronounced failure cone results from the drilling process according to the state of the base material, which can lead to an embedment depth tolerance of approx. 3 mm.

The following edge distances of screws in the timber construction (min. 60/1000 mm) must be observed:

- 30 mm to the non-required edges
- 70 mm to the end grain

Legend:

h_{nom} = 60 mm Total length of the plastic dowel in the anchor base

h_1 = 90 mm Borehole depth to lowest point (concrete and masonry only)

h_{min} = 100 mm is the minimum thickness of the component

h_p = 90 mm is the embedment depth of the EiSYS-H screw

t_{tol} = 3 mm Thickness of the tolerance compensation layer or the non-load-bearing layer

The anchor base does not need to be pre-drilled before use. The embedment depth position hp is equal to the depth displayed above.

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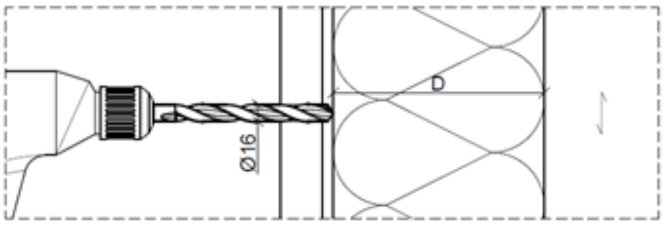
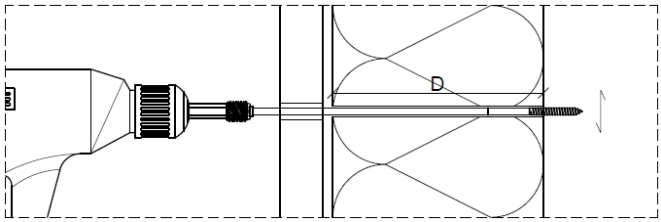
Example of installation of wooden anchor base

1. Drilling the hole into the lathe bar.
   Wood drill with Ø 16 mm

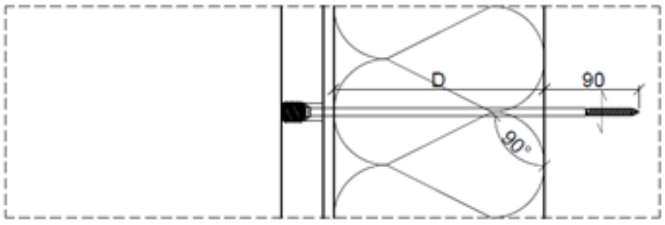


   The timber substructure does not need to be pre-drilled. If necessary, it is possible to pre-drill hard insulation material with a suitable drill with Ø 8 to Ø 10 mm.

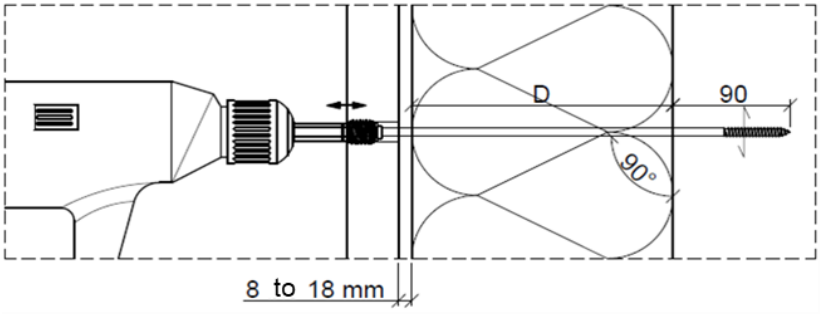
2. The EiSYS-H can be inserted through a wooden lathe bar and the insulation materials into the anchor base in a single operation with the insertion tool used.



3. Installed state of the EiSYS-H.



   Adjusting: If the insertion tool is only inserted to the extent that the outer ring can be seen, the lathe bar can be adjusted in front of the insulation. The adjustment head must always be completely in the lathework! Normally there is an adjustment dimension of 8 to 18 mm before the insulation.



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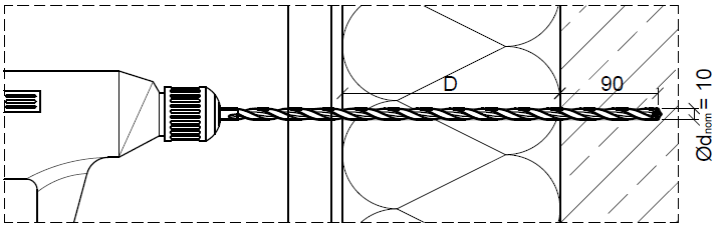
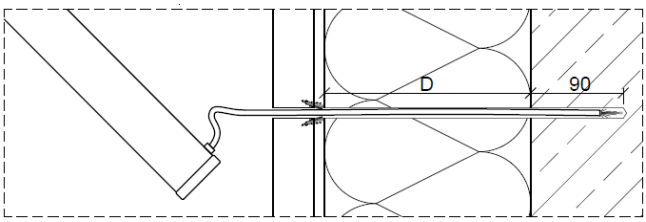
Example of installation for concrete and masonry anchoring grounds

1. Drilling the borehole with a drill hammer.

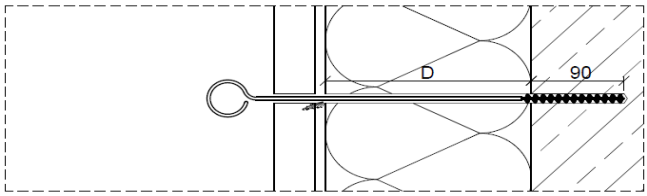


2. Cleaning the borehole
   - or insulation thickness D < 200 mm it is recommended to clean the boreholes at least 2x by blow-out
     For insulation thickness D ≥ 200 mm, it is recommended for cleaning the boreholes at least to blow out 2 x, brush 2 x, blow out 2 x

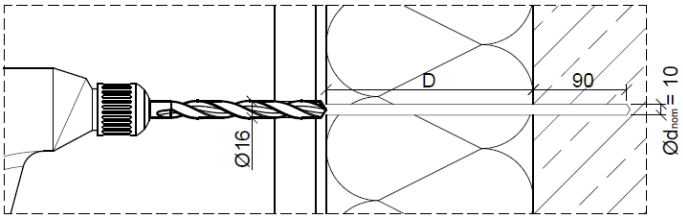
min. blow 2 x



min. brush 2 x



3. Drilling the hole into the lathe bar.
   Wood drill with Ø 16 mm



4. Insert the ERD SK dowel sleeve onto the screw and fix it with 2 revolutions

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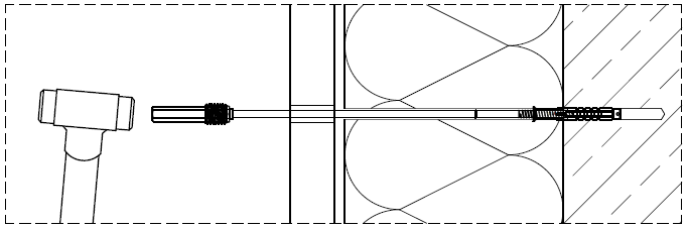
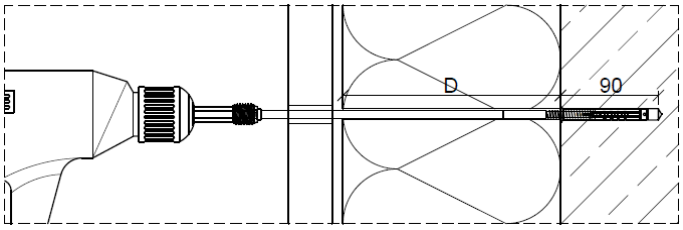
5. Insert the screw with attached dowel sleeve into the borehole

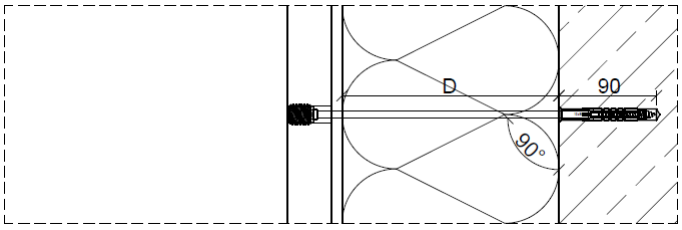


The screw can be inserted into the borehole by light blows of a recoilless hammer with an attached insertion tool (see Appendix 6). The insertion tool must be used to the extent that no rings are visible.

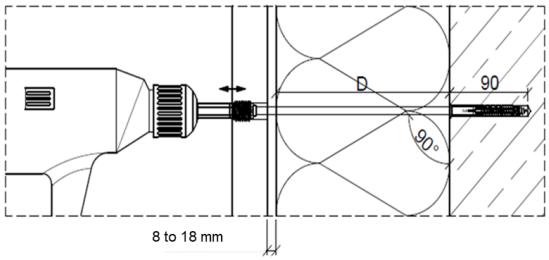
6. If the dowel sleeve is inserted into the anchor base, the screw body can be screwed into the dowel sleeve and the lathe bar in a single operation using the insertion tool.



7. Installed state of the EiSYS-H



Adjusting: If the insertion tool is only inserted to the extent that the outer ring can be seen, the lathe bar can be adjusted in front of the insulation. The adjustment head must always be completely in the lathe bar! Normally there is an adjustment dimension of 8 to 18 mm before the insulation.



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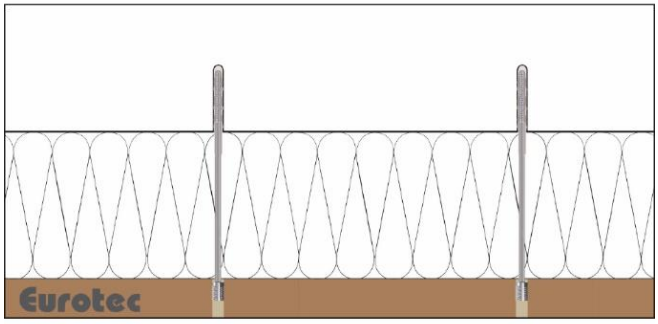
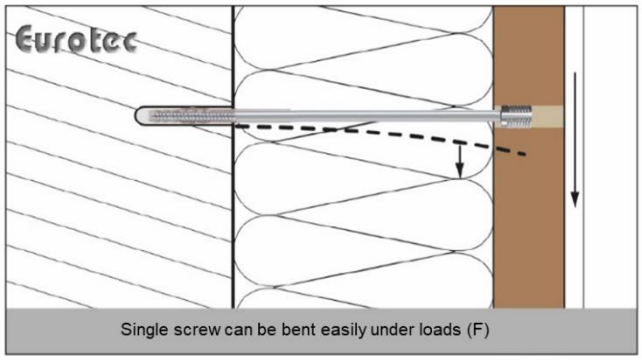
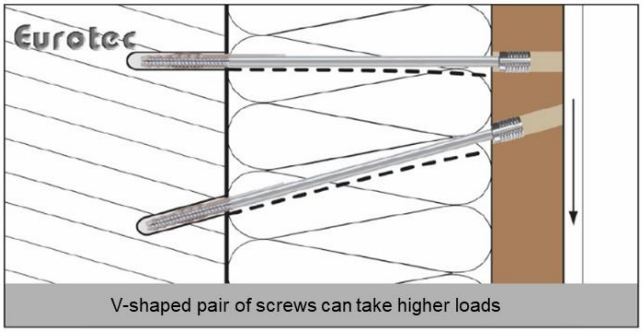
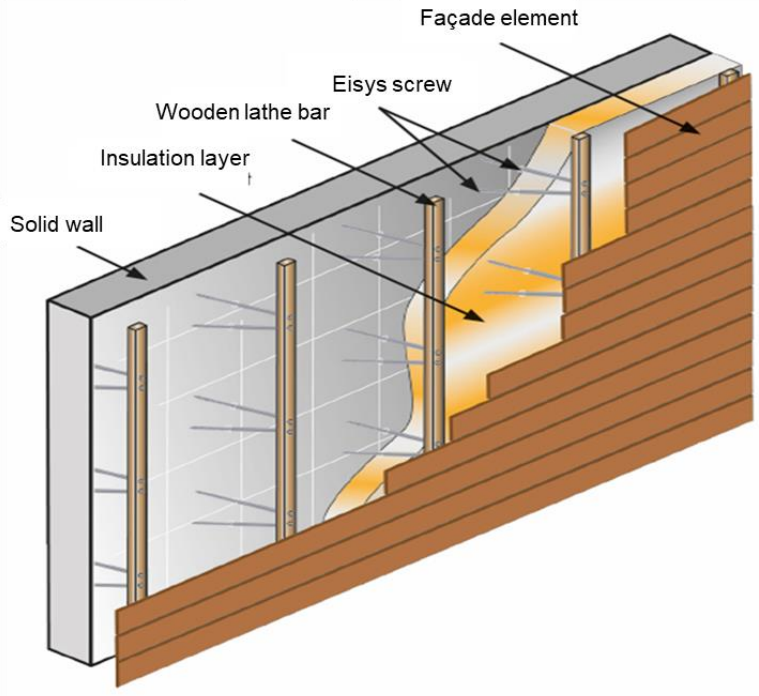
Application range

Vertically and horizontally









If you are not familiar with how this product is used, and particularly with the product's intended use, please contact our Application Technology department.

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