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Revision: 03
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Technical Leaflet

EGGER DHF special –
Use of EGGER DHF on the roof



The following information sheet refers to EGGER DHF. It is intended to provide builders, fabricators, planners and all interested parties with essential information on the advantages of using this product, as well as general information on the processing and installation of EGGER DHF in wall and roof constructions.

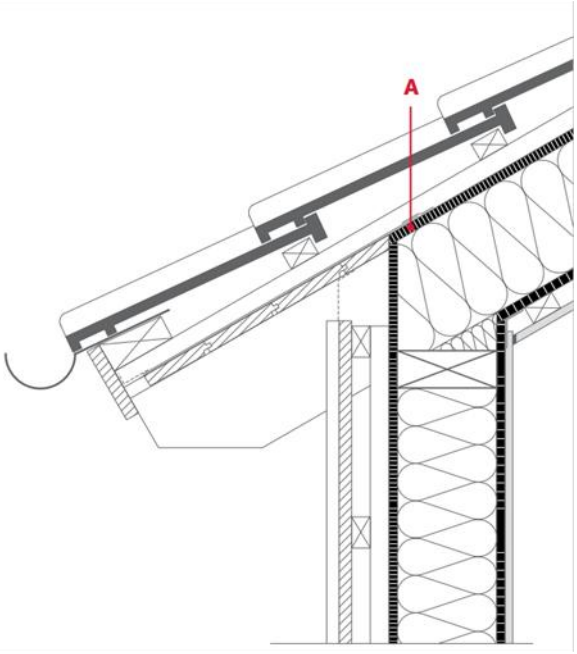
Please note that this leaflet is an extension of the leaflet "TLBP130_DHF Installation and use guideline". All information from TLBP130 also applies to this leaflet.

Please note that EGGER DHF is not intended for use in floor constructions!

EGGER DHF on the roof

General

The DHF panel is used in roof constructions as a sarking panel or sub-roof (**A**). The country-specific rules and differences in terminology must be observed.



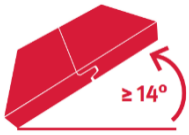
The basic usability of DHF panels as a sarking panel (**A**) is regulated in EN 14964. According to EN14964, DHF panels can be classified as impermeable to water and also achieve the highest resistance class W1 against water penetration. If the roof pitch falls below 14°, the tongue and groove joints must be taped.

For use as a load-bearing and stiffening component, EN 13986 and EN 1995-1-1 with the national annexes must also be observed.

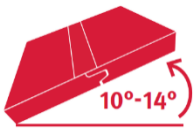
The panels without a stiffening function can be exposed to free weathering for two months between March and November as a temporary covering during the construction period. In the winter months, free weathering should be limited to a maximum of two weeks.

Roof pitches

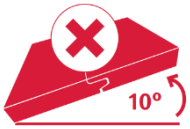
The following conditions should be taken into account when using DHF boards as underlay:



DHF boards can be used as underlay boards without covering the tongue and groove joints up to a roof pitch of 14°.



In the case of roof pitches below 14°, the tongue and groove joints must be covered with additional tape in order to achieve rain resistance.



The actual roof pitch may not be below 10°.



Blunt joints of cut boards must generally be covered.

Nail sealing tape

Tested by Holzforschung Austria, the nail sealing tape can be dispensed for DHF boards according to DIN EN 14964 in accordance with the German ZVDH regulations and Austrian Standard ÖNORM B 4119.

Puncture resistance



Tested by Holzforschung Austria in accordance with the requirements of Austrian Standard ÖNORM B 4119, DHF panels are puncture-resistant and enable the creation of a roof surface that can be walked on:

Table 1: maximum rafter spacing for a roof surface that can be walked on

DHF panel thickness d	Rafter spacing a
15 mm	1,0 m
20 mm	1,25 m

Tested by the Research Institutes of Sweden RISE the DHF panels meet the requirements for step through protection according to SP-Method 0487 "Genomtrampningsskydd - bärförmåga", edition 5.

Table 2: maximum rafter spacing for step through safety

DHF panel thickness d	Rafter spacing a
20 mm	1,20 m

Roof and counter battens

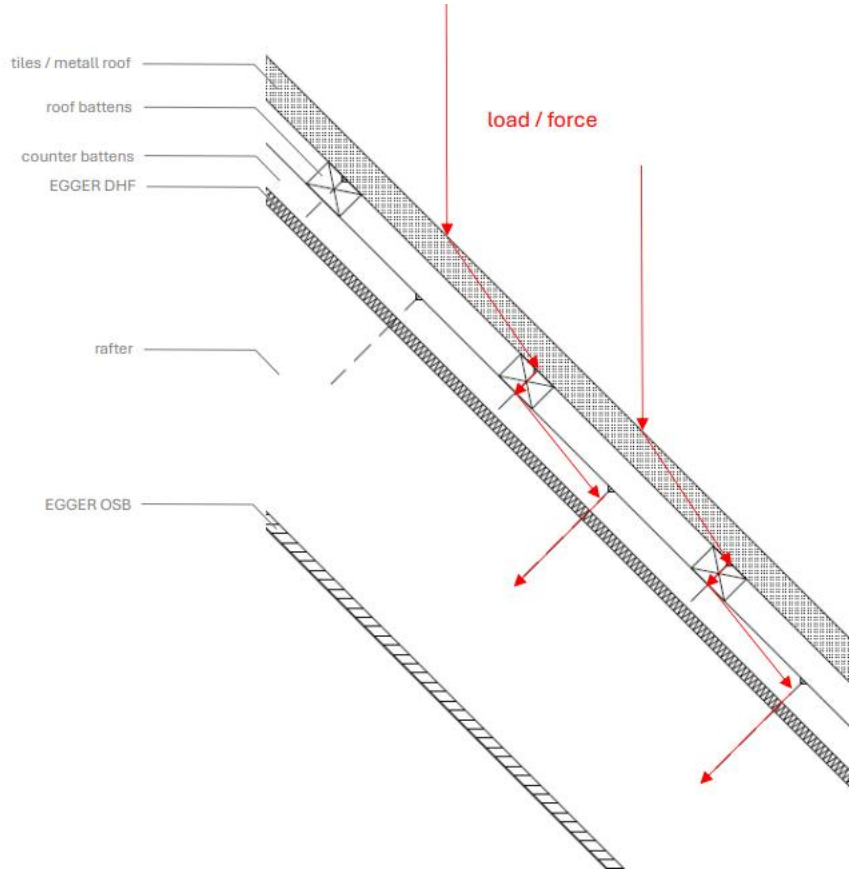
EGGER DHF is an MDF.RWH (roof, wall, humid) acc. to EN 622-5. This board type is only approved for short and very short-term load application durations.

Wind loads, for example, fall into this category. Under Swedish law, snow loads are classified as ‘medium’ load category.

This means that EGGER DHF cannot, or is not permitted to, bear snow loads in Sweden. Therefore, when laying EGGER DHF and installing the roof battens and counter-battens, care must be taken to ensure that the counter-battens are always positioned on a rafter and fixed to the rafter through the DHF.

This means that with a CC-span of 1200mm, the span of the counter-battens is also 1200mm.

Due to the loads and the necessary ventilation openings, we recommend using solid timber in the dimensions 45x70 and strength class C24 for the roof battens and counter-battens.



Fastening counter battens

Counter battens are anchored in the rafters through DHF-boards. The proof regarding the load-bearing capacity of the fasteners is provided on the basis of the theory of Johansen. The following table lists data regarding the required quantity of fasteners. The following framework conditions are taken into account:

- the computation occurs with nails 3.1 × 80 mm according to EN 10230
- the counter battens have minimum dimensions of 30 × 50 mm and are fastened to the rafters with 15 mm DHF-boards

In the case of larger counter batten cross-sections, longer nails must be used. The wind suction is secured with a minimum insertion depth of 12 d_n into the rafters.

Table 1: Number of nails required per meter of counter-batten (pieces/linear metre)

	snow load s_k								
	0,75 kN/m²		1,00 kN/m²		1,50 kN/m²		2,50 kN/m²		>2,50 kN/m²
rafter spacing e_{max} in mm	**850**	**1.000**	**850**	**1.000**	**850**	**1.000**	**850**	**1.000**	
lightweight roofing 0,35 kN/m²	3	3	3	3	3	4	5	5	*Please, ask your responsible structural engineer.*
average roofing 0,60 kN/m²	3	4	4	4	4	5	5	6	
heavy roofing 0,95 kN/m²	4	5	5	5	5	6	7	8	

Cold roofs

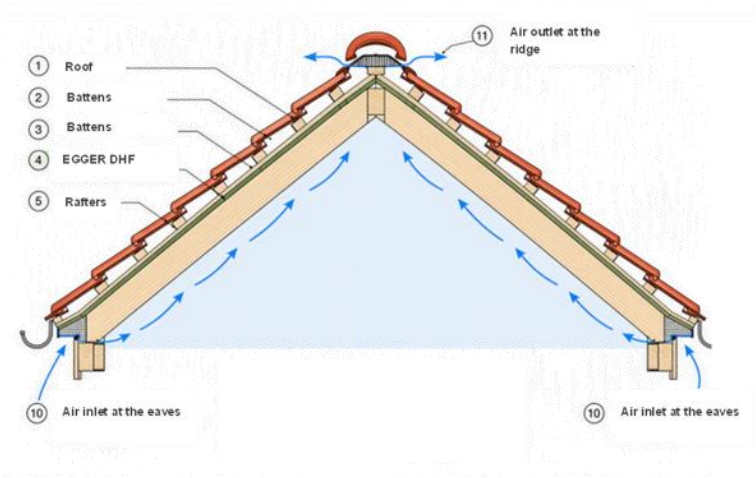
Diffusion processes and the associated condensation also occur in the case of underlays in the area of uninsulated attics.

If sufficient and permanent ventilation cannot be ensured through openings at the eaves, ridge and gable, condensation will occur on the cold surface of the DHF panel under unfavorable climatic conditions.

The execution of non-permanently insulated peaked floors in connection with sub-ceilings made of DHF boards is not recommended in case of lack of or insufficient ventilation.

In addition to establishing ventilation of the pointed floor in the ridge, the airtightness of the ceiling, including the floor hatch, to the living space below must be carefully executed.

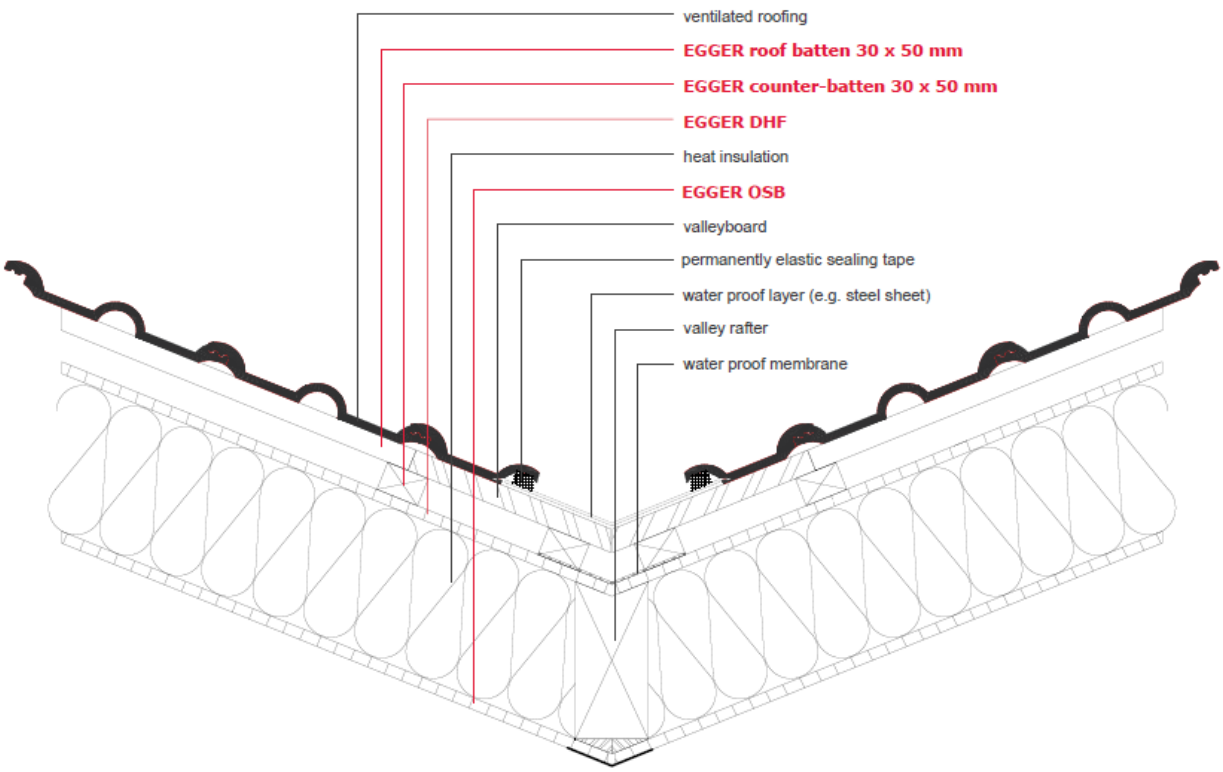
Possible convection currents from the masonry heads of interior walls and the eaves and verge walls must be taken into account in the planning and implementation of the airtightness concept. This can be done, for example, by covering with foil and bonding with the airtightness layer of the remaining construction!



Roof details

Valley preparation

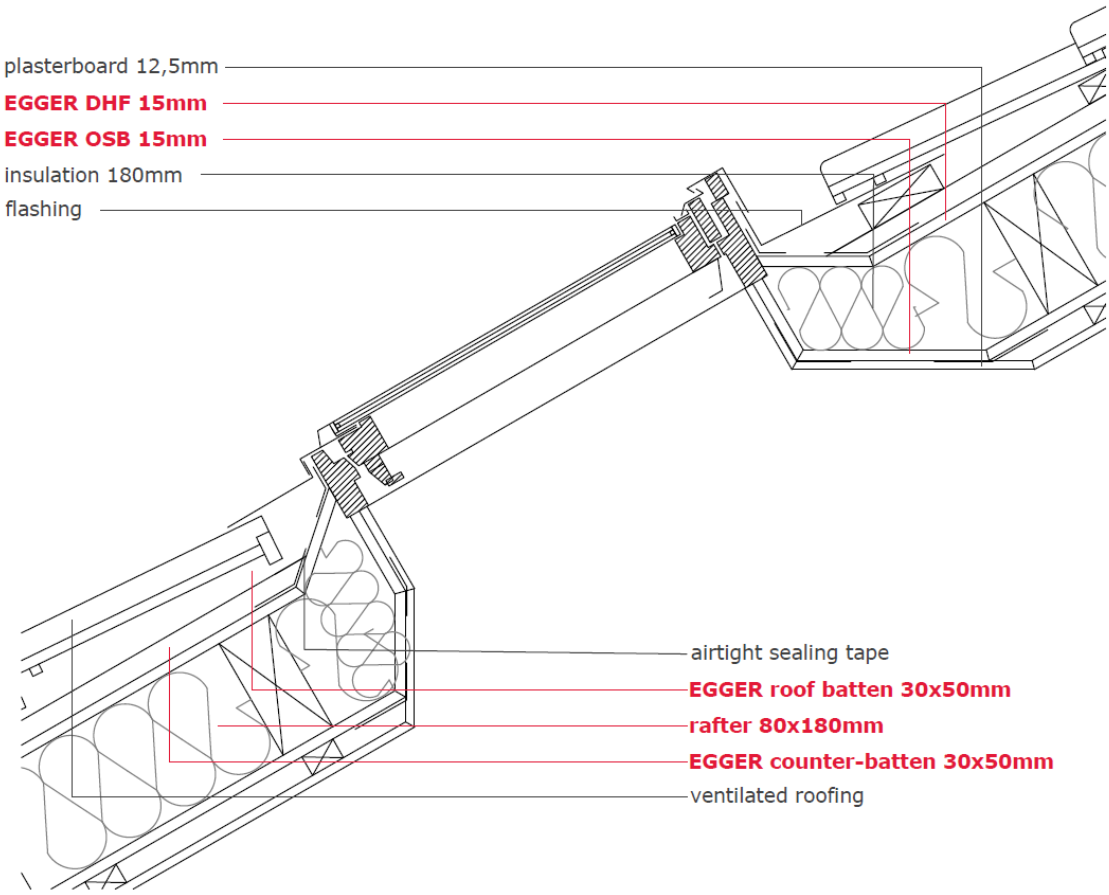
The DHF panel forms the second water-draining level below the sheeting and must be taped. The adhesive surface width should be at least 50 mm on each DHF surface.





Penetration

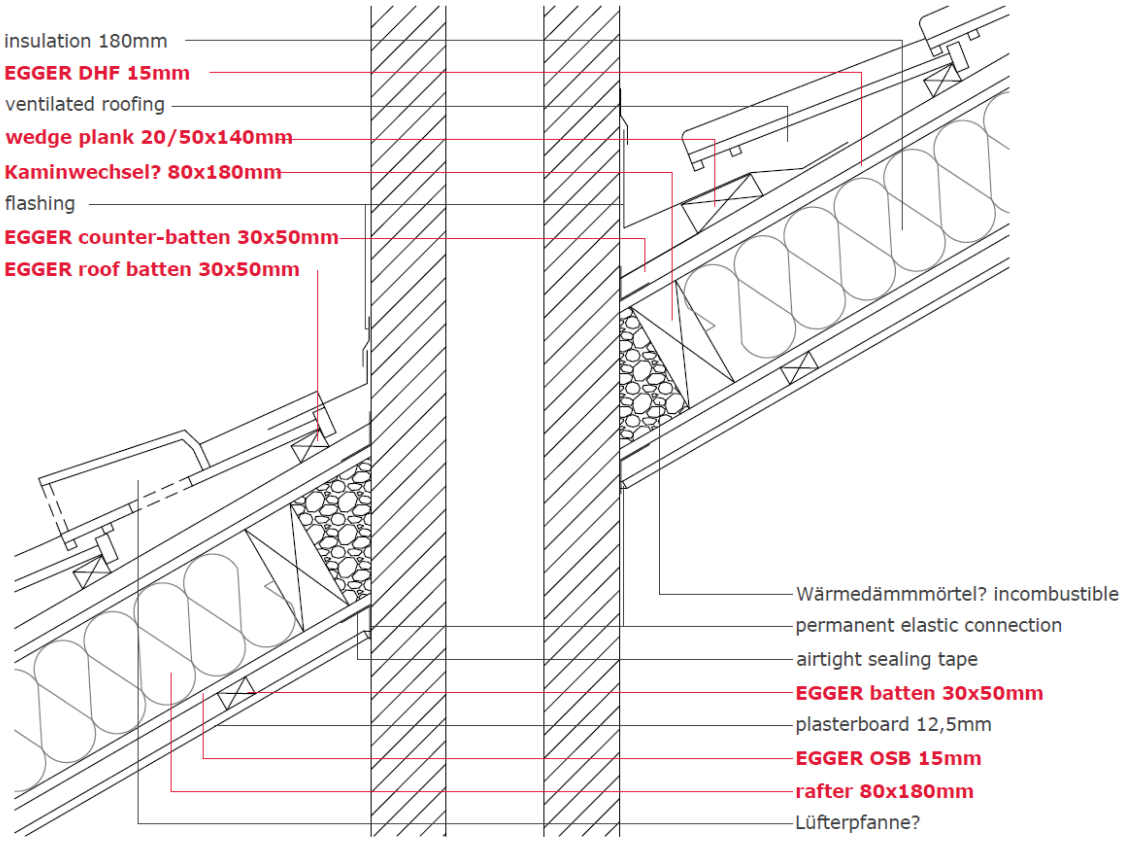
In the case of complete penetration of exterior building components, the creation of air tightness and water drainage must be carried out with special care and should be checked and approved by the carpenter as a trade interface.





Chimney

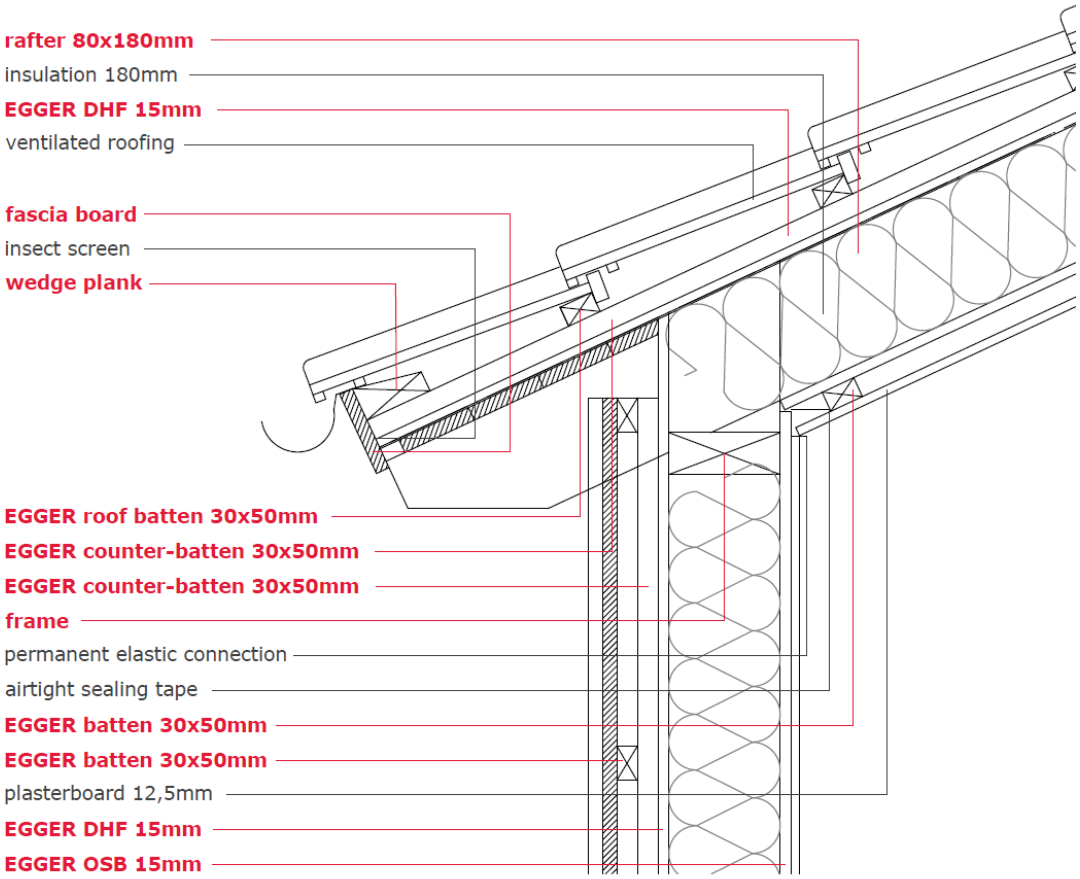
The distance between the chimney and combustible, load-bearing components (except for lathing, wooden formwork or similar) must be executed in accordance with the applicable state building code.





Eaves

If the additional profile formwork in the eaves and verge is dispensed with, the DHF panel must be coated with a suitable exterior paint (e.g. Adler Lacke).





General notes

All documents can be found at www.egger.com. For further information please contact our hotline.

Additional documents

CE Declaration of Performance DOP-506 for EGGER DHF

TLBP001 Transport and Handling Instructions

TLBP002 Storage Instructions

TLBP130 Installation and Usage Guideline

For questions please contact:

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Provisional Listings:
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