

Assembly Instructions

Light Oppdal and Offerdal quartzite

MINERA
SKIFER

This is a modern and elegant façade solution where slate panels are mounted with concealed fixings. The method provides a clean appearance without visible screws, while offering high strength, flexibility and easy installation. The natural properties of the slate, combined with a solid substructure, give a façade with a very long service life.

FAÇADE – DOWEL MOUNTING

TECHNICAL DATA

Geology:	Scandinavian metamorphic rocks, 750 and 650 million years old
Quartz content:	39 - 46 %
Flexural strength:	35,6 – 44,8 MPa
Water absorption:	0,1 - 0,2 weight %
Unit weight:	2700 kg/m ³ (e.g.: 1m ² facade in thickness 20 mm = 54 kg)



LOW CARBON FOOTPRINT



FROST PROOF



MAINTENANCE-FREE



REUSABLE



SALT/ACID-PROOF



SLATE PRODUCT

Slate type:	Light Oppdal quartzite, Offerdal quartzite
Surfaces:	Natural, antique brushed, silk brushed
Edges:	Sawn
Format:	Rectangular panels in fixed or random lengths, thickness 25 – 40 mm

CALCULATION OF SLATE QUANTITIES

The façade area is measured and entered into the calculation. Detailed planning is required for accurate quantity calculation.

WEIGHT

Weight is calculated as panel area × thickness × 2700 kg/m³. The density of the slate is 2700 kg/m³.

As an example, 1 m² of façade slate in 20 mm thickness will weigh approx. 54 kg:

$$2700 \text{ kg/m}^3 \times 1 \text{ m}^2 \times 0,02 \text{ m} = 54 \text{ kg/m}^2$$

STRUCTURE

1. Load-bearing construction
2. Optional external insulation
3. Ventilated air cavity
4. Slate, mounted with backfix system for dowels

A substructure in aluminium or galvanized steel is attached to the underlying load-bearing structure. Between the construction and the slate panels, a ventilated air cavity is created with space for any insulation. The distance between wall and slate is determined by the project's requirements for insulation thickness and ventilation.

FIXING WITH DOWELS

Preparation:

Check that the substructure is correctly aligned and secured.

One hole is usually drilled in the edge of the slab at each corner, approx. 40 mm from the end. The holes must be core-drilled without hammer action. The final drilling pattern must be detailed in the project design.

Fixing:

Each slab is fastened with concealed stainless-steel dowels that run from one slab, through the fitting's eye, and into the next slab.

The slabs are mounted to a steel support rail via the dowels, providing adjustment options and flexibility for thermal movements.

The slabs can be dismantled and replaced easily if needed.

Installation sequence:

Start from the bottom and work upwards.

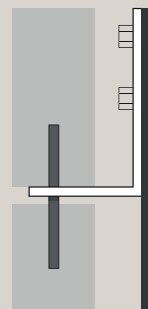
Check that joints are vertical and level.

Use shims if needed to ensure a flat façade.

Endings and corners:

Use custom flashings or slate panels cut to size.

Corner solutions can be executed with panels over the corner or with recessed joints.



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