

Assembly Instructions

Light Oppdal and Offerdal quartzite

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 – EXPANSION ANCHORS

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 or hewn
Format:	Rectangular panels in fixed or random lengths, thickness 20–30 mm – (expansion screws require min. 20 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 expansion anchors

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 EXPANSION ANCHORS

Preparation:

Check that the substructure is correctly aligned and secured.

A conical undercut hole is drilled on the back of the slate panel so that the fixing is mechanically locked. The drilling pattern must be detailed in the design.

Fixing:

Each panel is attached with concealed stainless-steel expansion anchors.

The anchor is inserted into the hole and locked with special tools.

The panels are mounted to a metal carrier rail via the anchors, providing adjustability and flexibility for thermal movement.

The panels can be easily removed and replaced if required.

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.

