# APPENDIX LOW PITCH ROOFS

## 1 GENERAL

This data is an appendix to the SVK Slates Technical Data which continues to apply, except where the information below differs from this guideline.

Montana and Ardonit fibre-cement slates and their fittings are manufactured in accordance with the requirements of the European Standard EN 492.

## 2 WEATHER CONDITIONS

This annex is valid for roofs with moderate or severe exposure.

## 3 ROOF PITCH

This annex is valid for low pitch roofs (15° ≤$\alpha$< 22,5°) for vertical double-lap slating only.

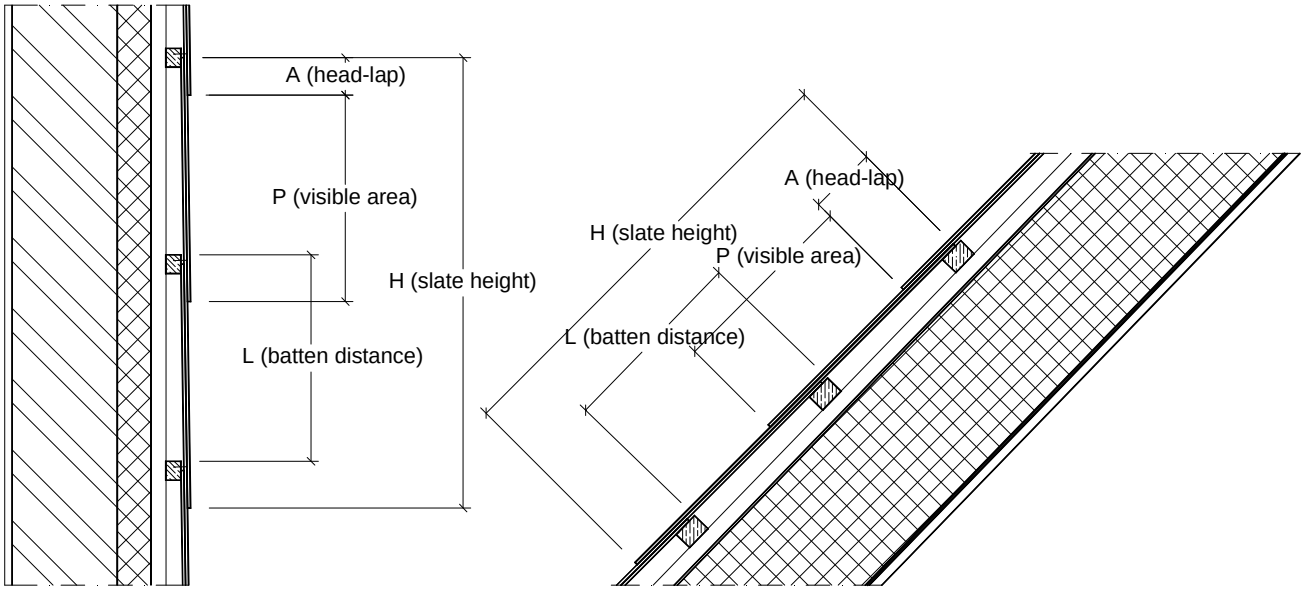
## 4 PRINCIPLE

Vertical, double-lap slating is the common way of working and is suitable for all rectangular slates. The slates are laid in broken bond. Double-lap means that each row of slates is partly covered by the two rows above. The head-lap is the distance by which the upper course of slates provides a lap with the next but one course below.

This way, each slate can be divided into three areas (see figure below):
- visible area;
- single lap area;
- double-lap area (= head-lap).

The double covered part is called the head-lap. The height of each of the two other parts equals the batten distance and is determined as following:

$$L(batten\ distance) = \frac{H(slate\ height) - A(headlap)}{2} = P(visible\ area) = single\ lap\ area$$




FACADE CLADDING ROOF COVERING

The recommendations apply for limited rafter lengths, see § 5.

## 5 ROOF PITCH – MAXIMUM RAFTER LENGTH

The vertical head-lap and the maximum rafter length for the different slates are:

**Ardonit smooth & Ardonit textured**

**Moderate, severe or very severe exposure**

| Roof pitch $\alpha$ | Fixing[1] | Headlap A[2] | Maximum rafter length |
|---|---|---|---|
| 15° ≤ $\alpha$ < 17,5° | nails and rivet or hooks | 11 cm | 4 m |
| 17,5° ≤ $\alpha$ < 22,5° | nails and rivet or hooks | 11 cm | 6 m |
| $\alpha$ ≥ 22,5° | See general SVK Slates Technical Data | | |

**Montana smooth & Montana textured**

**Moderate exposure**

| Roof pitch $\alpha$ | Fixing[1] | Headlap A[2] | Maximum rafter length |
|---|---|---|---|
| 15° ≤ $\alpha$ < 17,5° | nails and rivet or hooks | 15 cm | 6 m |
| 17,5° ≤ $\alpha$ < 22,5° | nails and rivet or hooks | 15 cm | 6 m |
| $\alpha$ ≥ 22,5° | See general SVK Slates Technical Data | | |

**Severe or very severe exposure**

| Roof pitch $\alpha$ | Fixing[1] | Headlap A[2] | Maximum rafter length |
|---|---|---|---|
| 17,5° ≤ $\alpha$ < 22,5° | nails and rivet or hook | 15 cm | 6m |
| $\alpha$ ≥ 22,5° | See general SVK Slates Technical Data | | |

[1] All slates are without holes - nails and rivet: holes to be made on site

[2] In case of low-pitch roofs, special attention must be given to the quality and watertightness of the underlay.
The underlay must warranty a 100% watertightness on a durable way.
A ventilated counter batten space is required.
The headlap has to be increased, we refer to the BS EN 13859-1 and the BS 5534 Annex A.

## 6 FIXING

- The nails must comply with BS EN 1202-2 and 3. The nail shank should be not less than 2,65 mm and the length should be approximately 30 mm so a penetration of at least 15 mm into the batten is provided.
- Use disc rivets with stem of minimum 19 mm long and diameter less than 2 mm. The disc base of the disc rivet should be formed of 0,5 mm thick copper sheet and have a diameter of minimum 19 mm. Use appropriate disc rivets to obtain sufficient uplift resistance.
- Hooks intended for slating should be drive slate hooks formed from stainless steel wire conforming to BS EN 10088-3, grade 316.

## 7 NUMBER AND DIMENSIONS

| Size [cm] | Head-lap A [cm] | Appx. batten gauge L [cm] | Appx. pieces per m² [1] | Appx. Weight /m² [kg] |
|---|---|---|---|---|
| **Ardonit smooth & Ardonit textured** | | | | |
| 60 x 30 | 11 | 24,5 | 13,4 | 20,5 |
| 60 x 60 | | 24,5 | - | - |
| 60 x 30 | 15 | 22,5 | 14,6 | 22,0 |
| 60 x 60 | | 22,5 | - | - |
| **Montana smooth & Montana textured** | | | | |
| 60 x 30 | 11 | 24,25 | 13,8 | 20,2 |
| 60 x 60 | | 24,25 | - | - |
| 60 x 30 | 15 | 22,25 | 15,0 | 21,6 |
| 60 x 60 | | 22,25 | - | - |

[1] The numbers per m² are calculated with a **perpendicular joint of 4 mm**.

## 8 WARRANTY

SVK warrants the durability of the Ardonit and Montana slates and accessories in fibre cement insofar the installation takes place in accordance with all above mentioned requirements and guidelines.