

From clay. From concrete. From experience.

NELSKAMP

Flat roof tile F 12 Ü



The flat roof tile F 12 Ü.



The new head and side trough in the F 12 Ü flat roof tile allows a variable height overlap of 4 cm. With approx. 11.7 to 13.0 pcs. per square metre it can be used flexibly, above all in the renovation of roofs. The simplified laying makes the F 12 Ü a very economical gutter tile. The regular roof pitch is 22°.

The F 12 Ü in detail:

- Pressed roof tile according to DIN/EN 1304
- Twin head and side trough
- Waterproof, frost-resistant, breathable
- Regular roof pitch 22°
- Requirement per m² approx. 11.7 - 13.0 pcs



The Colours.



(115) natural red



(156) red engobed



(118) brown engobed



(120) black noble engobed
(matt black glazed)



(209) bordeaux red engobed



(139) muscat noble engobed (glazed)



(140) burgundy red noble engobed (glazed)



(141) old black engobed



(142) copper red engobed



(150) brown noble engobed (glazed)


Colour deviations: Our clay roof tiles are environment-friendly building materials. When using natural raw materials you may experience colour deviations. This is often the case with naturally red tiles since the fired colour is the sole result of natural raw materials with no added metal oxides to change the colour. Deviations are possible in the colours for reasons of printing methods.


Clay roof tile surfaces: Minor impairments to the surface are possible due to transport. This does not affect the quality of the tiles.


The program.


Moulded bricks for various functions meet the demand for homogeneous, architecturally demanding roofs. They are also an important safety factor. Moulded bricks and accessories reduce the amount of laying work and


facilitate calculations. You will find the complete program for every tile on our Internet website www.nelskamp.de.


	Whole tile Length: ~ 45.7 cm Width: ~ 28.6 cm Weight: ~ 3.8 kg	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm Requirement: ~ 11.7 - 13.0 pcs/m ²
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	Verge tile with outer web on left Length: ~ 45.7 cm Width: ~ 24.9 cm Weight: ~ 5.2 kg	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 22.0 cm Requirement: ~ 2.8 pcs/m
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	Verge tile with outer web on right Length: ~ 45.7 cm Width: ~ 24.1 cm Weight: ~ 5.0 kg	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 16.0 cm Requirement: ~ 2.8 pcs/m
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	Left verge tile Length: ~ 45.7 cm Width: ~ 28.9 cm Weight: ~ 4.1 kg	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 21.9 cm Requirement: ~ 2.8 pcs/m
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	Right verge tile Length: ~ 45.7 cm Width: ~ 28.9 cm Weight: ~ 4.0 kg	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 16.8 cm Requirement: ~ 2.8 pcs/m
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	Ridge/crest tile ~ 2.7 pieces/m Length: ~ 43.5 cm Width: ~ 24.5 cm Weight: ~ 3.4 kg	Covering length: ~ 37.0 cm Covering width: ~ 21.2 cm Requirement: ~ 2.7 pcs/m
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	Start ridge with offset end web for verge tile with offset ridge Length: ~ 43.5 cm Width: ~ 24.5 cm	Covering length: ~ 30.5 cm Covering width: ~ 21.2 cm
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	Ridge end with offset end web for verge tile with offset ridge Length: ~ 43.5 cm Width: ~ 24.5 cm	Covering length: ~ 37.0 cm Covering width: ~ 21.2 cm
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	Crest initial tile Length: ~ 43.4 cm Width: ~ 23.1 cm Weight: ~ 3.2 kg	Covering length: ~ 29.5 cm Covering width: ~ 21.2 cm Requirement: individual
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	Hip cap start and end (also available with four outlets) Requirement: individual	
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	Clay dormer ventilator (ventilation cross-section ~ 15 cm²) Length: ~ 45.7 cm Width: ~ 28.6 cm Weight: ~ 3.7 kg	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm Requirement: individual
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	Ridge connection sliding tile (left/right verge tiles also available) Length: ~ 45.7 cm Width: ~ 24.9 cm	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 22.0 cm
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	Shed roof tile (left/right verge tiles also available) Length: individual Width: ~ 28.6 cm	Covering length: individual Covering width: ~ 23.6 cm
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	Mansard tile (left/right verge tiles also available) Length: individual Width: ~ 28.6 cm	Covering length: individual Covering width: ~ 23.6 cm
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	Pent roof tile (left/right verge tiles also available) Length: individual Width: ~ 28.6 cm	Covering length: individual Covering width: ~ 23.6 cm
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	Ceramic vent pipe tile with weather cap ø 125 and hose with adapter Length: ~ 45.7 cm Width: ~ 28.6 cm Weight: ~ 7.8 kg	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm Requirement: individual
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	Ceramic aerial tile Length: ~ 45.7 cm Width: ~ 28.6 cm	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm Requirement: individual
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	Ceramic thermal exhaust gas through pantile with universal collar (ø: max. 127 mm) (can be used up a max of 42° RP*) Length: ~ 45.7 cm Width: ~ 28.6 cm	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm
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	PVC solar through tile Length: ~ 45.7 cm Width: ~ 28.6 cm	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm ø: 30/50/70 mm
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	PVC solar carrier tile Length: ~ 45.7 cm Width: ~ 28.6 cm	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm Requirement: individual
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	Light tile „Acrylic glass“ Length: ~ 45.7 cm Width: ~ 28.6 cm	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm Requirement: individual
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	2 Alu-walking grid tile, coated Width: ~ 34.0 cm Length: 40.0; 80.0; 150.0 cm	
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	SnapStep universal alu step (40 cm and 80 cm universal walking grid with two brackets also available) coated, for mounting on different lath thicknesses, can be adjusted for roof pitches from 0° - 60°	
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	Alu base tile with single step Length: ~ 45.7 cm Width: ~ 28.6 cm	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm Requirement: individual
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	Alu base pantile with twin tube holder Length: ~ 45.7 cm Width: ~ 28.6 cm	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm Requirement: individual
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	Alu tile with round wood holder (also available with snow rib support) Length: ~ 45.7 cm Width: ~ 28.6 cm	Covering length: ~ 34.5 cm ± 20 mm Covering width: ~ 23.6 cm
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	Steel skylight, coated, 6-tiles, acrylic glazed Length: ~ 78.0 cm Width: ~ 76.0 cm	Hatch: 45.0 x 55.0 cm Weight: ~ 8.6 kg
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	Steel skylight, coated, 9-tiles, acrylic glazed Length: ~ 110.0 cm Width: ~ 76.0 cm	Hatch: 45.0 x 85.0 cm Weight: ~ 10.0 kg
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	Multitherm skylight Length: ~ 85.0 cm Width: ~ 78.0 cm Weight: ~ 15.0 kg	Opening: upwards + to the side Hatch: 44.0 x 54.0 cm Double glazing: ESG Kv 1.4
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	Living room skylight wra Length: ~ 98.0 cm Width: ~ 54.0 cm	Opening: to the side Hatch: 46.0 x 90.0 cm Double glazing: ESG Kv 1.1
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	Eaves fresh air element ~ 1.1 pcs/m	
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	Ridge/crest lath holder	
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	Ridge or crest clip no. 470/41	
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	Copper roll/Alu roll 2000 Length: ~ 5 m Ventilation cross-section: permanent acc. to DIN 4108, Part 3 Natural copper, anthracite, red	Width: ~ 29 cm, 33 cm, 36 cm
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	Multi storm claw	
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All sizes are approx. sizes. Tolerances according to DIN EN 1304. Covering sizes are to be determined on site. Subject to technical changes.

* Over 42° RP = special design of PVC on request

Laying the flat roof tile F 12 Ü.

Technical data

Roof tile	Flat roof tile F 12 Ü
Manufacturer	Nelskamp (D)
Overall length	~ 45.7 cm
Overall width	~ 28.6 cm
Mean covering length	~ 34.5 cm ± 20 mm
Mean covering width	~ 23.6 cm
Requirement per m ²	~ 11.7 - 13.0 pieces
Weight per tile	~ 3.8 kg
Weight per m ²	~ 44.5 kg
Regular roof pitch	22°
Recommended storm clip	Multi storm claw

Laying!

The following applies when laying our clay roof tiles:

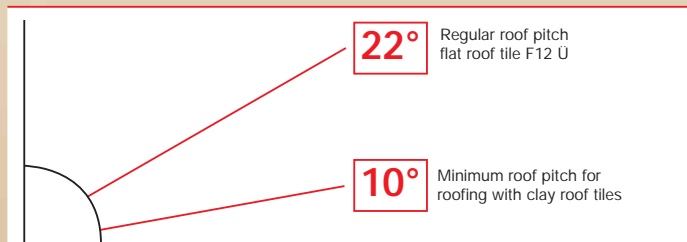
1. The NELSKAMP manufacturer's instructions take priority (laying instructions)
2. The specialist rules of the roofing trade (rules for coverings with clay roof tiles)
3. The German Construction Contract Procedures (VOB) (clay roof tile cover)

Material requirements for coverage

Laths	~ 3.2 m/m ² (incl. 10% waste)
Counter-laths	~ 1.7 m/m ² (incl. 10% waste)
Roof tile	~ 11.7 pieces/m ² (covering length 36.5 cm) ~ 12.3 pieces/m ² (covering length 34.5 cm) ~ 13.0 pieces/m ² (covering length 32.5 cm)
Packing unit*	
Tiles per pallet	288 pieces
Tiles per stack	36 pieces (72 pieces)
Tiles per pack	6 pieces
Verge tile	~ 2.9 pieces/m
Ridge or crest tile	~ 2.7 pieces/m
Copper roll/Alu roll 2000 (5 m per roll)	as required
Ridge/crest clip 470/41	1.0 piece per ridge tile
Wood screws	1.0 piece per ridge tile d = 4.5 mm Screw depth: 24 mm
Ridge or crest initial tile	1.0 piece per ridge or crest start
Ridge end tile	1.0 piece per ridge end
Ridge lath holder	1.0 piece per rafter
Crest lath holder	1.0 piece/ ~ 70 cm
Eaves fresh air element	~ 1.1 piece/m Fresh air ~ 200 cm ² /m

* only applies for deliveries in Germany

Regular roof pitch for clay roof tiles



If the pitch is below the regular roof pitch the additional measures of the roofing trade rules must be carried out (cf. table).

With equivalent roof substructure alternatives: pay attention to the manufacturer's and laying instructions. Warranty must be assumed by the relevant manufacturer.

Classification of additional measures except for subordinate buildings ¹⁾ according to the technical rules of the German roofing trade, last revised January 2010

Roof pitch	Higher requirements ²⁾			
	Use - Design - Climatic conditions			
	no further increased requirement ²⁾	one further increased requirement ²⁾	two further increased requirement ²⁾	three further increased requirement ²⁾
≥ 22°	Class 6 3.3 Underlayment (USB- A) ⁴⁾	Class 6 3.3 Underlayment (USB- A) ⁴⁾	Class 5 2.4 Overlapping / interlocking undercover (UDB- A; UDB- B ⁵⁾ ; USB- A) ⁴⁾	Class 4 2.2 Welded / bonded undercover 2.3 Undercover covered with bitumen sheeting 3.2 Underlayment secured at seams (UDB- A; UDB- B ⁵⁾ ; USB- A) ⁴⁾
≥ 18°	Class 4 2.2 Welded / bonded undercover 2.3 Undercover covered with bitumen sheeting 3.2 Underlayment secured at seams (UDB- A; UDB- B ⁵⁾ ; USB- A) ⁴⁾	Class 4 2.2 Welded / bonded undercover 2.3 Undercover covered with bitumen sheeting 3.2 Underlayment secured at seams (UDB- A; UDB- B ⁵⁾ ; USB- A) ⁴⁾	Class 3 2.1 Undercover secured at seams and perforations 3.1 Underlayment secured at seams and perforations (UDB- A; UDB- B ⁵⁾ ; USB- A) ⁴⁾	Class 3 2.1 Undercover secured at seams and perforations 3.1 Underlayment secured at seams and perforations (UDB- A; UDB- B ⁵⁾ ; USB- A) ⁴⁾
≥ 14°	Class 3 2.1 Undercover secured at seams and perforations 3.1 Underlayment secured at seams and perforations (UDB- A; UDB- B ⁵⁾ ; USB- A) ⁴⁾	Class 3 2.1 Undercover secured at seams and perforations 3.1 Underlayment secured at seams and perforations (UDB- A; UDB- B ⁵⁾ ; USB- A) ⁴⁾	Class 3 2.1 Undercover secured at seams and perforations 3.1 Underlayment secured at seams and perforations (UDB- A; UDB- B ⁵⁾ ; USB- A) ⁴⁾	Class 3 ³⁾ 2.1 Undercover secured at seams and perforations 3.1 Underlayment secured at seams and perforations (UDB- A; UDB- B ⁵⁾ ; USB- A) ⁴⁾
≥ 10°	Class 2 1.2 Rainproof roof substructure	Class 2 1.2 Rainproof roof substructure	Class 1 1.1 Waterproof roof substructure	Class 1 1.1 Waterproof roof substructure
MRP			10°	

¹⁾ The additional measures named in the table are minimum measures taking into account table 1 of the "Leaflet for roof substructures, undercovers, underlays".

²⁾ Higher requirements form categories in accordance with Section 1.1.3. Further higher requirements may result from the weighting within a category according to Section 1.1.3. For example, climatic conditions can lead to several higher requirements.

³⁾ Only allowed if proof has been rendered of the functional reliability of the products used including accessories (sealing tapes, adhesive tapes, sealing compounds, ready-made seam protection, etc.) by the manufacturer during a driving rain test. The next highest class should otherwise be chosen.

⁴⁾ Undercover plates are to be assigned according to the classification in the "Leaflet for roof substructures, undercovers and underlays".

⁵⁾ If indices 2), 3), 4), 5) in the product data sheet are met:

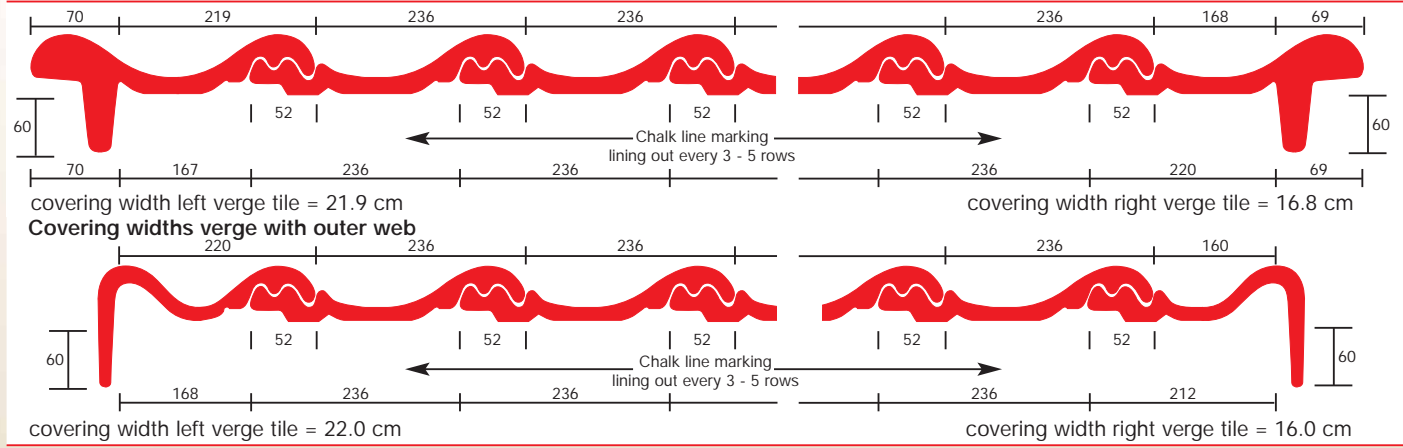
2) Resistance to driving rain, proven by the "Driving rain test underlay and undercover sheets - TU Berlin"

3) Higher requirements on ageing are proven by increasing the temperature in the test method Appendix C 5.2 of DIN EN 13859- 1 to 80 °C.

4) The manufacturer specifies the duration of the outdoor weathering period whilst warranting the aforementioned properties.

5) The manufacturer confirms the suitability as a provisional cover and specifies the duration of the outdoor weathering period whilst warranting the aforementioned properties.

Covering widths



Roof lathing in conjunction with ridge flaps (dry ridge)

Supporting laths:

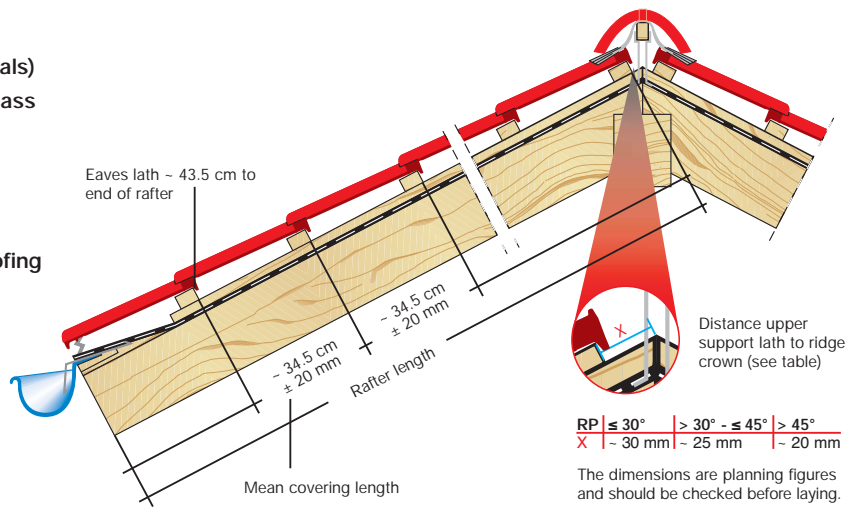
The following min. cross-sections must be used:
 (rules for roofing, notes on wood and timber materials)

Nom. cross-sections of support laths	Rafter intervals (unit spacing)	Sizing class
30 x 50 mm	≤ 80 cm	S 10
40 x 60 mm	≤ 100 cm	S 10

Counter-laths:

Rec. thickness of counter-laths acc. to rules for roofing
 (notes on wood and timber materials):

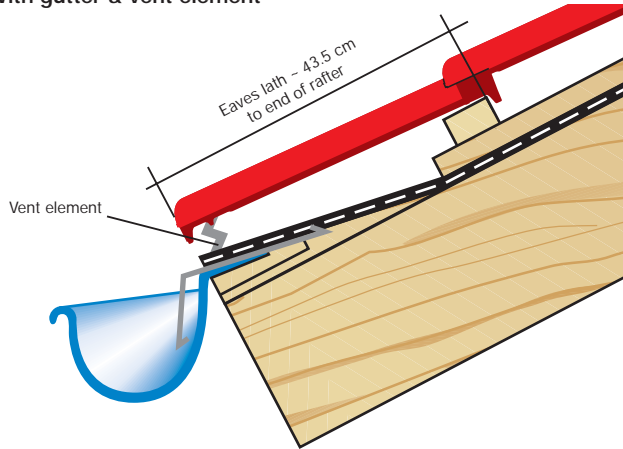
Rafter length	Rec. thickness
up to 8 m	24 mm
up to 12 m	30 mm
over 12 m	40 mm



Details eaves design

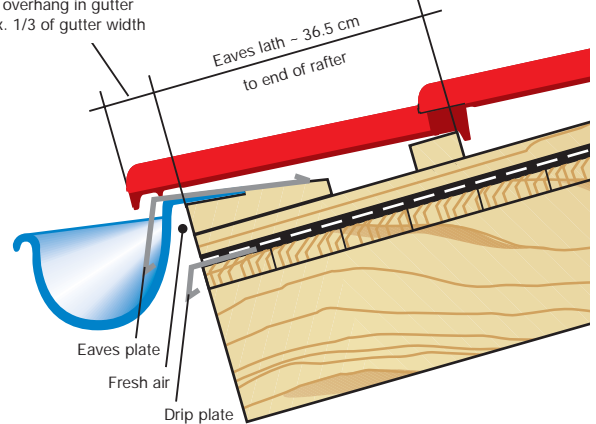
The dimensions are planning figures and should be checked before laying depending on the design and local circumstances.

1 With gutter & vent element

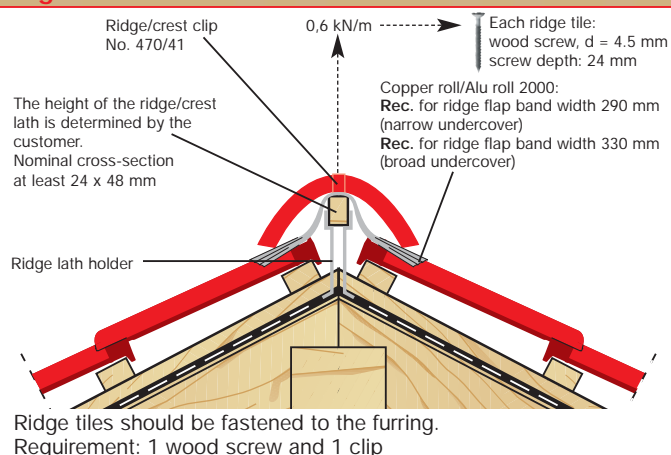


2 High-level gutter (recommended for flat roof pitches < 22°)

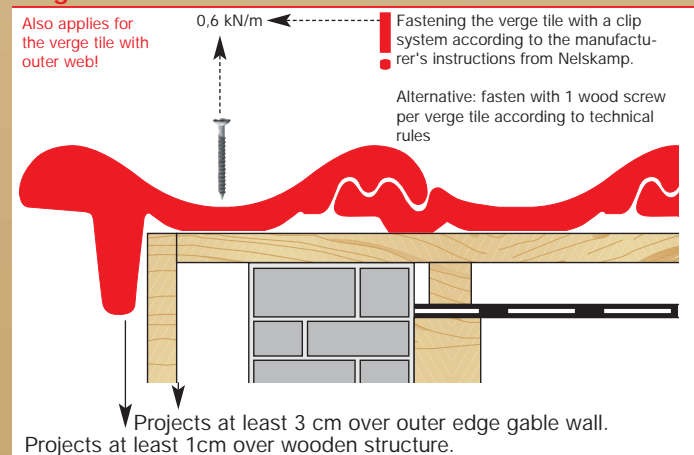
Tile overhang in gutter max. 1/3 of gutter width



Ridge/crest details



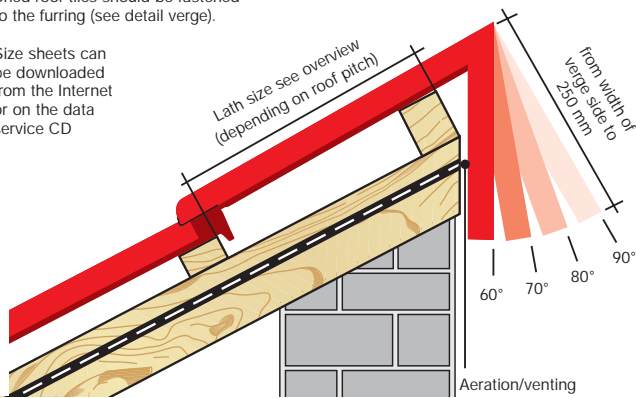
Verge details



Shed roof tile

Shed roof tiles should be fastened to the furring (see detail verge).

Size sheets can be downloaded from the Internet or on the data service CD



Overview lath size:

90°

- maximum lath size of 225 mm
- minimum lath size of 90 mm

80° = RP 10°

- maximum lath size of 210 mm
- minimum lath size of 90 mm

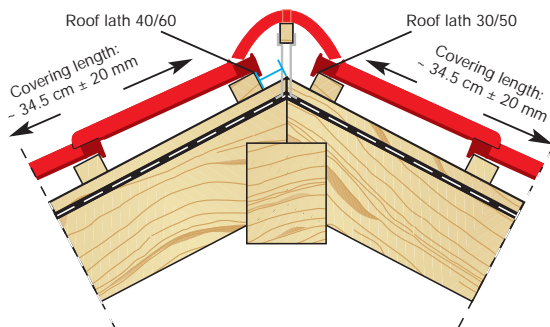
70° = RP 20°

- maximum lath size of 190 mm
- minimum lath size of 90 mm

60° = RP 30°

- maximum lath size of 165 mm
- minimum lath size of 90 mm

Laying instructions for ridge connecting tile (with standard ridge tile)



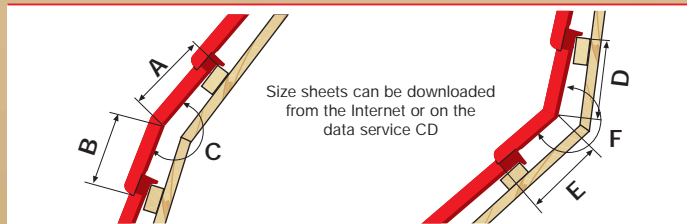
Ridge design with ridge connecting tiles

Upper edge 1st lath from ridge crown

up to 30° RP	Laths 30 x 50 mm	4.0 cm
up to 30° RP	Laths 40 x 60 mm	4.0 cm
up to 45° RP	Laths 30 x 50 mm	2.0 cm
up to 45° RP	Laths 40 x 60 mm	2.0 cm
over 50° RP	Laths 30 x 50 mm	2.0 cm
over 50° RP	Laths 40 x 60 mm	2.0 cm

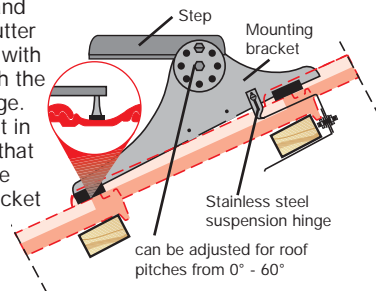
The dimensions are planning figures and should be checked before laying.

Mansard and pent roof tile



Installation instructions for universal alu step

A chase is made in the head and foot interlocking joint of the gutter tile using a right angle grinder with diamond wheel to lead through the stainless steel suspension hinge. Hang the alu mounting bracket in the throat of the gutter tile so that the two rubber profiles with the lower end of the mounting bracket lie on the roof lath. The rubber profiles must rest where the gutter tiles overlap.

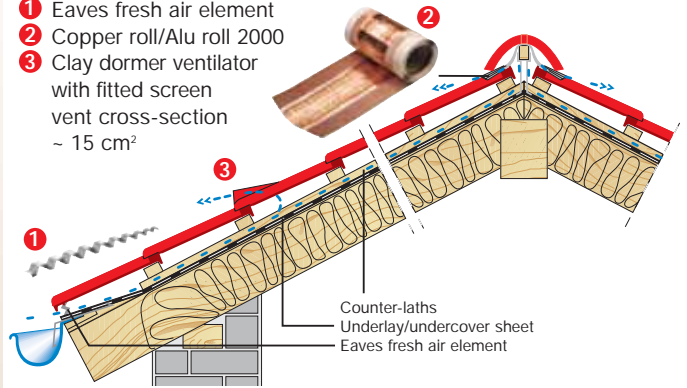


Installation instructions on delivery

tested to
DIN EN 516

Aeration and ventilation in steep roof

- 1 Eaves fresh air element
- 2 Copper roll/Alu roll 2000
- 3 Clay dormer ventilator with fitted screen vent cross-section ~ 15 cm²



- 1) The vent cross-section at the eaves should be at least 200 cm²/m of eaves.
- 2) The vent cross-section at the ridge or crest should be at least 0.5% of the total corresponding roof area, though at least 50 cm². (according to DIN 4108-3)

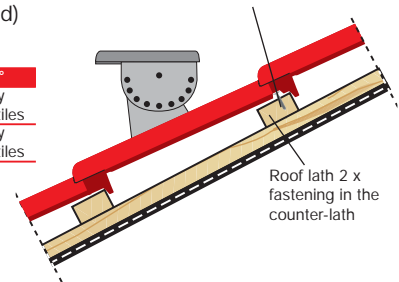
Installation instructions for alu base tile with single step/walking grid tile/snow stop tile

Of stainless steel/aluminium. No supporting laths needed!

Fastening to supporting lath: Aluminium tile fastened to lath with 2 screws (V2A screw included)

Processing acc. to DIN 18160-5

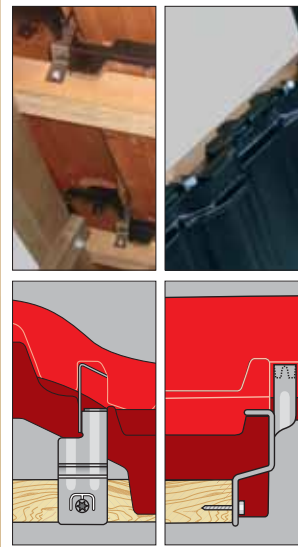
Article	≤ 45°	> 45°
Walking grid tile	every 2 nd row of tiles	every row of tiles
Alu base tile	every row of tiles	every row of tiles
w step tile	every row of tiles	every row of tiles



tested to DIN EN 516

The same applies for alu pantiles with snow rib or round wood holder, whereby the max. support spacing should not exceed 90 cm. For higher demands you should reduce the support spacing (60 cm).

Multi storm claw



That's new:

Maximum protection against wind suction and easy installation:

The multi storm claw is placed on top of the gutter tile at the appropriate point and screwed to the laths. The roof tiles remain **completely free of screw holes that could impair their function**. There is a clay groove pressed into the underside of the tile where the multi storm claw can be clipped into place. After screwing into place the next overlapping tile is simply laid in position. The multi storm claw audibly clips/grips the clay groove after a slight pressure is exerted on the tile.

The multi storm claw ensures a combined (2-fold) fastening of the roof tile at its top and bottom.

The pull-out values of former common side rabbit clips are greatly exceeded. The tiles are fastened in place absolutely stormproof in accordance with the technical rules for roofing.

On the NELSKAMP data service CD or as a download on the Internet from www.nelskamp.de

- Product specifications
- Laying instructions
- CAD data

DOWNLOAD



For colourful, clean roofs. The Nelskamp concrete roofing tile program.



Finkenberger pantile CLIMALIFE,
LONGLIFE, SELF-CLEANING (SG)
and TOP 2000 S

S pantile CLIMALIFE,
LONGLIFE and
SELF-CLEANING (SG)

Kronen pantile
SELF-CLEANING (SG)

Sigma pantile LONGLIFE,
SELF-CLEANING (SG) and
TOP 2000 S

CLIMALIFE concrete roofing tiles

With their ClimaLife surface our roof pantiles clean our environment from contaminants resulting from heating, traffic and the industry. Up to 90 percent are neutralized in daylight, without sunlight up to 70 percent. This is due to the titanium oxide content in the micro concrete. It mainly converts nitrogen oxides (NO_x) into harmless substances like NO₃⁻. Again and again, because titanium oxide is a catalyst, which is never used up. The rain does the rest: It just flushes away the substances, which then are harmless.

LONGLIFE concrete roofing tiles

The leading technology of LONGLIFE concrete roofing tiles is based on the smooth surface of micro-concrete and a newly developed, silk-gloss colour coating. Both factors ensure clean roofs with long-lasting, intensive colours. The reason: dirt is washed off by rain and moss or algae find almost no base for growth.

SELF-CLEANING (SG) concrete roofing tiles

SG = Self-cleaninG concrete roofing tiles are also supplied with the newly developed colour coating. Moss and algae find almost no base for growth on the surface.

TOP 2000 S concrete roofing tiles

High-quality raw materials, the latest production methods and established coating technologies with numerous standard and special colours are characteristic of TOP 2000 S concrete roofing tiles.



Concrete roofing tiles and clay roof tiles from Nelskamp. The obvious solution.

Our strategically placed production facilities guarantee that our roof building materials are always well received. Six plants throughout Germany are the sound, logistical basis for co-operation and help spare the environment.

Administration and sales

Waldweg 6 · D-46514 Schermbeck
Postfach 11 20 · D-46510 Schermbeck
Phone: +49 28 53/91 30-0
Fax: +49 28 53/37 59
Email: vertrieb@nelskamp.de
Internet: www.nelskamp.de

Production of concrete roofing tiles

Gartrop Works
Gahlener Straße 158
D-46569 Hünxe-Gartrop
Phone: +49 28 53/91 30-31/32
Fax: +49 28 53/45 59

Dieburg Works
Lagerstraße 30
D-64807 Dieburg
Phone: +49 60 71/98 64-0
Fax: +49 60 71/16 73

Schönerlinde Works
Schönerlinder Bahnhofstraße 6
D-16348 Wandlitz
Phone: +49 30/94 03 91-0
Fax: +49 30/94 12 20 4

Production of clay roof tiles

Schermbeck Works
Waldweg 6
D-46514 Schermbeck
Phone: +49 28 53/91 30-23/17
Fax: +49 28 53/26 70

Unsleben Works
Wechterswinkler Straße 23
D-97618 Unsleben
Phone: +49 97 73/9 10 10
Fax: +49 97 73/7 49

Groß-Ammensleben Works
Magdeburger Straße 42
D-39326 Groß-Ammensleben
Phone: +49 3 92 02/88-6
Fax: +49 3 92 02/88 80 2

From clay. From concrete. From experience.

NELSKAMP