From clay. From concrete. From experience.
NELSKAMP

The NIBRA® plain clay tile

NIBRA® plain clay tile 18/38

NIBRA® "Berliner" plain tile 15.5/38

Technical data

Roof tile	NIBRA® plain clay tile 18/38
Roof tile	NIBRA® "Berliner" plain tile 15.5/38
Manufacturer	Nelskamp (D)
Overall length	~ [1]38.0/[2]38.0 cm
Requirement per m²	~ [1]36/[2]42 pieces
Weight per tile	~ [1]2.0/[2]1.6 kg
Weight per m²	~ [1]72.0/[2]67.2 kg
Regular roof pitch	30°
Tile clip	415c® 07 for laths 24 x 48 cm 415c® 08 for laths 30 x 50 cm 415c® 09 for laths 40 x 60 cm

[1] Plain clay roof tile 18/38
[2] "Berliner" plain tile 15.5/38

The Colours

natural red, red engobed, old colours engobed, brown engobed, black noble engobed (matt black glazed)

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	~ 6.8 m/m² (incl. 10% waste)
Counter-laths	~ 1.7 m/m² (incl. 10% waste)
Plain tile	~ [1]36/[2]42 pieces/m²
Packing unit*	
Tiles per pallet	[1]400/[2]500 pieces
Half plain tile, divisible	as required, ~ 3.0 pieces/m
Plain verge tile (only possible with double-lap)	~ 6.5 pieces/m (divided up into: 3.2 pieces/m 3/4 and 3.2 pieces/m 1 1/4)
Plain walking grid tileas	as required
Plain walking grid tile with alu step	as required
Standard ridge tile	~ 2.5 pieces/m
Large plain ridge tile	~ 3.0 pieces/m
Small plain ridge tile	~ 4.0 pieces/m
Copper roll/Alu roll 2000 (5 m per roll)	as required
Ridge/crest clip 470®/41	1.0 piece per standard ridge
Ridge/crest clip 470®/135	1.0 piece per small plain ridge
Ridge/crest clip 470®/150	1.0 piece per large plain ridge
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 cm²/m

* only applies for deliveries in Germany

Lath widths

Roof pitch	Lath width Y	Lath width X	Requirement
Plain tile 18/38	**crown-tiles**	**double-lap**	**pce./m²**
< 30°- ≤ 35°	29.00 cm	14.50 cm	38.31
> 35°- ≤ 40°	30.00 cm	15.00 cm	37.04
> 40°- ≤ 45°	31.00 cm	15.50 cm	35.84
> 45°- ≤ 60°	32.00 cm	16.00 cm	34.72
> 60°	33.00 cm	16.50 cm	33.67
"Berliner" plain tile 15.5/38	**crown-tiles**	**double-lap**	**pce./m²**
< 30°- ≤ 35°	29.00 cm	14.50 cm	44.49
> 35°- ≤ 40°	30.00 cm	15.00 cm	43.01
> 40°- ≤ 45°	31.00 cm	15.50 cm	41.62
> 45°- ≤ 60°	32.00 cm	16.00 cm	40.32
> 60°	33.00 cm	16.50 cm	39.10

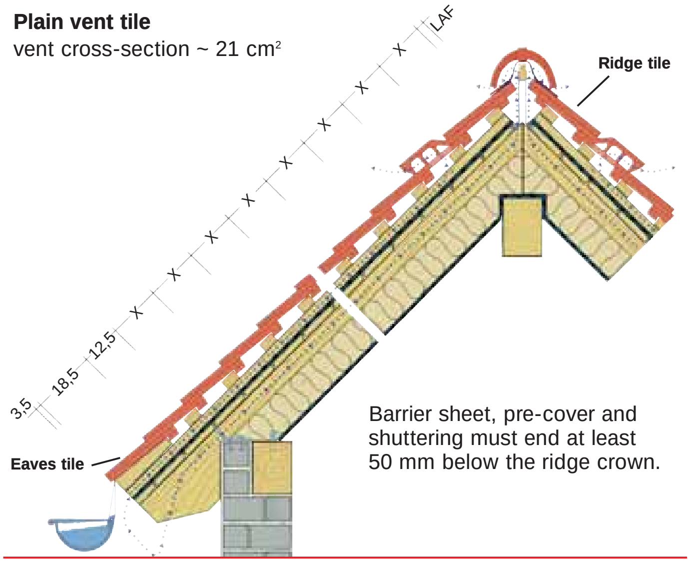
Last revised 05/2010

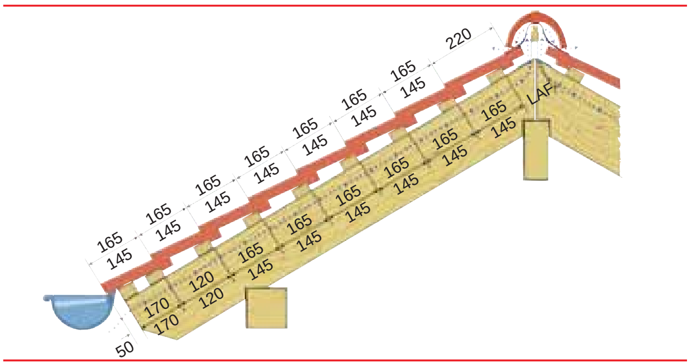
Classification of additional measures except for subordinate buildings [1] according to the technical rules of the German roofing trade, last revised January 2010

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]
≥ 30°	**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]
≥ 26°	**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]
≥ 22°	**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** 2.1 Undercover secured at seams and perforations 3.1 Underlayment secured at seams and perforations (UDB- A; UDB- B [5]; USB- A) [4]
≥ 18°	**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
≥ 10°	**Class 1** 1.1 Waterproof roof substructure	**Class 1** 1.1 Waterproof roof substructure	**Class 1** 1.1 Waterproof roof substructure	**Class 1** 1.1 Waterproof roof substructure
MRP	10°			

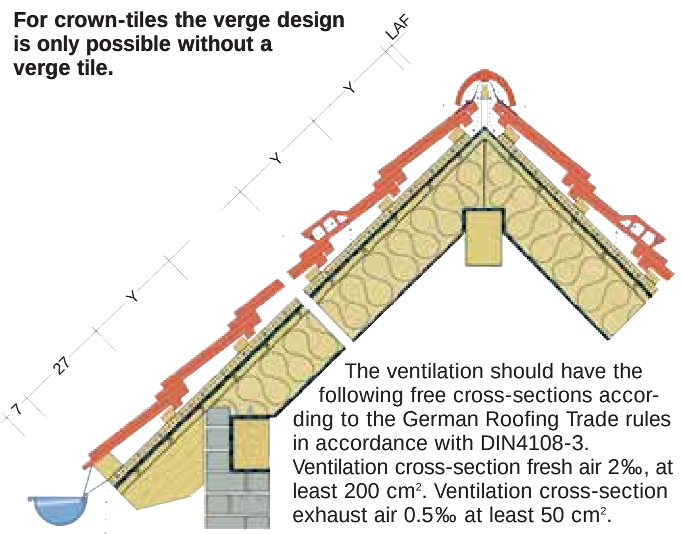
1) The additional measures named in the table are minimum measures taking into account table 1 of the "Leaflet for roof substructures, undercovers, underlays".
2) Higher requirements form categories in accordance with Section 1.1.3. Further higher requirements may result from the weighting within a category 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 whist warranting the aforementioned properties.
   5) The manufacturer confirms the suitability as a provisional cover and specifies the duration of the outdoor weathering period whist warranting the aforementioned properties.

Roof cross-section with double-lap, fresh air exhaust air





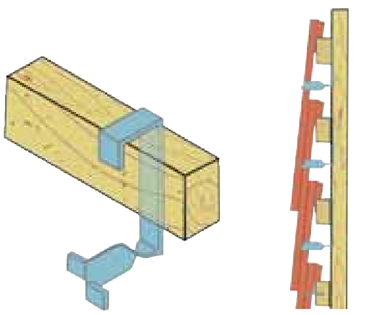
Roof cross-section with crown-tiles, fresh air exhaust air



Wall covering

Clip holder for every plain clay tile or screw nail securing

Mechanical fastening with one-piece storm clip for every plain clay tile.
For lath sizes 24 x 48, 30 x 50 and 40 x 60



Lath cross-sections

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

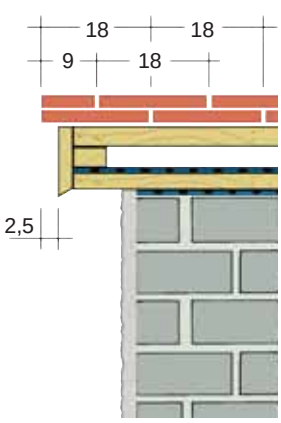
Nom. cross-sections of support laths	Rafter intervals (unit spacing)	Sizing class
24 x 48 mm	≤ 70 cm ≤ 17 cm lath distance	S 13 (= sawn timber with above-average carrying capacity
24 x 60 mm	≤ 80 cm	S 13
30 x 50 mm	≤ 80 cm	S 10 (= sawn timber with normal carrying capacity
40 x 60 mm	≤ 100 cm	S 10

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

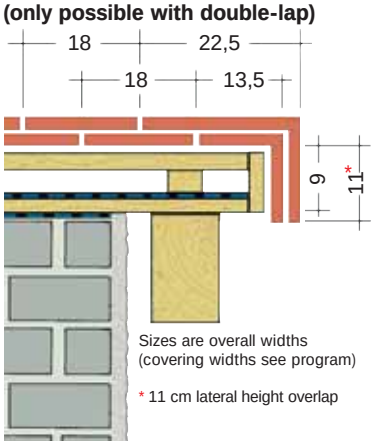
Rafter length	Rec. thickness
up to 8 m	24 mm
up to 12 m	30 mm
over 12 m	40 mm

Verge details

Verge with plain tile
1/1 and 1/2



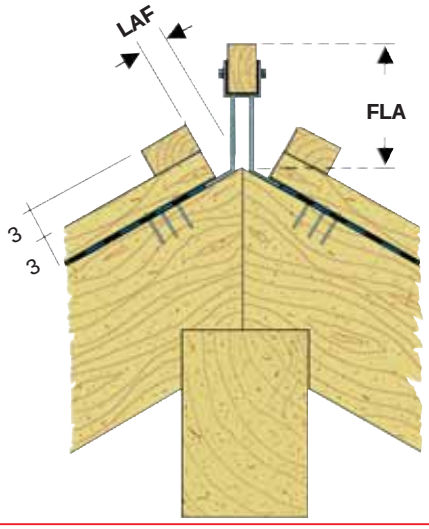
Verge with verge tile
1 1/4 and 3/4
(only possible with double-lap)



Sizes are overall widths
(covering widths see program)

* 11 cm lateral height overlap

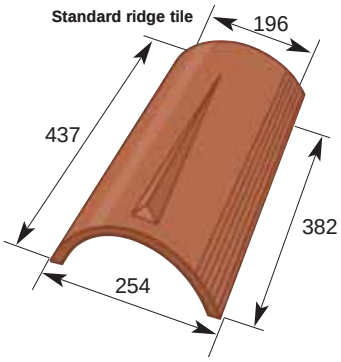
Ridge design

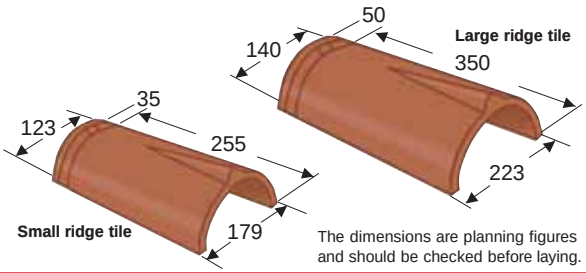


Roof design: rafters, barrier sheet, counter-lath, lath, ridge lath

Rafter pitch		30°	35°	40°	45°	50°	60°
FS (dry laying)	**LAF**	90	90	85	80	80	-
FG (dry laying)	**LAF**	90	90	95	100	100	105
FK (mortared)	**LAF**	65	60	55	45	40	-

FLA = To be determined by customer
LAF = Lath distance to ridge crown
FS = Standard ridge tile ~ 2.5 pce./m
FG = Large ridge tile ~ 3.0 pce./m
FK = Small ridge tile ~ 4.0 pce./m

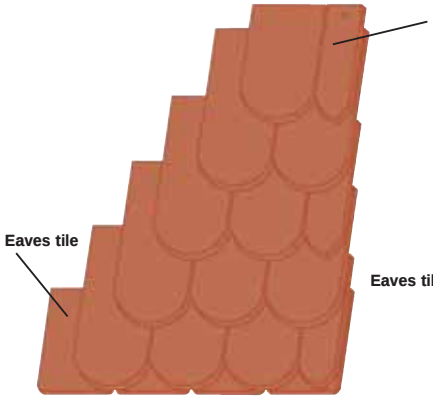




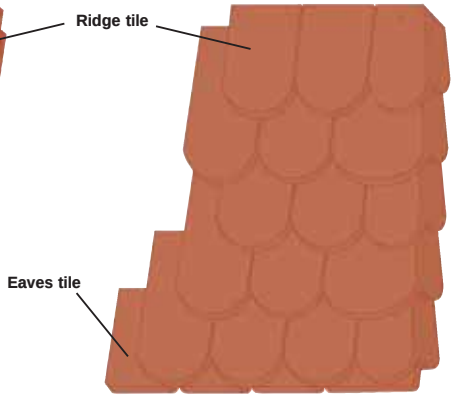
The dimensions are planning figures
and should be checked before laying.

Suggested designs

Double-lap pattern
with plain tile 1/1 and 1/2



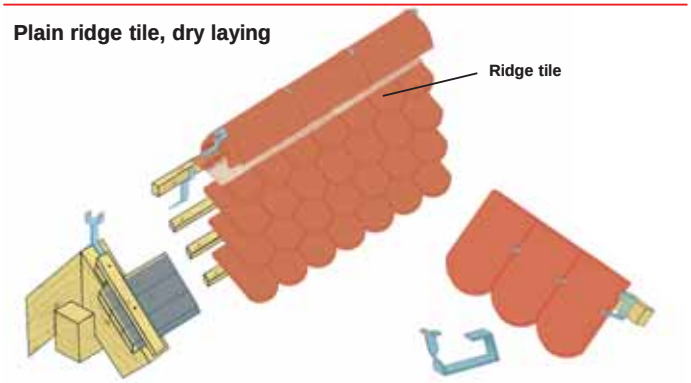
Double-lap
with verge tile 3/4 and 1 1/4



Crown-tiles (verge tile on request)

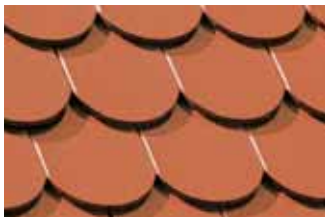
Ridge tile laying and storm protection

Plain ridge tile, dry laying



Storm protection with plain tile clip 415c®, 1-part for laths 24 x 48 or 30 x 50 or 40 x 60 for roofs with roof substructure.

Plain clay tile roofing

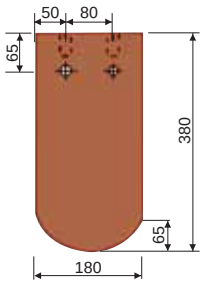


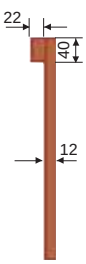
Double-lap

Crown-tiles

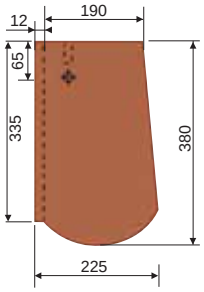
Moulded bricks for various functions meet the demand for homogeneous, architecturally demanding roofs. They are also an important safety factor. Moulded bricks and accessories reduce the amount of laying work and facilitate calculations. You will find the complete program for every tile on our Internet website **www.nelskamp.de**.

Plain clay tile circular cut 18/38

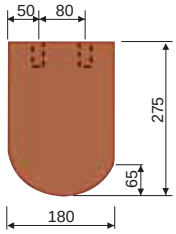


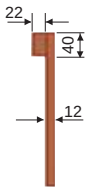


Plain tile
18/38 circular cut

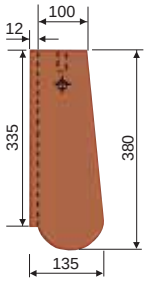


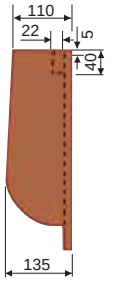
1 1/4 left verge
22.5/38 circular cut



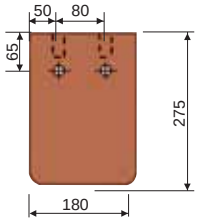


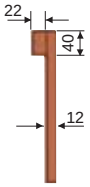
Ridge tile
18/27.5 circular cut



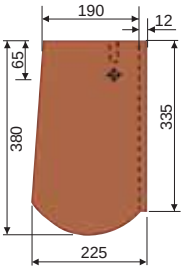


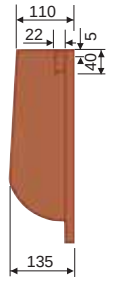
3/4 left verge
13.5/38 circular cut



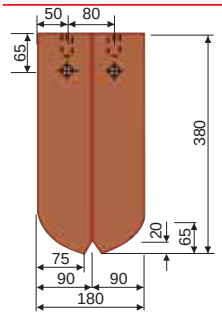


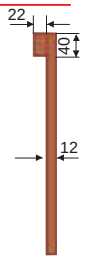
Eaves tile
18/27.5 circular cut



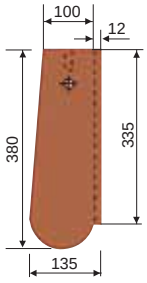


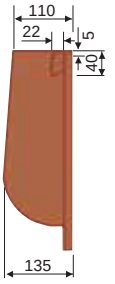
1 1/4 right verge
22.5/38 circular cut



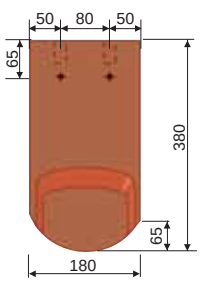


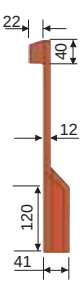
1/2 plain tile, divisible
18/38 circular cut



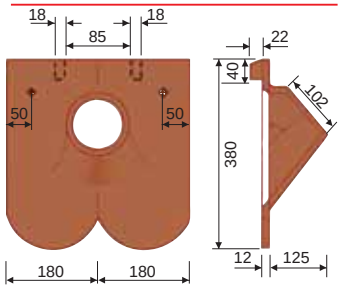


3/4 right verge
13.5/38 circular cut



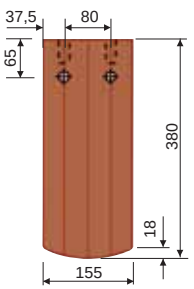


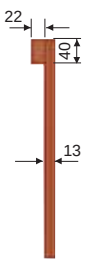
Plain vent tile
18/38 Circular/straight cut



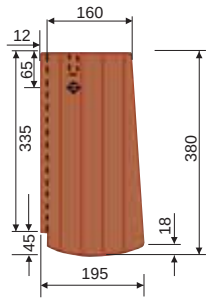
Plain tile with hole
36/38 Circular/straight cut

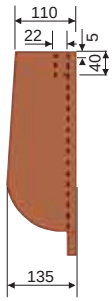
"Berliner" plain tile segment cut 15.5/38



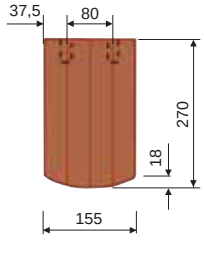


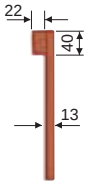
Plain tile
15.5/38 "Berliner" plain tile



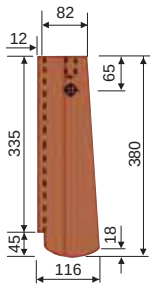


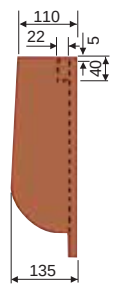
1 1/4 left verge
19.5/38 "Berliner" plain tile



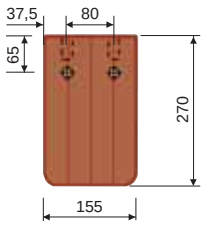


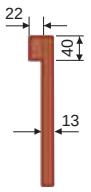
Ridge tile
15.5/27 "Berliner" plain tile



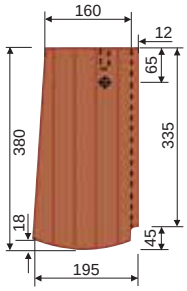


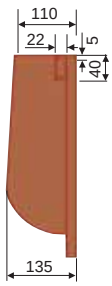
3/4 left verge
11.6/38 "Berliner" plain tile



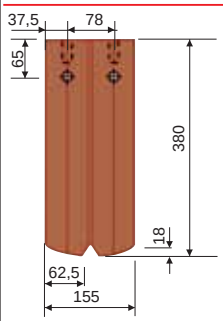


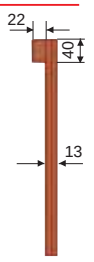
Eaves tile
15.5/27 "Berliner" plain tile



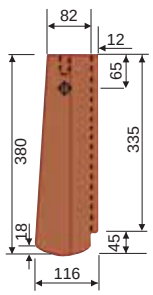


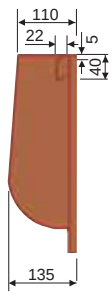
1 1/4 right verge
19.5/38 "Berliner" plain tile



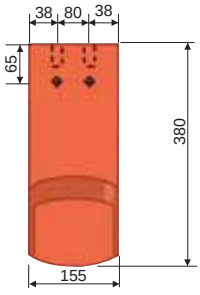


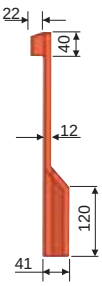
1/2 plain tile, divisible
15.5/38 "Berliner" plain tile



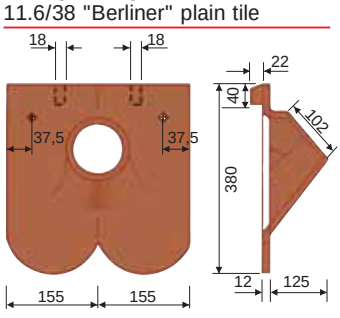


3/4 right verge
11.6/38 "Berliner" plain tile





Plain vent tile
15.5/38 "Berliner" plain tile



Plain tile with hole
31/38 "Berliner" plain tile