



## MULDENVARIABEL

THE HISTORICAL, STYLISH TWIN TROUGH  
INTERLOCKING TILE



# THE HISTORICAL TWIN TROUGH INTERLOCKING TILE FOR A STYLISH ROOF – **MULDENVARIABEL**



**MICHAEL NEUMANN**  
Roof tile production

"We at Laumans have a matching tile for every roof. In addition to a large selection on models and colours we also produce order-related products for our customers. It feels good to inspire the customer with creative, individual solutions."





The historical tile model **MULDENVARIABEL** dates back to a development by Wilhelm Ludowici in 1881. In addition to the geometric arrangement of the two troughs, it particularly impresses with its delicately structured pattern on the roof. Stylish and balanced, the twin trough interlocking tile convinces not least by two ways of laying: parallel or broken-bonded.





# MULDENVARIABEL

THE HISTORICAL, STYLISH TWIN TROUGH INTERLOCKING TILE

-  **Design:** geometrical design with a rustic look
-  **Surface effect:** filigree structured with dynamic play of light and shadow
-  **Technology:** double interlocking joint for increased rain protection, even at the lowest roof pitches; variable covering length for quick and easy mounting; offers two layout options: parallel or broken-bonded
-  **Application:** ideal for the restoration of historic buildings and monument preservation. The No. 1 tile for rustic country homes.





# UNIQUE SURFACES AND EXCLUSIVE COLOURS FROM MATT TO HIGH GLOSS

FOR CLASSIC AND STYLISH ROOF DESIGN.

## NATURAL FIRED – Naturally matt surface

The most original form of colouring which solid colours the entire roof tile body.

## NATURAL ENGOBES – Matt surface

Clay suspension of natural minerals which is poured over the roof tile before firing.

## BRILLIANT GLAZES – Glossy surface

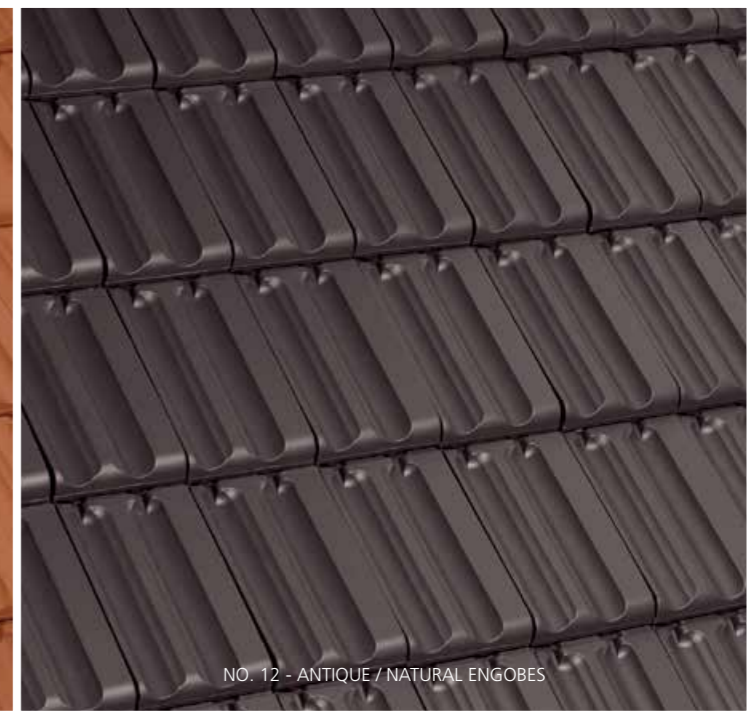
Ceramic coatings that fuse with the roof tile during firing.

## 30 YEARS WARRANTY ON ALL LAUMANS ROOF TILE PRODUCTS

First-class natural raw materials, groundbreaking production processes and comprehensive external and internal quality control ensure the consistently high quality of our roof tiles.



NO. 11 - NATURAL RED / NATURAL FIRED



NO. 12 - ANTIQUE / NATURAL ENGOBES



NO. 14 - RED / NATURAL ENGOBES







NO. 30 - XENON-GREY / NATURAL ENGOBES

## 40% MORE COLOUR – 100% MORE ENTHUSIASM



UNRIVALED LAUMANS COLOUR APPLICATION TECHNOLOGY. OVERPOUR INSTEAD OF SPRAYING OR SPINNING

-  Up to 40 % higher thicknesses of coloured clay sludges for intense and consistent colours
-  Uniquely defined, lively colours for an exclusive and inimitable naturalness
-  Noticeably smoother roof tile surfaces for a perfect look and dirt-repellent effect
-  Extremely hard surfaces for protection against mechanical and environmental influences



NO. 50 - BLACK / BRILLIANT GLAZES



NR. 108 - DARK BROWN / BRILLIANT GLAZES

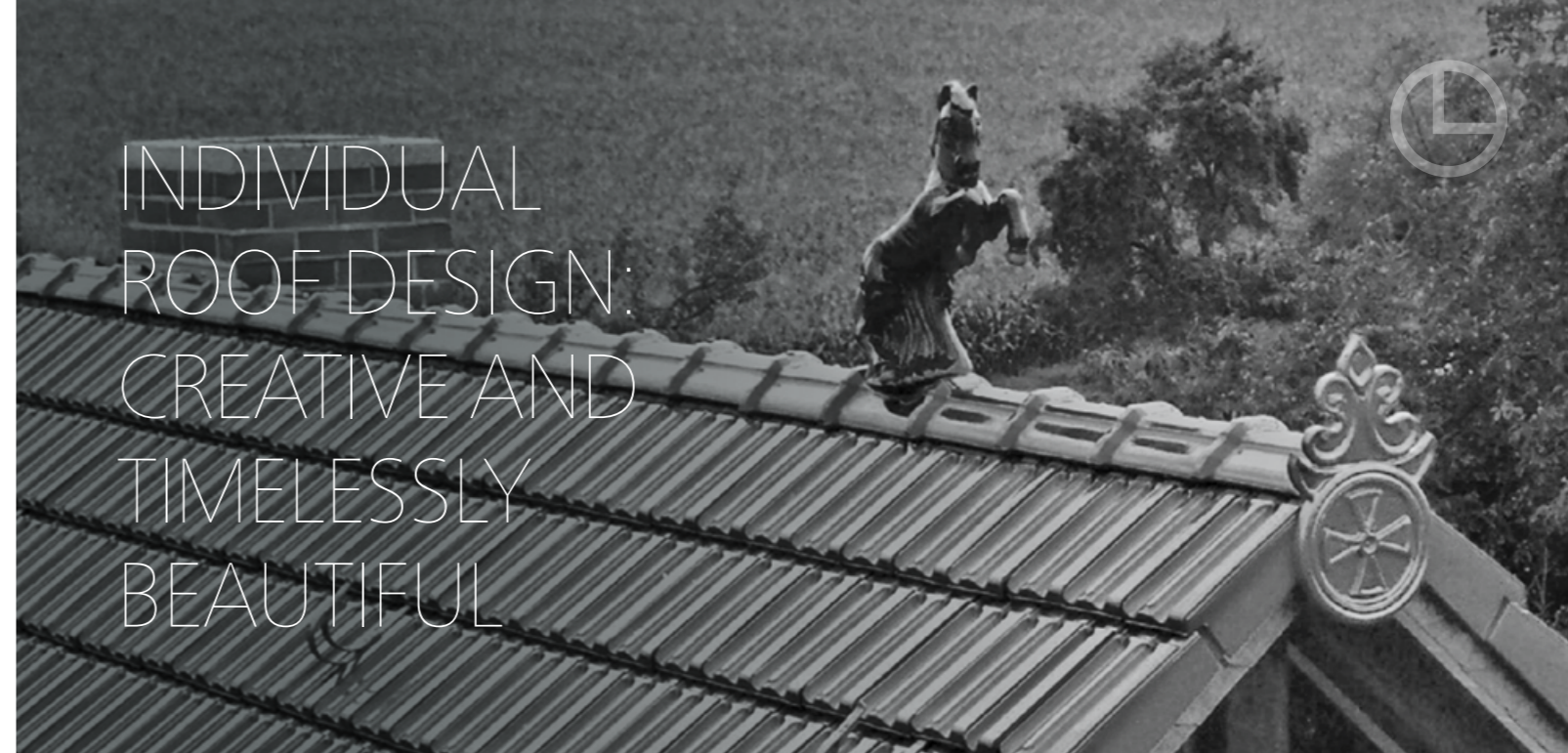








MULDENVARIABLE / NO. 14 - RED / NATURAL ENGOBES



## INDIVIDUAL ROOF DESIGN: CREATIVE AND TIMELESSLY BEAUTIFUL

A roof with Lauman's premium Tegelen clay roof tiles from the Lower Rhine combines tradition with innovation, tranquility with suspense, classicism with modernity. Its natural elegance is based on the perfect interplay of form and function and has the potential to create a harmonious image with any kind of architecture. Laumans offers many different roof tile models, colours and surfaces. So all clients have an opportunity to realize their own dream roof.

### LET YOURSELF BE INSPIRED

As a pioneer of industrial production, Laumans is one of the leading companies, especially in glazed and engobed tiles. One reason for the success is the special colour-coating technique of showering: coloured clay slurries and glazes are not sprayed or spun, but poured over the tiles before the firing. The result is more intense and more consistent colours with up to 40 % higher thickness - for noticeably smoother roof tiles. Also unique are the trend glazes which combine all the positive qualities of a conventional glaze with a deliberately matt appearance. Our claim: the right tile for every roof - from extra matt to high gloss.

### SHOWING YOUR COLOURS

With the design of your roof you show your colours in the truest sense. Reds radiate warmth and enjoyment of life, grey and black appear factual and elegant. You set very special accents with noble blue or green roof tiles.

The various ceramic surfaces emphasize the design aspect of the roof in the overall context of the house to a great extent and make every property a real "eye-catcher".

### EYE-CATCHING ORNAMENTS

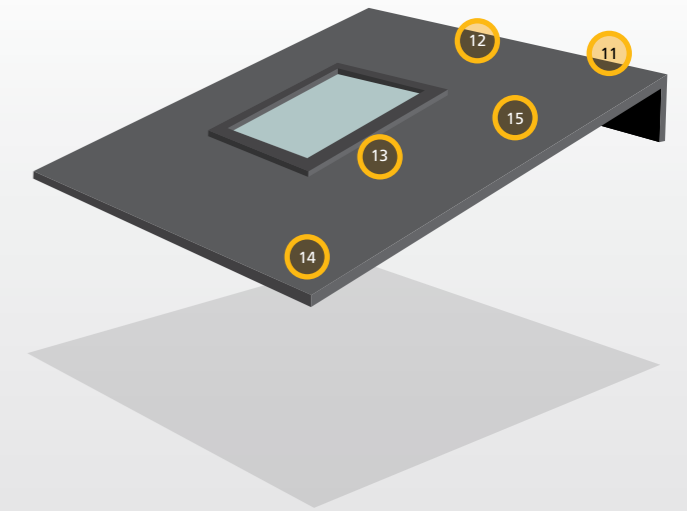
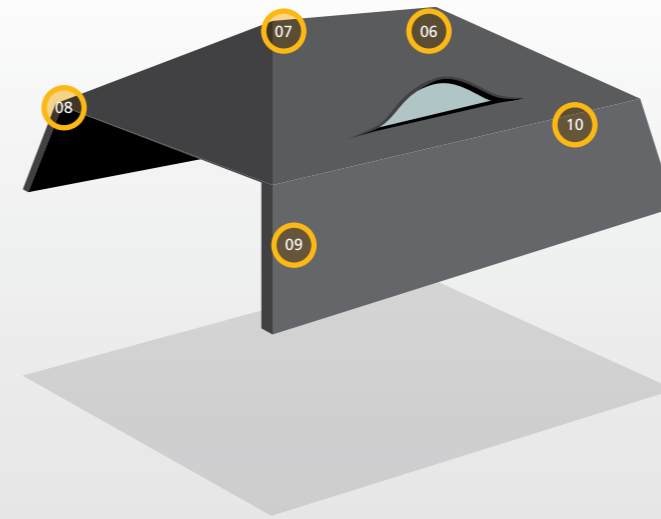
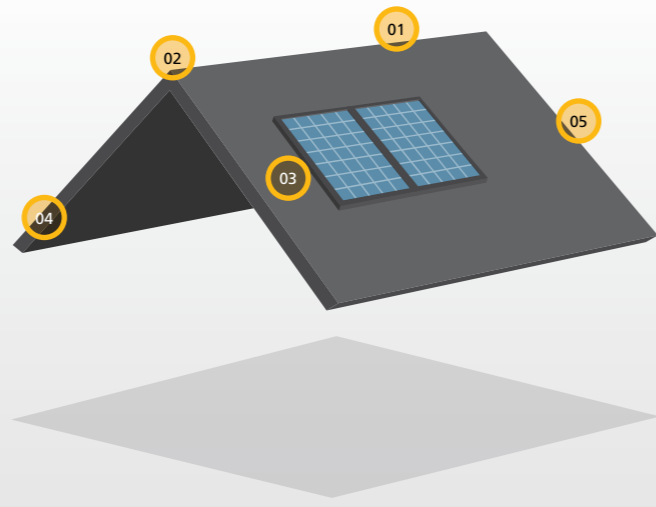
You can also use roof trims, ornaments and figures to give your dream roof even more personality. Let your ideas run wild. At Laumans you will find a large selection of roof ornaments. Just visit our website [www.laumans.de](http://www.laumans.de) and ask your specialist or dealer.

### ADVANTAGE: INDIVIDUALITY

- The right tile for each roof because of a great variety of models
- Exclusive surface variants from matt to high gloss
- Comprehensive colour palette in particularly natural, lively tones
- Intense colours and smooth surfaces thanks to unique colour application technology
- Compatible with every kind of architecture
- Extensive range of roof decorations for additional customizations



# ACCESSORIES MADE OF CLAY. FOR PERFECT ROOFS.



Only the all-ceramic roof, from the eaves to the ridge, guarantees the unmistakable overall performance of a Laumans clay tile roof. One in shape and function unbeatable unit that defies all environmental influences and does not show material fatigue even after decades. Available in all available colours and finishes.

## OTHER ACCESSORIES

We supply various roof accessories, such as snow chains, runners, and safety step pans for static or safety reasons, in a material combination of metal and / or plastic. These products are available upon request in the chosen roof tile colour.

## ORNAMENTS MADE OF CLAY

Make your roof even more individual with ornaments made of clay. Whether rooster, sleepwalker or cat, your ideas have no limits. Talk to your specialist about the many possibilities.



**01 RIDGE TILE**  
Perfect finishing tile for secure coverage of opposite roof surfaces on the ridge and hip.



**02 ROOF RIDGE ENDER**  
Elegant ridge formation as a starting or ending tile.



**03 SOLAR CONNECTION**  
Indispensable accessory tile for solar systems for penetration of the connection cable and pipework



**04 VERGE TILE INTERIOR BAULK**  
Visually compact finish to the side roof plane and protection for the roof connection against driving rain. Available for left and right sides.



**05 VERGE TILE EXTERIOR BAULK**  
Visually compact finish to the side roof plane and protection for the roof connection against driving rain. Available for left and right sides.



**06 ANTENNA TILE**  
For the safe implementation of satellite dish and antenna masts.



**07 HIP CAP**  
All-ceramic covering of the transition between the ridge and hip. Suitable for roof pitches of 18–50°.



**08 HIP STARTING TILE**  
Shapely and functional design for the start of the hip.



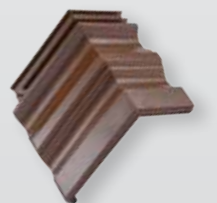
**09 HALF TILE**  
Width compensation for existing roofs or for precise laying work on roof structures and roof windows.



**10 MANSARD TILE**  
The accessory for creating mansard roofs or other creative roof shapes according to the requirements of the roofer.



**11 SHED ROOF TILE**  
Finishing tile for all monopitch roofs. With 90° angle as a standard-shaped part. Other shapes at the roofer's request.



**12 UNIVERSAL SHED ROOF TILE**  
Universal cover with finishing tiles.



**13 DOUBLE BRIM TILE**  
Left-hand finish for ascending masonry or roof windows.



**14 VENTILATION TILE**  
Additional surface ventilation in the eaves and ridge area. Ensures air circulation above the insulation and avoids condensation.

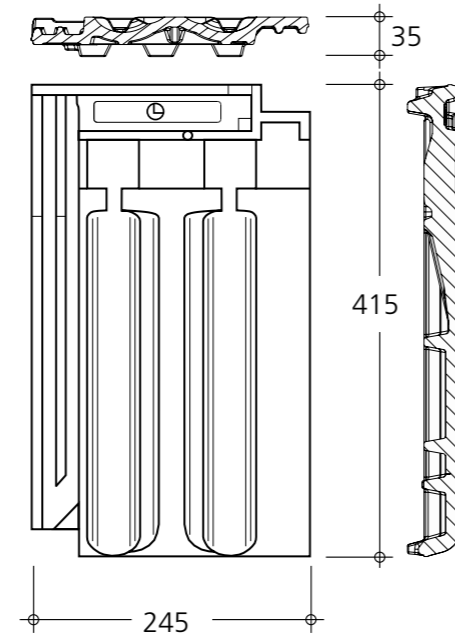


**15 VENTILATION PIPE**  
For the driving rain-resistant ventilation of sanitary pipes and exhaust ducts over the roof.



# TECHNOLOGY WITH SYSTEM

In addition to all visual aspects, the protective function and safety of your roof takes first place. Thanks to the wide contact surface and the pronounced suspension, the **MULDENVARIABEL** is firmly and securely on the roof batten. The four-way covering and intensive locking in the four-tile corner gives the tile surface additional stability and makes it extremely safe against wind suction. The double interlocking joint defies driving rain and snow. **And this already for roof pitches from 17 ° with corresponding additional measures.**<sup>1</sup>

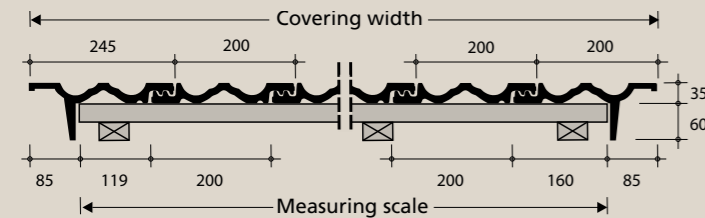


## MULDENVARIABEL

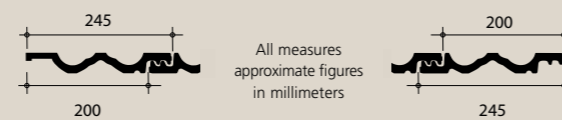
DIMENSIONS	COVERING LENGTH	COVERING WIDTH	REQUIRED	WEIGHT	MINIMUM ROOF PITCH	STANDARD ROOF PITCH	PACKAGE CONTENTS
approx. 415 x 245 mm	approx. 330 - 350 mm	approx. 200 mm	from approx. 14,3 per m <sup>2</sup>	per pc.: approx. 3,7 kg per m <sup>2</sup> : 52,9 - 56,2 kg	17° with under-roof	25°	300 pc. on europallet

## EVALUATION/SIZING OF THE COVERING WIDTH

### A: Verge tile with interior baulk

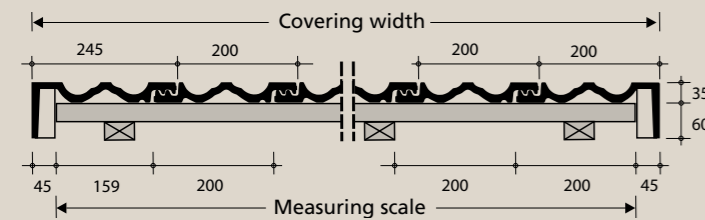


### B: Double brim tile



All measures approximate figures in millimeters

### A: Verge tile with exterior baulk

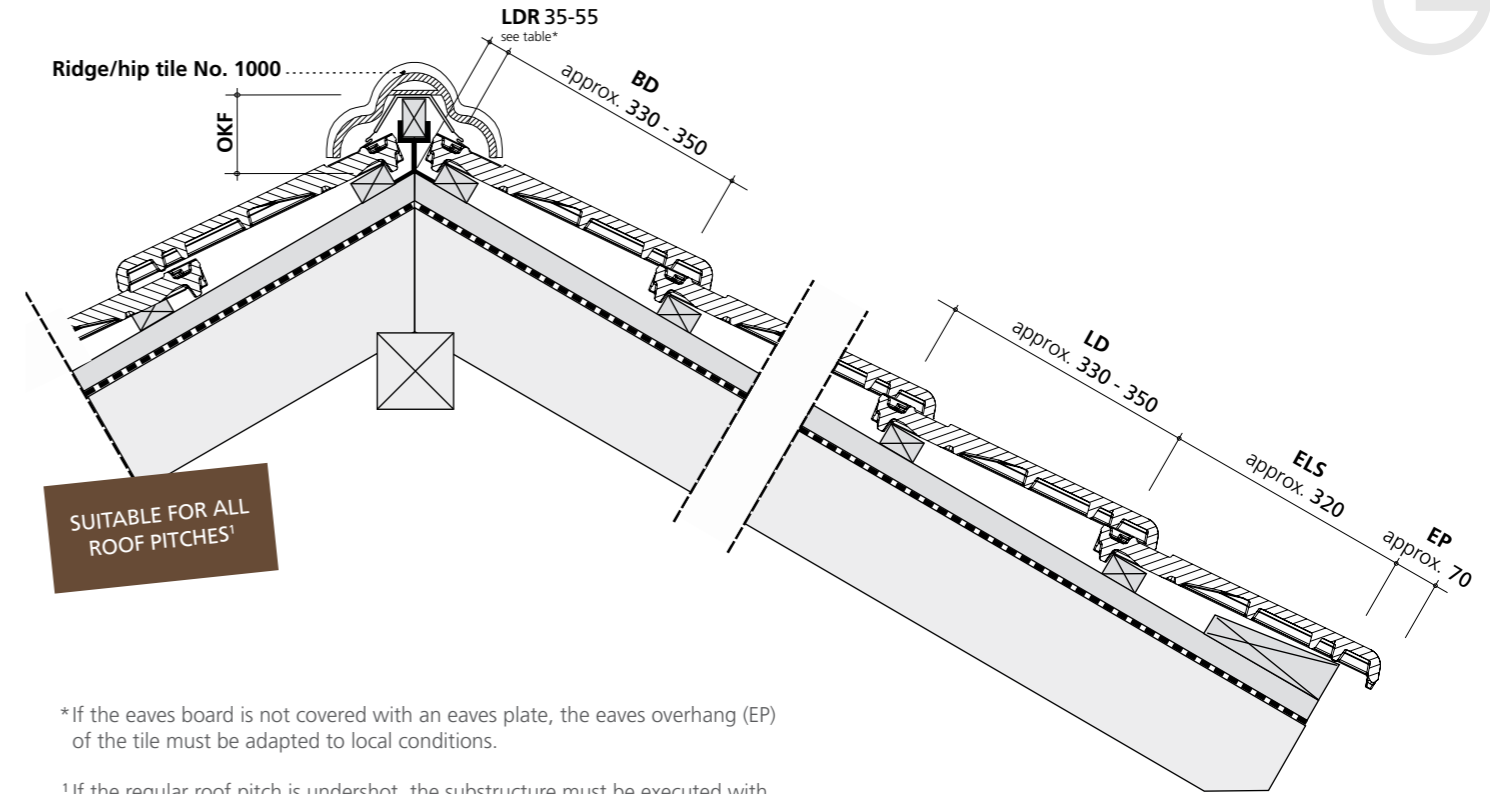


Tile clips for storm protection  
409-214 Clipholster® to batten in ZIAL  
456-203 Clipholster® to hang onto batten size 30 x 50 ZIAL  
456-011 for batten size 40 x 60 ZIAL

Average covering width in rows without or with roof tile in mm construction width = respective measuring scale

ROWS		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Roof tile (RT)		200	400	600	800	1.000	1.200	1.400	1.600	1.800	2.000	2.200	2.400	2.600	2.800	3.000
Double brim tile + RT	200 245	-	-	645	845	1.045	1.245	1.445	1.645	1.845	2.045	2.245	2.445	2.645	2.845	3.045
Verge tile l./r. (interior baulk) + RT	119 160	-	-	479	679	879	1.079	1.279	1.479	1.679	1.879	2.079	2.279	2.479	2.679	2.879
Verge tile l./r. (exterior baulk) + RT	159 200	-	-	559	759	959	1.159	1.359	1.559	1.759	1.959	2.159	2.359	2.559	2.759	2.959

ROWS		16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Roof tile (RT)		3.200	3.400	3.600	3.800	4.000	4.200	4.400	4.600	4.800	5.000	5.200	5.400	5.600	5.800	6.000
Double brim tile + RT		3.245	3.445	3.645	3.845	4.045	4.245	4.445	4.645	4.845	5.045	5.245	5.445	5.645	5.845	6.045
Verge tile l./r. (interior baulk) + RT		3.079	3.279	3.479	3.679	3.879	4.079	4.279	4.479	4.679	4.879	5.079	5.279	5.479	5.679	5.879
Verge tile l./r. (exterior baulk) + RT		3.159	3.359	3.559	3.759	3.959	4.159	4.359	4.559	4.759	4.959	5.159	5.359	5.559	5.759	5.959



\*If the eaves board is not covered with an eaves plate, the eaves overhang (EP) of the tile must be adapted to local conditions.

<sup>1</sup>If the regular roof pitch is undershot, the substructure must be executed with increased requirements

## EVALUATION/SIZING OF THE RAFTER LENGTH

Eaves overhang (EP) 70 mm: number of rows (according to chart) + lath distance eaves (ELS) + lath distance ridge (LDR)

### Covering length

ROWS	01	02	03	04	05	06	07	08	09	10	
COVERING LENGTH in mm	330	660	990	1.320	1.650	1.980	2.310	2.640	2.970	3.300	
	340	680	1.020	1.360	1.700	2.040	2.380	2.720	3.060	3.400	
	350	700	1.050	1.400	1.750	2.100	2.450	2.800	3.150	3.500	
ROWS	11	12	13	14	15	16	17	18	19	20	
	COVERING LENGTH in mm	3.630	3.960	4.290	4.620	4.950	5.280	5.610	5.940	6.270	6.600
	COVERING LENGTH in mm	3.740	4.080	4.420	4.760	5.100	5.440	5.780	6.120	6.460	6.800
ROWS	21	22	23	24	25	26	27	28	29	30	
	COVERING LENGTH in mm	6.930	7.260	7.590	7.920	8.250	8.580	8.910	9.240	9.570	9.900
	COVERING LENGTH in mm	7.140	7.480	7.820	8.160	8.500	8.840	9.180	9.520	9.860	10.200
COVERING LENGTH in mm	7.350	7.700	8.050	8.400	8.750	9.100	9.450	9.800	10.150	10.500	

All values are determined with a 30 x 50 mm lathing. If other slat cross sections are used, than these must be checked at the construction site beforehand!

The accurate lath spacing has to be determined at the building site with the delivered tiles.

### Lath distance ridge (LDR)

Roof pitch	20°	30°	40°	50°
Ridge No. 1000	55 mm	35 mm	35 mm	35 mm
Ridge No. 300	40 mm	35 mm	40 mm	35 mm

### Distance from ridge vertex / Top of ridge lath (OKF):

Roof pitch	20°	30°	40°	50°
Ridge No. 1000	130 mm	110 mm	90 mm	80 mm
Ridge No. 300	120 mm	105 mm	95 mm	80 mm

### Further fitting tiles available

Term	Covering width/Measuring scale
Half tile	100 mm
Ventilation tile, ventilation approx. 15 cm <sup>2</sup>	200 mm
Vent pipe/antenna opening tile	200 mm
Solar connection tile, admission max. 65 mm Ø	200 mm
Shed roof tile 90°, side length 220/100 mm	200 mm
Shed roof verge tile left, interior baulk	245 mm / 119 mm
Shed roof verge tile right, interior baulk	200 mm / 160 mm

Shed roof tiles with different slopes and dimensions, mansard tiles etc. on request.

For ridge / hip tile and accessories, see pages 16-19





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