

# CLINKER ROOF TILES



#### **ABOUT US**

We, the ABC Clinker Group, are a family-owned business in the brick and tile industry in Germany and can look back on around 130 years of experience. Today, our ABC Clinker Group is in the fifth generation and manufactures various brick products at six locations in Germany. Our product portfolio includes facing bricks, brick slips, ceramic facades, clay pavers, clinker roof tiles and floor ceramics.

#### **SUSTAINABILITY**

We produce sustainable natural building materials as environmentally friendly as possible. For this reason, we focus on low energy consumption in production with gentle, efficient use of resources and low material consumption.

The natural slate clay of the Tecklenburger Land forms the basic material of our ABC products - a valuable, genuine natural product!

# VISIT OUR SHOWROOM "RINGOFEN" IN HÖRSTEL

In our showroom, the Ringofen, Dornierstr. 11 in Hörstel, we offer you numerous suggestions and various possibilities for your house construction. For an individual consultation we are available Monday to Friday from 08.30 am to 05.30 pm and Saturday from 09.00 am to 01.00 pm. For an appointment, you can reach us by phone at +49 (0) 54 59 / 93 43 11 or by e-mail at ausstellung@abc-klinker.de.







# Features of our products



Frost-resistant



Weatherproof



Environmentally friendly



Fire behavior: euroclass A1



Water absorption i.M. 3 %



Standardized



Colourfast



Graffiti removable

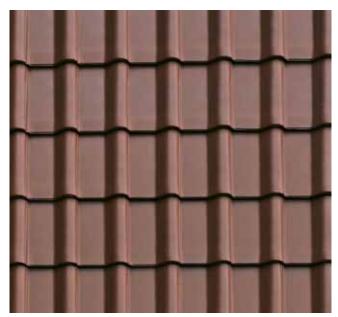








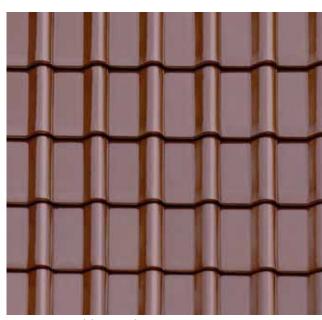
Copper-brown (Engobe)



Nut-brown (Engobe)



Nature-red



Amarena (Noble engobe)



Palisander-brown (Glaze)

Variations in colour, play of colours and proportions may be possible due to production/printing reasons.

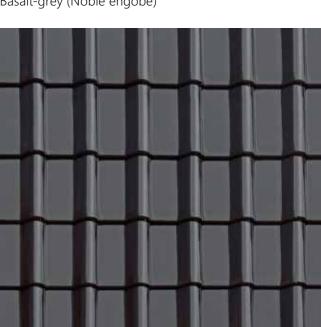


# Flat roof tile Modena 11





Basalt-grey (Noble engobe)



Diamant-black (Noble engobe)



Slate-black (Engobe)



Brilliant-black (Glaze)

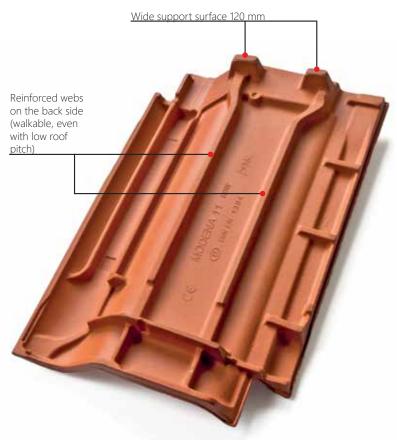
Variations in colour, play of colours and proportions may be possible due to production/printing reasons.

Graphite-metallic (Noble engobe)



# Flat roof tile Modena 11





Gauge	34 - 36,5 cm
Recommended gauge	35,5 cm
Coverage width	23,2 - 23,8 cm
Recommended coverage width	23,5 cm

System dimensions verge tile left	14,5 cm
System dimensions verge tile right	17,5 cm
Requirement per m²	11,5 - 12,5 units
Average requirement per m²	approx. 12 units

Weight per unit	3,6 kg
Average standard weight	40,5 kg/m²
Standard pitch	18°
Water absorption	i.M. 3%

# Advantages

# Finest hard clinker quality

• slate clay - the best raw material

# Adjustable gauge

• adjustable roof tile with batten spacing tolerance of 25 mm

## Storm-proof

• every roof tile can have storm-proof fastening – easy, secure and cost-effective

## Very economical

• with an average of only 12 roof tiles per m<sup>2</sup>

## Harmonious roof appearance

• balanced roof appearance without disturbing joint lines

# Fast and watertight

- easy, single-handed roofing installation
- waterproof 4-tile corner
- double head and side grooves
- rainfall resistance very good
- reinforced webs on the back side (walkable, even with low roof pitch)

# **Environmentally friendly**

• no subsequent siliconisation

# Low algae growth

• algae and moss like it damp - ABC clinker roof tiles with low water absorption of less than 3%

# Technical Data



The tile dimensions must be checked in accordance with DIN 1304 and the roofing rules of the German Roofing Trade Association before roofing.

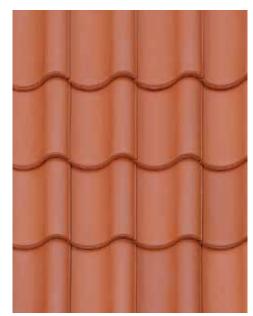
# Großhohlfalzziegel TG10



Nature-red



Slate-black (Engobe)



Copper-brown (Engobe)



Diamant-black (Noble engobe)



Amarena (Noble engobe)



Noble-black (Noble engobe)



Nut-brown (Engobe)

Variations in colour, play of colours and proportions may be possible due to production/printing reasons.



# Großhohlfalzziegel TG10



# Advantages

# Finest hard clinker quality

• slate clay - the best raw material

## Storm-proof

• every roof tile can have storm-proof fastening – easy, secure and cost-effective

## Very economical

• with an average of only 10.5 roof tiles per m<sup>2</sup>

## Harmonious roof appearance

• balanced roof appearance without disturbing joint lines

# Fast and light

- easy, single-handed roofing installation
- uniquely low weight 3.8 kg/p. i. m.
- waterproof 4-tile corner
- reinforced webs on the back side (walkable, even with low roof pitch)

## **Environmentally friendly**

• no subsequent siliconisation

## Low algae growth

 algae and moss like it damp - ABC clinker roof tiles with low water absorption on average at 3%

# Technical Data

Gauge	37,5 - 39 cm
Recommended gauge	38 cm
Coverage width	24,9 - 25,4 cm
Recommended coverage width	25,1 cm
System dimensions verge tile left	16 cm
System dimensions verge tile right	18 cm
Requirement per m²	10,2 - 11 units
Average requirement per m²	approx. 10,5 units
Weight per unit	3,8 kg
Average standard weight	39,9 kg/m²
Standard pitch	22°
Water absorption	i.M. 3%

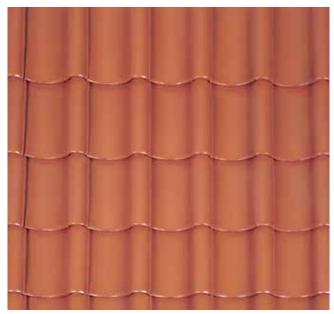
The tile dimensions must be checked in accordance with DIN 1304 and the roofing rules of the German Roofing Trade Association before roofing.

# Hohlfalzziegel









Copper-brown (Engobe)



Slate-black (Engobe)



Diamant-black (Noble engobe)

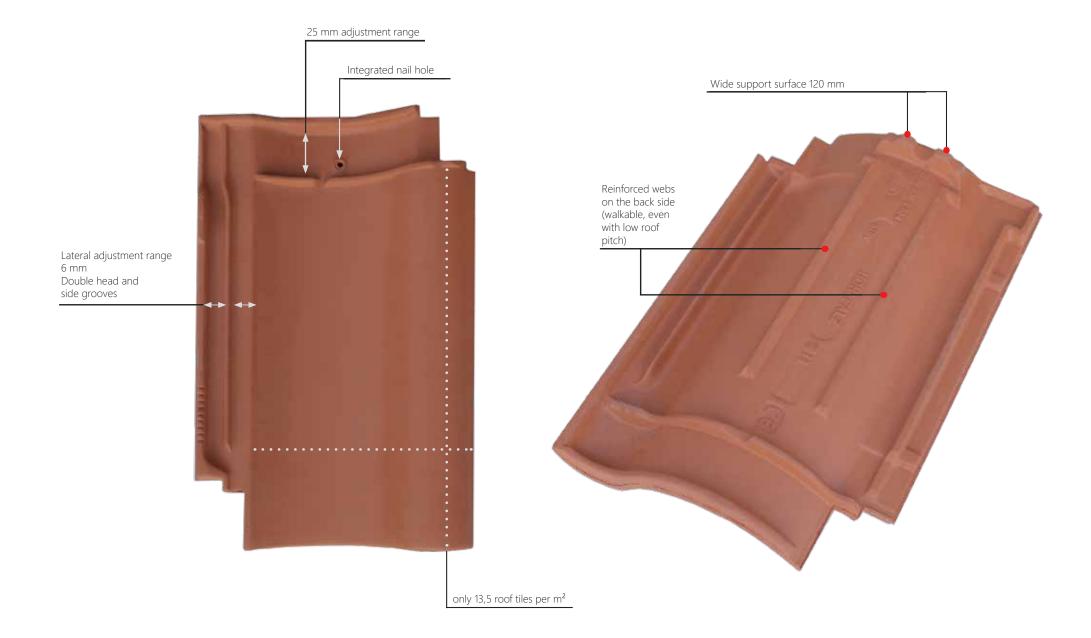


Brilliant-black (Glaze)

Variations in colour, play of colours and proportions may be possible due to production/printing reasons.



# Hohlfalzziegel



# Advantages

## Finest hard clinker quality

• slate clay - the best raw material

# Adjustable gauge

• adjustable roof tile with batten spacing tolerance of 25 mm

## Storm-proof

• every roof tile can have storm-proof fastening – easy, secure and cost-effective

## Very economical

• with an average of only 13.5 roof tiles per m<sup>2</sup>

## Harmonious roof appearance

• balanced roof appearance without disturbing joint lines

# Fast and watertight

- easy, single-handed roofing installation
- waterproof 4-tile corner
- double head and side grooves
- rainfall resistance very good
- reinforced webs on the back side (walkable, even with low roof pitch)

# **Environmentally friendly**

• no subsequent siliconisation

## Low algae growth

 algae and moss like it damp - ABC clinker roof tiles with low water absorption on average at 3%

# Low roof slope

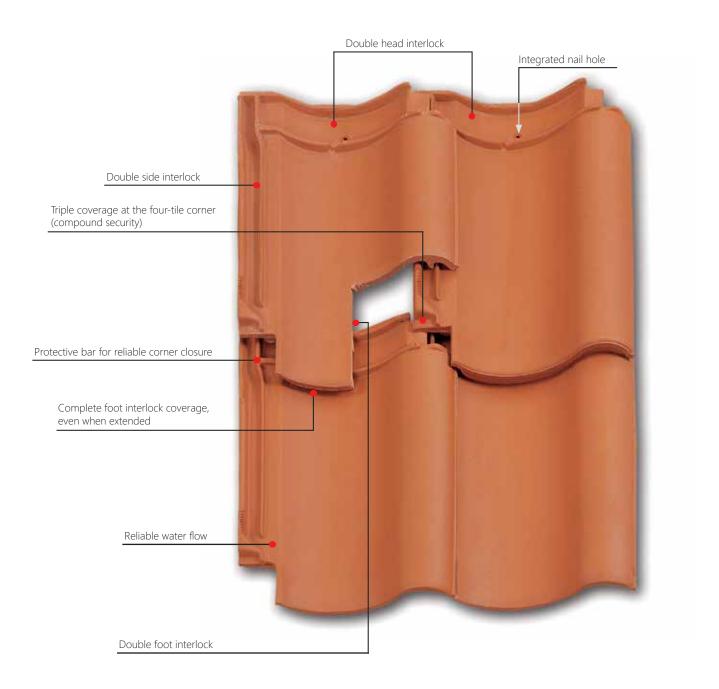
• at roof slopes of 14° ABC- Hohlfalzziegel can be laid with a rainproof subroof

# Technical Data

Gauge	32,5 - 35 cm
Recommended gauge	33,5 cm
Coverage width	22,1 - 22,7 cm
Recommended coverage width	22,4 cm
System dimensions verge tile left	13,5 cm
System dimensions verge tile right	17 cm
Requirement per m <sup>2</sup>	12,5 - 13,8 units
Average requirement per m²	approx. 13,5 units
Weight per unit	3,5 kg
Average standard weight	47,25 kg/m²
Standard pitch	22°
Water absorption	i.M. 3%

The tile dimensions must be checked in accordance with DIN 1304 and the roofing rules of the German Roofing Trade Association before roofing.

# Special features Hohlfalzziegel



# Straight cut

# Field of application

- optimises and preserves valuable historic building substance
- corresponds to the shape and profile of historic roof tiles
- system advantages of today's roof tiles
- variable cover length and triple overlap with optimum bond security are compatible with renovation of old buildings

# The straight cut provides the typical laying pattern of a historic roof

- a straight edge can be seen at the lower end
- the overlapping area of the roof tiles visually floats above the roof tile surface









# Quality of the clinker





Concrete roof tile

# Advantages of clinker roof tiles

- clinker roof tiles offer protection against algae, moss and lichen
- long life
- very high material density
- colour fastness and colour stability
- low water absorption





# System components for roof tiles



Verge tile (right)



Verge tile (left)



Outer verge tile (right) TG10



Outer verge tile (left) TG10



Ventilation system (one piece)



Flue element/
base plate
(100 + 125 mm ø) can be used as aerial
tile in combination with rubber sleeve



Ridge ventilator end tile plus



Hip starter



Roof ventilator for Modena 11 and TG10



Double roll tile



Solar tile



Conical Hip cap





Conical ridge



Нір сар

Hipp cap 4-core

Shed roof tile

Conical Ridge starter tile













Ridge ventilator (semi-circle)

Ridge closure plate

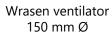
Big ridge closure plate

Ridge ventilator starter tile

Ridge ventilator end tile

Ridge ventilator starter tile plus







Tone exhaust pipe with removable coverl



Thermal passage (150 mm Ø) for steep and flat roofs



Universal shed roof ridge



Starter plate for shed roof ridge



End plate for shed roof ridge



Conical Ridge end tile



Conical Hip starter



Ridge connection tile



Antenna tile for steep and flat roofs



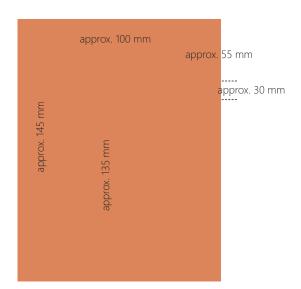
Articulated roof tile positive

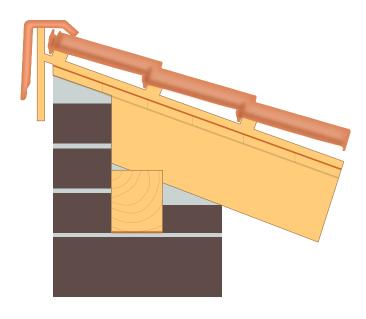


Articulated roof tile negative

# Universal shed roof ridge

Requirement: 3 units per linear metre







# Additional measures<sup>1</sup>

RDN 18°	RDN 22°	Additional requirements <sup>2</sup>   use · c	dditional requirements <sup>2</sup>   use · construction · climate conditions								
Modena 11	Hohlfalz, TG10	no additional requirement²	one additional requirement <sup>2</sup>	two additional requirements <sup>2</sup>	three additional requirements <sup>2</sup>						
≥ 18°	≥ 22°	class 6 sheathing	class 6 sheathing	class 5 overlapping/folded membrane	class 4 welded/blended membrane						
≥ 16°	≥ 18°	class 4 welded/blended membrane	class 4 welded/blended membrane	class 3 seam and perforation secured membrane	class 3 seam and perforation secured membrane						
≥ 14°	≥ 14°	class 3 seam and perforation secured membrane	class 3 seam and perforation secured membrane	class 3 seam and perforation secured membrane	class 2 rainproof sub-roof						
≥ 10°	≥ 10°	class 2 rainproof sub-roof	class 2 rainproof sub-roof	class 1 waterproof sub-roof	class 1 waterproof sub-roof						

<sup>&</sup>lt;sup>1</sup> The additional measures listed in the table are minimum measures and refer to the regulations in Germany by the German Roofing Trade DDH.
<sup>2</sup> For particularly high requirements and / or special local regulations a higher-value additional measure is to choose.
(Instruction sheet for sub-roofs, sub-coverings, sub-spanings, Table 1, DDH trade rules).
Generally higher-value additional measures can also be used instead of the minimum measures.
The minimum roof slope under rules of the Central Association of the German Roofing Trade ZVDH for roof tiles is 10 degrees.

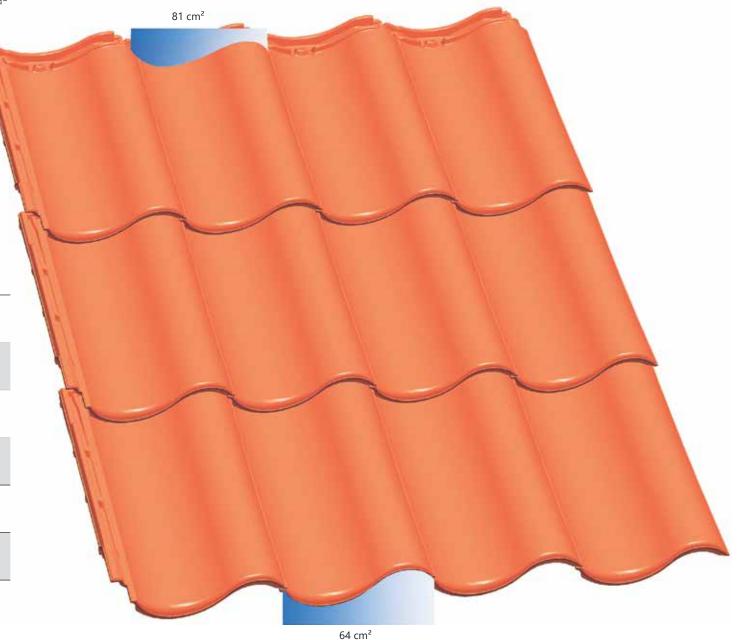
# Eave and ridge ventilation

# Ventilation system

Our roof tile models have the following minimum ventilation cross sections per meter of eaves and ridge.

# Ventilation cross-section in cm<sup>2</sup>

	per tile		per metre			
	Eave	Ridge	Eave			
TG10	64	81	256	324		
Hohlfalz	46	59	202	260		
Modena 11	46	59	202	260		



# Wind zones and clips

For proper clipping of roof tiles, please check the roof installation in accordance with the trade rules of the German Roofing Trade Association.

An uplift calculation can be obtained at: www.fos.de

# The average gauge

The average gauge/batten distance is determined from the average of a lengthwise row of 12 tiles. The dimension must be measured at the suspension lugs. (see sketch).

Formula: Average gauge = 
$$\frac{L1 + L2}{10 \times 2}$$

L1 = 10 extended tiles

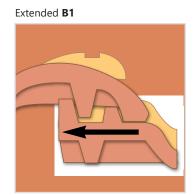
L2 = 10 compacted tiles

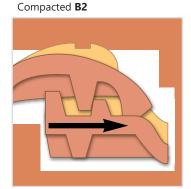
# Extended L1 Compacted L2

# The average coverage with

The average coverage width is determined from the average of a transverse row of 12 tiles. In the process, the tiles are laid on their backs on battens (see sketch).

Formula: Average coverage with = 
$$\frac{B1 + B2}{10 \times 2}$$

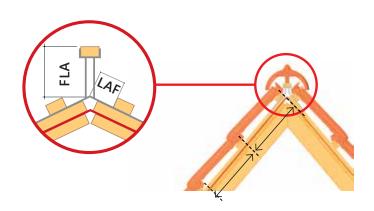




B1 = 10 extended tiles

B2 = 10 compacted tiles

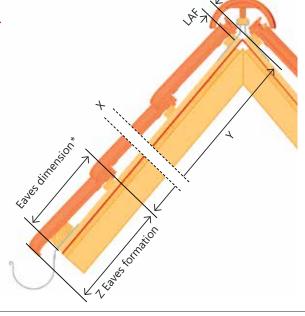
# Measures on the roof



# Dry ridge tile installation

#### TG10

		3 :	x 5 Lat	te	4 x 6 Latte				
		lge ilator		Conical ridge		Ridge ventilator		nical Ige	
DN	LAF	FLA	LAF	FLA	LAF	FLA	LAF	FLA	
20°	30	125	30	125	30	125	30	135	
25°	30	125	30	125	30	125	30	135	
30°	30	120	30	125	30	120	30	130	
35°	30	120	30	125	30	120	30	125	
40°	30	110	30	120	25	120	25	120	
45°	30	110	30	120	20	110	20	115	
50°	25	105	30	115	15	110	15	110	
60°	10	95	10	95	10	95	10	95	



#### Modena

		3 :	x 5 Lat	te	4 x 6 Latte				
		lge ilator		Conical ridge		Ridge ventilator		Conical ridge	
DN	LAF	FLA	LAF	FLA	LAF	FLA	LAF	FLA	
20°	30	120	30	120	30	120	30	125	
25°	30	120	30	120	30	120	30	125	
30°	30	115	30	120	30	115	30	120	
35°	30	115	30	120	30	115	30	120	
40°	30	110	30	110	30	110	25	110	
45°	30	110	30	110	30	110	15	110	
50°	30	100	30	105	15	105	15	100	
60°	25	90	10	95	10	100	10	100	

**LAF** = batten distance from ridge intersection

**FLA** = ridge batten distance from ridge intersection

Exact dimensions based on the tiles must be determined on site!

# **Roof length**

The following values are required to divide up the roof length:

X = leading eaves edge to ridge apex

Y = length of roof to be divided

Formula:  $Y = X - Traufma\beta - LAF$ 

The eaves dimension should be calculated on site based on the construction!

# **Eaves**

 $Z = TG10 \cdot 415 \text{ mm}$ 

 $Z = Holhlfalzziegel \cdot 400 mm$ 

 $Z = Modena 11 \cdot 410 mm$ 

## HF

		3 :	x 5 Lat	te	4 x 6 Latte				
		lge ilator	Conical ridge		Ridge ventilator		Conical ridge		
DN	LAF	FLA	LAF	FLA	LAF	FLA	LAF	FLA	
20°	30	125	30	130	30	125	30	130	
25°	30	125	30	130	30	125	30	130	
30°	30	110	30	125	30	110	30	125	
35°	30	110	30	120	30	110	30	120	
40°	30	110	30	115	25	105	25	110	
45°	30	105	30	105	20	95	20	100	
50°	30	95	30	100	15	85	15	95	
60°	25	85	10	85	10	85	10	85	

# **Roof width**

The following values are required to divide up the roof length:

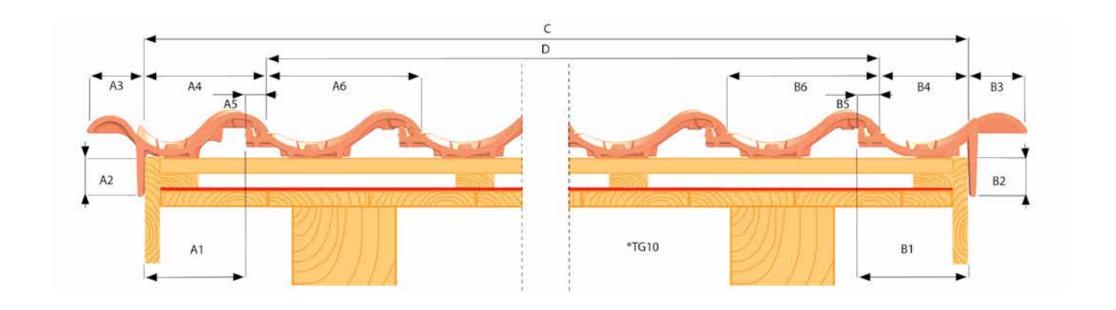
A1 = left-hand verge offset

B1 = right-hand verge offset

C = roof width

Formula: D = C - A1 - B1

D = roof width to be divided



Measures of the sketch in mm												
	A1	A2	А3	A4	A5	A6	B1	B2	В3	B4	B5	В6
TG10	160	60	105	195	40	251	180	60	105	140	40	251
Hohlfalz	135	60	110	190	50	224	170	60	110	120	50	224
Modena 11	145	55	100	185	45	235	175	55	100	130	45	235

# Our product range













Facing bricks

Brick slips

ABC-NORDIC®

Clay pavers

Clinker roof tiles

Floor ceramics

























# Production plants of the ABC Clinker Group



#### Headquarter

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