

# DECLARATION OF PERFORMANCE

number: GAH/LE-002

as required by (EU) regulation 305/2011 - No. GAH 6091

1. ETA 12/0584  
GAH cantilever connectors
2. Type: 8659 in lengths 120, 140, 160, 180, 200, 220, 240, 260, 280, 300, 320, 340, 360  
The cantilever connectors are labelled with the manufacturer's trade mark, CE marking and the number issued by the Karlsruhe Institute of Technology. All other information, such as the date of manufacture, is specified on the packaging label.
3. Cantilever connectors are designed for joining load-bearing wood or wooden components, e.g. for joining two purlins.
4. Gust. Alberts GmbH & Co. KG  
Blumenthal 2  
58849 Herscheid
5. N/A
6. System for assessing constancy of performance: 2+
7. N/A
8. The Karlsruhe Institute of Technology (KIT), NB no. 0769, performed an initial inspection of the plant and factory production control as well as ongoing monitoring, assessment and evaluation of factory production control in accordance with system 2+ and issued the following document: Certificate of conformity for factory production control, no. 0769-CPD-6091.

## 9. Declared performance:

Essential characteristics	Performance	Standardised technical specification
specificationCharacteristic load-bearing capacity	See Annex B of ETA 12/0584	
Stiffness	No performance determined	
Ductility	No performance determined	
Safety in the event of a fire Fire performance	The cantilever connectors are made of steel, classified as Euroclass A1 in accordance with EN 1350-1	EN 1350-1
hygiene, health and environmental protection	No hazardous substances contained	
Durability and fitness for purpose	The durability and fitness for purpose of the cantilever connectors was assessed as satisfactory, provided they are used in timber constructions with the wood types described in Eurocode 5, and meet the requirements of service classes 1, 2 and service class 3 for stainless steel.	
Identification	See Annex A of ETA 12/0584	

ETA 12/0584  
ETAG 015 three-dimensional spike plates

10. The product performance as per numbers 1 and 2 corresponds to the declared performance as per number 9. The manufacturer as stated in number 4 is solely responsible for the issuing of this declaration of performance in compliance with the Regulation (EU) No. 305/2011. Signed for and in the name of the manufacturer by:

**Peter Feldmann**

Name

**Head of Quality Management**

Role

**Herscheid 22. May 2018**

Location and date of issue

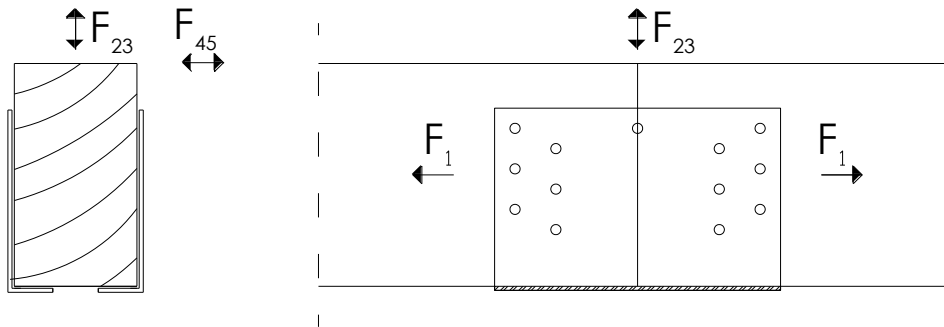
i.A.

Signature

Table B.1: GAH Alberts cantilever brackets: Characteristic load-carrying capacity  $F_{45,Rk}$  and effective number of nails  $n_{ef}$  per connection with two brackets

type	results					
	$n_{ef,1}$		$n_{ef,23}$	$F_{45,Rk}$		
	h purlin = H + 20 mm	h purlin = H + 40 mm		bending edge down	bending edge up	
			$F_{45,S,Rk}$	$F_{45,S,Rk}$	$F_{45,H,Rk}$	
[-]	[-]	[-]	[-]	[kN]	[kN]	[kN]
120	18,0	11,8	4,25	3,07	10,7	7,6
140	22,0	15,1	6,03	3,49	11,3	9,1
160	26,0	18,5	8,10	3,92	11,8	10,6
180	30,0	22,1	10,4	4,34	12,3	12,1
200	34,0	25,7	13,0	4,76	12,8	13,7
220	38,0	29,4	15,9	5,18	13,3	15,2
240	42,0	33,2	18,9	5,60	13,8	16,7
260	46,0	37,0	22,1	6,03	14,3	18,2
280	50,0	40,8	25,5	6,45	14,8	19,7
300	54,0	44,6	29,1	6,87	15,2	21,3
320	58,0	48,4	32,7	7,29	15,7	22,8
340	62,0	52,3	36,5	7,71	16,1	24,3
360	66,0	56,2	40,4	8,13	16,6	25,8

### Definitions of forces, their directions - Beam to beam connection



### Fastener specification

The holes on the left and the right side are to be fully nailed.

### Cantilever brackets in pairs per connection

The cantilever brackets must be placed at each side opposite to each other, symmetrically to the component axis.

### Wane

Wane is not allowed, the timber has to be sharp-edged in the area of the cantilever brackets.

### Timber splitting

For the lifting force  $F_{23}$  it must be checked in accordance with Eurocode 5 or a similar national Timber Code that splitting will not occur.

**GAH Alberts cantilever brackets**

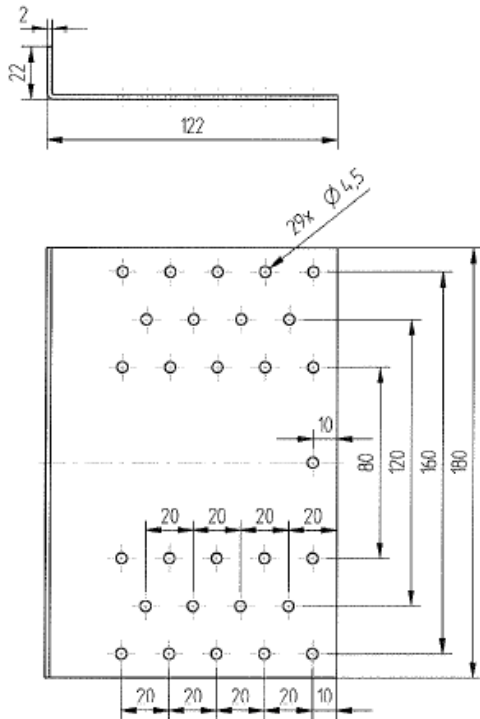


Figure B. 1 Dimensions of cantilever bracket 120

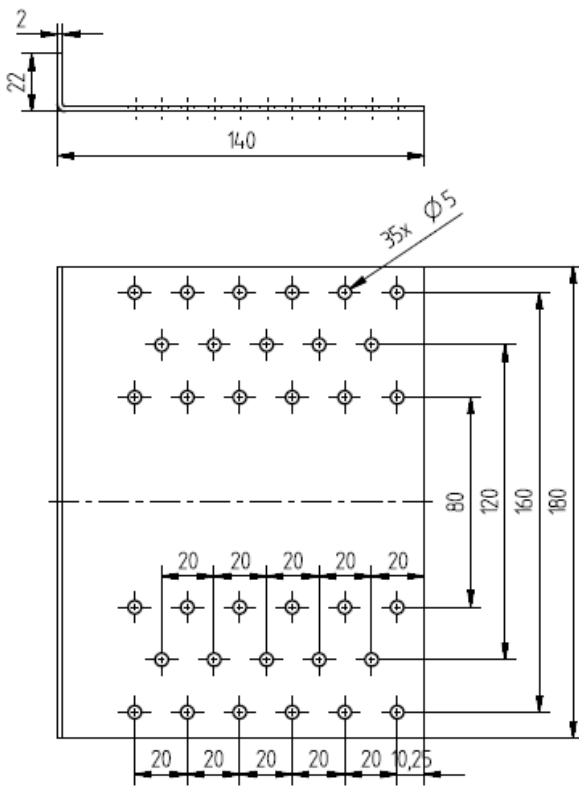


Figure B. 2 Dimensions of cantilever bracket 140