



ETA-Danmark A/S  
Göteborg Plads 1  
DK-2150 Nordhavn  
Tel. +45 72 24 59 00  
Fax +45 72 24 59 04  
Internet [www.etadanmark.dk](http://www.etadanmark.dk)

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to Article 29 of the Regulation (EU)  
No 305/2011 of the European  
Parliament and of the Council of 9  
March 2011

MEMBER OF EOTA



## European Technical Assessment ETA-10/0210 of 02/07/2015

### I General Part

**Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S**

**Trade name of the construction product:**

Gust. Alberts GmbH & Co. KG post bases type 326, 327, 345, 345VA, 365, 365v, 365VA, 366, 367, 367VA, 369, 370, 375, 376, 393, 394, 395, 396, 397, 398, 399, 401, 451, 472, 476, 480, 481, 566, 569, 577, 579, 580, 581, 583, 655, 665 and 751

**Product family to which the above construction product belongs:**

Three-dimensional nailing plate (Post bases for the support of timber columns and posts as load-bearing elements)

**Manufacturer:**

Gust. Alberts GmbH & Co KG  
Gewerbegebiet Grünenthal  
D-55845 Herscheid  
Tel. +49 2357 907 0  
Fax +49 2357 907 189  
Internet [www.gah.de](http://www.gah.de)

**Manufacturing plant:**

HW1, HW2 and HW3

**This European Technical Assessment contains:**

33 pages including 2 annexes which form an integral part of the document

**This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:**

Guideline for European Technical Approval (ETAG) No. 015 Three Dimensional Nailing Plates, April 2013, used as European Assessment Document (EAD).

**This version replaces:**

The previous ETA with the same number issued on 2010-08-13 and expiry on 2015-08-13

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## II    SPECIFIC PART OF THE EUROPEAN TECHNICAL ASSESSMENT

### 1    Technical description of product and intended use

#### Technical description of the product

The GAH post bases are made of 4.0 mm to 8.0 mm steel plates. The post bases are produced of steel grade S235JR according to EN 10025-2:2005-04 with a minimum characteristic yield strength of  $R_{eH} = 235 \text{ N/mm}^2$  and a minimum characteristic tensile strength of  $R_m = 360 \text{ N/mm}^2$  or of steel grade 1.4301 according to EN 10088-3:2005-09 with a minimum characteristic yield strength of  $R_{p0,2} = 190 \text{ N/mm}^2$  and a minimum characteristic tensile strength of  $R_m = 500 \text{ N/mm}^2$ .

For the connections with metal fasteners bolts  $\phi 10 \text{ mm}$  and  $\phi 12 \text{ mm}$  (S235) with minimum characteristic tensile strength of  $R_m = 360 \text{ N/mm}^2$  and coach screws 8x60 mm and 10x60 mm according to EN 14592 (DIN 571 and thread according to DIN 7998) with minimum characteristic tensile strength of  $R_m = 360 \text{ N/mm}^2$  are used. The screws shall be driven into pre-drilled holes according to EN 1995-1-1, 10.4.5.

The outer diameter for washers of bolts shall be not less than  $3 \cdot d_B$ , where  $d_B$  is the diameter of the bolts. The thickness shall be not less than  $0,3 \cdot d_B$ .

For anchorage in the foundation reinforcement bars or steel profiles are used.

Dimensions are shown in Annex A and B.

### 2    Specification of the intended use in accordance with the applicable EAD

The intended use of the post bases is the support of timber columns and posts as load-bearing elements, where requirements for mechanical resistance and stability and safety in use in the sense of the Basic Works Requirements 1 and 4 of Regulation (EU) 305/2011 shall be fulfilled.

The static and kinematical behaviour of the timber members or the supports shall be as described in Annex B.

The timber posts may be of solid timber of strength class C24 or better according to EN 338:2003-09. Minimum dimensions for the post have to be considered (Annex A). The end grain of the timber post

in general must be plane on the base plate of the post base. Post bases type 345, 345VA and 399 may have a clearance between the end grain of the timber post and the base plate of the post base due to constructive wood preservation (maximum 10 mm).

The maximum distance between the foundation and the base plate of the post base shall in general be 50 mm. For post bases type 375, 395, 396, 401, 480, 476, 481, 577, 579, 580, 581 and 583 larger distances are allowed.

Annex B states the load-carrying capacities of the post bases for solid timber of strength class C24 according to EN 338:2003-09. The design of the connections shall be in accordance with Eurocode 3 and Eurocode 5 or a similar national code. The anchorage of the post base in the foundation and imperfections exceeding the assumptions in Eurocode 5, 5.4.4 are not part of this ETA.

The post bases are for use in timber structures subject to the service classes 1, 2 and 3 of Eurocode 5 and for connections subject to static or quasi-static loading. The corrosion protection is given by stainless steel or zinc coating with minimum thickness of 55  $\mu\text{m}$  according to EN1461. The metal fasteners must also have a zinc coating for the intended use in service class 3 of EN 1995-1-1 (zinc coating Fe/Zn 25c according to EN ISO 2081).

The scope of the post bases regarding resistance to corrosion shall be defined according to national provisions that apply at the installation site considering environmental conditions.

The provisions made in this European Technical Assessment are based on an assumed intended working life of the connectors of 50 years.

The indications given on the working life cannot be interpreted as a guarantee given by the producer or Assessment Body, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

### 3 Performance of the product and references to the methods used for its assessment

Characteristic	Assessment of characteristic
<b>3.1 Mechanical resistance and stability*) (BWR1)</b>	
Characteristic load-carrying capacity	See Annex B
Stiffness	No performance determined
Ductility in cyclic testing	No performance determined
<b>3.2 Safety in case of fire (BWR2)</b>	
Reaction to fire	The post bases are made from steel classified as <b>Euroclass A1</b> in accordance with EN 1350-1 and EC decision 96/603/EC, amended by EC Decision 2000/605/EC
<b>3.3 Hygiene, health and the environment (BWR3)</b>	
Influence on air quality	The product does not contain/release dangerous substances specified in TR 034, dated March 2012*)
<b>3.7 Sustainable use of natural resources (BWR7)</b>	
<b>3.8 General aspects related to the performance of the product</b>	No Performance Determined
The post bases have been assessed as having satisfactory durability and serviceability when used in timber structures using the timber species described in Eurocode 5 and subject to the conditions defined by service class 1 and 2	
Identification	See Annex A

\*) See additional information in section 3.9 – 3.12.

\*\*) In addition to the specific clauses relating to dangerous substances contained in this European technical Assessment, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

### 3.9 Methods of verification

The characteristic load-carrying capacities are based on the characteristic values of the connections with metal fasteners, the steel plates and the timber post.

In the case of timber failure or failure of the metal fasteners, the design values shall be calculated according to EN 1995-1-1 by dividing the characteristic values of the load-carrying capacities by different partial factors for the strength properties in addition multiplied with the coefficient  $k_{\text{mod}}$ .

In the case of steel failure, the design value shall be calculated according to EN 1993-1-1 by reducing the characteristic values of the load-carrying capacity with different partial factors.

The design value of the load-carrying capacity is the smaller value of both load-carrying capacities:

$$F_{\text{Rd}} = \min \left\{ \frac{k_{\text{mod}} \cdot F_{\text{Rk,H}}}{\gamma_{M,H}}, \frac{F_{\text{Rk,S}}}{\gamma_{M,S}} \right\}$$

Therefore, for timber failure or failure of the metal fasteners the load duration class and the service class are included. The different partial factors  $\gamma_M$  for steel or timber, respectively, are also correctly taken into account.

### 3.10 Mechanical resistance and stability

See Annex B for the characteristic load-carrying capacity in the different directions  $F_1$  to  $F_5$  for solid timber of strength class C24 according to EN 338:2003-09. Using the load-carrying capacities of the post bases, the specifications in Annex A must be fulfilled. The end grain of the timber post must in general be plane on the base plate of the post base. Post bases type 345, 345VA and 399 may have a clearance between the end grain of the timber post and the base plate of the post base due to constructive wood preservation (maximum 10 mm).

The characteristic capacities of the post bases are determined by calculation according to Eurocode 3 and Eurocode 5. They should be used for designs in accordance with Eurocode 3 and Eurocode 5 or a similar national code.

#### *GAH Alberts connector screws*

In the formulas in Annex B the capacities for coach screws 8x60 mm and 10x60 mm according to EN 14592 (DIN 571 and thread according to DIN 7998) with minimum characteristic tensile strength of  $R_m = 360 \text{ N/mm}^2$  are used. The screws shall be driven into pre-drilled holes according to EN 1995-1-1, 10.4.5.

No performance has been determined in relation to ductility of a joint under cyclic testing. The contribution to the performance of structures in seismic zones, therefore, has not been assessed.

No performance has been determined in relation to the joint's stiffness properties - to be used for the analysis of the serviceability limit state.

No performance has been determined in relation to the anchorage of the post bases in the foundation. It must be checked by the designer of the structure to ensure it is not less than the post base capacity and, if necessary, the post base capacity reduced accordingly. Therefore the specifications for the lever arms  $e_{F2/F3}$  (for load case  $F_2 / F_3$ ) and  $e_{F4/F5}$  (for load case  $F_4 / F_5$ ) in annex A have to be considered. The lever arm is the distance between the top edge of the foundation and the load.

### 3.11 Aspects related to the performance of the product

**3.11.1 Corrosion protection in service class 1 and 2.**  
In accordance with ETAG 015 the post bases are made from steel grade S235JR according to EN 10025-2:2005-04 with a minimum characteristic yield strength of  $R_{eH} = 235 \text{ N/mm}^2$  and a minimum characteristic tensile strength of  $R_m = 360 \text{ N/mm}^2$

**3.11.2 Corrosion protection in service class 3**  
In accordance with Eurocode 5 the post bases are made from steel grade 1.4301 according to EN 10088-3:2005-09 with a minimum characteristic yield strength of  $R_{p0,2} = 190 \text{ N/mm}^2$  and a minimum characteristic tensile strength of  $R_m = 500 \text{ N/mm}^2$ .

### 3.12 General aspects related to the fitness for use of the product

The performance given in this ETA are based on the following:

- The primary structural member – the post member shown in typical installation page 17 or a beam member - to which the post bases are fixed shall be:
  - Restrained against rotation
  - Capable to transfer the force to the post bases as assumed.
  - Free from wane in areas in contact with the post base.

- The secondary structural member – the concrete support - to which the post bases are fixed shall be:
  - Made from concrete of at least strength class C15, unless otherwise is indicated in annex B of this ETA.
- To ensure sufficient capacity the designer has to take into account splitting of the timber.
- The timber member shall be free from wane.
- There shall be no gap between the timber and the horizontal contact area.
- Otherwise, the gap between the timber member and the post base may not exceed 3 mm.
- There are no specific requirements relating to preparation of the timber members.

The calculations are based on not pre-drilled holes for nails and screws. However, the holes for lag screws, dowels and bolts have to be pre-drilled.

## **4 Attestation and verification of constancy of performance (AVCP)**

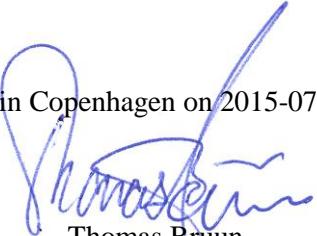
### **4.1 AVCP system**

According to the decision 97/638/EC of the European Commission<sup>1</sup>, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) is 2+.

## **5 Technical details necessary for the implementation of the AVCP system, as foreseen in the applicable EAD**

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark

Issued in Copenhagen on 2015-07-02 by



Thomas Bruun  
Managing Director, ETA-Danmark

**Annex A**  
**Product details and definitions**  
Table A.1 Specifications of the post bases

Post base		Identification		Metal Fasteners			Post [mm]	Distances [mm]		
Type	Width	Drawing-Nr.	EAN	Bolts	Dowels	Screws	min b/h	max. a	e <sub>F2/F3</sub>	e <sub>F4/F5</sub>
326	76	0326 0080 2	213954	-	-	3x Sr 10x60mm	80/95	50	-	-
327	71	0327 0071 2	214234	1x Bo 10mm	-	4x Sr 10x60mm	71/115	50	139	77
	75	0327 0075 2	214241	1x Bo 10mm	-	4x Sr 10x60mm	75/115	50	139	77
	81	0327 0081 2	214258	1x Bo 10mm	-	4x Sr 10x60mm	81/115	50	139	77
	91	0327 0091 2	214265	1x Bo 10mm	-	4x Sr 10x60mm	91/115	50	139	77
	95	0327 0095 2	214272	1x Bo 10mm	-	4x Sr 10x60mm	95/115	50	139	77
	101	0327 0101 2	214289	1x Bo 10mm	-	4x Sr 10x60mm	101/115	50	139	77
	121	0327 0121 2	214296	1x Bo 10mm	-	4x Sr 10x60mm	121/115	50	139	77
	141	0327 0141 2	214302	1x Bo 10mm	-	4x Sr 10x60mm	141/115	50	139	77
345	71	0345 0071 2	212766	2x Bo 10mm	-	-	71/80	-	175	25
	81	0345 0081 2	212780	2x Bo 10mm	-	-	81/80	-	175	25
	91	0345 0091 2	212797	2x Bo 10mm	-	-	91/80	-	175	25
	96	0345 0096 2	212803	2x Bo 10mm	-	-	96/80	-	175	25
	101	0345 0101 2	212810	2x Bo 10mm	-	-	101/80	-	175	25
	111	0345 0111 2	212841	2x Bo 10mm	-	-	111/80	-	175	25
	116	0345 0116 2	212858	2x Bo 10mm	-	-	116/80	-	175	25
	121	0345 0121 2	212827	2x Bo 10mm	-	-	121/80	-	175	25
345 VA	71	0345 0071 2VA	212902	2x Bo 10mm	-	-	71/80	-	175	25
	91	0345 0091 2VA	212919	2x Bo 10mm	-	-	91/80	-	175	25
365	71	0365 0071 2	213800	2x Bo 10mm	-	-	71/80	50	125	77
	81	0365 0081 2	213817	2x Bo 10mm	-	-	81/80	50	125	77
	91	0365 0091 2	213824	2x Bo 10mm	-	-	91/80	50	125	77
	101	0365 0101 2	203917	2x Bo 10mm	-	-	101/80	50	125	77
	111	0365 0111 2	203924	2x Bo 10mm	-	-	111/80	50	125	77
	116	0365 0116 2	203931	2x Bo 10mm	-	-	116/80	50	125	77
	121	0365 0121 2	203948	2x Bo 10mm	-	-	121/80	50	125	77
	91	365v 0091 2	213626	2x Bo 10mm	-	-	91/80	50	130	82
365 v	95	365v 0095 2	213886	2x Bo 10mm	-	-	95/80	50	130	82
	101	365v 0101 2	213831	2x Bo 10mm	-	-	101/80	50	130	82
	111	365v 0111 2	213879	2x Bo 10mm	-	-	111/80	50	130	82
	116	365v 0116 2	213916	2x Bo 10mm	-	-	116/80	50	130	82
	121	365v 0121 2	213848	2x Bo 10mm	-	-	121/80	50	130	82
	141	365v 0141 2	213893	2x Bo 10mm	-	-	141/80	50	130	82
	91-141	365v 0094 2VA	213701	2x Bo 10mm	-	-	91/80	50	125	-
365 VA	91	0365 0091 2VA	213718	2x Bo 10mm	-	-	91/80	50	125	77
	366	76	0366 0080 2	214005	-	-	3x Sr 10x60mm	80/95	50	-

## Continuation of Table A.1 Specifications of the post bases

Post base		Identification		Metal Fasteners			Post [mm]	Distances [mm]		
Type	Width	Drawing-Nr.	EAN	Bolts	Dowels	Screws	min b/h	max. a	eF2/F3	eF4/F5
367	71	0367 0071 2	214043	1x Bo 10mm	-	4x Sr 10x60mm	71/115	50	139	77
	81	0367 0081 2	214067	1x Bo 10mm	-	4x Sr 10x60mm	81/115	50	139	77
	91	0367 0091 2	214074	1x Bo 10mm	-	4x Sr 10x60mm	91/115	50	139	77
	101	0367 0101 2	214098	1x Bo 10mm	-	4x Sr 10x60mm	101/115	50	139	77
	121	0367 0121 2	214104	1x Bo 10mm	-	4x Sr 10x60mm	121/115	50	139	77
	141	0367 0141 2	214111	1x Bo 10mm	-	4x Sr 10x60mm	141/115	50	139	77
367 VA	71	0367 0071 2VA	214203	1x Bo 10mm	-	4x Sr 10x60mm	71/115	50	139	77
	91	0367 0091 2VA	214210	1x Bo 10mm	-	4x Sr 10x60mm	91/115	50	139	77
369	91	0369 0091 2	214401	1x Bo 10mm	-	4x Sr 10x60mm	91/115	50	139	77
	101	0369 0101 2	214418	1x Bo 10mm	-	4x Sr 10x60mm	101/115	50	139	77
	121	0369 0121 2	212711	1x Bo 10mm	-	4x Sr 10x60mm	121/115	50	139	77
	141	0369 0141 2	212728	1x Bo 10mm	-	4x Sr 10x60mm	141/115	50	139	77
	161	0369 0161 2	212896	1x Bo 10mm	-	4x Sr 10x60mm	161/115	50	139	77
370	71-131	0370 0110 2	214494	1x Bo 10mm	-	4x Sr 10x60mm	71/95	50	-	-
375	71-131	0375 0110 2	214500	1x Bo 10mm	-	4x Sr 10x60mm	71/95	75	-	-
393	70	0393 0070 2	215446	-	-	4x Sr 10x60mm	70/70	50	-	-
394	71	0394 0071 2	216740	2x Bo 10mm	-	-	71/80	50	225	74
	75	0394 0075 2	216757	2x Bo 10mm	-	-	75/80	50	225	74
	81	0394 0081 2	216764	2x Bo 10mm	-	-	81/80	50	225	74
	91	0394 0091 2	216771	2x Bo 10mm	-	-	91/80	50	225	74
	96	0394 0096 2	216788	2x Bo 10mm	-	-	96/80	50	225	74
	101	0394 0101 2	216795	2x Bo 10mm	-	-	101/80	50	225	74
	111	0394 0111 2	216818	2x Bo 10mm	-	-	111/80	50	225	74
	116	0394 0116 2	216832	2x Bo 10mm	-	-	116/80	50	225	74
	121	0394 0121 2	216801	2x Bo 10mm	-	-	121/80	50	225	74
	141	0394 0141 2	216825	2x Bo 10mm	-	-	141/80	50	225	74
395	91-2	0394 0092 2	216870	2x Bo 10mm	-	-	91/80	50	225	74
	80	0395 0080 2	217532	-	-	4x Sr 8x60mm	80/80	230	-	-
396	300	0396 0300 2	212674	-	4x Do 10mm	-	120/100	100	218	140
	500	0396 0500 2	212681	-	4x Do 10mm	-	120/100	200	318	240
397	100	0397 0100 2	215453	-	-	-	100/100	-	-	-
398	80	0398 0080 2	215521	4x Bo 10mm	-	-	80/120	50	130	70
399	100	0399 0130 2	215538	4x Bo 10mm	-	-	120/120	-	115	32
401	150	0401 0150 2	212698	-	4x Do 10mm	-	120/100	150	260	173
	200	0401 0200 2	212704	-	4x Do 10mm	-	120/100	200	310	221

## Continuation of Table A.1 Specifications of the post bases

Post base		Identification		Metal Fasteners			Post [mm]	Distances [mm]		
Type	Width	Drawing-Nr.	EAN	Bolts	Dowels	Screws	min b/h	max. a	eF2/F3	eF4/F5
451	71	0451 0071 2	217600	1x Bo 10mm	-	4x Sr 10x60mm	71/115	-	135	68
	81	0451 0081 2	217617	1x Bo 10mm	-	4x Sr 10x60mm	81/115	-	135	68
	91	0451 0091 2	217624	1x Bo 10mm	-	4x Sr 10x60mm	91/115	-	135	68
	101	0451 0101 2	217631	1x Bo 10mm	-	4x Sr 10x60mm	101/115	-	135	68
	121	0451 0121 2	217648	1x Bo 10mm	-	4x Sr 10x60mm	121/115	-	135	68
472	91	0472 0091 2	214432	2x Bo 10mm	-	-	91/80	-	265	215
476	70	0476 0000 2	218102	-	-	4x Sr 10x60mm	70/70	150	-	-
	150	0476 0150 2	218119	-	-	4x Sr 10x60mm	150/150	150	-	-
480	-	0480 0000 2	208028	-	-	-	100/100	200	-	-
481	-	0481 0000 2	208035	-	-	-	100/100	56	-	-
566	91	0566 0091 2	219703	2x Bo 10mm	-	-	91/80	50	225	78
569	121	0569 0121 2	219758	1x Bo 10mm	-	4x Sr 10x60mm	121/145	50	135	80
	141	0569 0141 2	219765	1x Bo 10mm	-	4x Sr 10x60mm	141/145	50	135	80
	161	0569 0161 2	219772	1x Bo 10mm	-	4x Sr 10x60mm	161/145	50	135	80
577	150	0577 0100 2	219819	-	-	4x Sr 10x60mm	150/150	95	-	-
	150	0577 0150 2	210823	-	-	4x Sr 10x60mm	150/150	145	-	-
579	100	0579 0100 2	219802	-	-	4x Sr 10x60mm	100/100	95	-	-
	70	0579 0070 2	219826	-	-	4x Sr 8x60mm	70/90	74	-	-
580	71-161	0580 0110 2	218058	1x Bo 10mm	-	4x Sr 10x60mm	71/95	175	-	-
581	71-161	0581 0110 2	219901	1x Bo 10mm	-	4x Sr 10x60mm	71/95	220	-	-
583	70	0583 0000 2	212391	-	-	4x Sr 10x60mm	70/70	175	-	-
655	91	0655 0091 2	219925	2x Bo 10mm	-	-	91/80	50	130	82
	111	0655 0111 2	219949	2x Bo 10mm	-	-	111/80	50	130	82
	116	0655 0116 2	208417	2x Bo 10mm	-	-	116/80	50	130	82
	121	0655 0121 2	208424	2x Bo 10mm	-	-	121/80	50	130	82
	141	0655 0141 2	208431	2x Bo 10mm	-	-	141/80	50	130	82
665	116	0665 0116 2	208448	2x Bo 12mm	-	-	116/100	50	210	107
	121	0665 0121 2	205003	2x Bo 12mm	-	-	121/100	50	210	107
	141	0665 0141 2	205010	2x Bo 12mm	-	-	141/100	50	210	107
	161	0665 0161 2	208455	2x Bo 12mm	-	-	161/100	50	210	107
751	71	0751 0071 2	208509	1x Bo 10mm	-	4x Sr 10x60mm	71/115	50	185	118
	81	0751 0081 2	208516	1x Bo 10mm	-	4x Sr 10x60mm	81/115	50	185	118
	91	0751 0091 2	208523	1x Bo 10mm	-	4x Sr 10x60mm	91/115	50	185	118
	101	0751 0101 2	208530	1x Bo 10mm	-	4x Sr 10x60mm	101/115	50	185	118
	121	0751 0121 2	208547	1x Bo 10mm	-	4x Sr 10x60mm	121/115	50	185	118

Table A.2 Specifications of the metal fasteners according to EN 14592

Fastener type (S235)	Size (mm)			Finish
	Diameter	Length	Thickness	
Dowels	10 mm			Galvanic zinc coating
Bolts	10, 12 mm			Galvanic zinc coating
Washers	30, 36 mm		3, 3.6 mm	Galvanic zinc coating
Screws	8, 10 mm	60 mm		Galvanic zinc coating

The load-carrying-capacities of the metal fasteners were calculated according to Eurocode 5 for lateral loads. The contribution to the load-carrying capacity due to the rope effect was considered according to Eurocode 5.

**Annex B**  
**Characteristic load-carrying capacities**

Table B.1 Characteristic load-carrying capacities for post bases

Post Base		F <sub>1</sub> (Compression)			F <sub>1</sub> (Tension)			F <sub>23</sub>			F <sub>45</sub>	
Type	Width	Timber	Steel		Timber	Steel		Timber	Steel		Timber	Steel
326	76	61,7	-	33,8	4,46	2,81	3,45	-	-	-	-	-
		$\gamma_m$	-	$\gamma_{m,0}$	$\gamma_m$	$\gamma_{m,0}$	$\gamma_{m,2}$	-	-	-	-	-
327	71	56,1	-	48,3	8,91	6,28	6,90	5,94	-	2,11	11,7	5,58
	75	58,6	-	48,3	8,91	5,74	6,90	5,94	-	2,11	12,3	5,58
	81	62,4	-	48,3	8,91	5,09	-	5,94	-	2,11	12,3	5,58
	91	68,7	-	48,3	8,91	4,28	-	5,94	-	2,11	12,3	5,58
	95	71,2	-	48,3	8,91	4,03	-	5,94	-	2,11	12,3	5,58
	101	75,0	-	48,3	8,91	3,69	-	5,94	-	2,11	12,3	5,58
	121	87,6	-	48,3	8,91	2,90	-	5,94	-	2,11	12,3	5,58
	141	100,2	-	48,3	8,91	2,38	-	5,94	-	2,11	12,3	5,58
		$\gamma_m$	-	$\gamma_{m,0}$	$\gamma_m$	$\gamma_{m,0}$	$\gamma_{m,2}$	$\gamma_m$	-	$\gamma_{m,2}$	$\gamma_m$	$\gamma_{m,0}$
345	71	23,2	-	27,6	12,7	6,36	-	8,17	1,32	-	7,81	2,57
	81	23,2	-	27,6	12,7	7,41	-	9,32	1,32	-	7,81	2,57
	91	23,2	-	27,6	12,7	8,86	-	10,5	1,32	-	7,81	2,57
	96	23,2	-	27,6	12,7	9,82	-	10,7	1,32	-	7,81	2,57
	101	23,2	-	27,6	12,7	11,0	-	10,7	1,32	-	7,81	2,57
	111	23,2	-	27,6	12,7	14,6	-	10,7	1,32	-	7,81	2,57
	116	23,2	-	27,6	12,7	16,9	-	10,7	1,32	-	7,81	2,57
	121	23,2	-	27,6	12,7	17,1	-	10,7	1,32	-	7,81	2,57
		$\gamma_m$	-	$\gamma_{m,1}$	$\gamma_m$	$\gamma_{m,0}$	-	$\gamma_m$	$\gamma_{m,0}$	-	$\gamma_m$	$\gamma_{m,2}$
345 VA	71	23,2	-	26,3	12,7	5,14	-	8,17		1,08	8,17	3,13
	91	23,2	-	26,3	12,7	5,14	-	10,5		1,08	9,76	3,13
		$\gamma_m$	-	$\gamma_{m,1}$	$\gamma_m$	$\gamma_{m,0}$	-	$\gamma_m$	-	$\gamma_{m,2}$	$\gamma_m$	$\gamma_{m,2}$
365	71	25,3	-	45,5	12,7	-	81,8	8,17	15,6	-	7,85	3,88
	81	25,3	-	45,5	12,7	-	81,8	9,32	15,6	-	7,85	3,88
	91	25,3	-	45,5	12,7	-	81,8	10,5	15,6	-	7,85	3,88
	101	25,3	-	45,5	12,7	-	81,8	11,6	15,6	-	7,85	3,88
	111	25,3	-	45,5	12,7	-	81,8	12,8	15,6	-	7,85	3,88
	116	25,3	-	45,5	12,7	-	81,8	13,3	15,6	-	7,85	3,88
	121	25,3	-	45,5	12,7	-	81,8	13,9	15,6	-	7,85	3,88
		$\gamma_m$	-	$\gamma_{m,1}$	$\gamma_m$	-	$\gamma_{m,2}$	$\gamma_m$	$\gamma_{m,1}$	-	$\gamma_m$	$\gamma_{m,0}$
365 v	91	27,1	-	71,0	13,6	-	98,2	10,5	19,3	-	10,4	5,05
	95	27,1	-	71,0	13,6	-	98,2	10,9	19,3	-	10,4	5,05
	101	27,1	-	71,0	13,6	-	98,2	11,6	19,3	-	10,4	5,05
	111	27,1	-	71,0	13,6	-	98,2	12,8	19,3	-	10,4	5,05
	116	27,1	-	71,0	13,6	-	98,2	13,3	19,3	-	10,4	5,05
	121	27,1	-	71,0	13,6	-	98,2	13,9	19,3	-	10,4	5,05
	141	27,1	-	71,0	13,6	-	98,2	16,2	19,3	-	10,4	5,05
		$\gamma_m$	-	$\gamma_{m,1}$	$\gamma_m$	-	$\gamma_{m,2}$	$\gamma_m$	$\gamma_{m,1}$	-	$\gamma_m$	$\gamma_{m,0}$

## Continuation of Table B.1 Characteristic load-carrying capacities for post bases

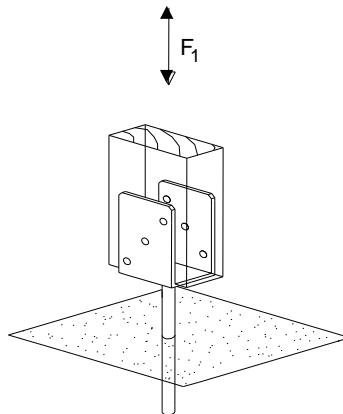
## Continuation of Table B.1 Characteristic load-carrying capacities for post bases

Continuation of Table B.1 Characteristic load-carrying capacities for post bases

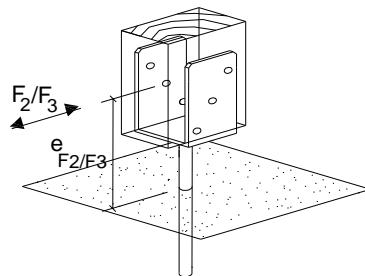
Post Base		F <sub>1</sub> (Compression)			F <sub>1</sub> (Tension)			F <sub>23</sub>		F <sub>45</sub>		
Type	Width	Timber	Steel		Timber	Steel		Timber	Steel		Timber	Steel
581	71-161	29,2	21,1	-	-	-	-	-	-	-	-	-
		$\gamma_m$	$\gamma_{m,0}$	-	-	-	-	-	-	-	-	-
583	70	64,1	44,0	-	-	-	-	-	-	-	-	-
		$\gamma_m$	$\gamma_{m,0}$	-	-	-	-	-	-	-	-	-
655	91	27,1	-	71,0	13,6	-	98,2	10,5	19,3	-	10,4	5,05
	111	27,1	-	71,0	13,6	-	98,2	12,8	19,3	-	10,4	5,05
	116	27,1	-	71,0	13,6	-	98,2	13,3	19,3	-	10,4	5,05
	121	27,1	-	71,0	13,6	-	98,2	13,9	19,3	-	10,4	5,05
	141	27,1	-	71,0	13,6	-	98,2	16,2	19,3	-	10,4	5,05
		$\gamma_m$	-	$\gamma_{m,1}$	$\gamma_m$	-	$\gamma_{m,2}$	$\gamma_m$	$\gamma_{m,1}$	-	$\gamma_m$	$\gamma_{m,0}$
665	116	38,9	-	176,3	38,9	-	300,8	16,2	28,3	-	16,8	12,9
	121	38,9	-	176,3	38,9	-	300,8	16,9	28,3	-	17,5	12,9
	141	38,9	-	176,3	38,9	-	300,8	19,7	28,3	-	20,4	12,9
	161	38,9	-	176,3	38,9	-	300,8	22,5	28,3	-	22,6	12,9
		$\gamma_m$	-	$\gamma_{m,1}$	$\gamma_m$	-	$\gamma_{m,0}$	$\gamma_m$	$\gamma_{m,1}$	-	$\gamma_m$	$\gamma_{m,0}$
751	71	12,7	5,61	6,90	8,91	5,61	6,90	5,94	-	1,39	7,43	2,46
	81	12,7	4,64	-	8,91	4,64	-	5,94	-	1,39	7,43	2,46
	91	12,7	3,96	-	8,91	3,96	-	5,94	-	1,39	7,43	2,46
	101	12,7	3,45	-	8,91	3,45	-	5,94	-	1,39	7,43	2,46
	121	12,7	2,75	-	8,91	2,75	-	5,94	-	1,39	7,43	2,46
		$\gamma_m$	$\gamma_{m,0}$	$\gamma_{m,2}$	$\gamma_m$	$\gamma_{m,0}$	$\gamma_{m,2}$	$\gamma_m$	-	$\gamma_{m,2}$	$\gamma_m$	$\gamma_{m,0}$

### Definitions of forces, their directions and eccentricity

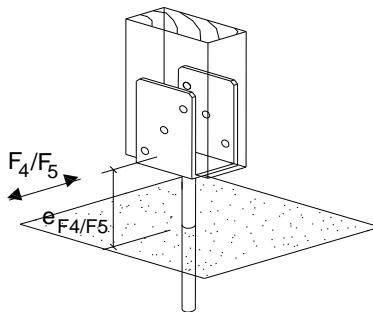
- Force  $F_1$ : tensile or compression load



- Force  $F_2 / F_3$ : horizontal load parallel to the side plates of the post base



- Force  $F_4 / F_5$ : horizontal load perpendicular to the side plates of the post base



### Acting forces

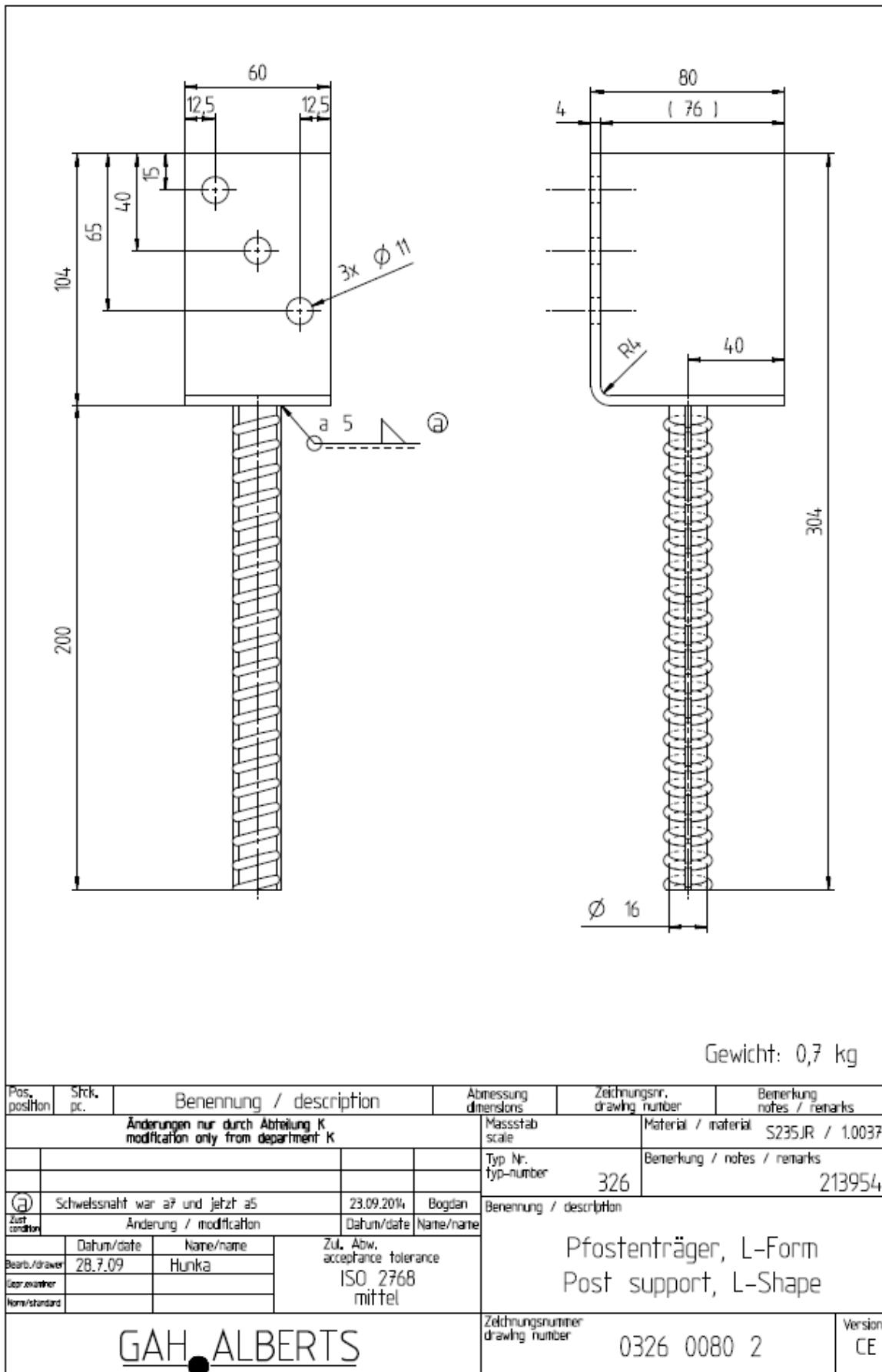
$F_1$	axial force (tension or compression) acting along the central axis of the joint
$F_2$ and $F_3$	horizontal force parallel to the side plates of the post base acting with the lever arm $e_{F2/F3}$ above the foundation
$F_4$ and $F_5$	horizontal force perpendicular to the side plates of the post base acting with the lever arm $e_{F4/F5}$ above the foundation

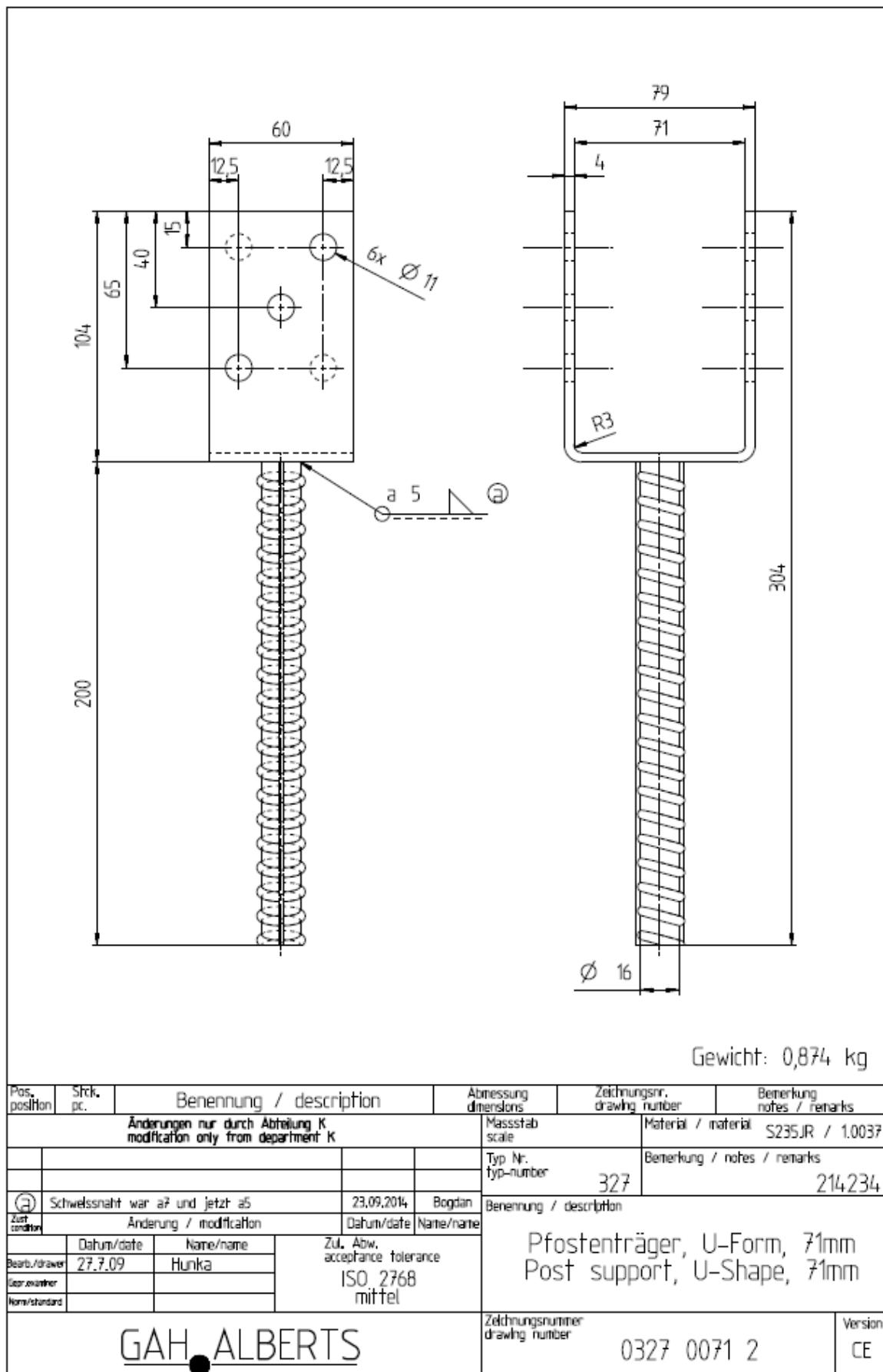
### Combined forces

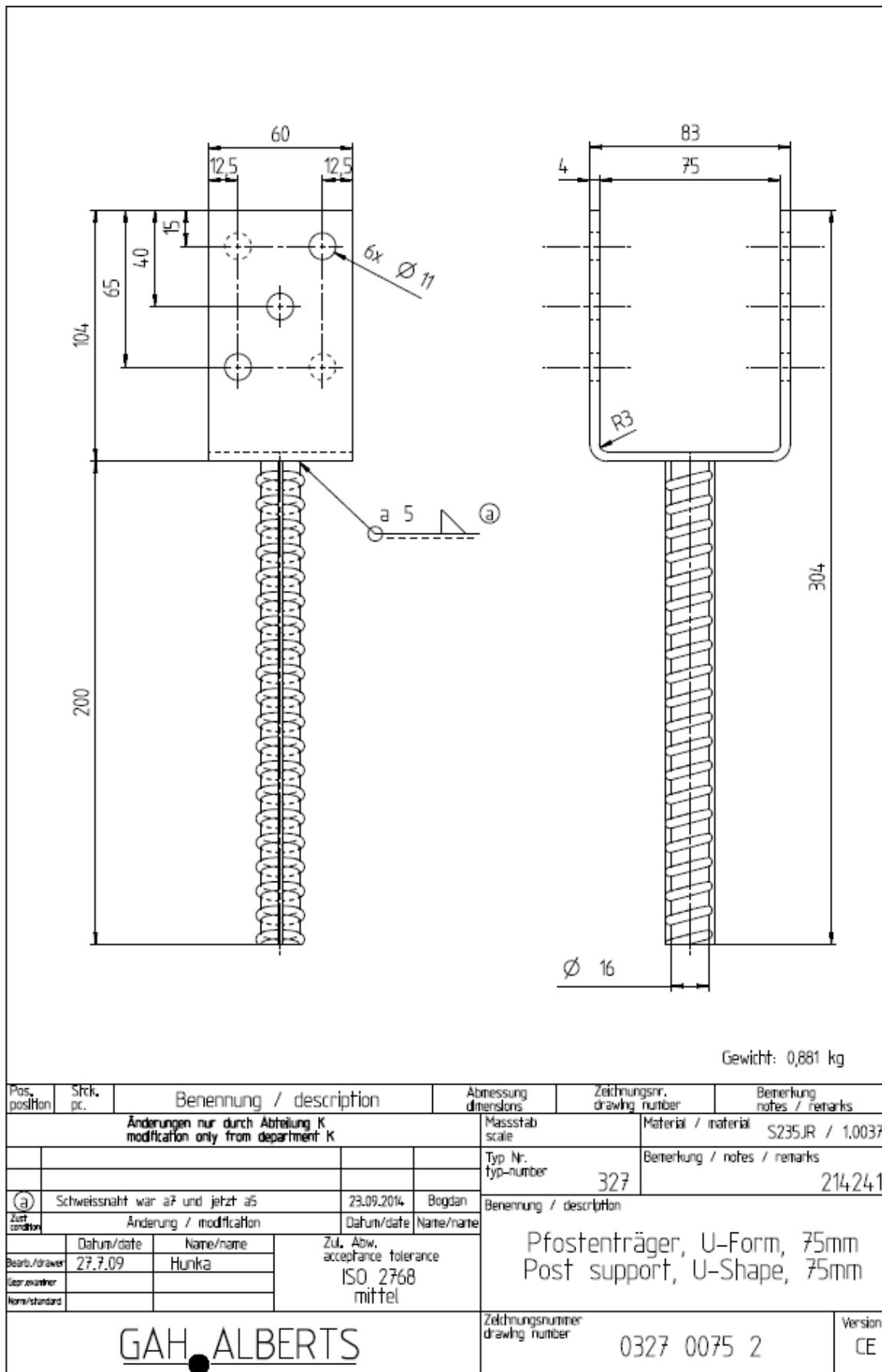
If the forces  $F_1$  and  $F_2/F_3$  or  $F_4/F_5$  act at the same time, the following inequality shall be fulfilled:

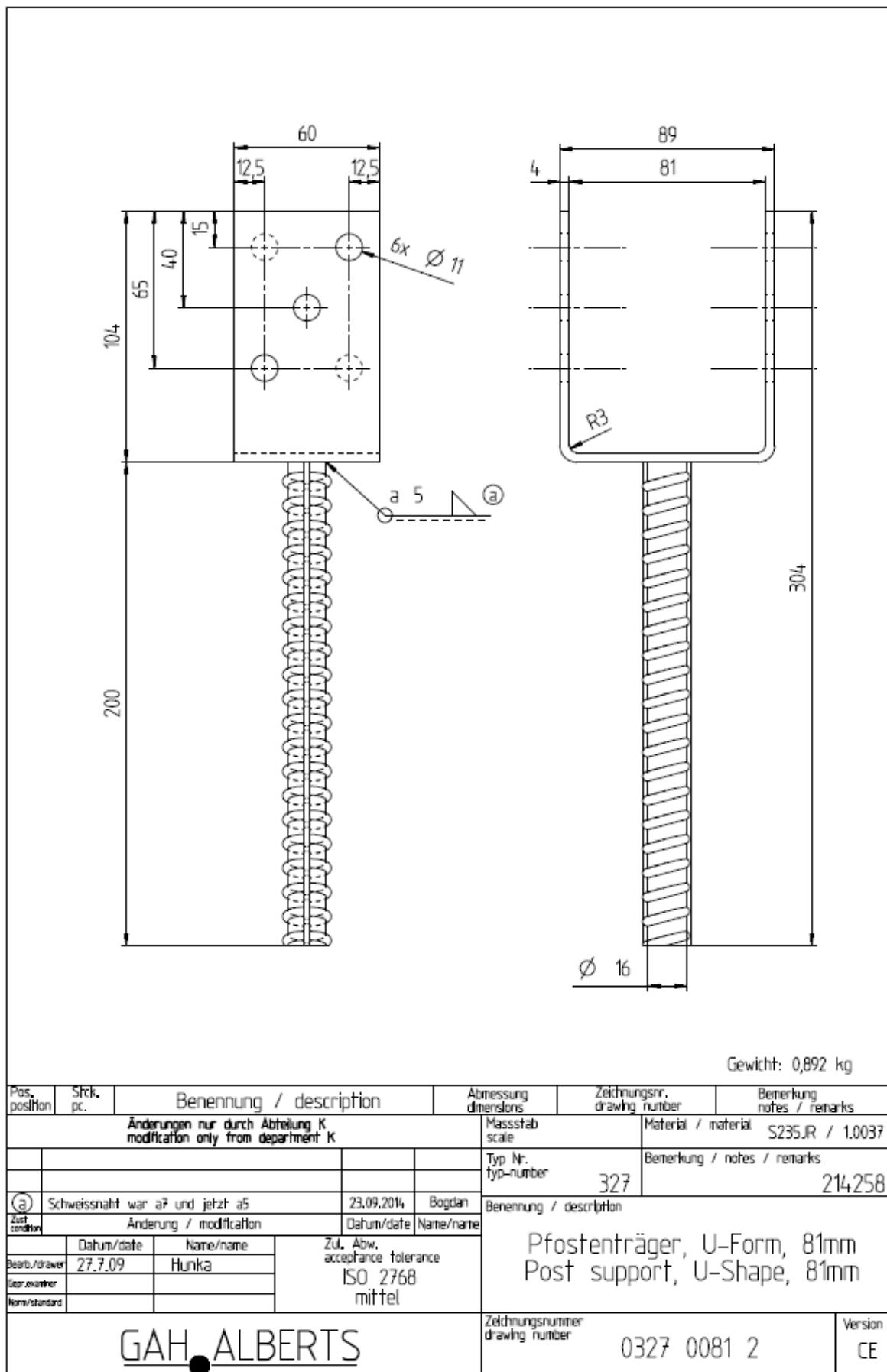
$$\sum \frac{F_{i,d}}{R_{i,d}} \leq 1$$

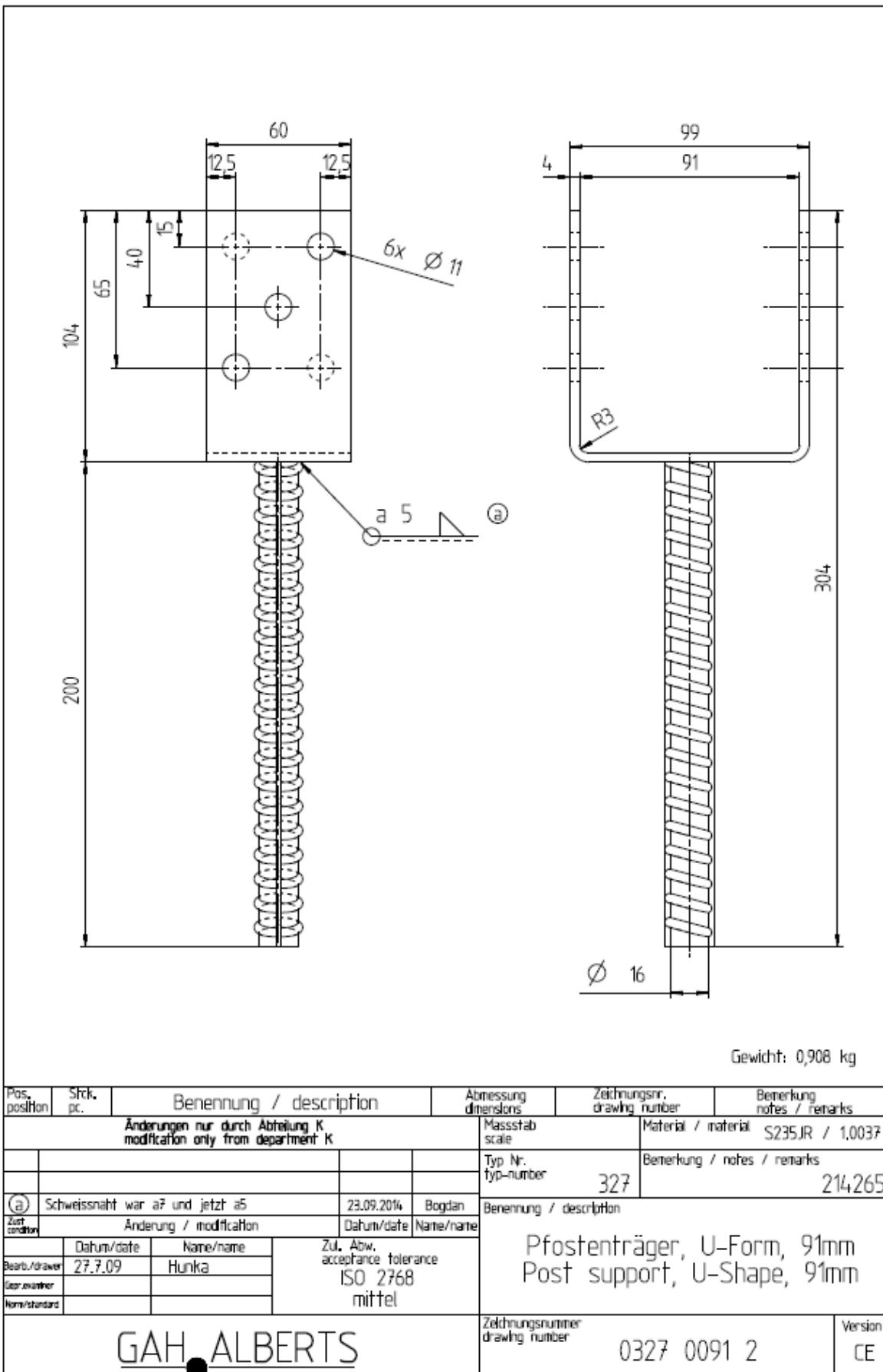
The forces  $F_2$  and  $F_3$  or  $F_4$  and  $F_5$  are forces with opposite direction. Therefore only one force  $F_2$  or  $F_3$ , and  $F_4$  or  $F_5$ , respectively, is able to act simultaneously with  $F_1$ .

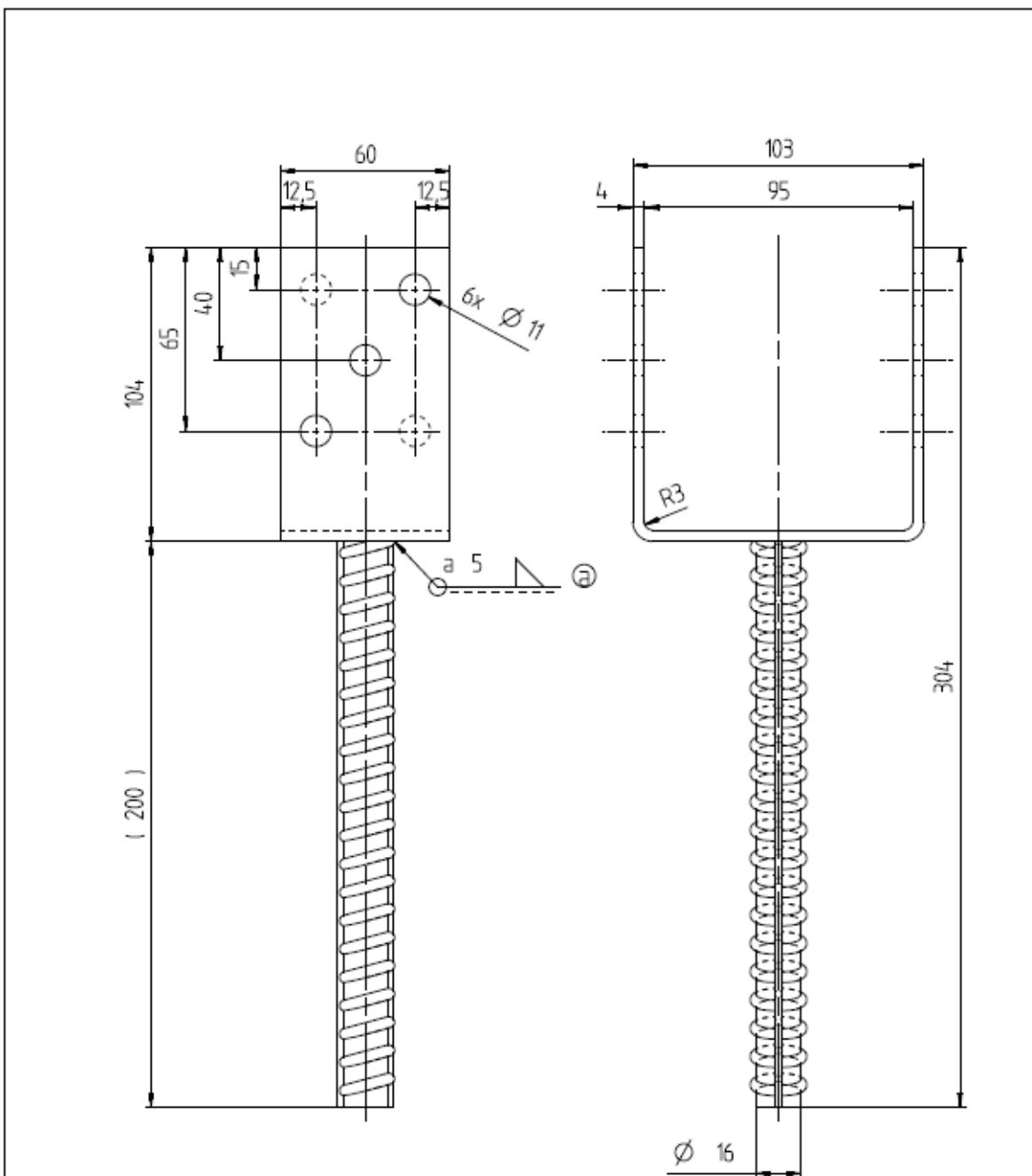






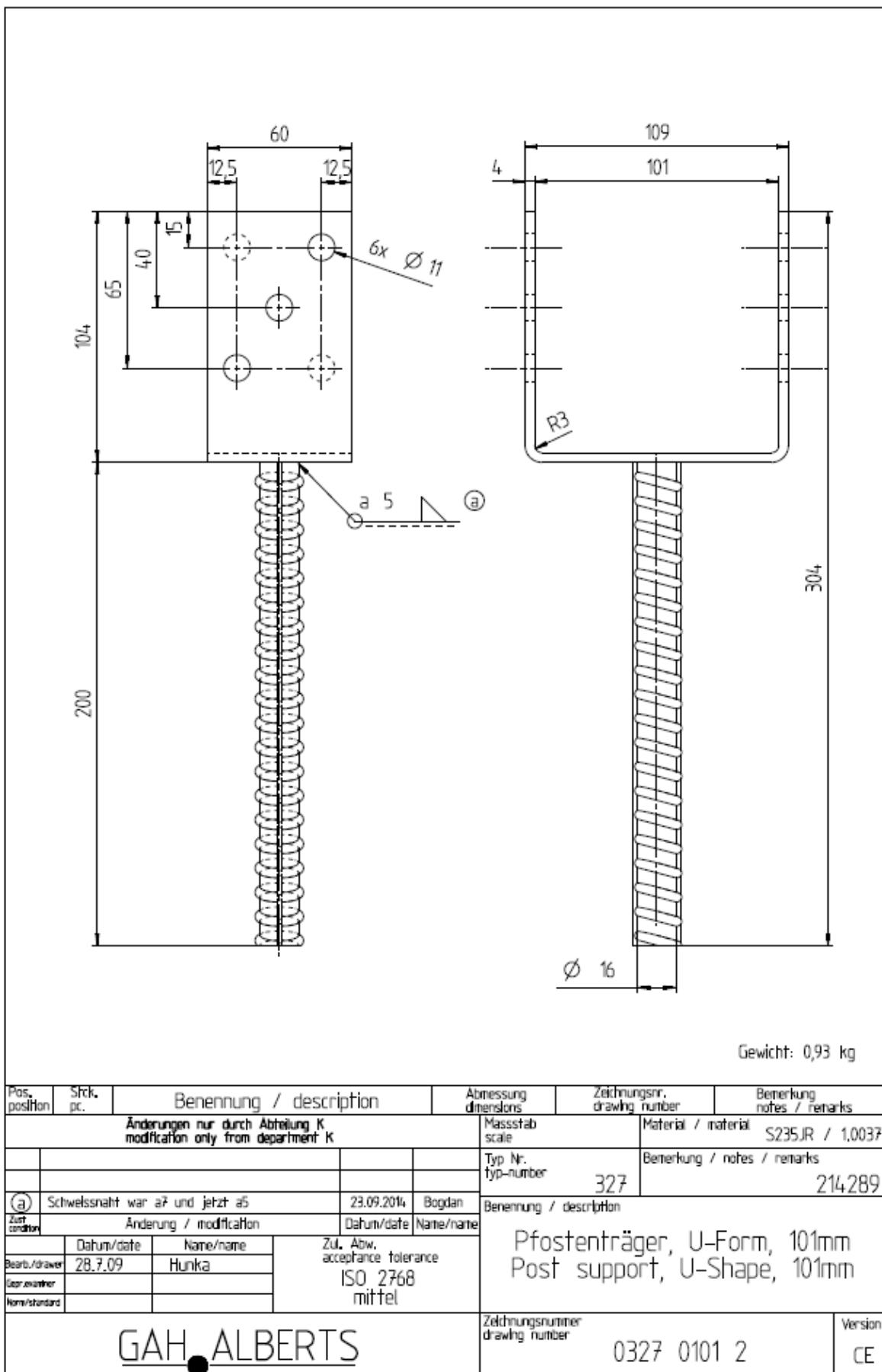


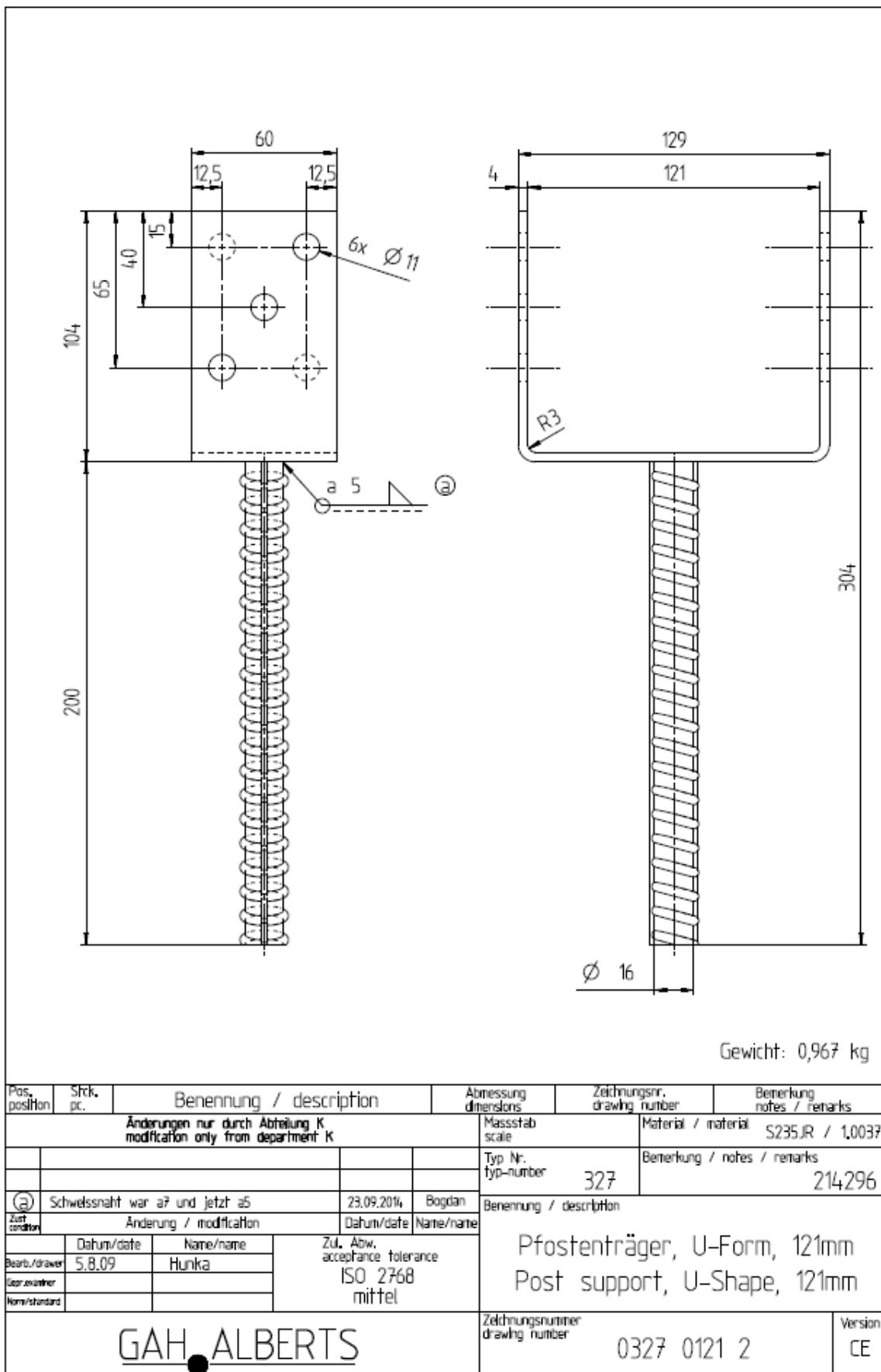


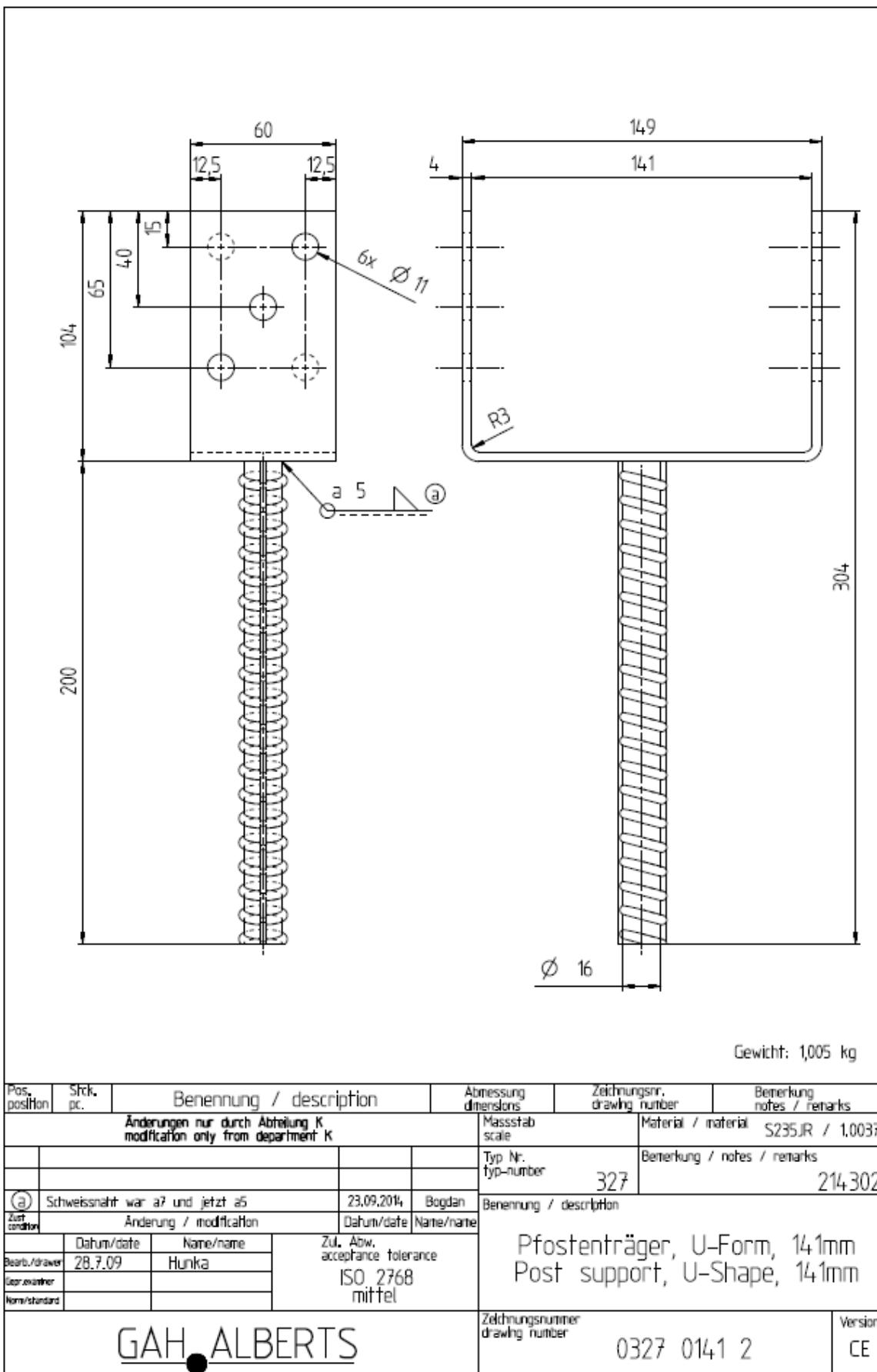


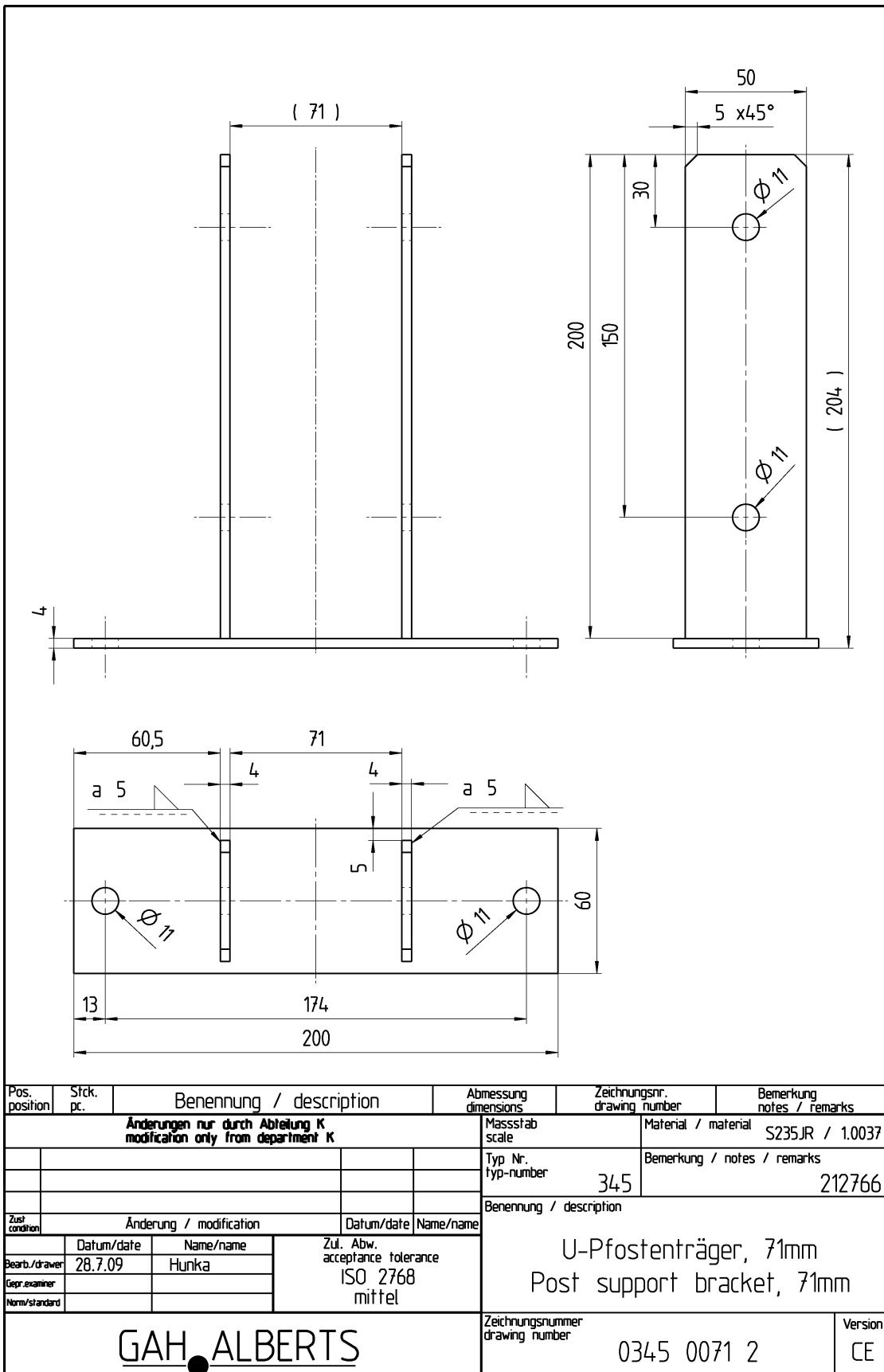
Gewicht: 0,919 kg

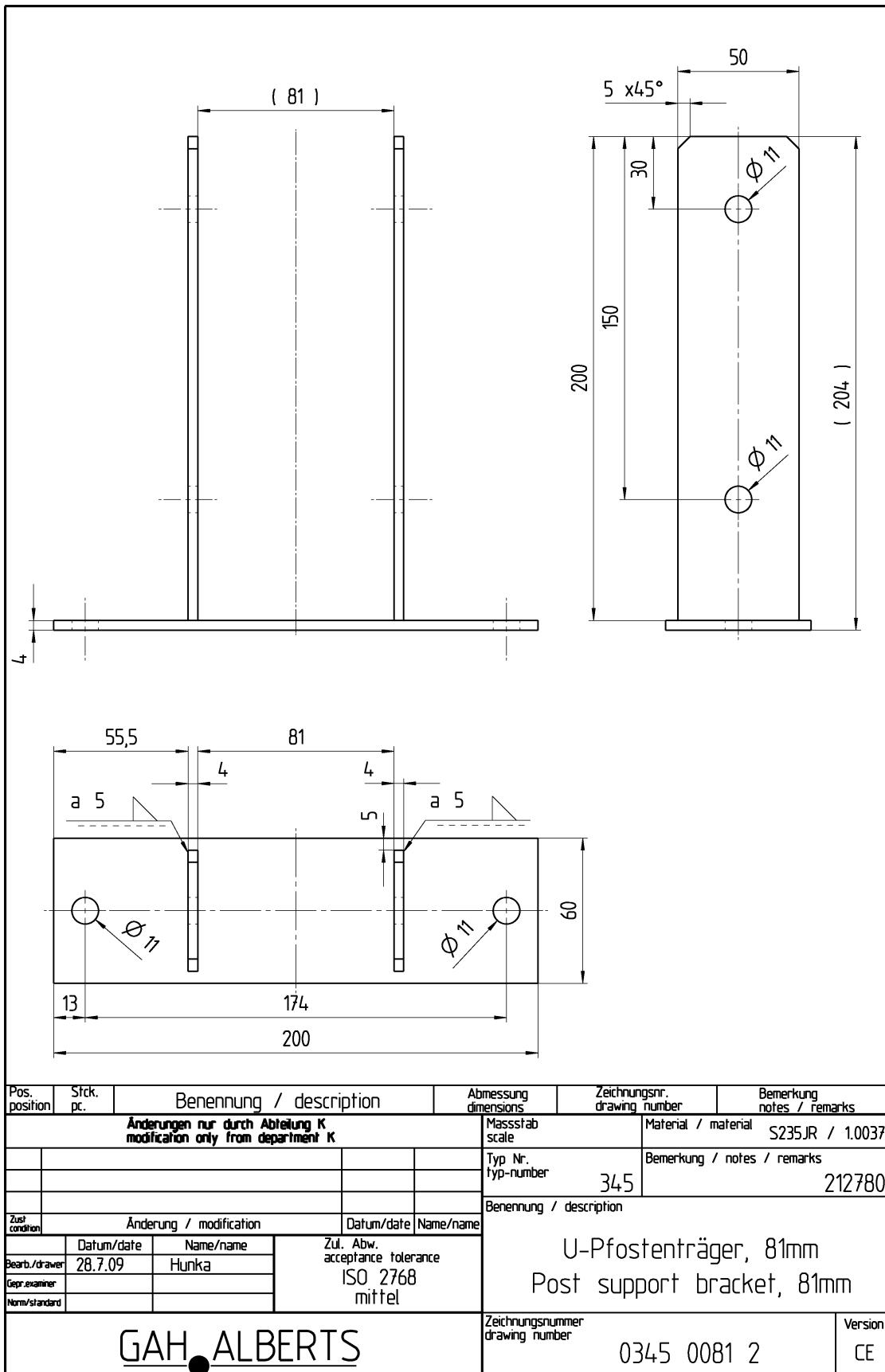
Pos. position	Stck. pc.	Benennung / description		Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
		Änderungen nur durch Abteilung K modification only from department K		Massstab scale	Material / material S235JR / 1.0037			
				Typ Nr. typ-number	Bemerkung / notes / remarks 327 214272			
(2)		Schweißnaht war a7 und jetzt a5	23.09.2014	Bogdan				
Zust. status		Änderung / modification	Datum/date	Name/name	Benennung / description			
Bearb./drawer		Datum/date	Name/name	Zul. Abw. acceptance tolerance ISO 2768 mittel				
User/author		28.7.09	Hunka	Pfostenträger, U-Form, 95mm Post support, U-Shape, 95mm				
Norm/standard								
GAH ALBERTS				Zeilungsnr. drawing number	0327 0095 2	Version CE		

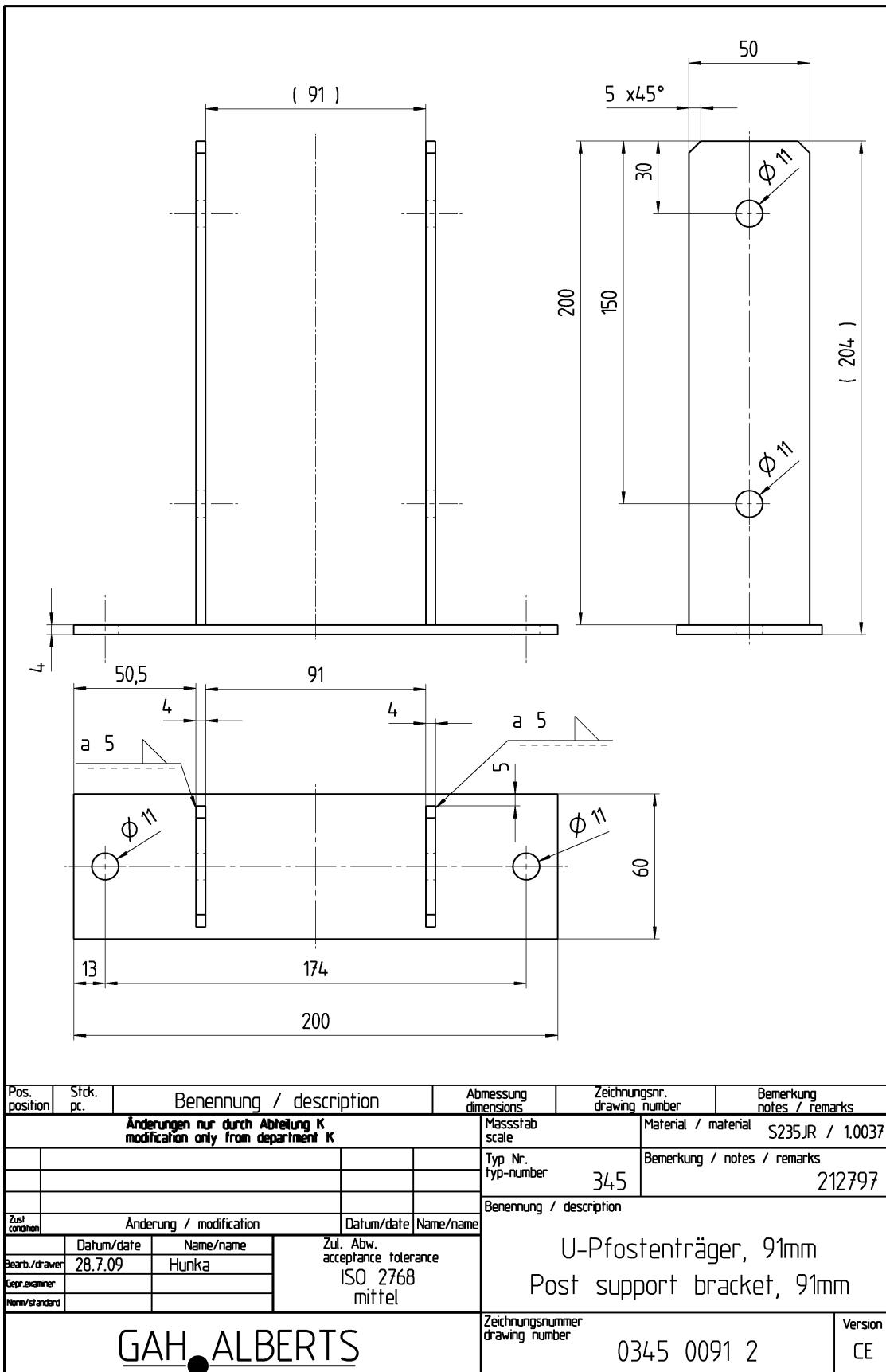


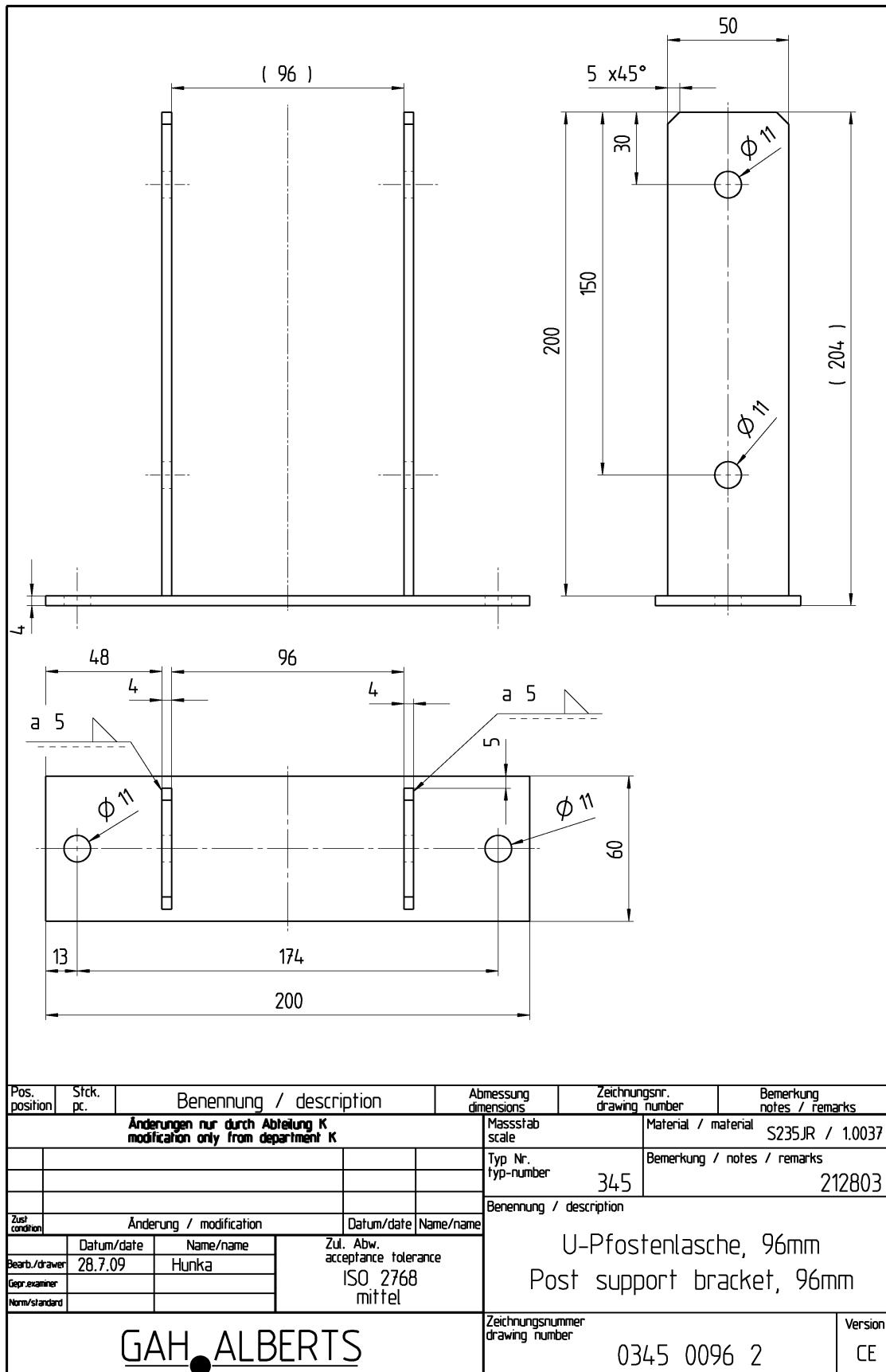


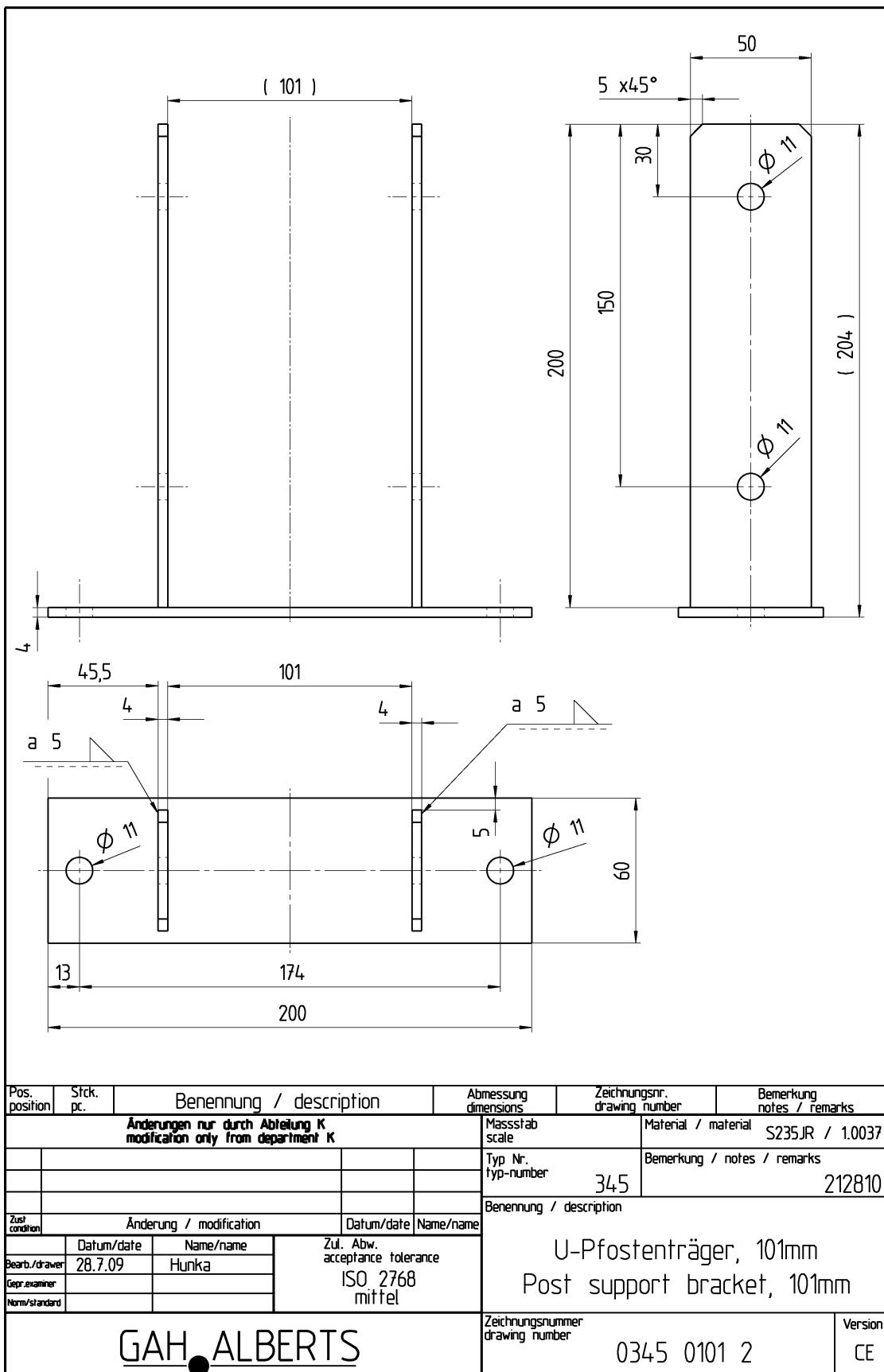


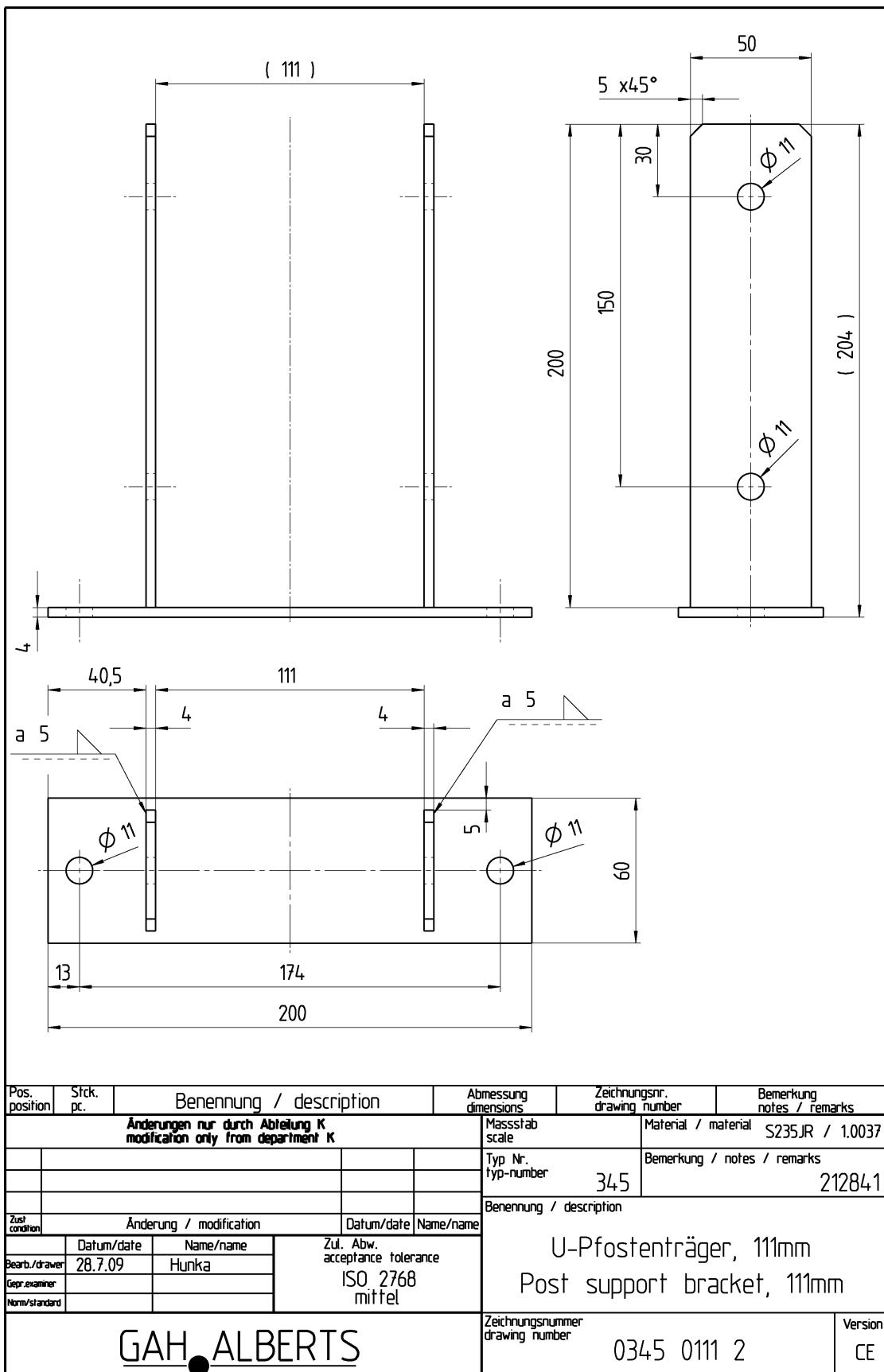


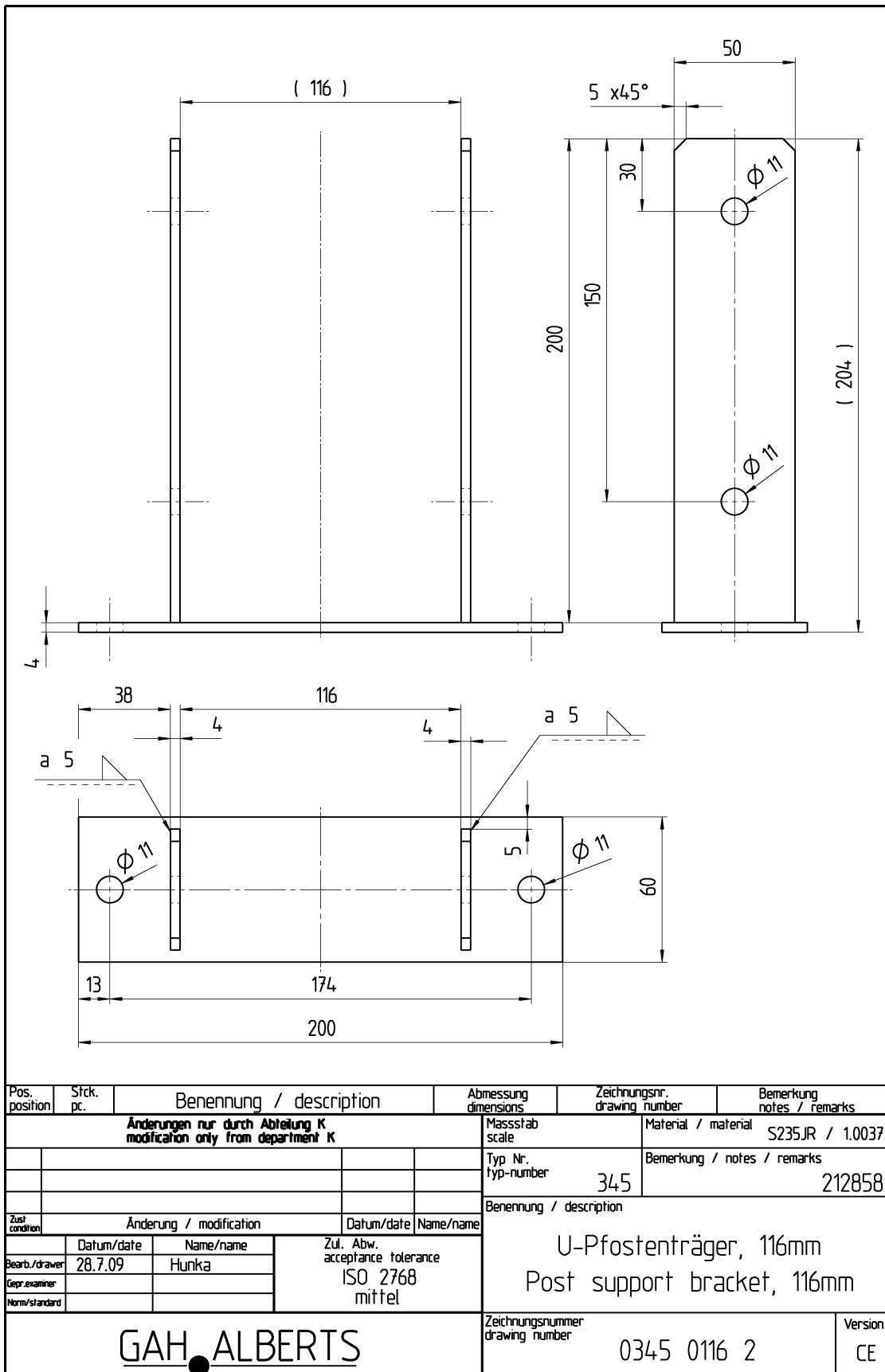


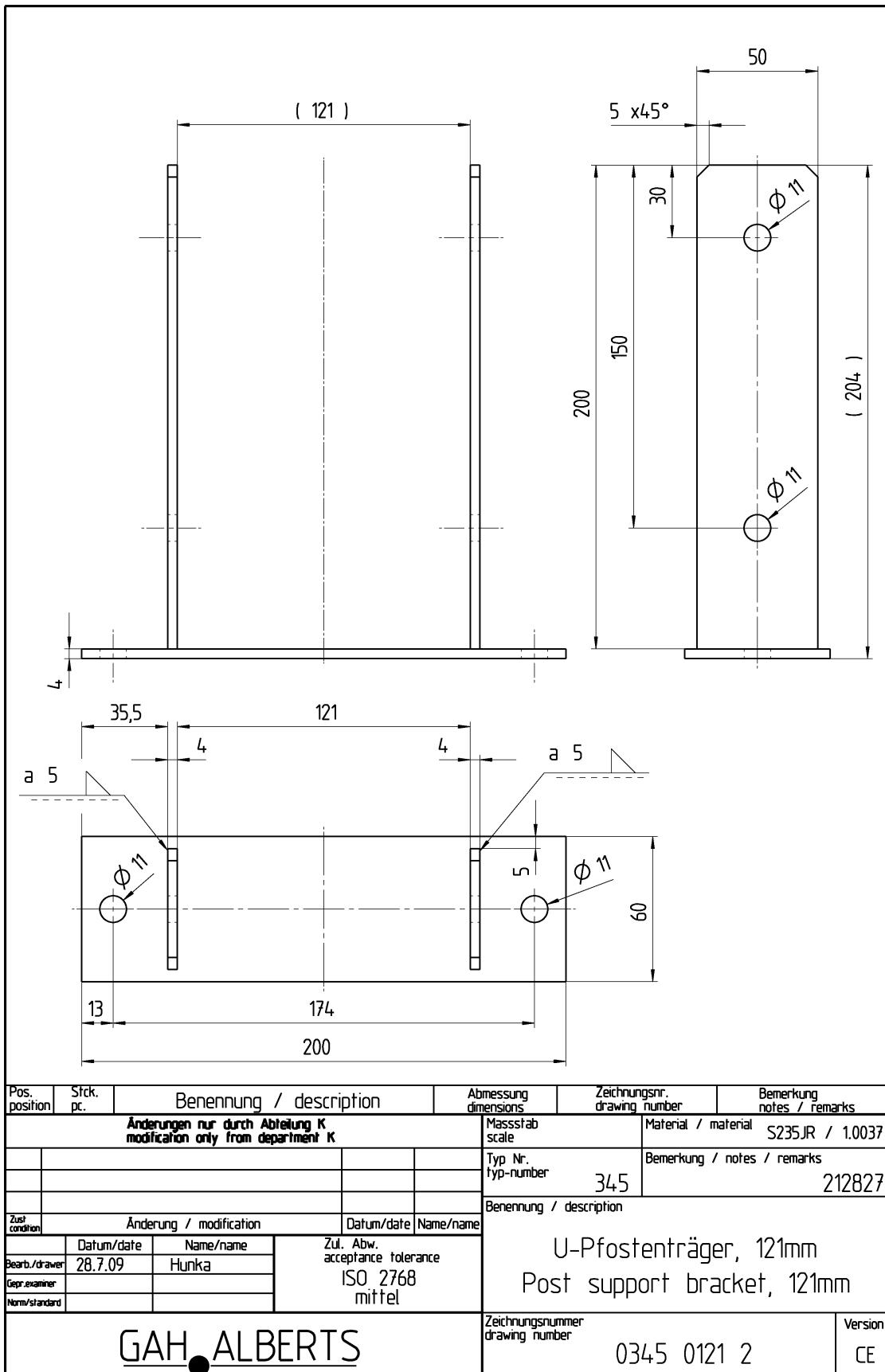


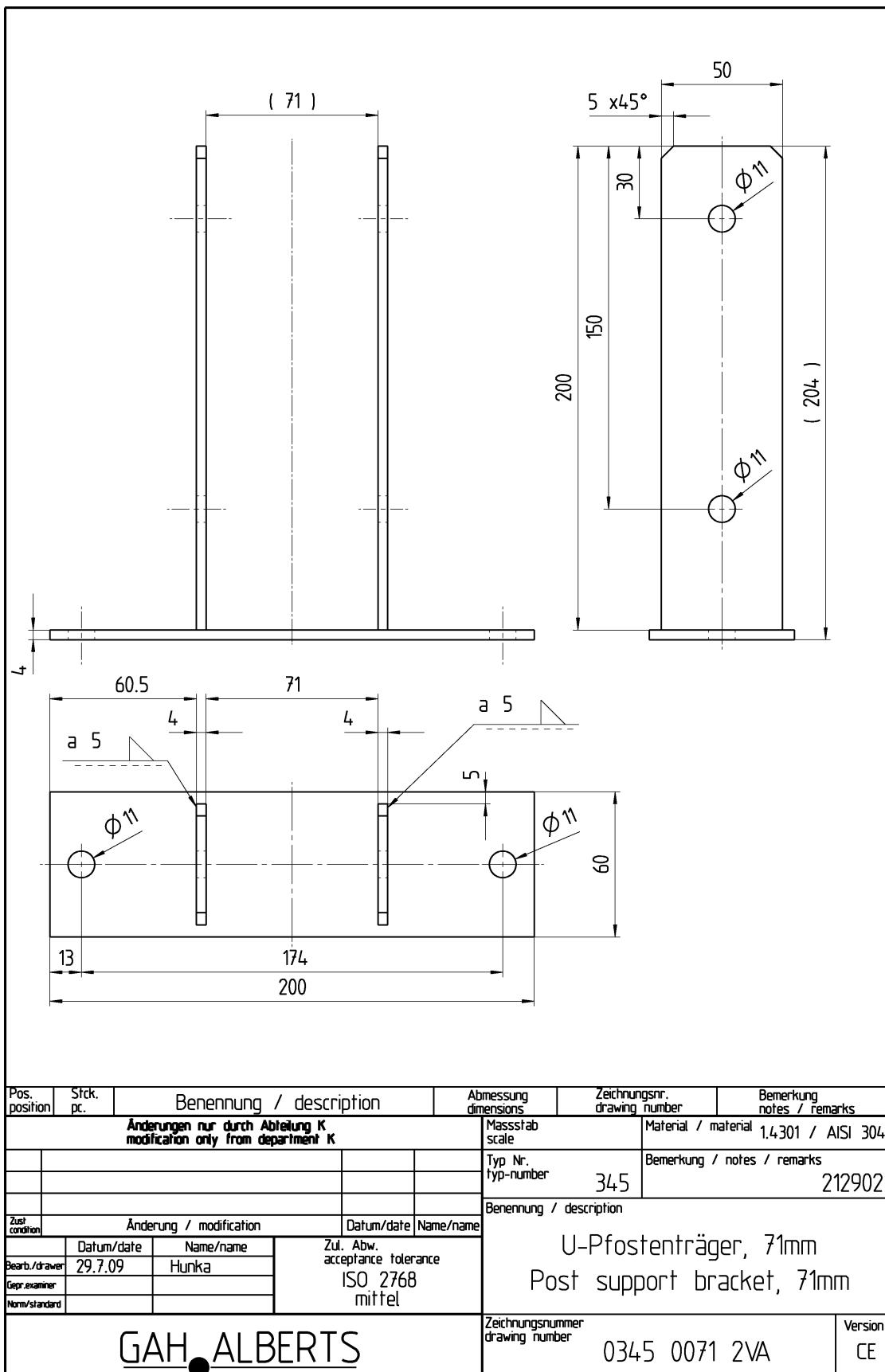


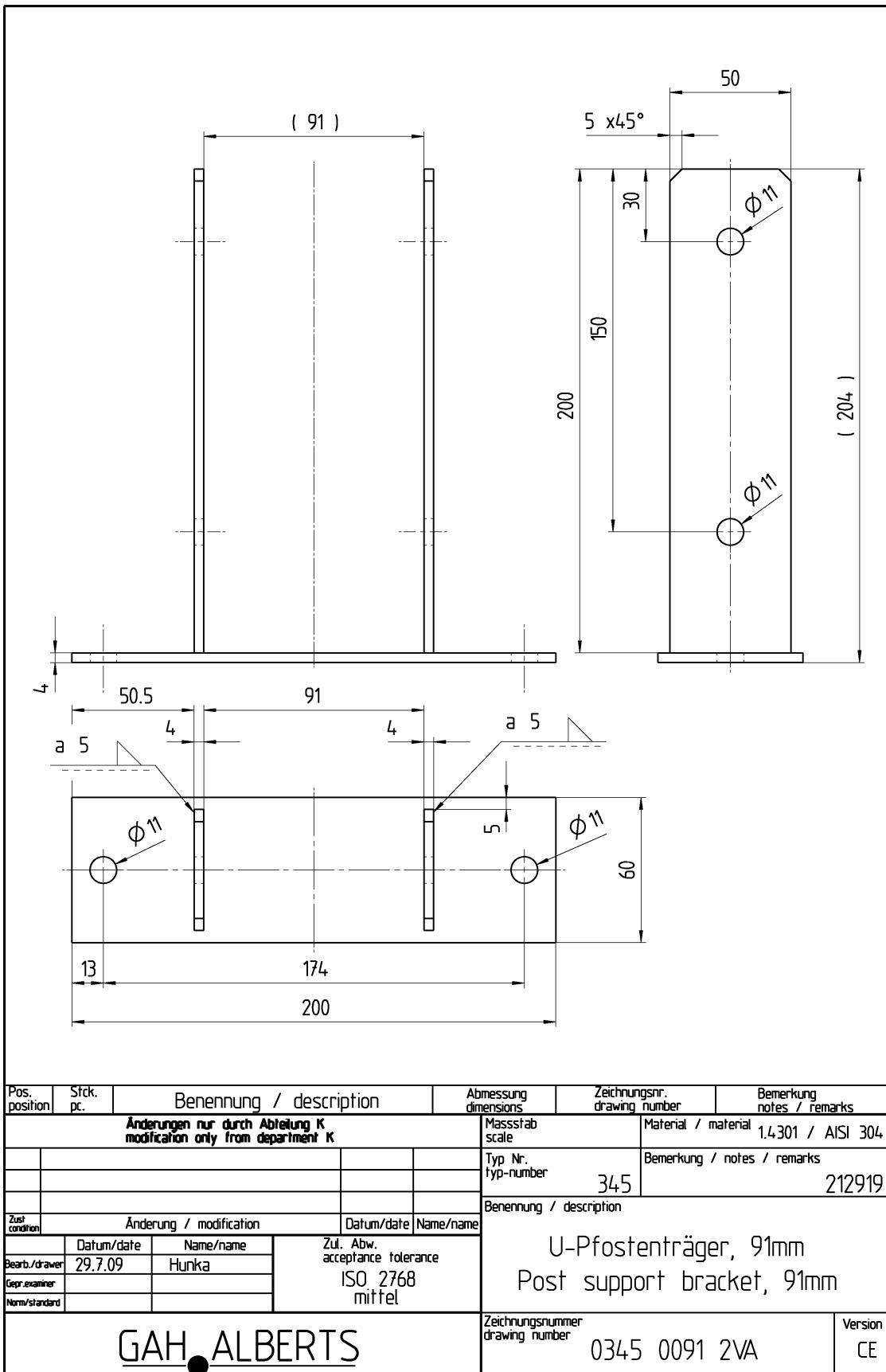


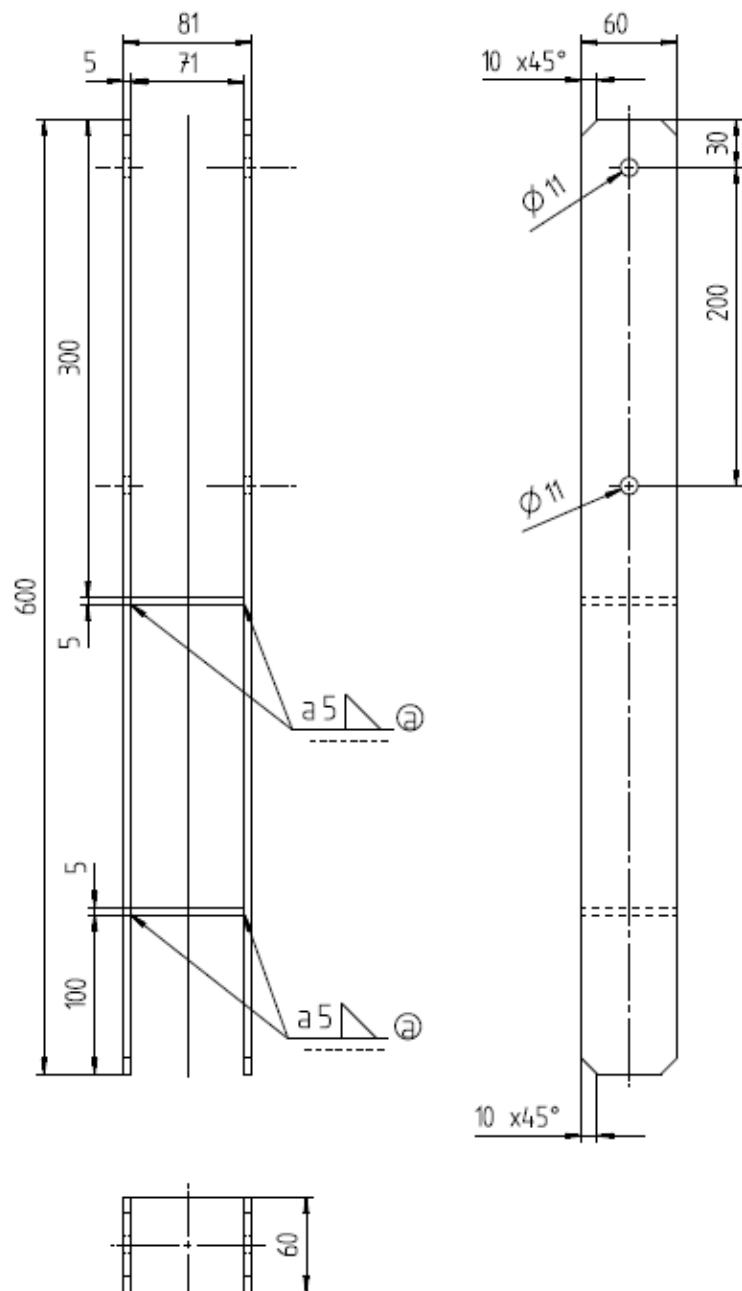






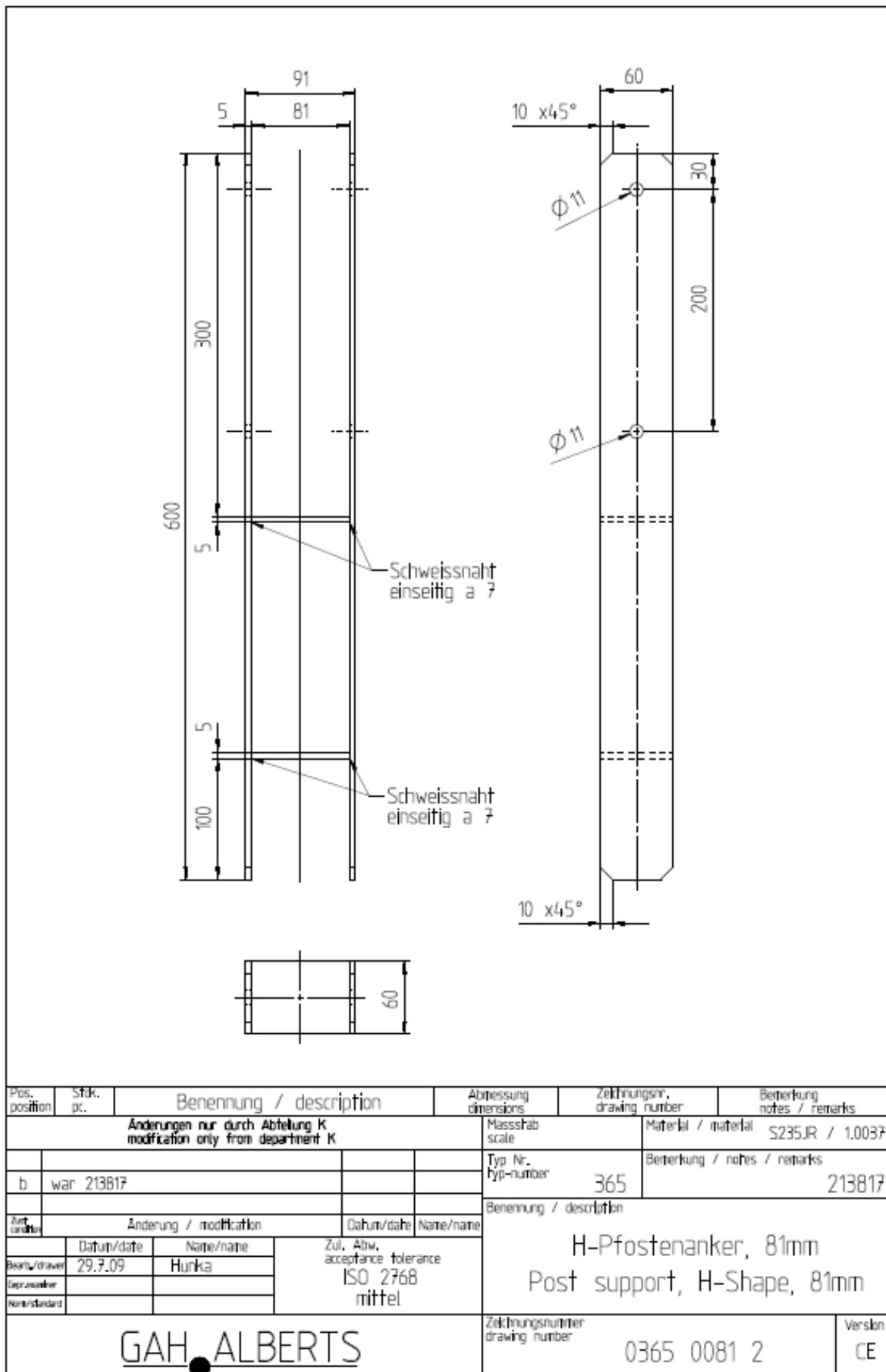


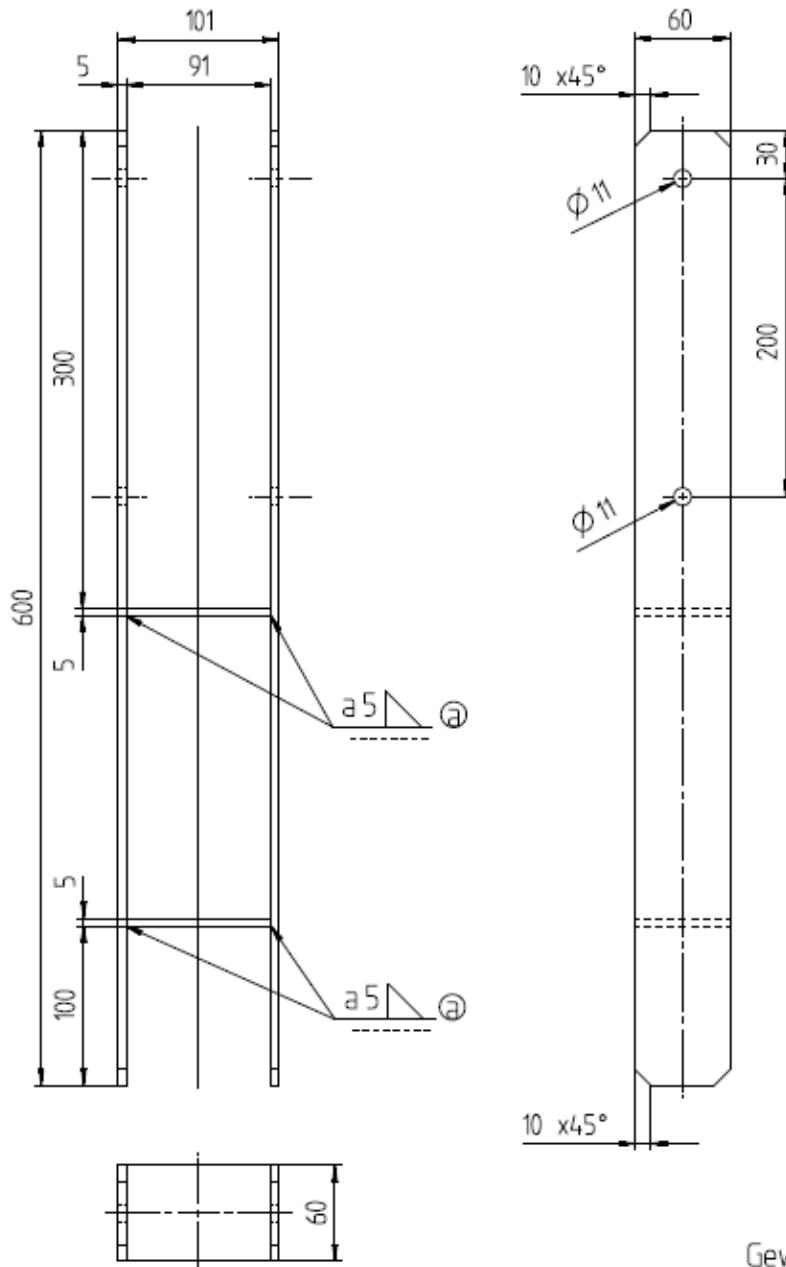




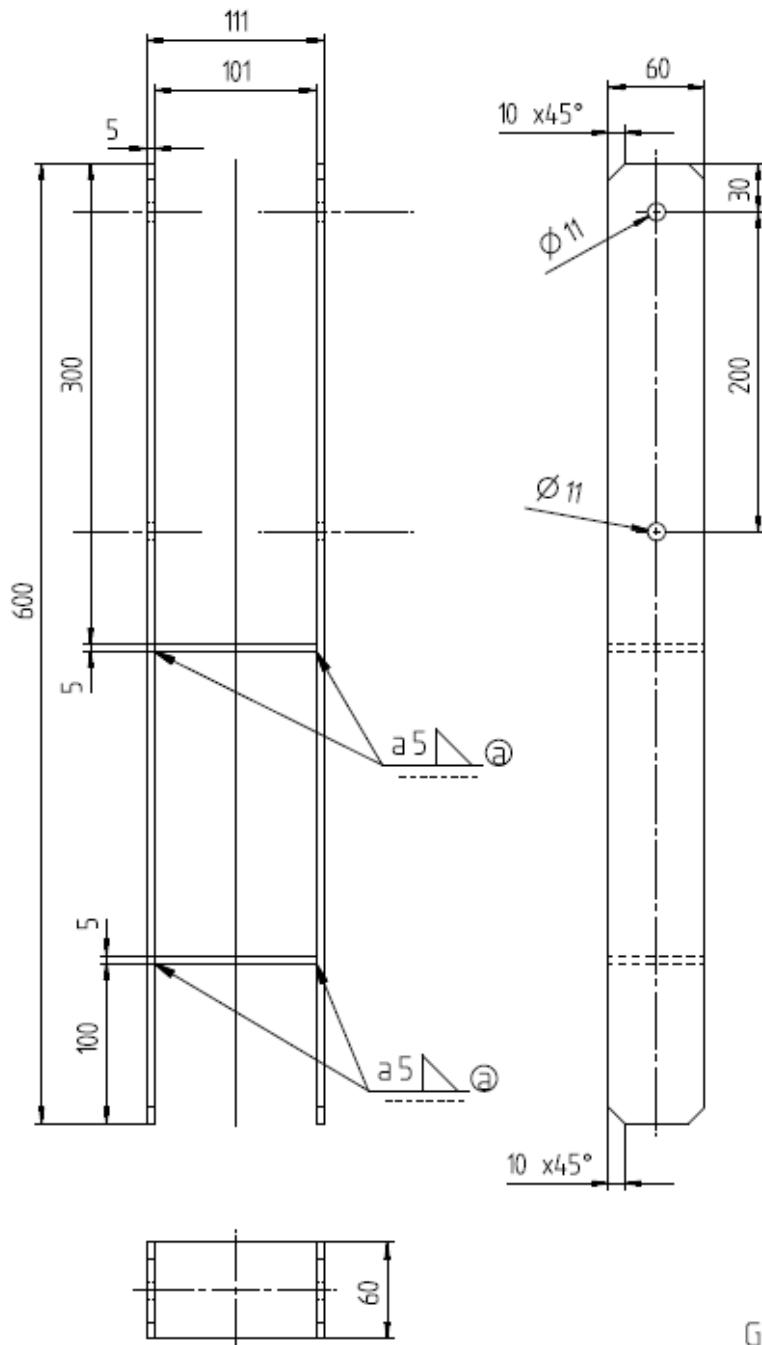
Gewicht: 3,122 kg

Pos. position	Stck. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
Änderungen nur durch Abteilung K modification only from department K					Massstab scale	Material / material	S235JR / 1.0037		
					Typ Nr. typ-number	Bemerkung / notes / remarks			
					365	213800			
(@)		Schweißnaht war a7 und jetzt a5	23.09.2014	Bogdan	Benennung / description				
Zust. condition		Änderung / modification	Datum/date	Name/name	H-Pfostenanker, 71mm Post support, H-Shape, 71mm				
Bearb./drawer									
User/examiner									
Norm/standard									
<u>GAH ALBERTS</u>					Zeichnungsnr. drawing number	0365 0071 2	Version CE		



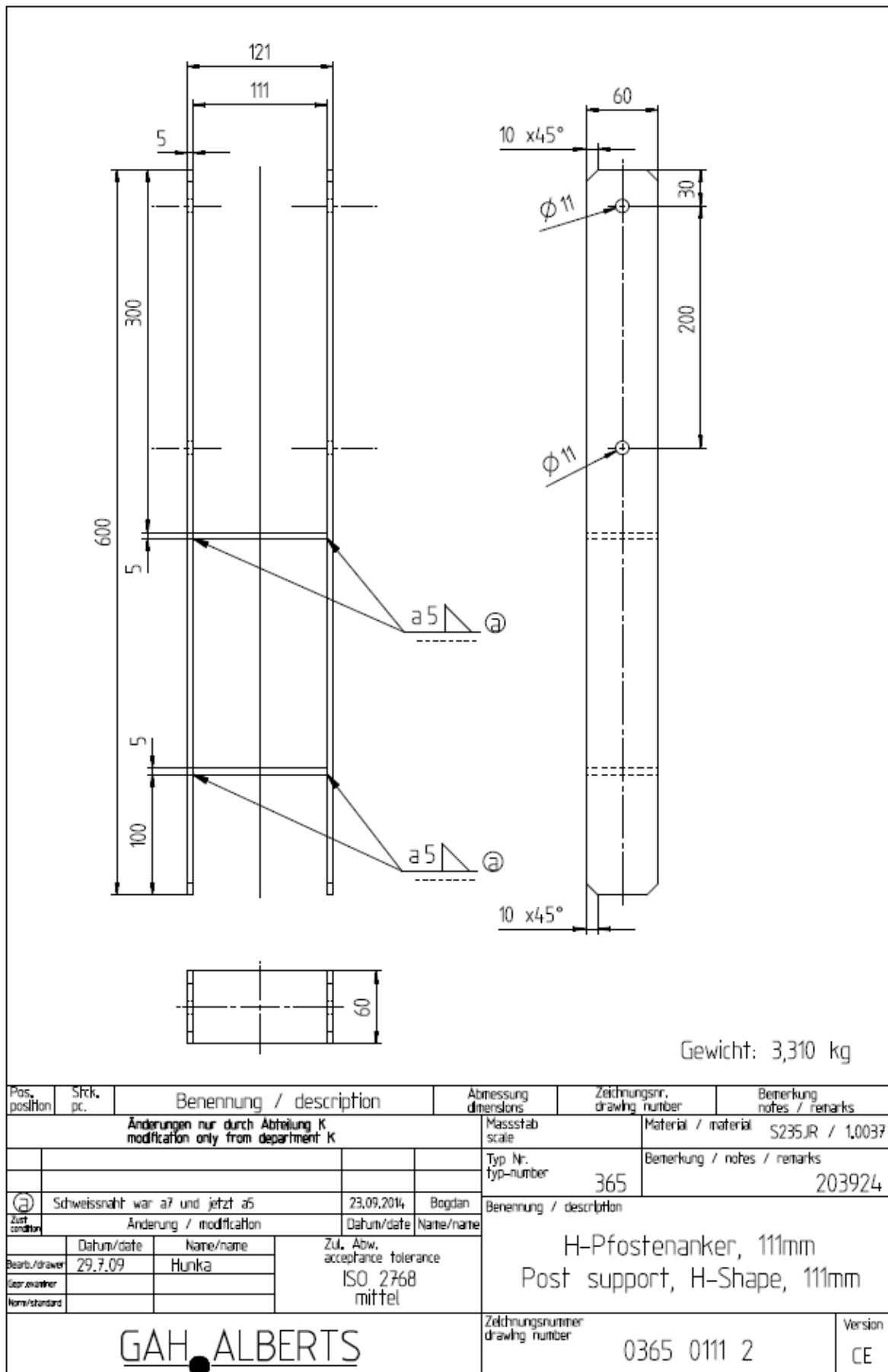


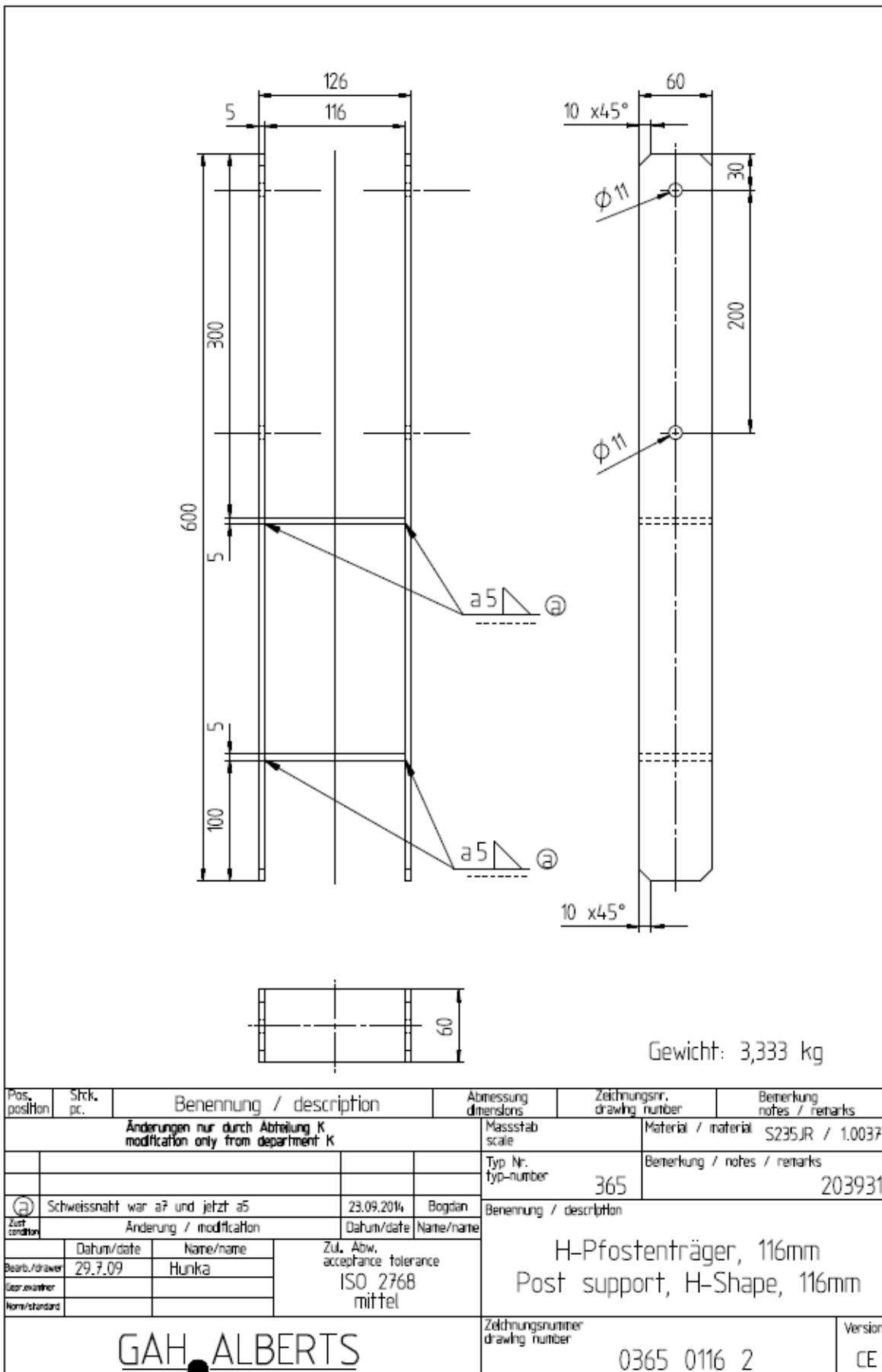
Pos. position	Stck. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
Änderungen nur durch Abteilung K modification only from department K					Massstab scale	Material / material S235JR / 1.0037			
					Typ Nr. typ-number	Bemerkung / notes / remarks 365 213824			
(@) Zust condition	Schweißnaht war a7 und jetzt a5	Datum/date 23.09.2014	Name/name Bogdan	Benennung / description H-Postenanker, 91mm Post support, H-Shape, 91mm					
Bearb./drawer User/author Norm/standard	Änderung / modification 29.7.09 Hunka	Datum/date Name/name ISO 2768 mittel	Zul. Abw. acceptance tolerance ISO 2768 mittel						
GAH ALBERTS				Zeilungsnr. drawing number 0365 0091 2	Version CE				

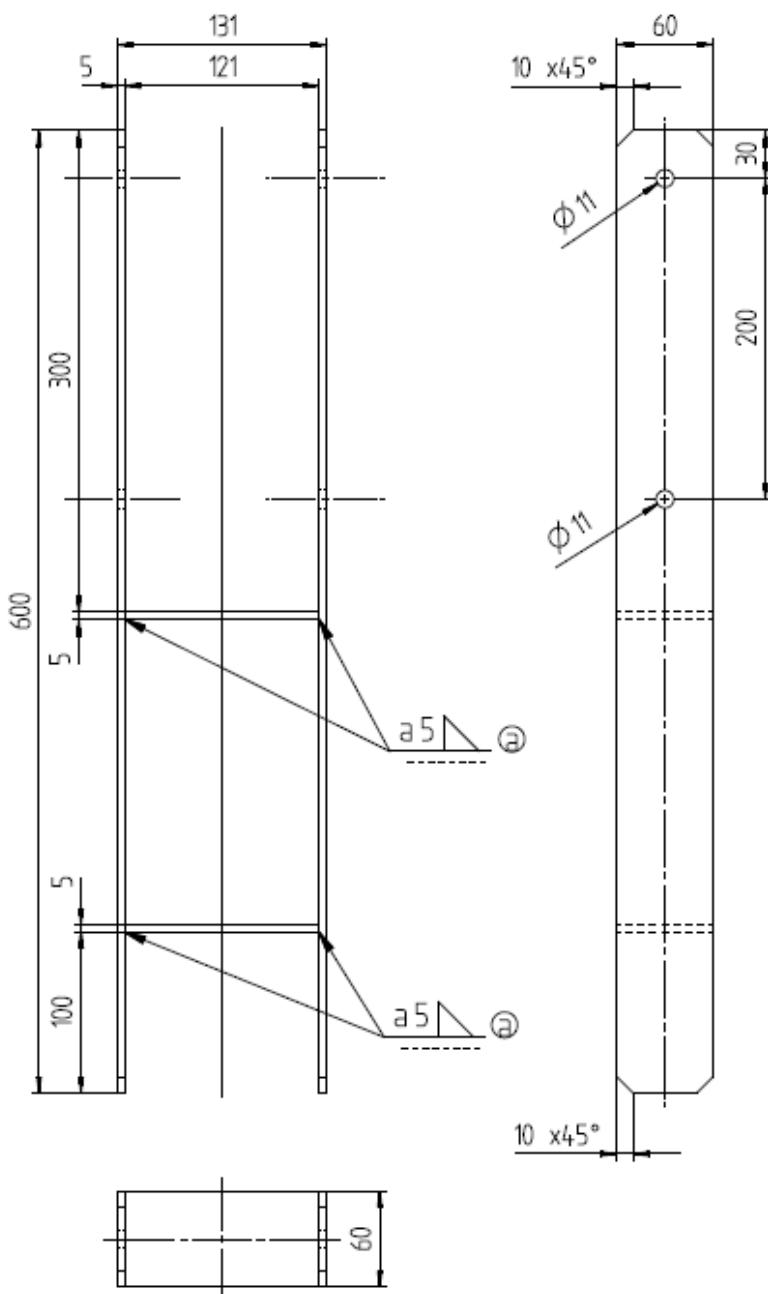


Gewicht: 3,263 kg

Pos. position	Stck. pc.	Benennung / description		Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
		Änderungen nur durch Abteilung K modification only from department K		Maßstab scale	Material / material S235JR / 1.0037			
				Typ Nr. typ-number	Bemerkung / notes / remarks 365 203917			
(@)	Schweißnaht war a7 und jetzt a5	Datum/date	Bogdan	Benennung / description				
Zust. condition	Änderung / modification	Datum/date	Name/name	H-Pfostenanker, 101mm Post support, H-Shape, 101mm				
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance ISO 2768 mittel		Zeichnungsnr. drawing number			
Gepr./geprüft					0365 0101 2			
Norm/standard					Version CE			
GAH ALBERTS								

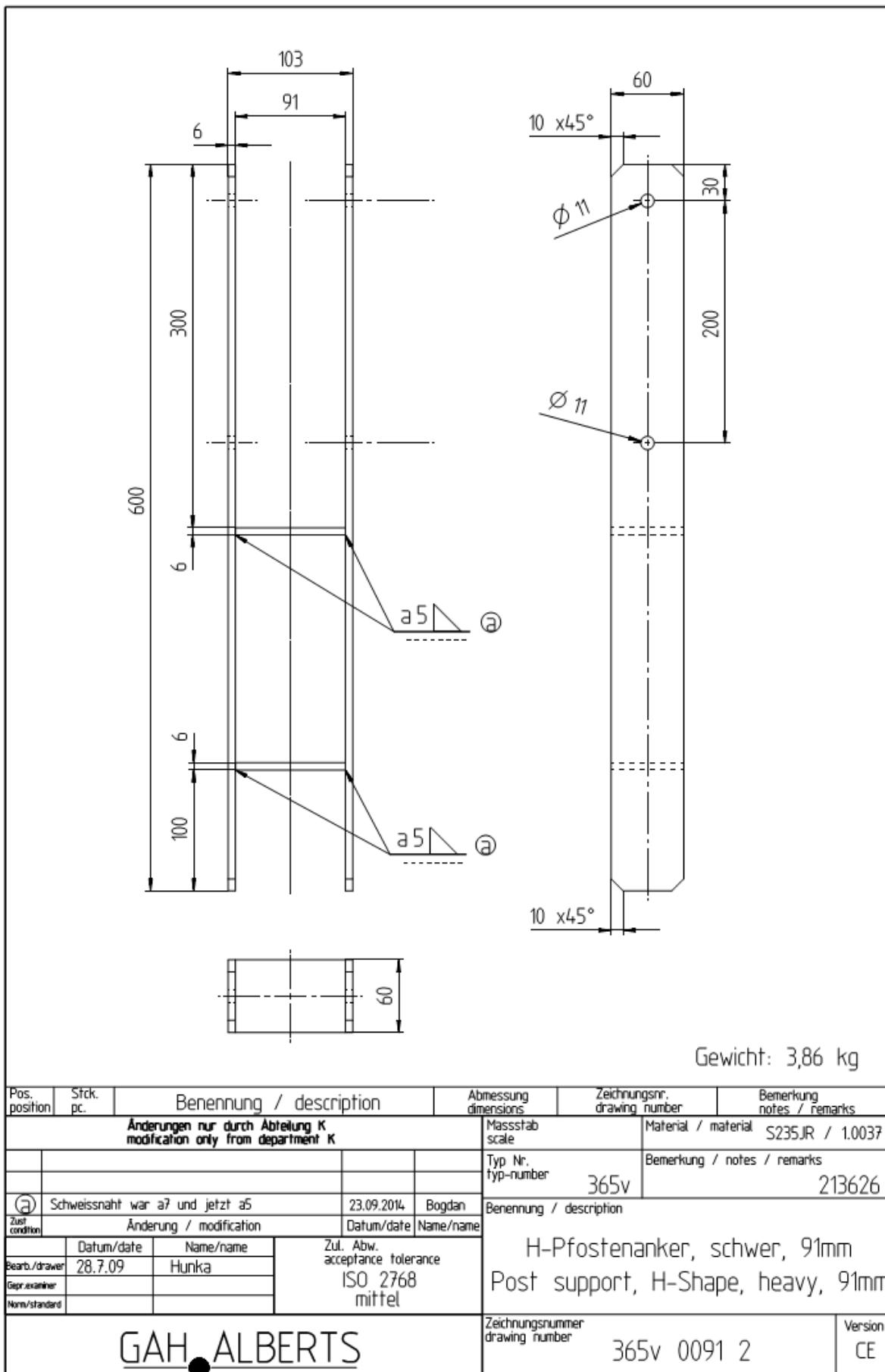


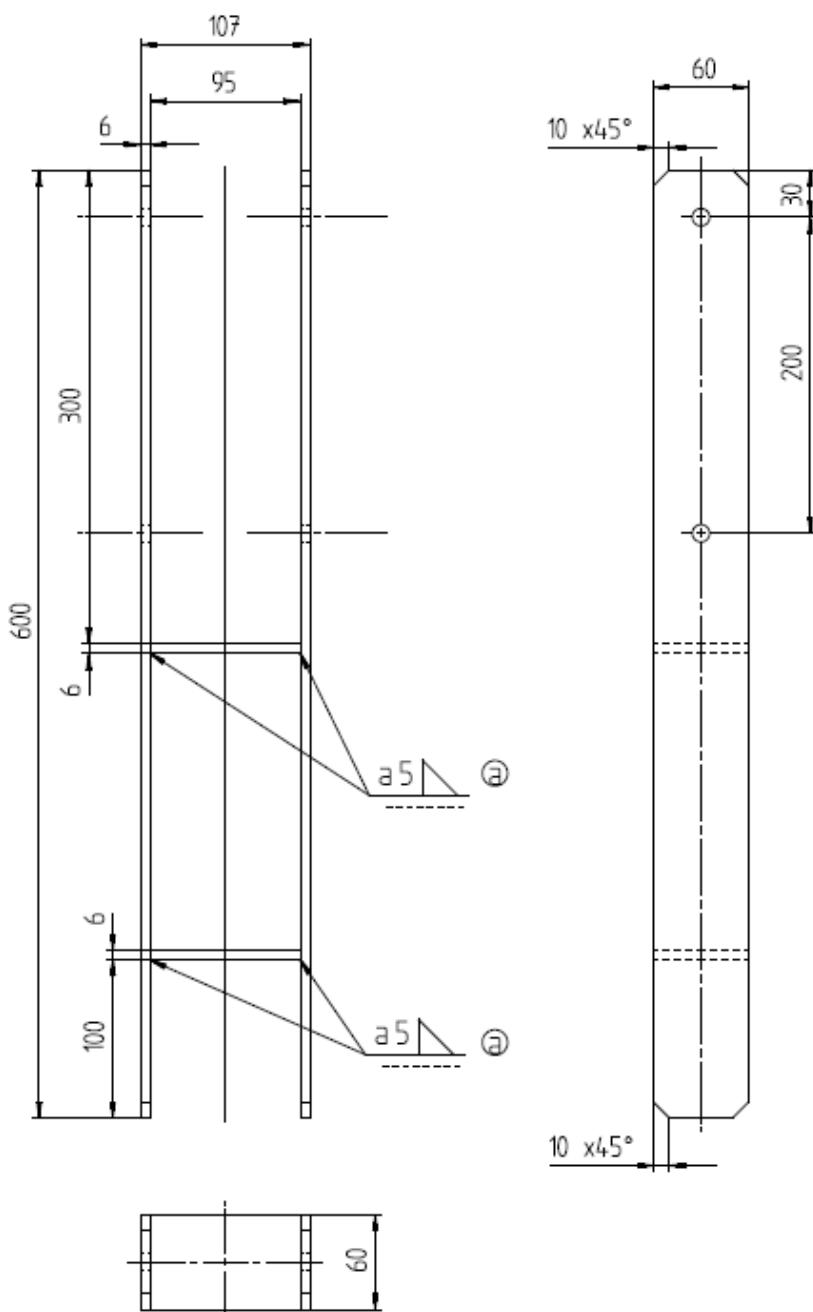




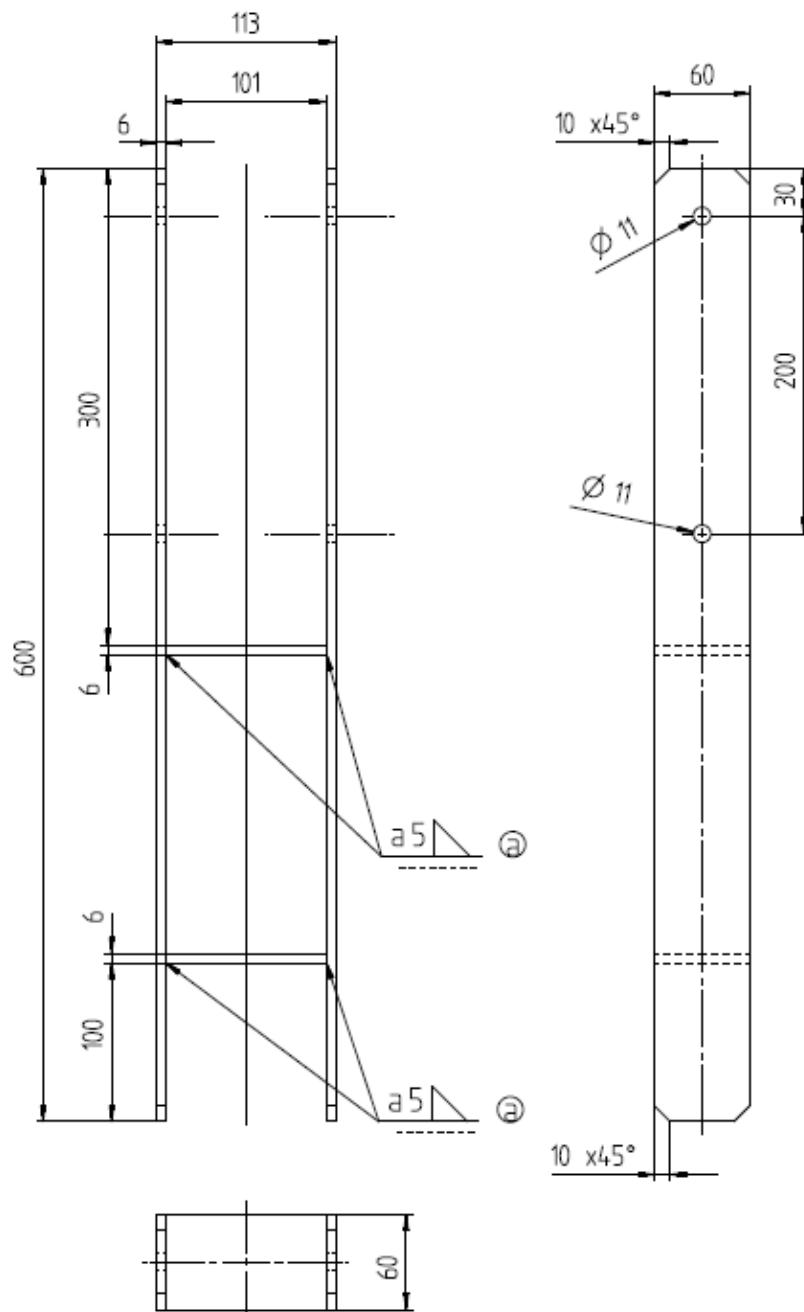
Gewicht: 3,357 kg

Pos. position	Sch. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
		Änderungen nur durch Abteilung K modification only from department K			Massstab scale	Material / material	S235JR / 1.0037		
					Typ Nr. typ-number	Bemerkung / notes / remarks			
					365	203948			
(1)	Schweissnaht war a7 und jetzt a5	23.09.2014	Bogdan	Benennung / description					
Zust. condition	Aenderung / modification	Datum/date	Name/name	H-Pfostenanker, 121mm					
	Datum/date	Name/name	Zu. Abw. acceptance tolerance	Post support, H-Shape, 121mm					
Bearb./drawer	31.7.09	Hunka	ISO 2768 mittel	Zeichnungsnr. drawing number					
Gepr./examiner				0365 0121 2					
Norm/standard				Version					
<b>GAH ALBERTS</b>				CE					



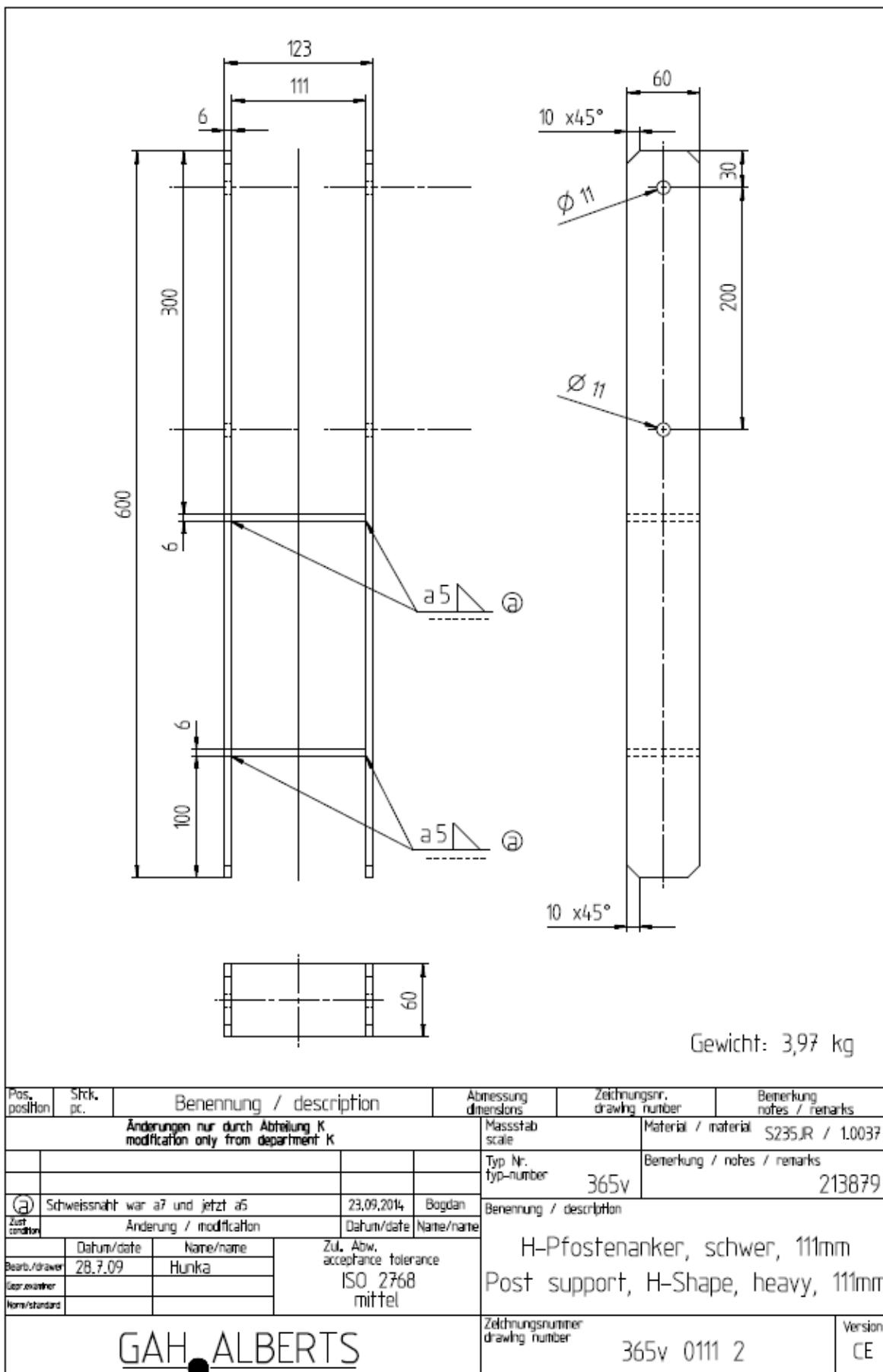


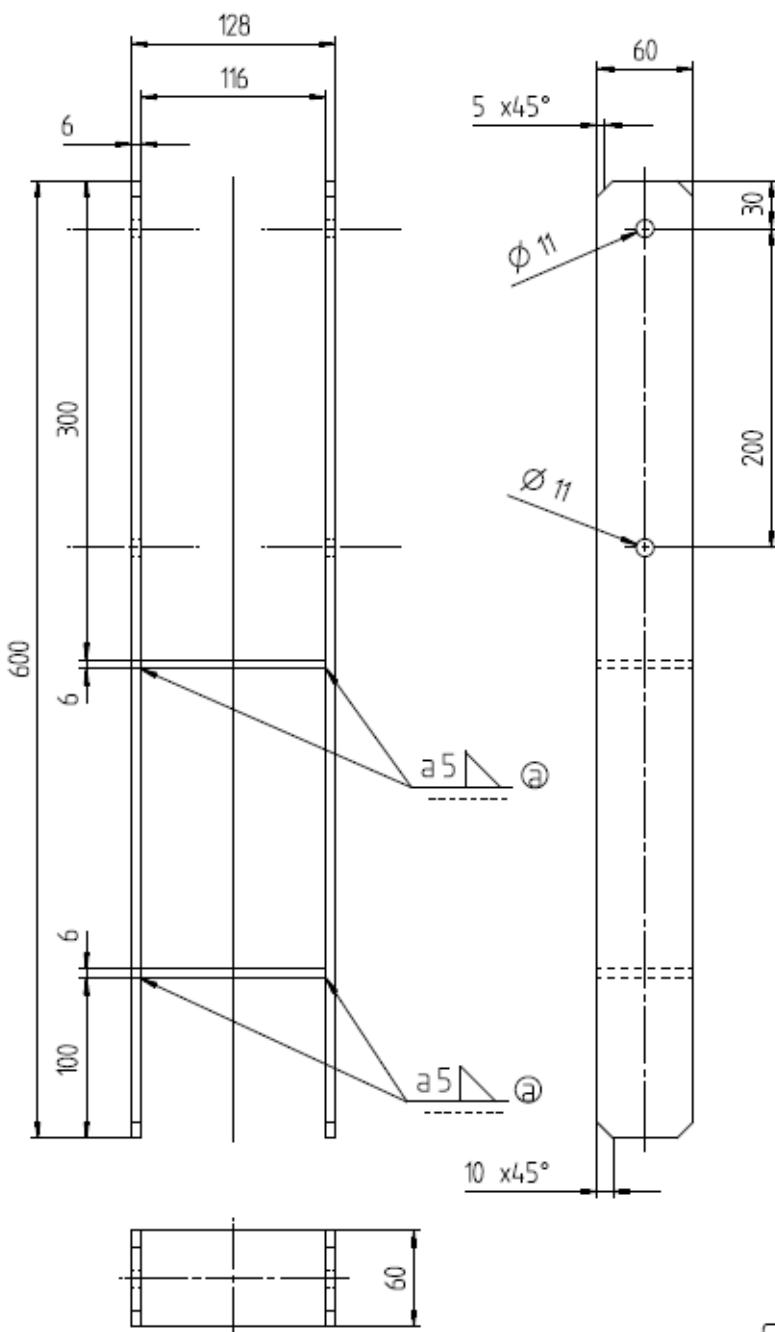
Pos. position	SFrk. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
Änderungen nur durch Abteilung K modification only from department K					Massstab scale	Material / material S235JR / 1.0037			
					Typ Nr. typ-number	Bemerkung / notes / remarks 213886			
(a) Schweißnaht war a7 und jetzt a5			Datum/2014	Bogdan					
Zust. condition	Änderung / modification		Datum/date	Name/name	Benennung / description				
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance ISO 2768 mittel		H-Pfostenanker, schwer, 95mm Post support, H-Shape, heavy, 95mm				
Gepr./gecheckt									
Norm/standard									
<u>GAH ALBERTS</u>					Zeichnungsnr. drawing number	365v 0095 2	Version CE		



Gewicht: 3,92 kg

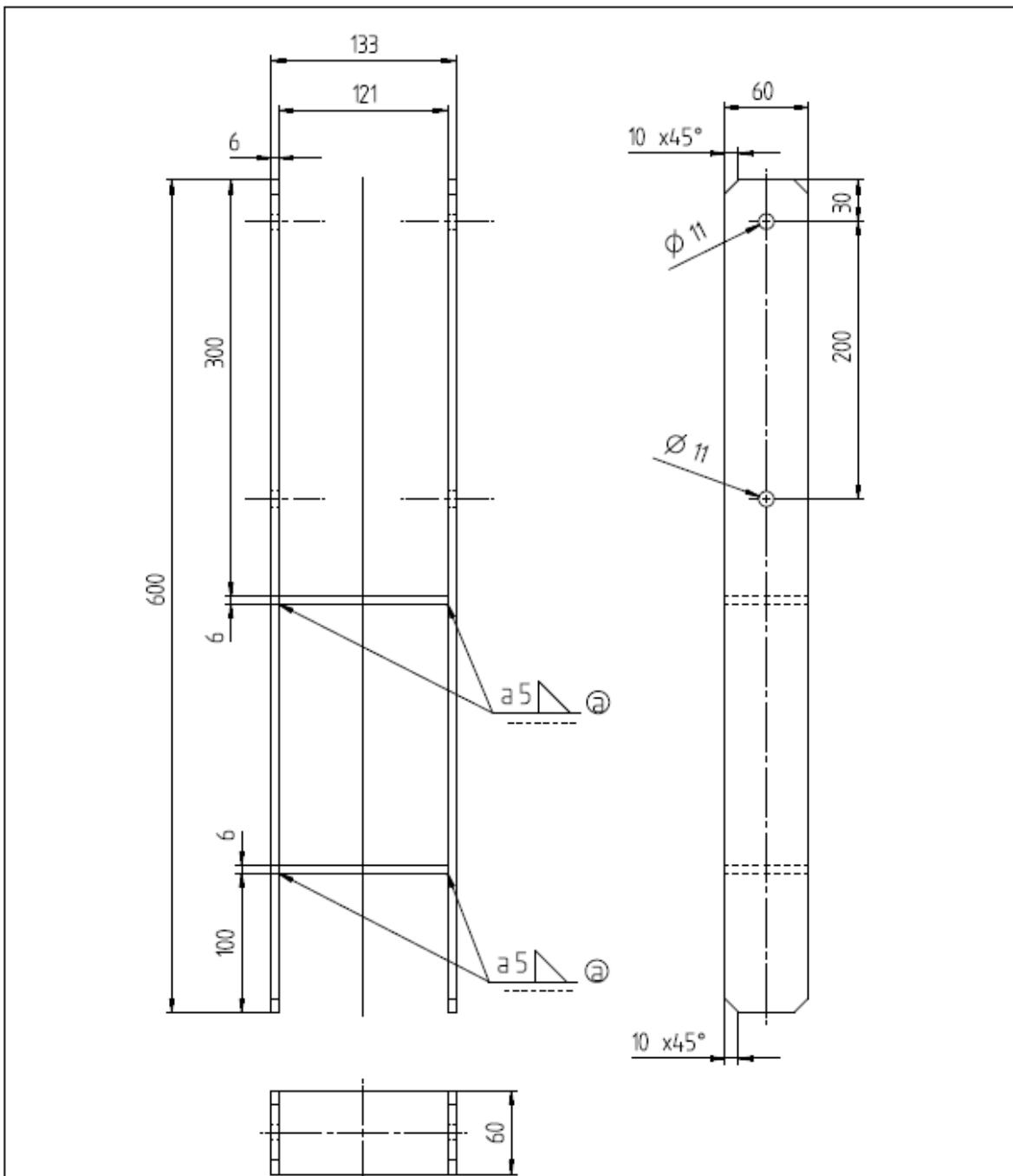
Pos. position	Stck. pc.	Benennung / description			Abmessung dimensions	Zeichnungs drawing number	Bemerkung notes / remarks		
		Änderungen nur durch Abteilung K modification only from department K			Massstab scale	Material / material S35JR / 1.0037			
					Typ Nr. typ-number	Bemerkung / notes / remarks 365v 213831			
②		Schweißnaht war a7 und jetzt a5	Datum/2014	Bogdan					
Zust. condition		Änderung / modification	Datum/date	Name/name	Benennung / description				
Bearb./drawer					H-Pfostenanker, schwer, 101mm				
Über-examiner					Post support, H-Shape, heavy, 101mm				
Norm/standard									
<u>GAH ALBERTS</u>					Zeichnungsnr. drawing number	365v 0101 2	Version CE		





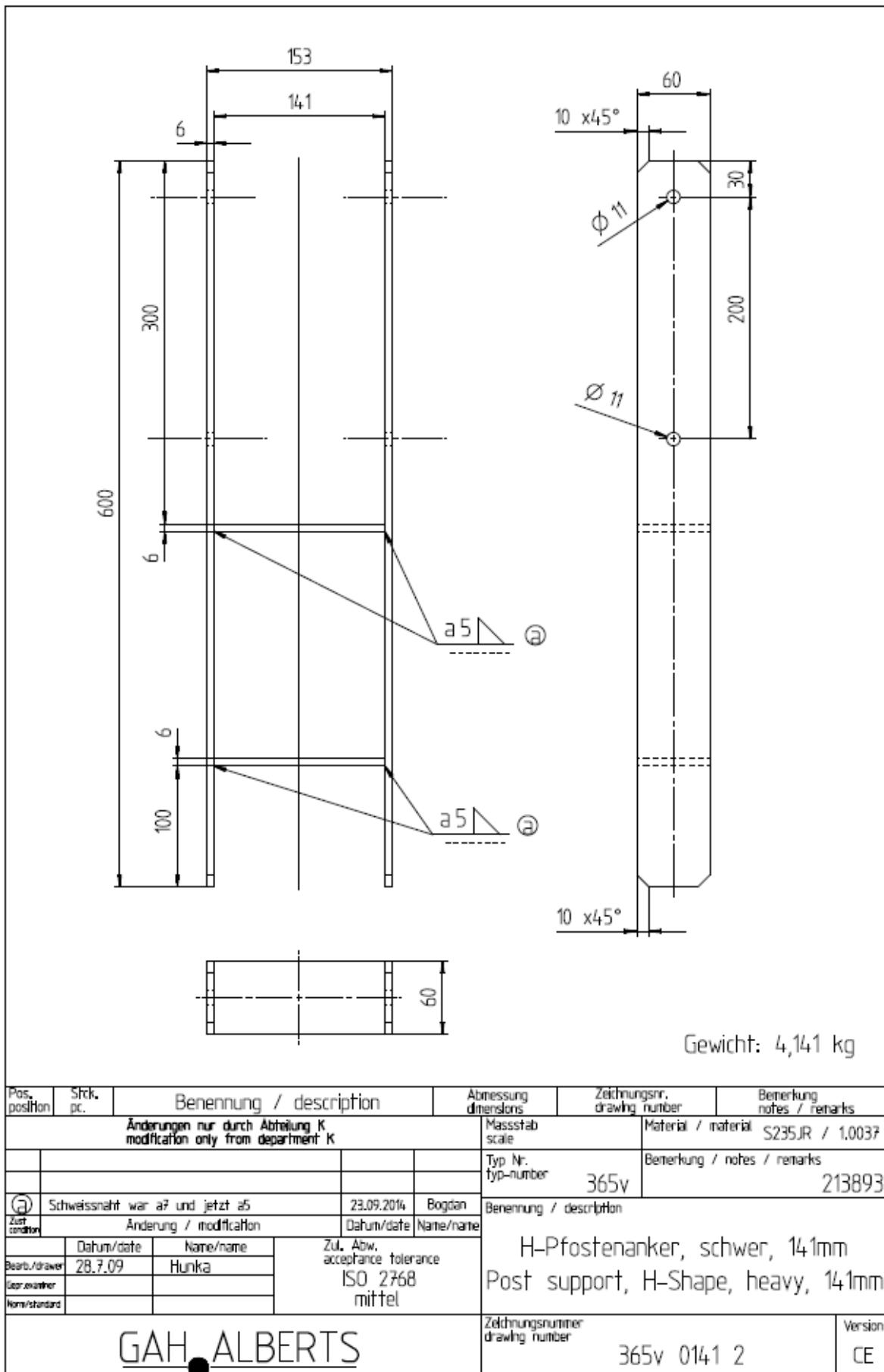
Gewicht: 4,0 kg

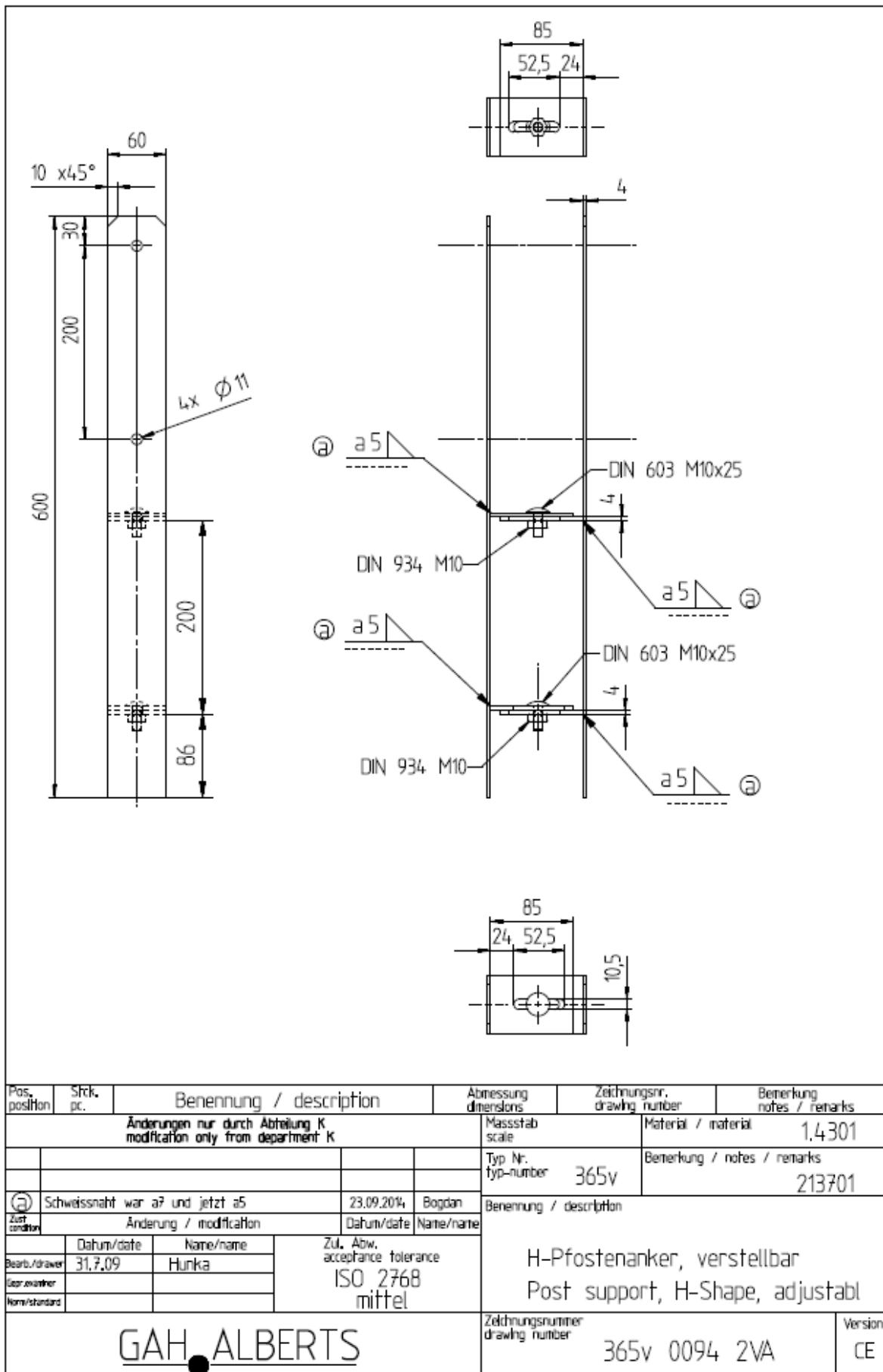
Pos. position	Stck. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
		Änderungen nur durch Abteilung K modification only from department K			Maßstab scale	Material / material	S235JR / 1.0037		
					Typ Nr. typ-number	Bemerkung / notes / remarks			
					365v	213916			
(A)	Schweißnaht war a7 und jetzt a5	23.09.2014	Bogdan	Benennung / description					
Zust. condition	Änderung / modification	Datum/date	Name/name	H-Pfostenanker, schwer, 116mm					
				Post support, H-Shape, heavy, 116mm					
Bearb./drawer	Datum/date	Name/name	Zu. Abw. acceptance tolerance						
Gez. zeichner	28.7.09	Hunka	ISO 2768						
Norm/standard			mittel						
<b>GAH ALBERTS</b>				Zeilenummer drawing number	365v 0116 2		Version CE		

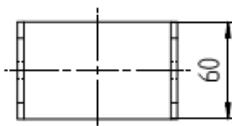
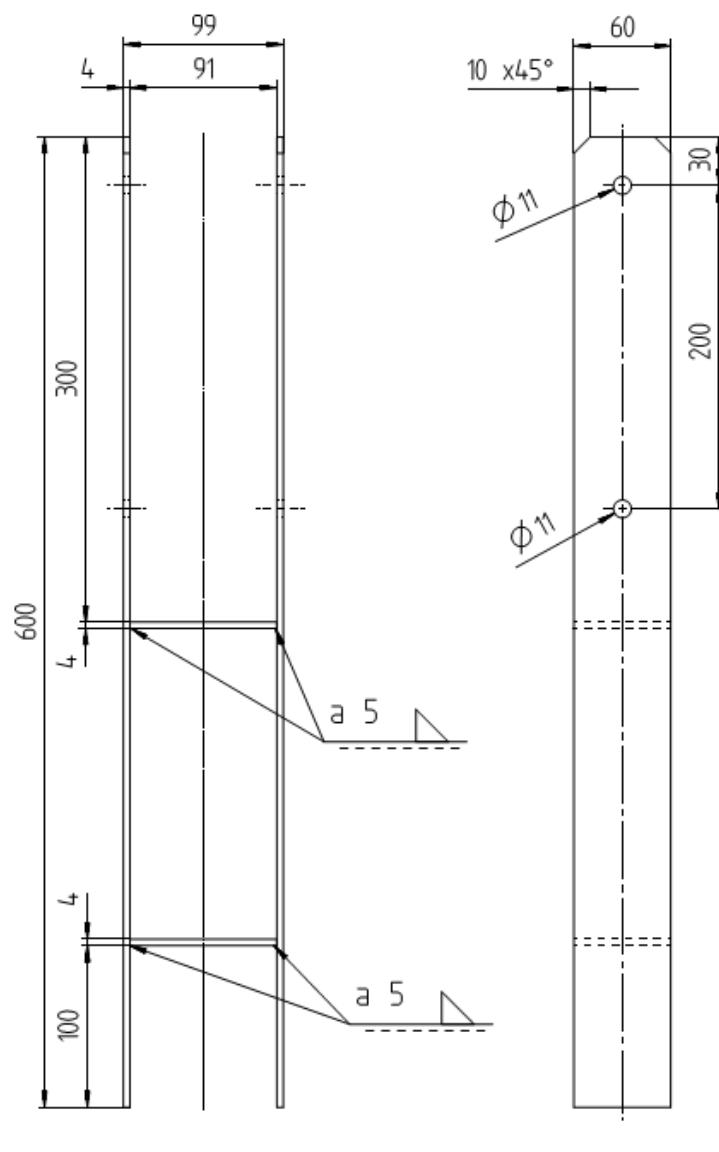


Gewicht: 4,03 kg

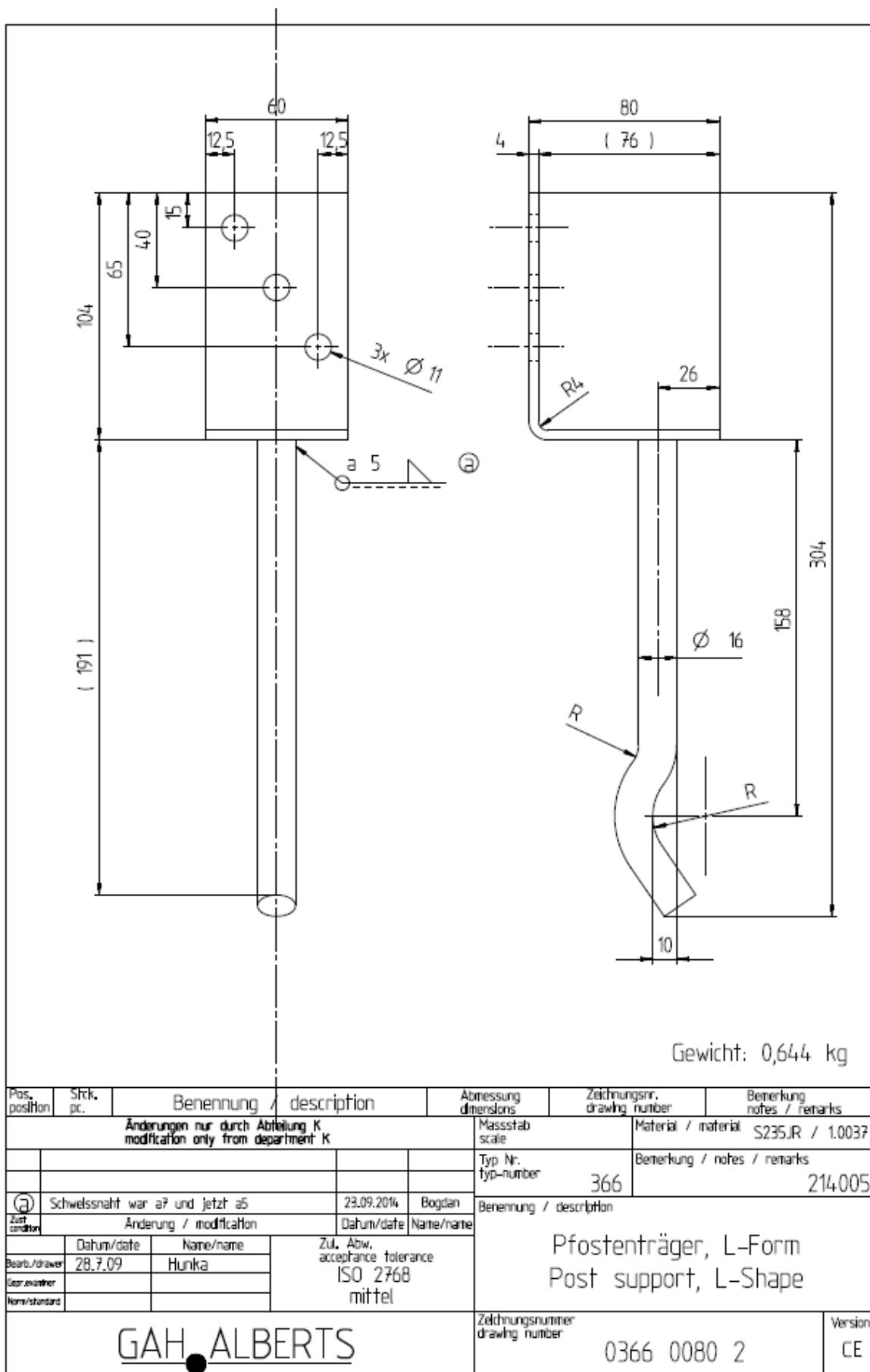
Pos. position	Stck. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
Änderungen nur durch Abteilung K modification only from department K					Massstab scale	Material / material S235JR / 1.0037			
b	war 213848				Typ Nr. typ-number 365v	Bemerkung / notes / remarks 213848			
(a)	Schweißnaht war a7 und jetzt a5	23.09.2014	Bogdan	Benennung / description					
Zust. condition	Aenderung / modification	Datum/date	Name/name	H-Pfostenanker, schw, 121mm Post support, H-Shape, heavy, 121mm					
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance ISO 2768 mittel	Zeichnungsnr. drawing number 365v 0121 2					
User/zeichner	28.7.09	Hunka		Version CE					
Kont./standard									
GAH ALBERTS									

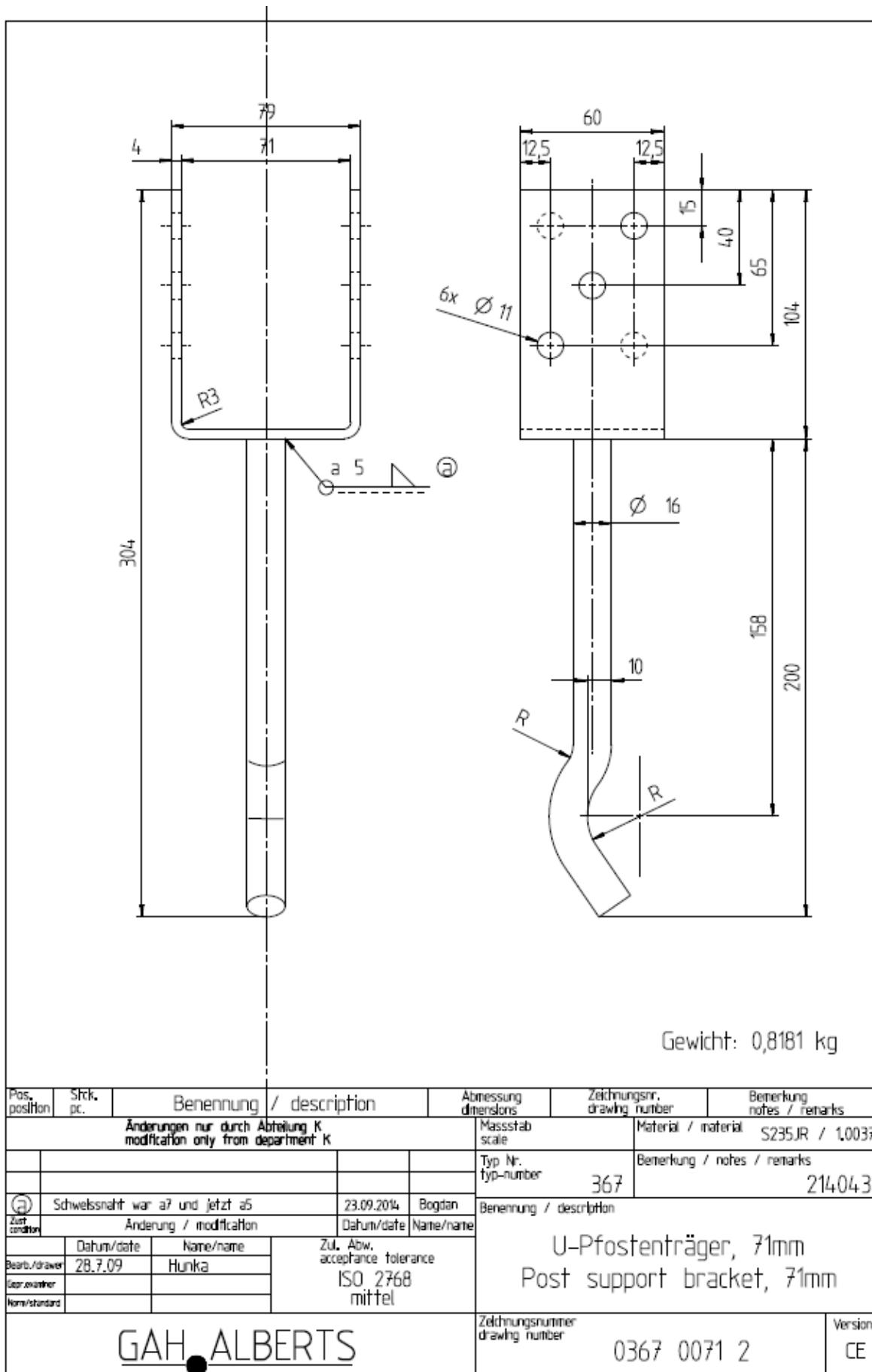


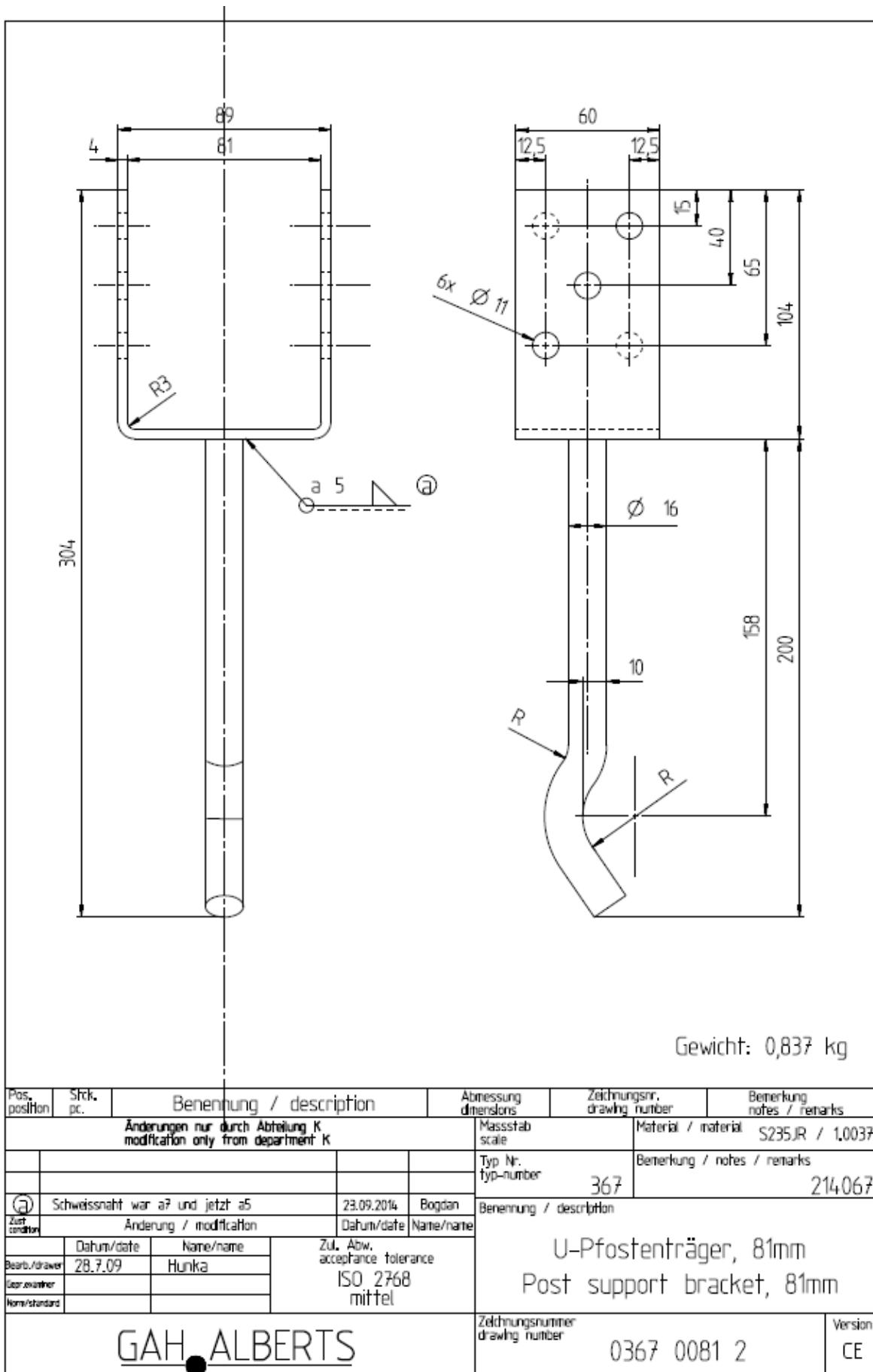


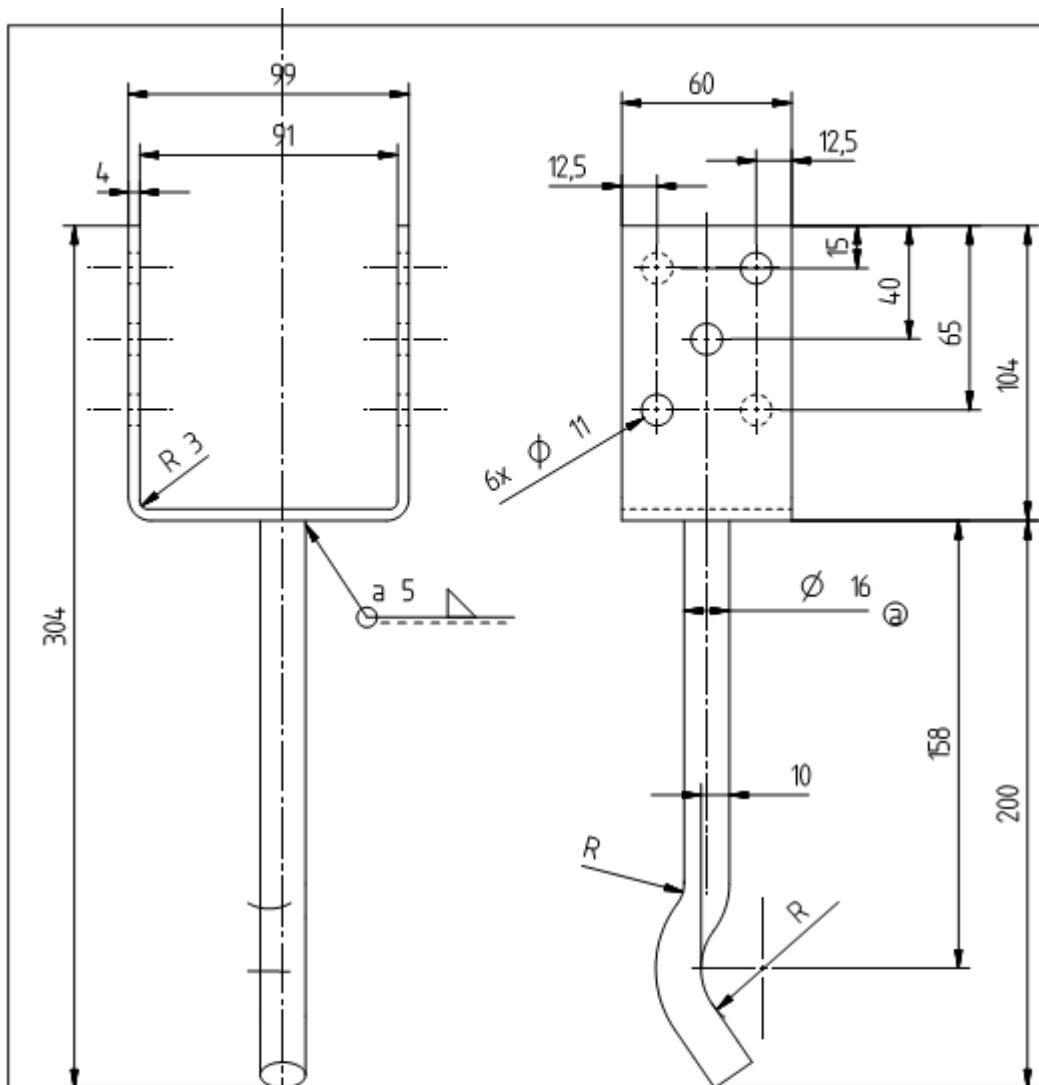


Pos. position	Stck. pc.	Benennung / description		Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks
<b>Änderungen nur durch Abteilung K modification only from department K</b>				Massstab scale	Material / material	1.4301
				Typ Nr. typ-number	Bemerkung / notes / remarks	
				365	213718	
Zust. condition	Änderung / modification		Datum/date	Name/name	Benennung / description	
Bearb./drawer	Datum/date	Name/name			H-Pfostenanker	
Gepr./examiner					Post support, H-Shape	
Norm/standard					Zeichnungsnr. drawing number	Version
<u>GAH ALBERTS</u>				0365 0091 2VA		CE



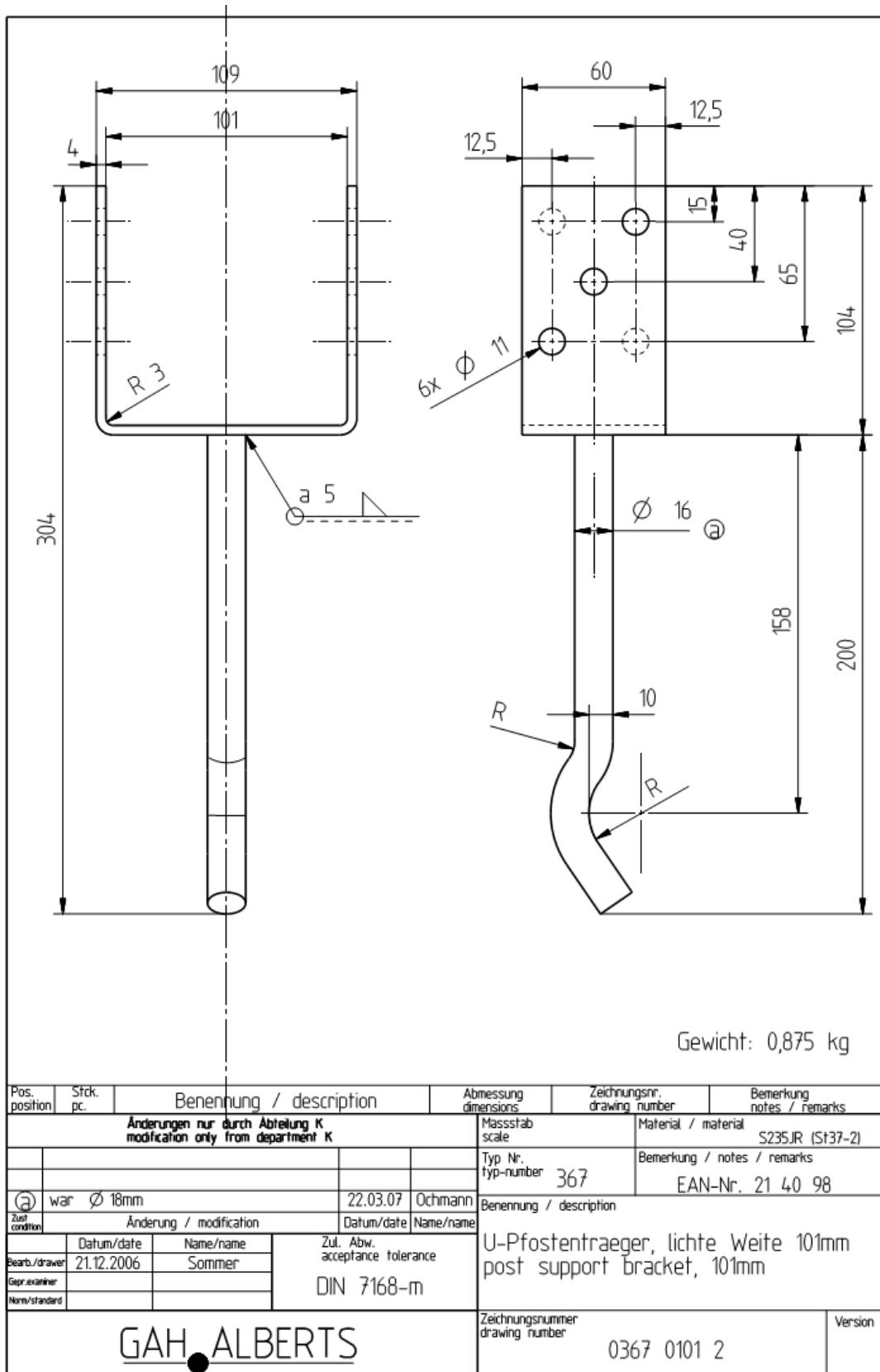


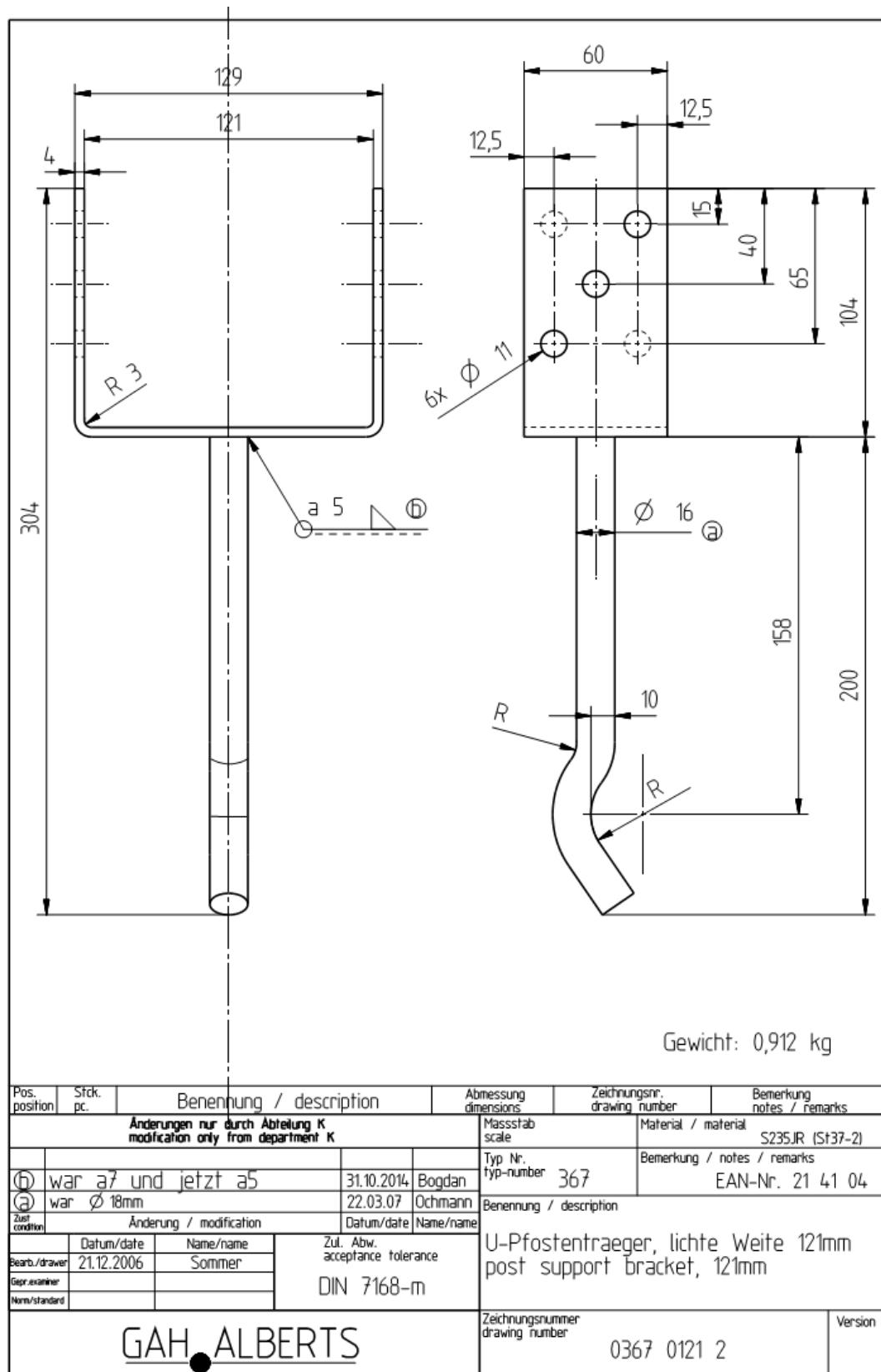


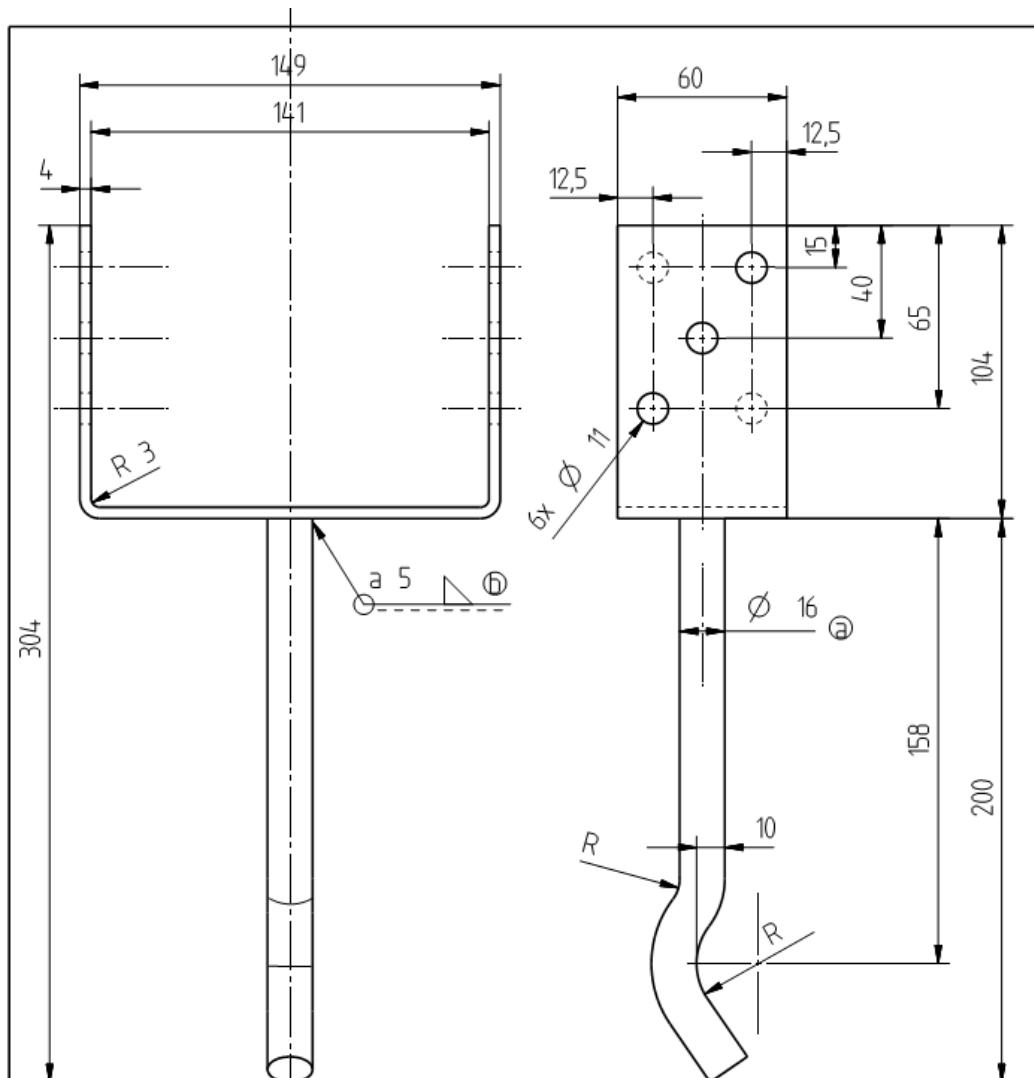


Gewicht: 0,853 kg

Pos. position	Stck. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks
Änderungen nur durch Abteilung K modification only from department K					Massstab scale	Material / material S235JR (St37-2)	
					Typ Nr. typ-number	367	Bemerkung / notes / remarks EAN-Nr. 21 40 74
(@)	war Ø 18mm		22.03.07	Ochmann	Zuordnung / Zuordnung Änderung / modification		
Zustand/ status			Datum/date	Name/name			
Bearb./drawn	Datum/date	Name/name	Zul. Abw. acceptance tolerance		Benennung / description U-Pfostenträger, lichte Weite 91mm post support bracket, 91mm		
Gepr./examined			DIN 7168-m				
Herrn/Standard							
GAH ALBERTS					Zeichnungsnr. drawing number	0367 0091 2	Version

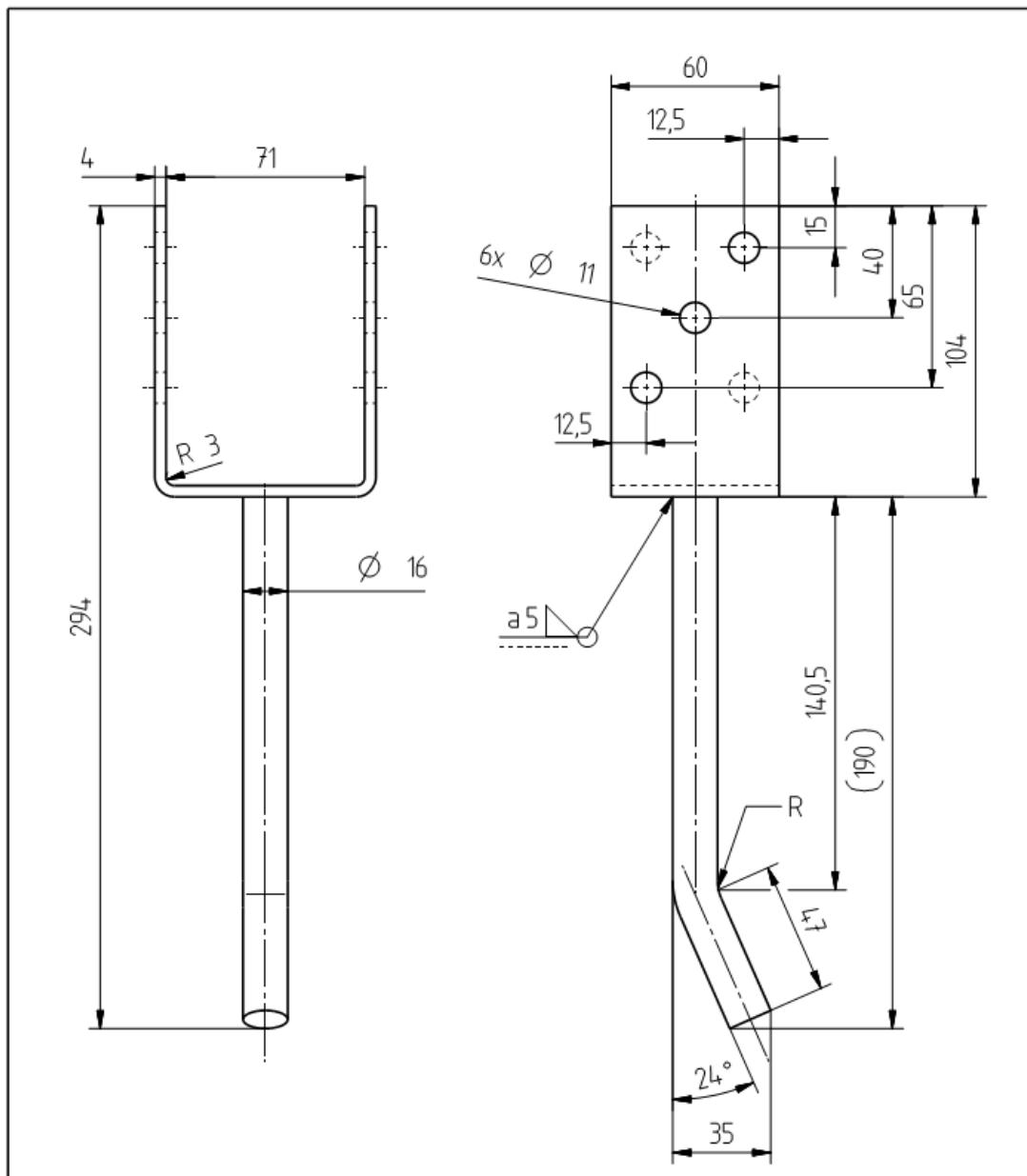




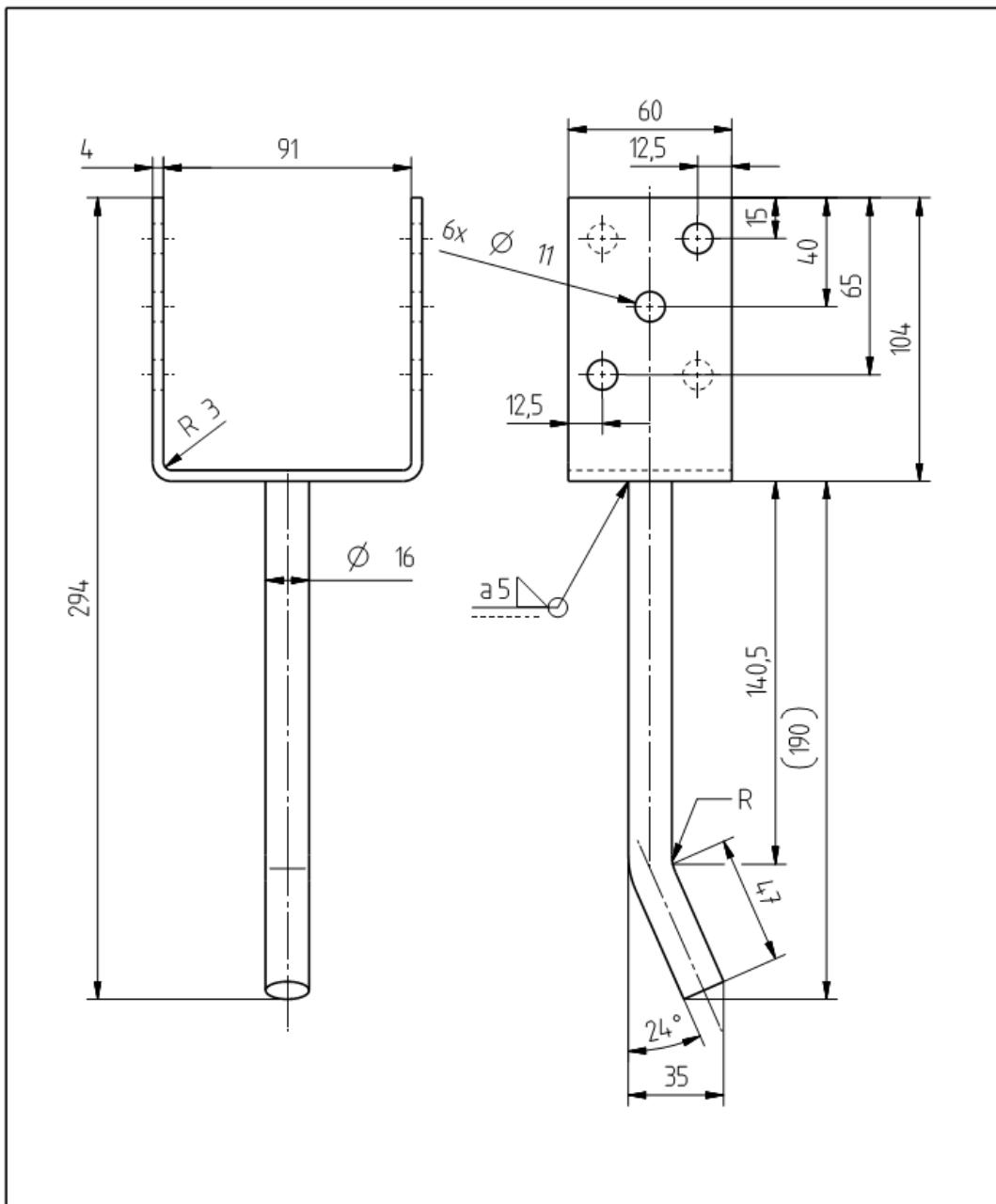


Gewicht: 0,95 kg

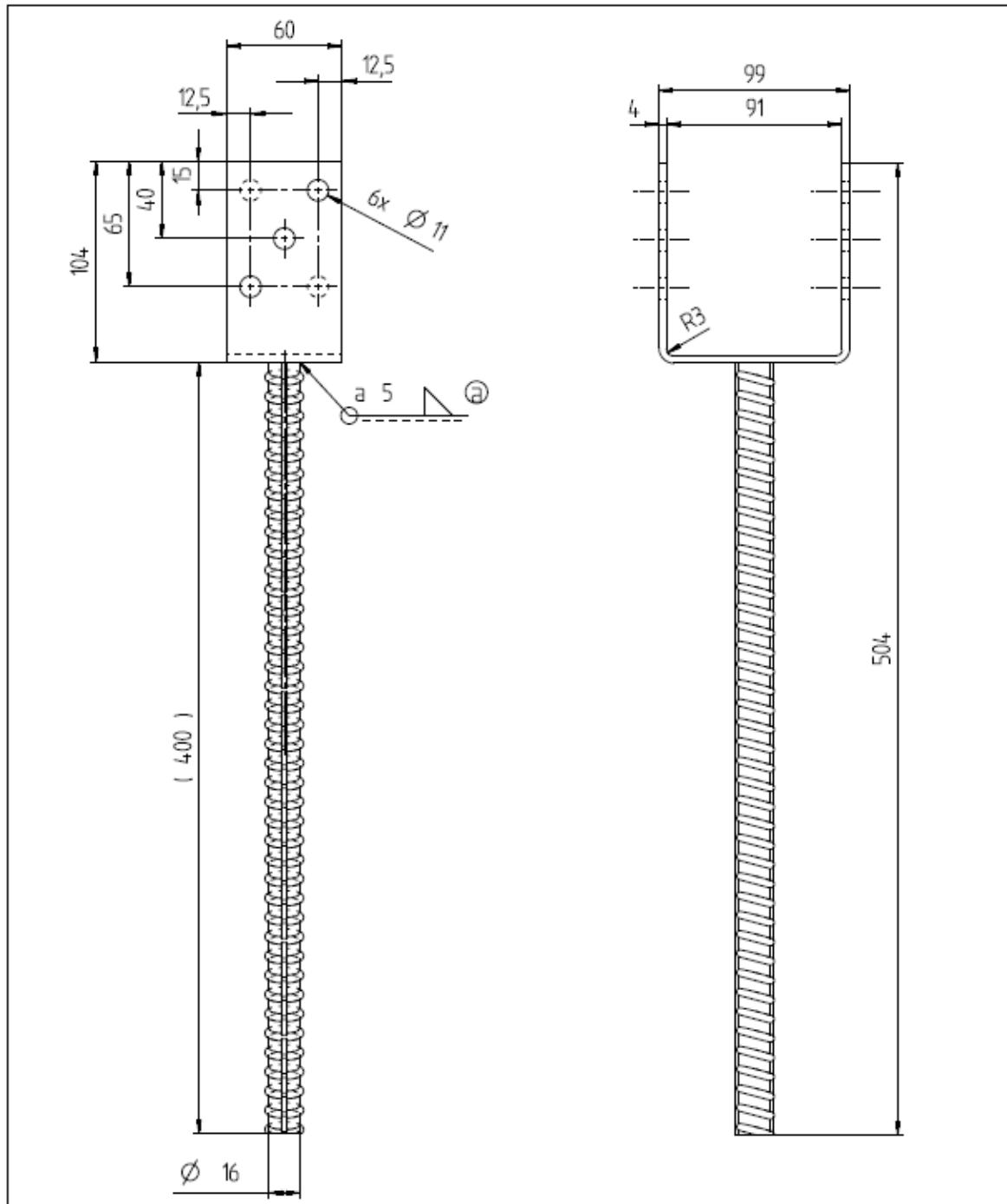
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Änderungen nur durch Abteilung K modification only from department K				Massstab scale	Material / material S235JR (St37-2)	
( <b>a</b> )		(b) war a7 ist jetzt a5		31.10.2014 Bogdan	Typ Nr. typ-number	Bemerkung / notes / remarks EAN-Nr. 21 41 11
( <b>a</b> )		(d) war Ø 18mm		22.03.07 Ochmann		
Zust. condition		Änderung / modification		Datum/date	Name/name	Benennung / description
Bearb./drawer		Datum/date	Name/name	Zul. Abw. acceptance tolerance DIN 7168-m	U-Pfostentraeger, lichte Weite 141mm post support bracket, 141mm	
Gepr./examiner						
Norm/standard						
<u>GAH ALBERTS</u>				Zeichnungsnr. drawing number	0367 0141 2	Version



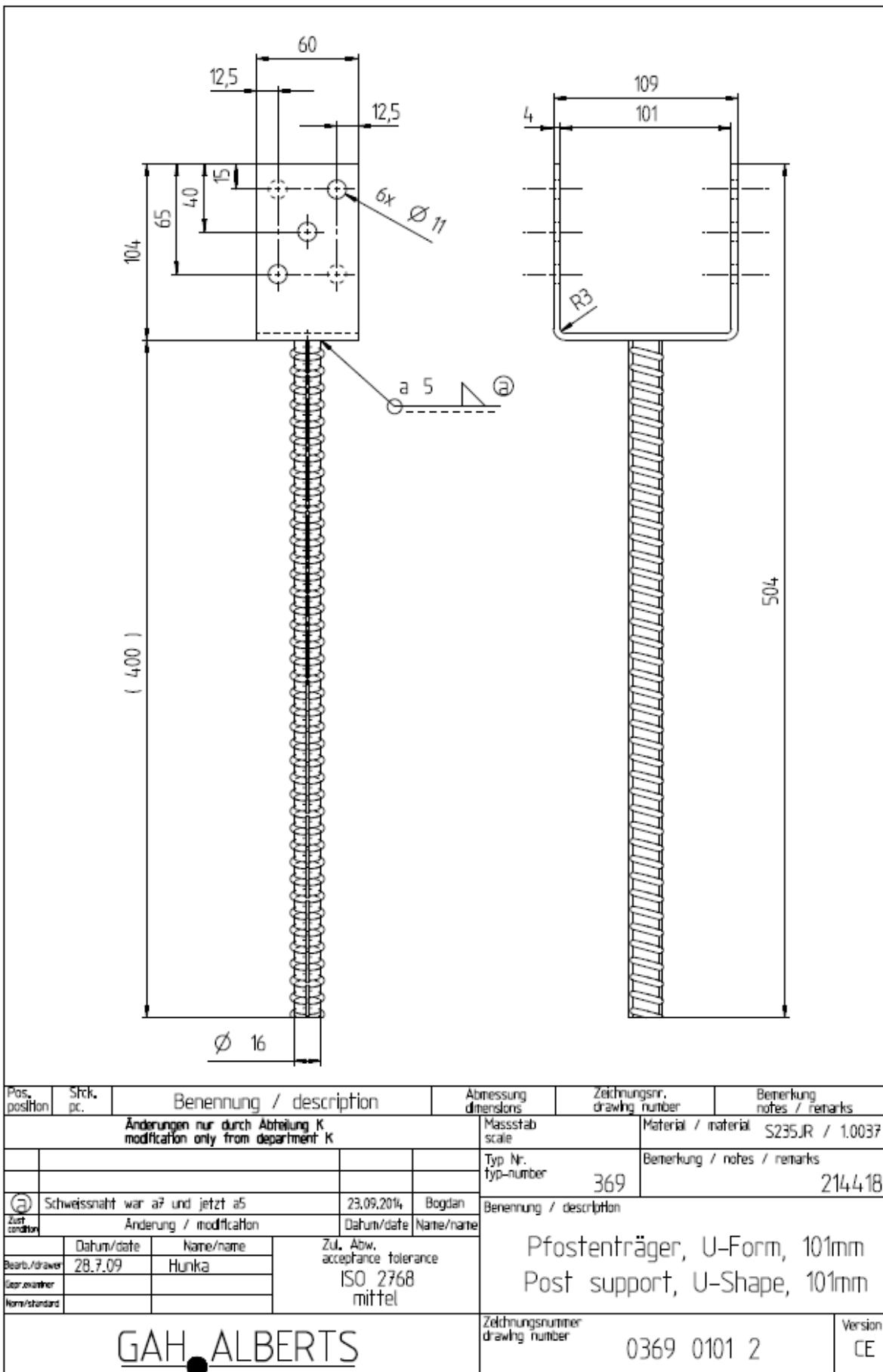
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		Änderungen nur durch Abteilung K modification only from department K		Massstab scale	Material / material	X5CrNi18-10 AISI 304		
				Typ Nr. typ-number	Bemerkung / notes / remarks			
		367		367	EAN-Nr.	214203		
Zust. condition	Änderung / modification		Datum/date	Name/name	Benennung / description			
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance	U-Pfostenträger, lichte Weite 71mm post support bracket, 71mm				
Gopr.examiner	15.12.06	Dierks	DIN 7168-m					
Norm/standard								
<b>GAH ALBERTS</b>				Zeichnungsnr. drawing number	Version			
				0367 0071 2VA				

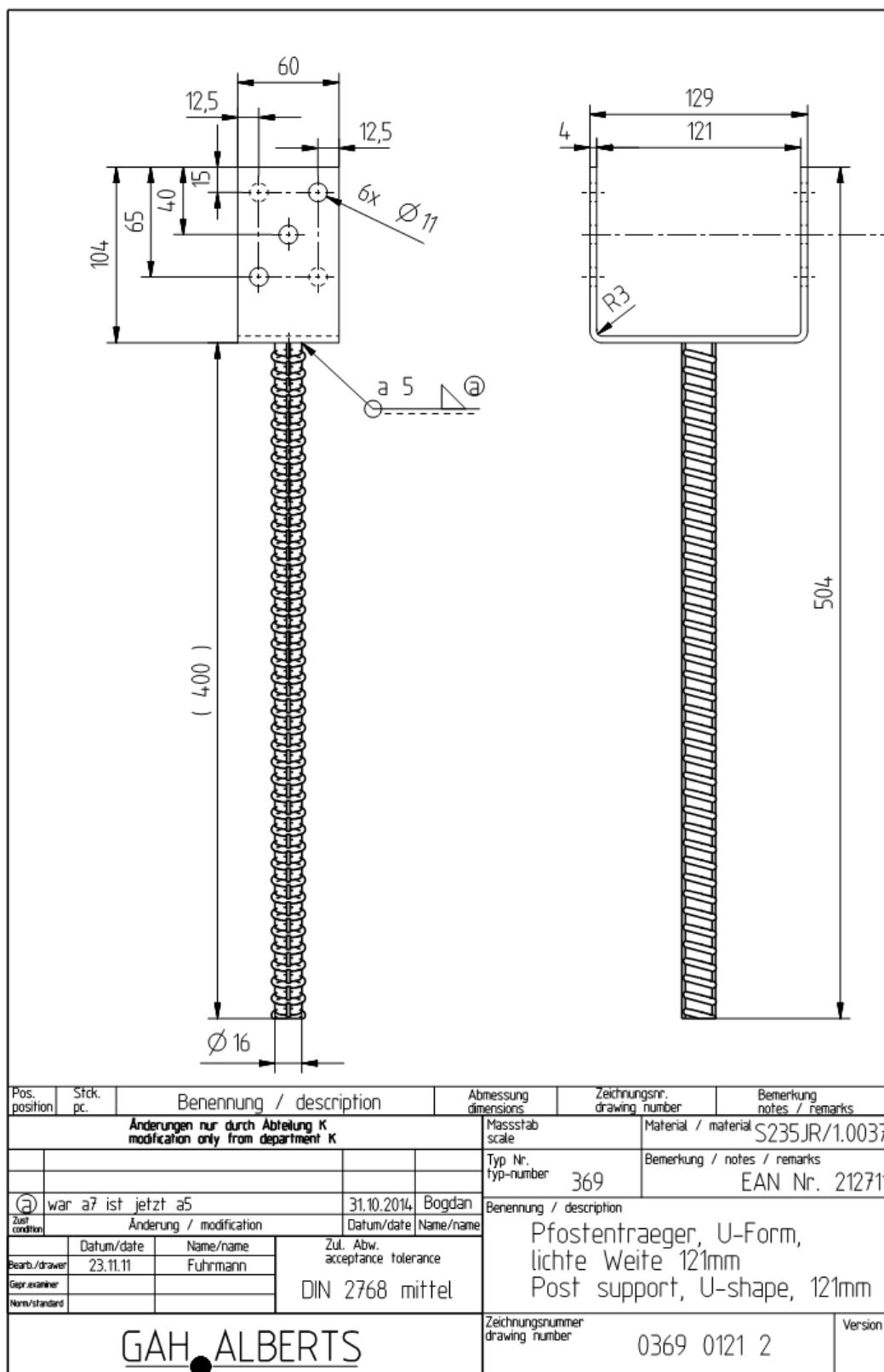


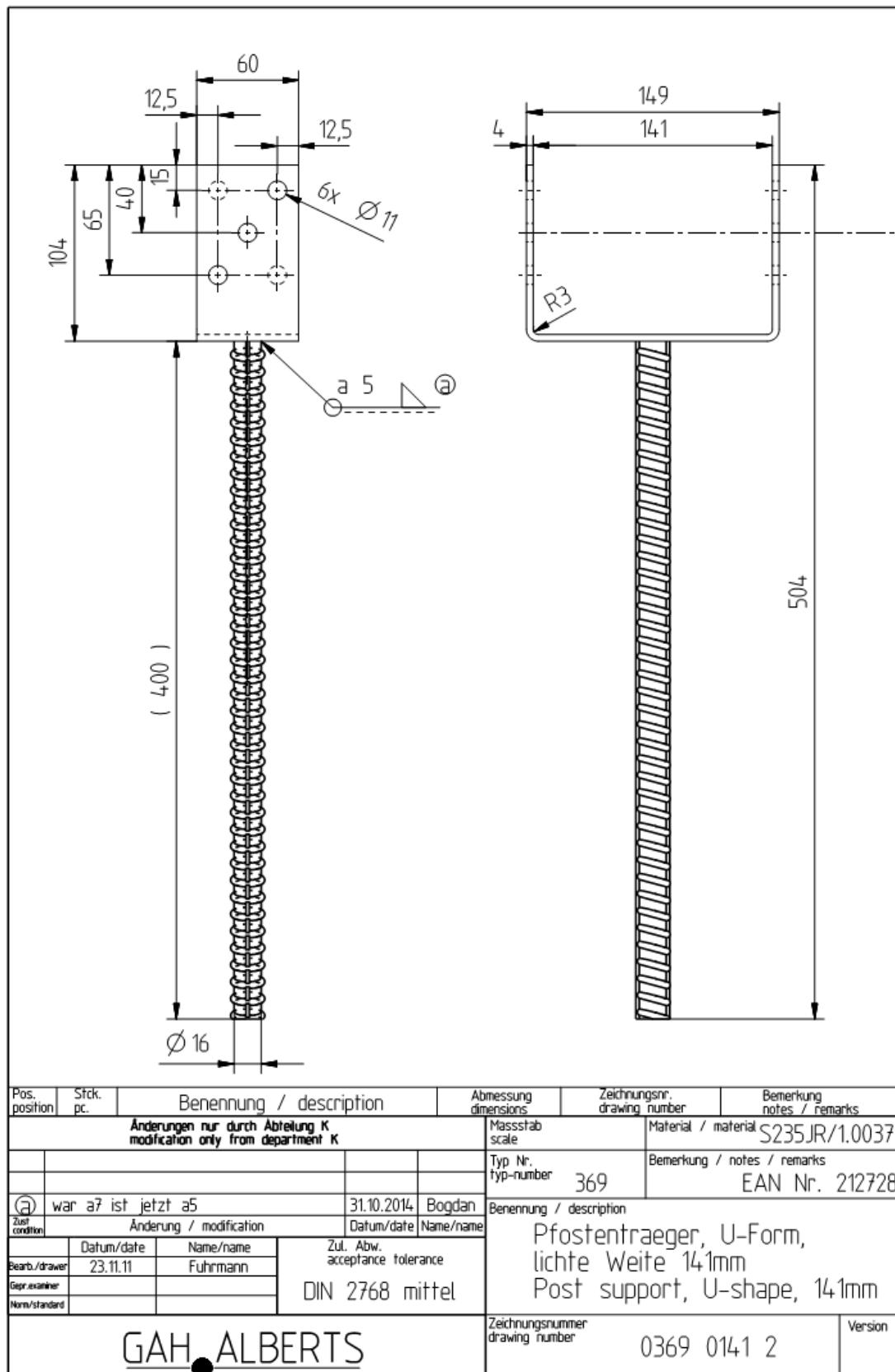
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		Änderungen nur durch Abteilung K modification only from department K		Massstab scale	Material / material 1.4301			
				Typ Nr. typ-number	Bemerkung / notes / remarks 367 EAN-Nr. 214210			
Zust. condition	Änderung / modification		Datum/date	Name/name	Benennung / description			
Pearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance	U-Pfostenträger, lichte Weite 91mm post support bracket, 91mm				
Gep. examiner	15.12.06	Dierks	DIN 7168-m					
Norm/standard								
<u>GAH ALBERTS</u>				Zeichnungsnr. drawing number	Version			
				0367 0091 2VA				

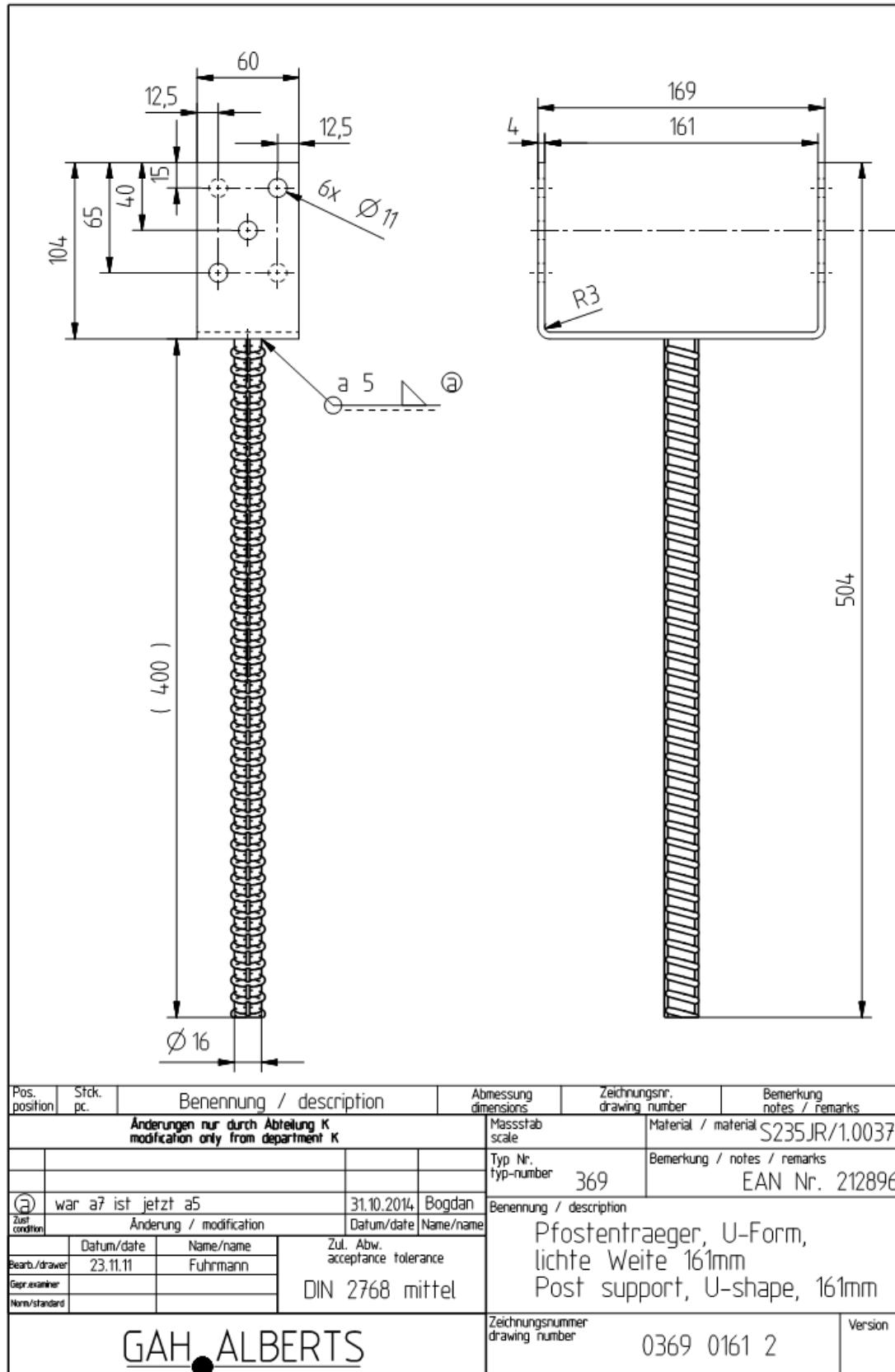


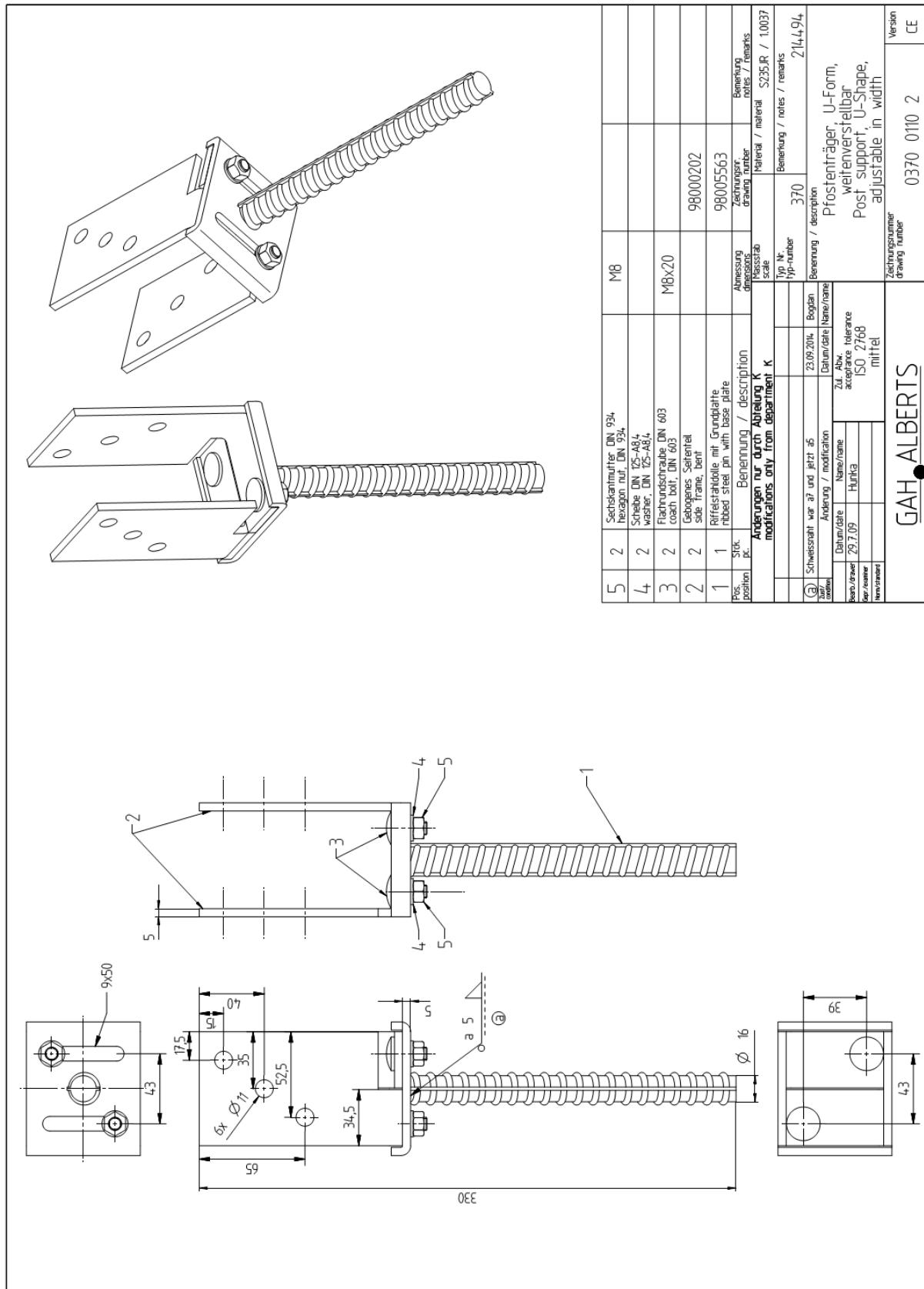
Pos. position	Stck. pc.	Benennung / description		Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks
		Änderungen nur durch Abteilung K modification only from department K		Massstab scale	Material / material	S235JR / 1.0037
				Typ Nr. typ-number	Bemerkung / notes / remarks	
				369	214401	
Zust. condition	(A) Schweißnaht war a7 und jetzt a5		Datum/2014	Bogdan		
Änderung / modification		Datum/date	Name/name			
Bearb./drawer	Datum/2009	Name/name	Zul. Abw. acceptance tolerance ISO 2768 mittel		Pfostenträger, U-Form, 91mm Post support, U-Shape, 91mm	
User/zeichenher						
Kern/standard						
<u>GAH ALBERTS</u>				Zeichnungsnr. drawing number	0369 0091 2	Version CE

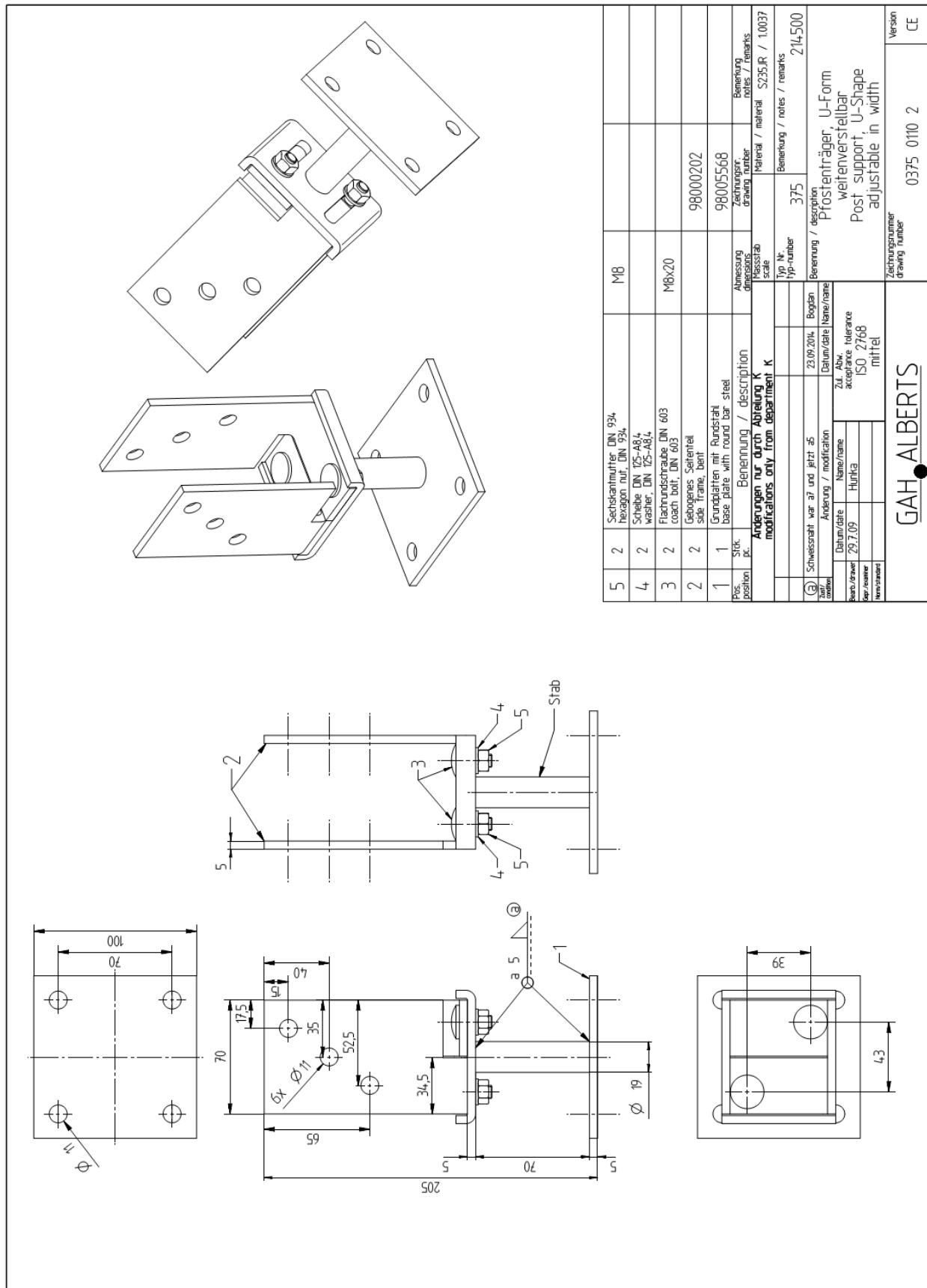


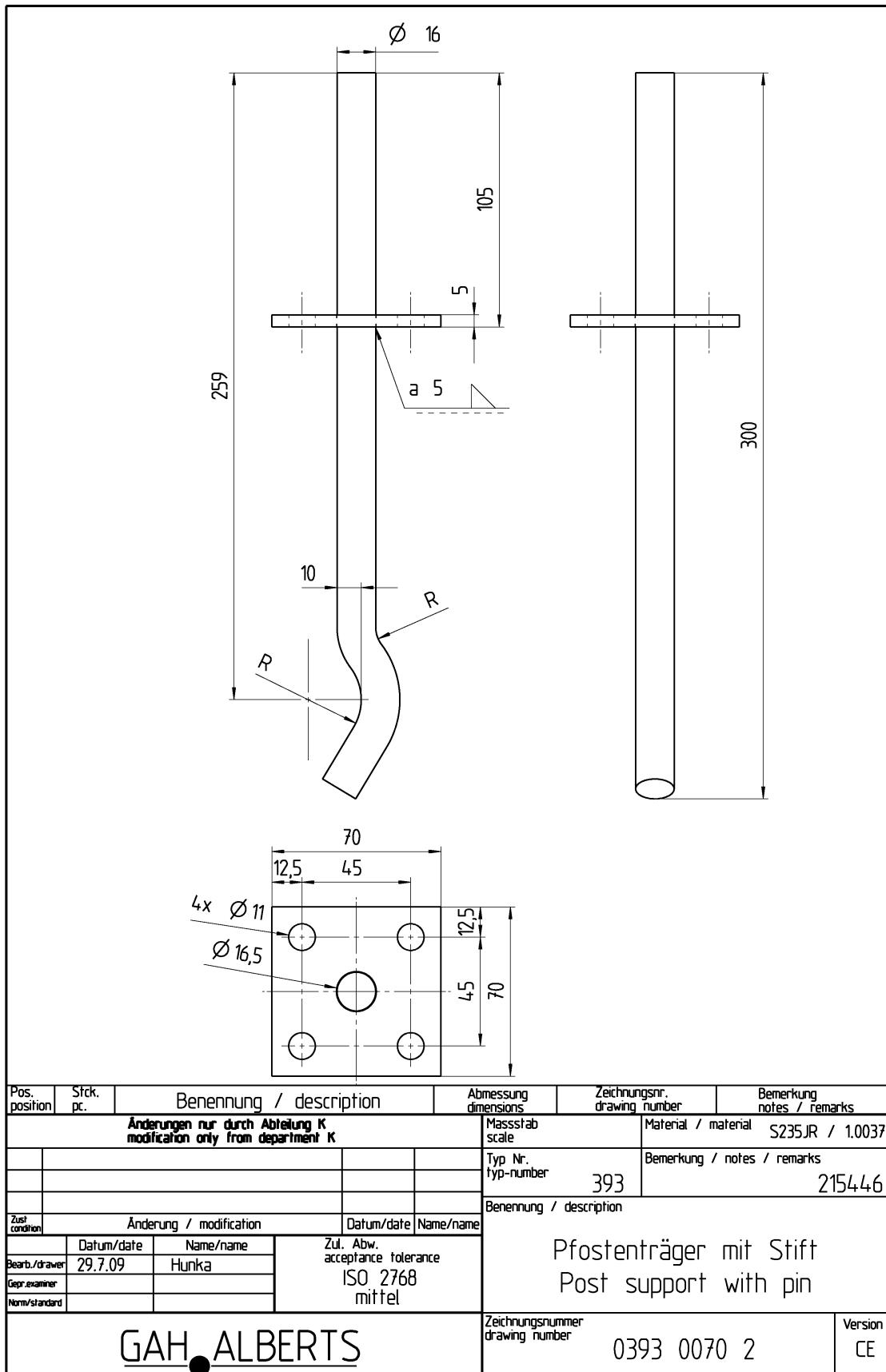


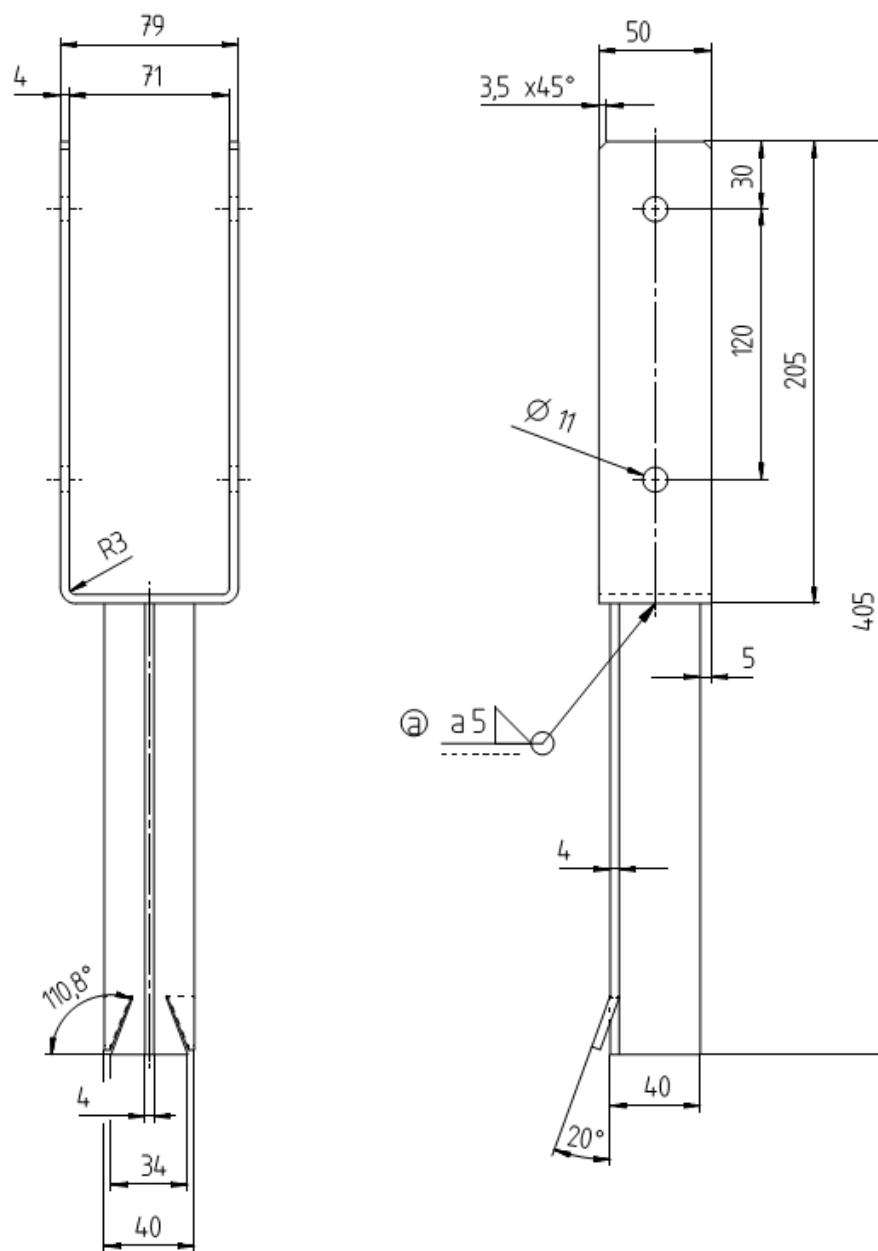






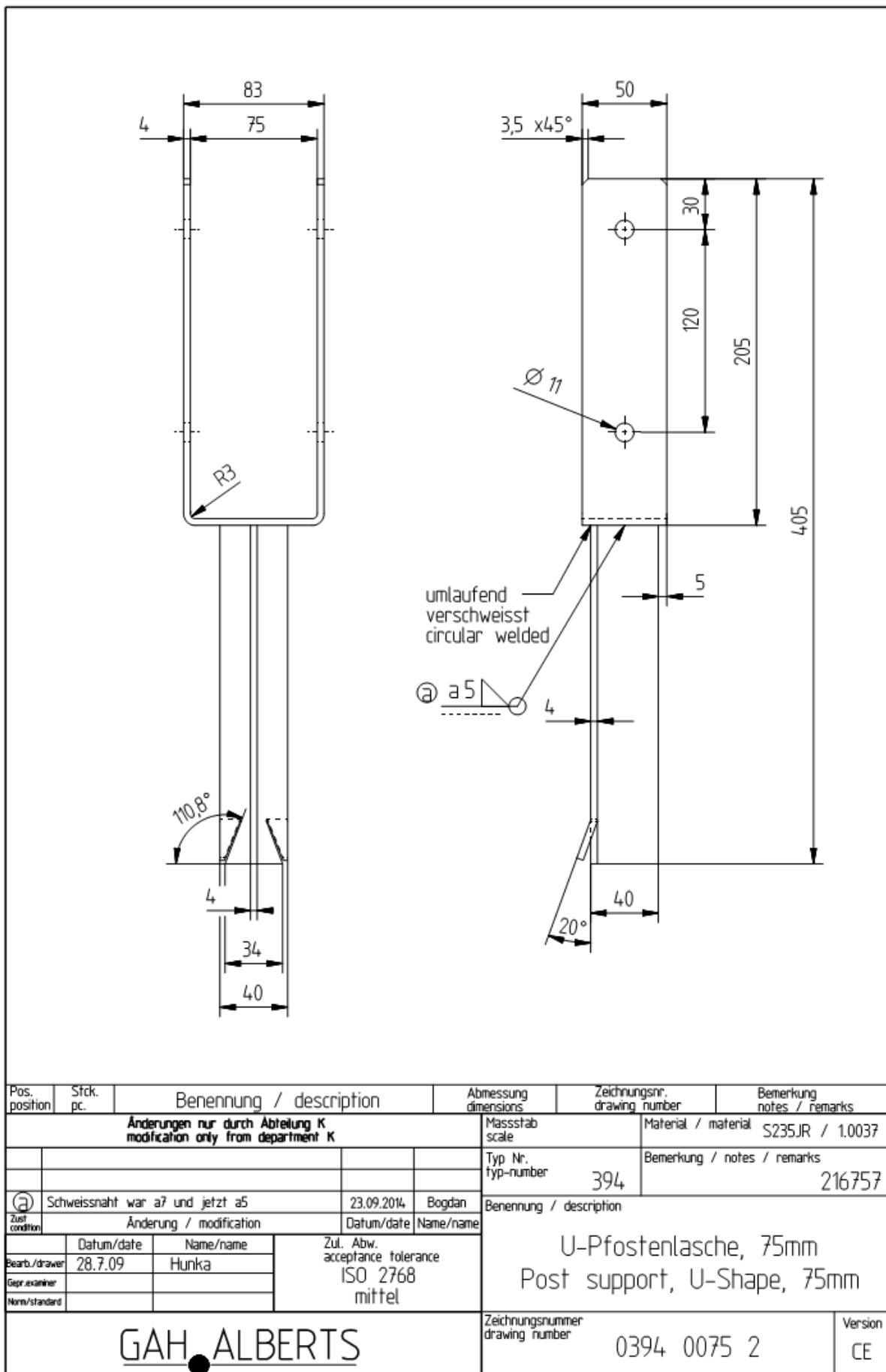


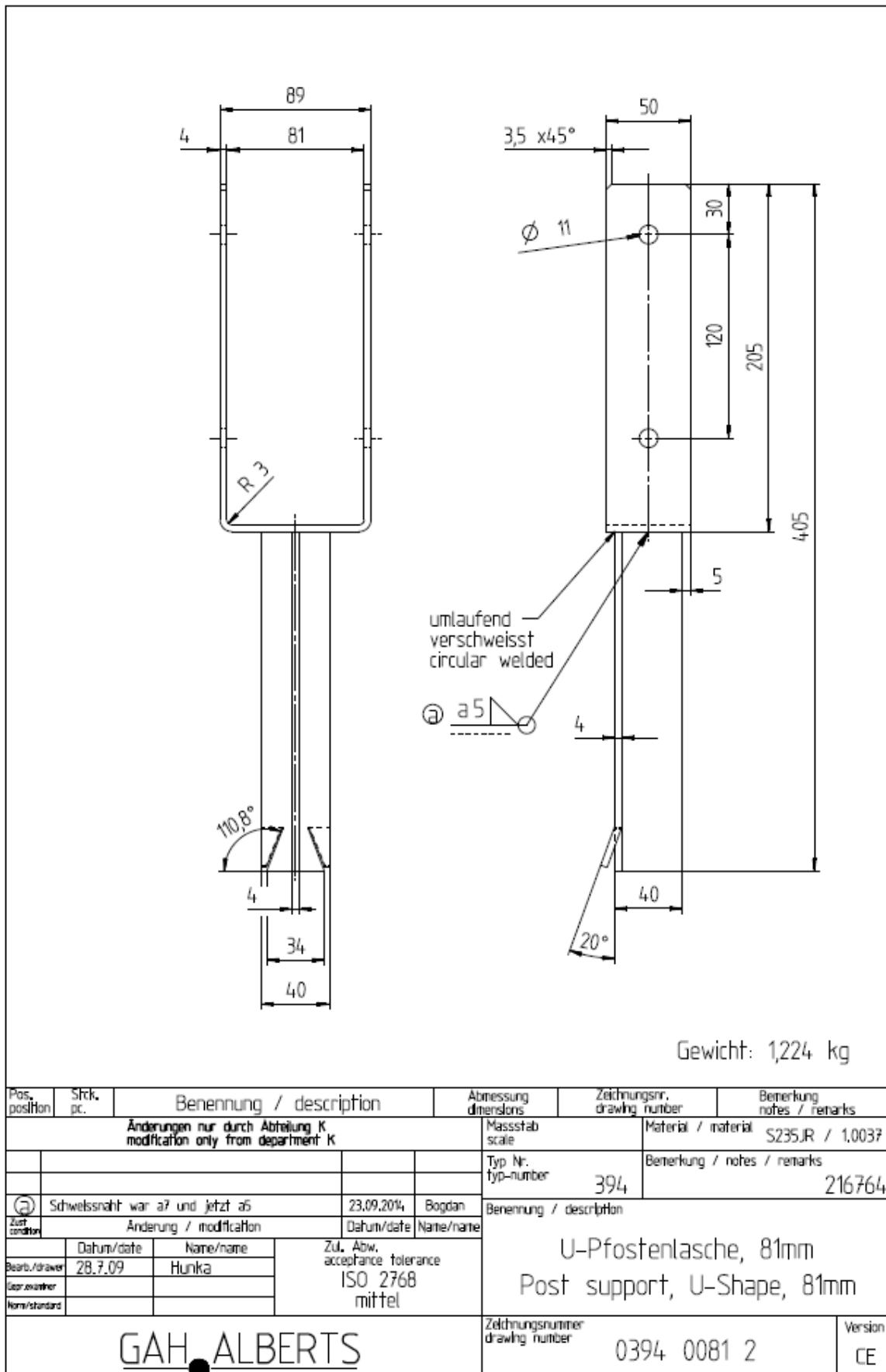


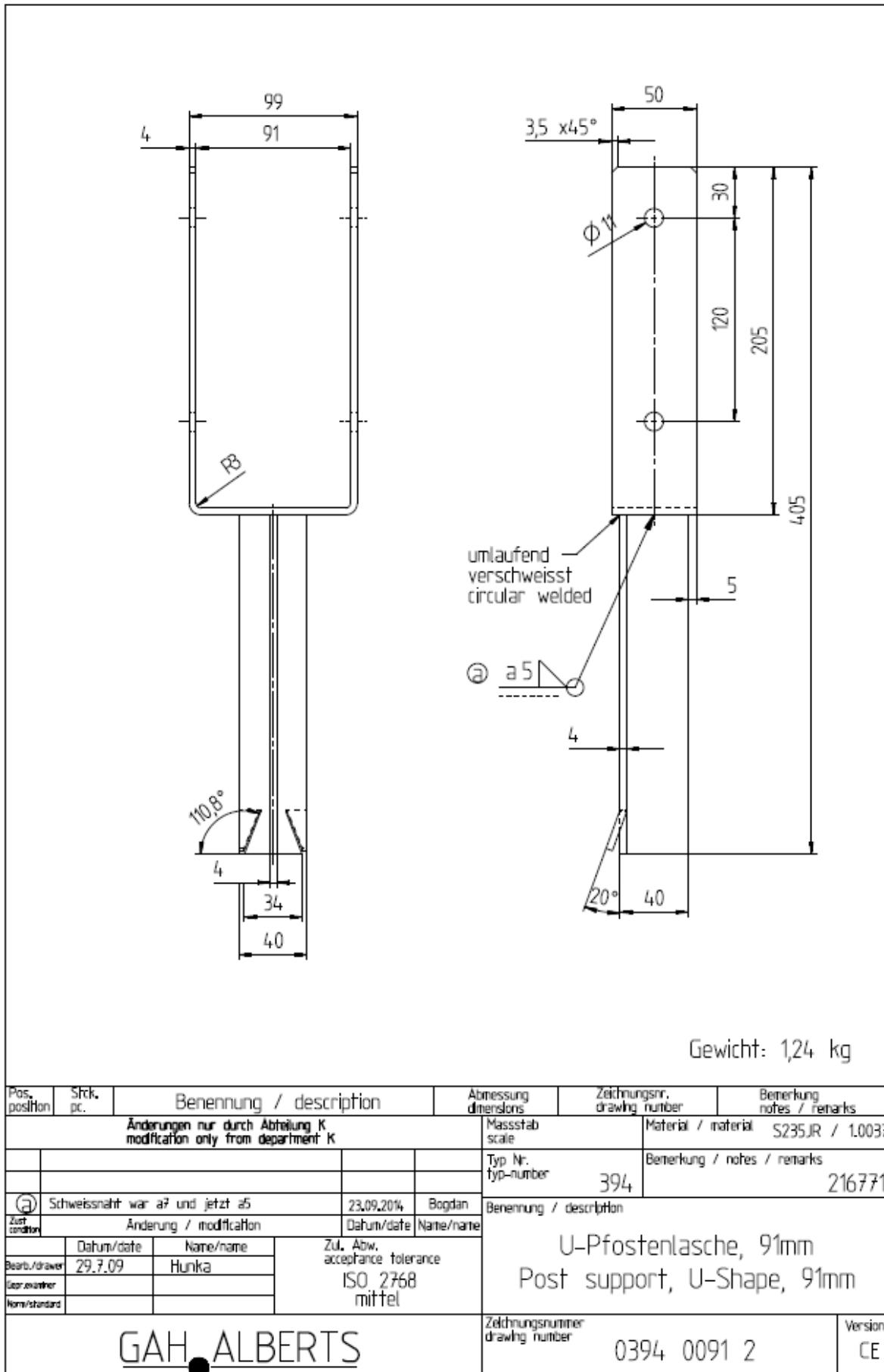


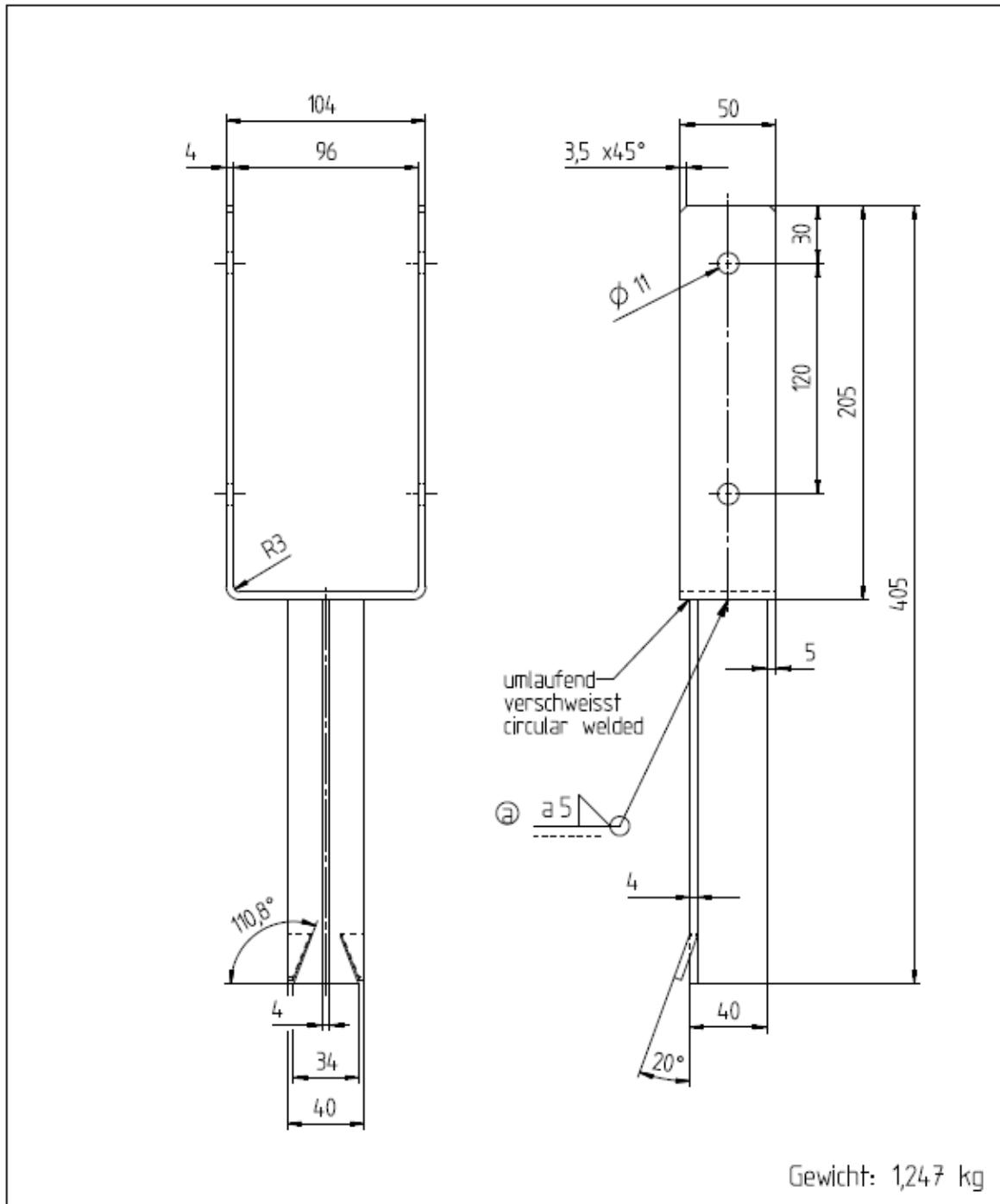
Gewicht: 1,209 kg

Pos. position	Stck. pc.	Benennung / description		Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
<b>Änderungen nur durch Abteilung K modification only from department K</b>				Massstab scale	Material / material S235JR / 1.0037			
				Typ Nr. typ-number	Bemerkung / notes / remarks			
				394	216740			
(2) Zust. condition	Schweißnaht war a7 und jetzt a5		23.09.2014	Bogdan	Benennung / description  U-Pfostenlasche, 71mm Post support, U-Shape, 71mm			
	Änderung / modification		Datum/date	Name/name				
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance	Post support, U-Shape, 71mm				
Gepr.examiner	28.7.09	Hunka	ISO 2768 mittel					
Norm/standard				Zeichnungsnr. drawing number	0394 0071 2	Version CE		
<b>GAH ALBERTS</b>								

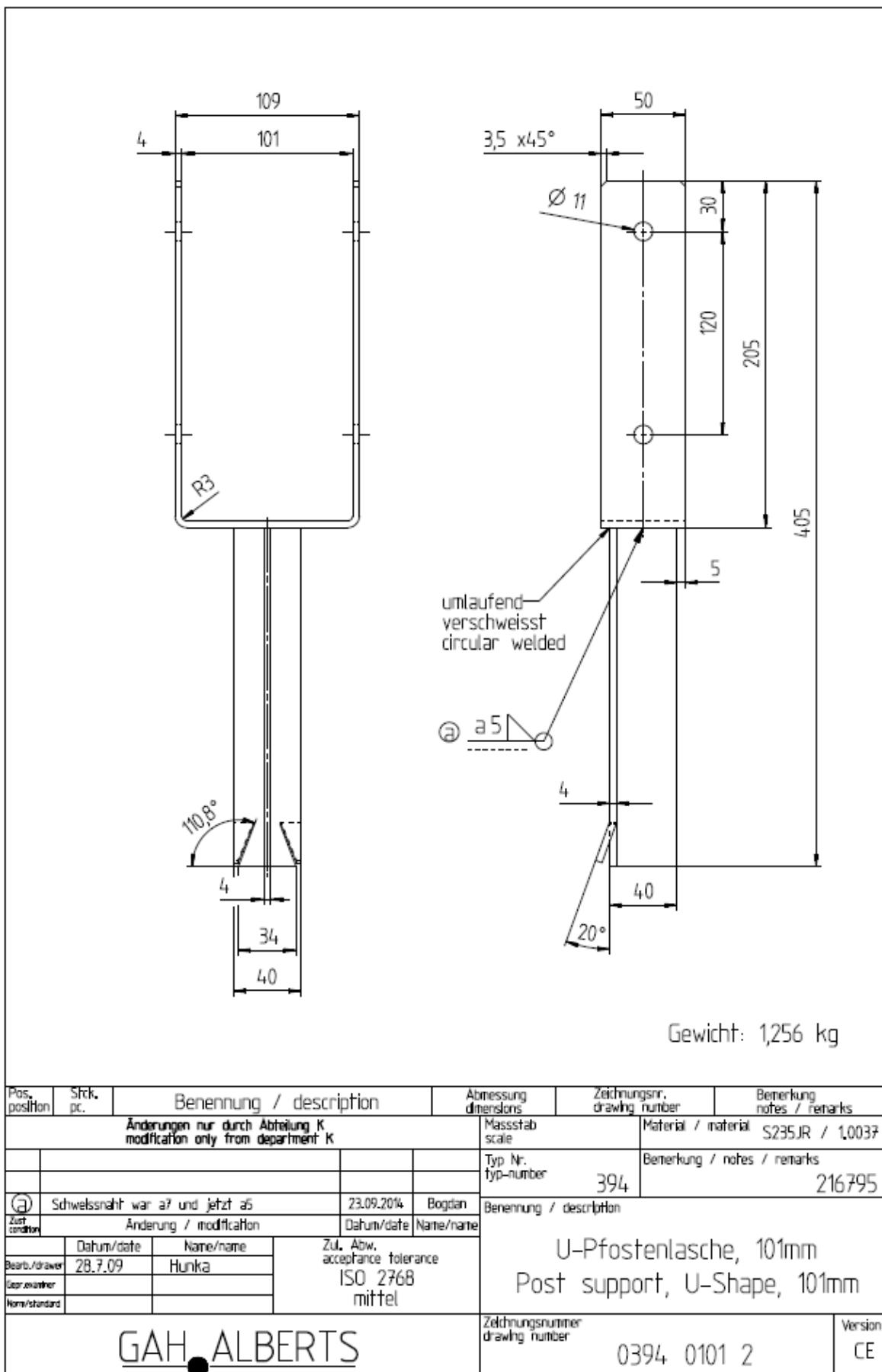


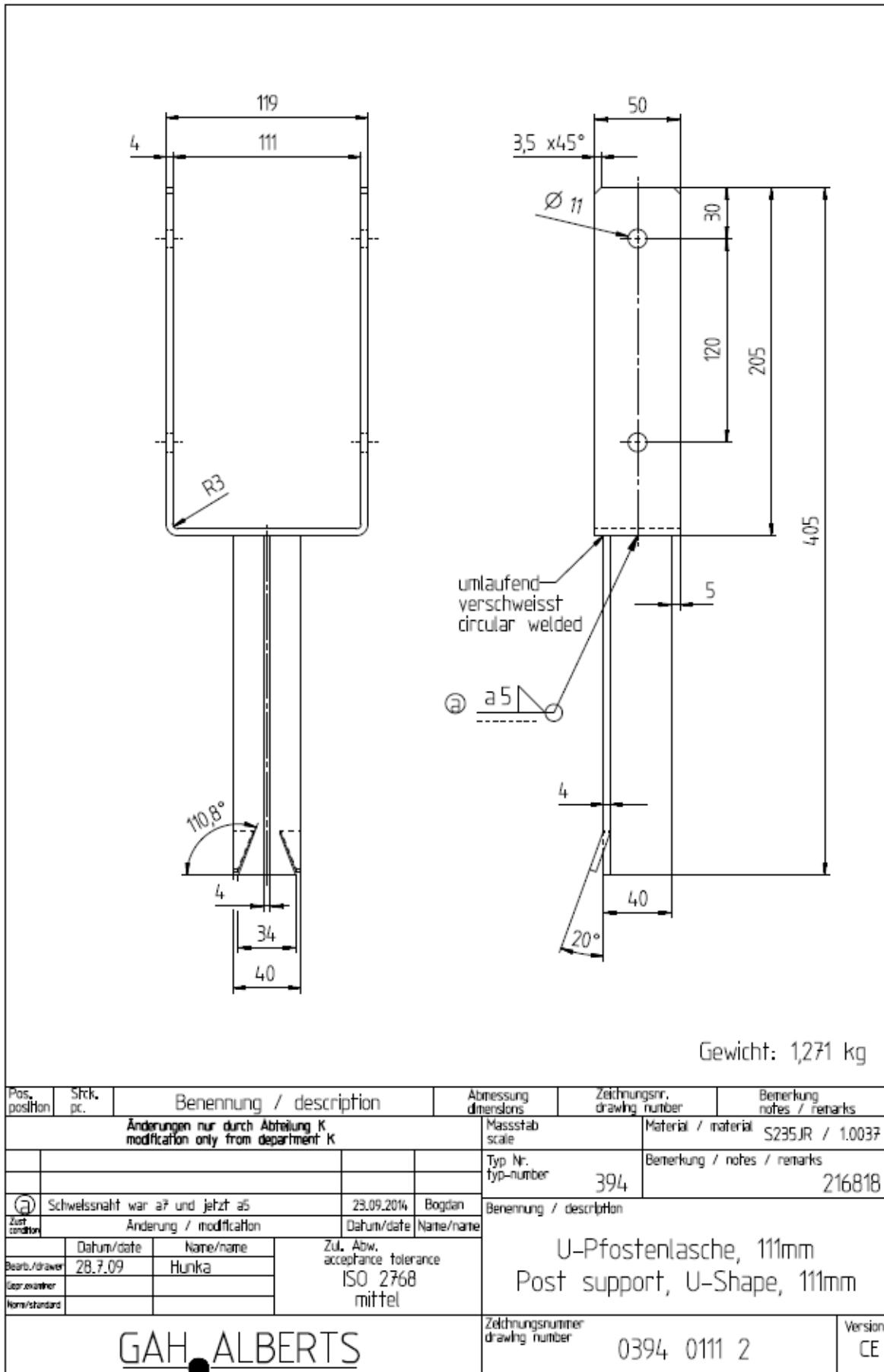


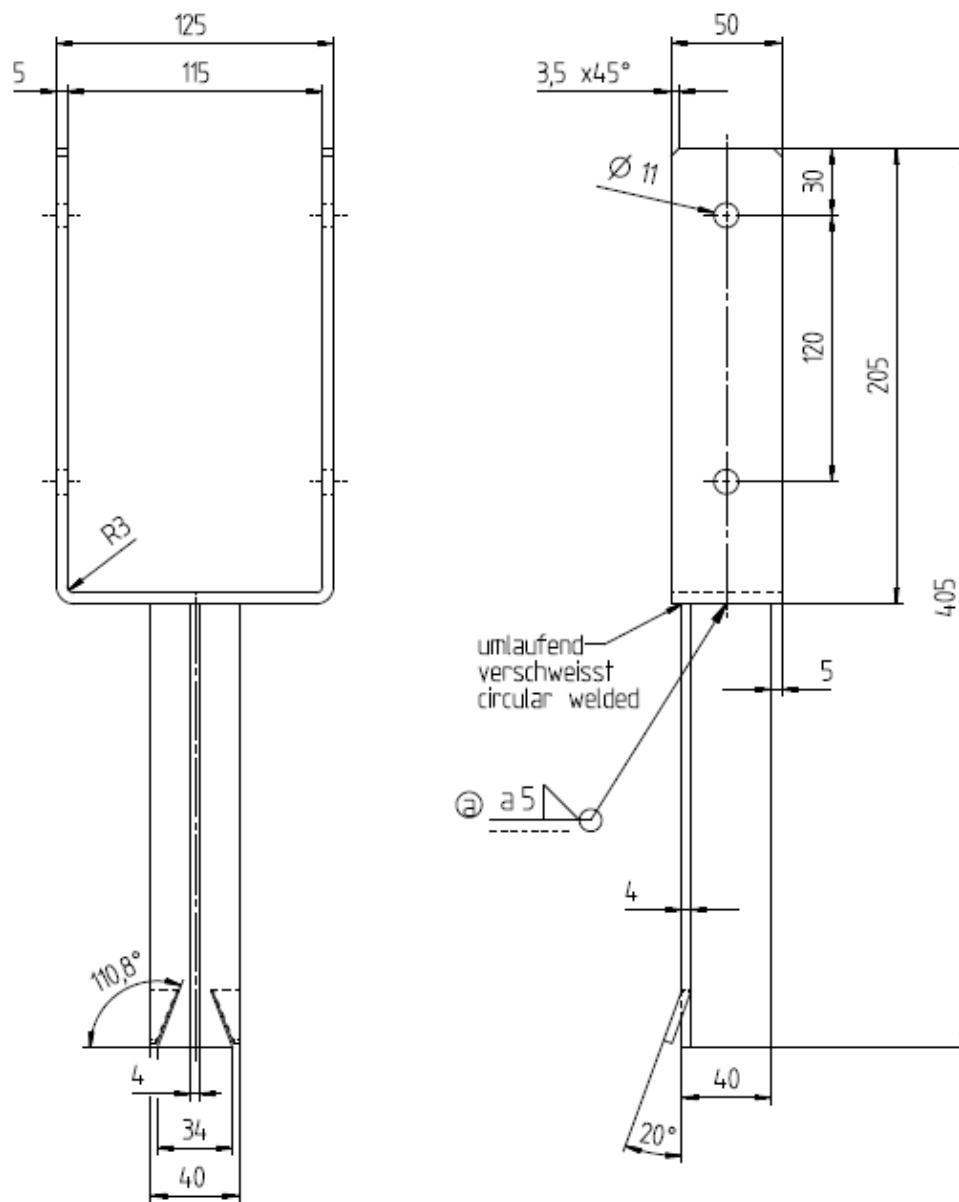




Pos. position	Stck. pc.	Benennung / description		Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
		Änderungen nur durch Abteilung K modification only from department K		Massstab scale	Material / material S235JR / 1.0037			
				Typ Nr. typ-number	Bemerkung / notes / remarks 394 216788			
(@)		Schweißnaht war a7 und jetzt a5		23.09.2014 Bogdan				
Zust. condition		Änderung / modification		Datum/date Name/name				
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance	Benennung / description U-Pfostenlasche, 96mm Post support, U-Shape, 96mm				
Gez. zeichner	28.7.09	Hunka	ISO 2768 mittel					
Norm/standard								
<u>GAH ALBERTS</u>				Zeichnungsnr. drawing number	0394 0096 2	Version CE		

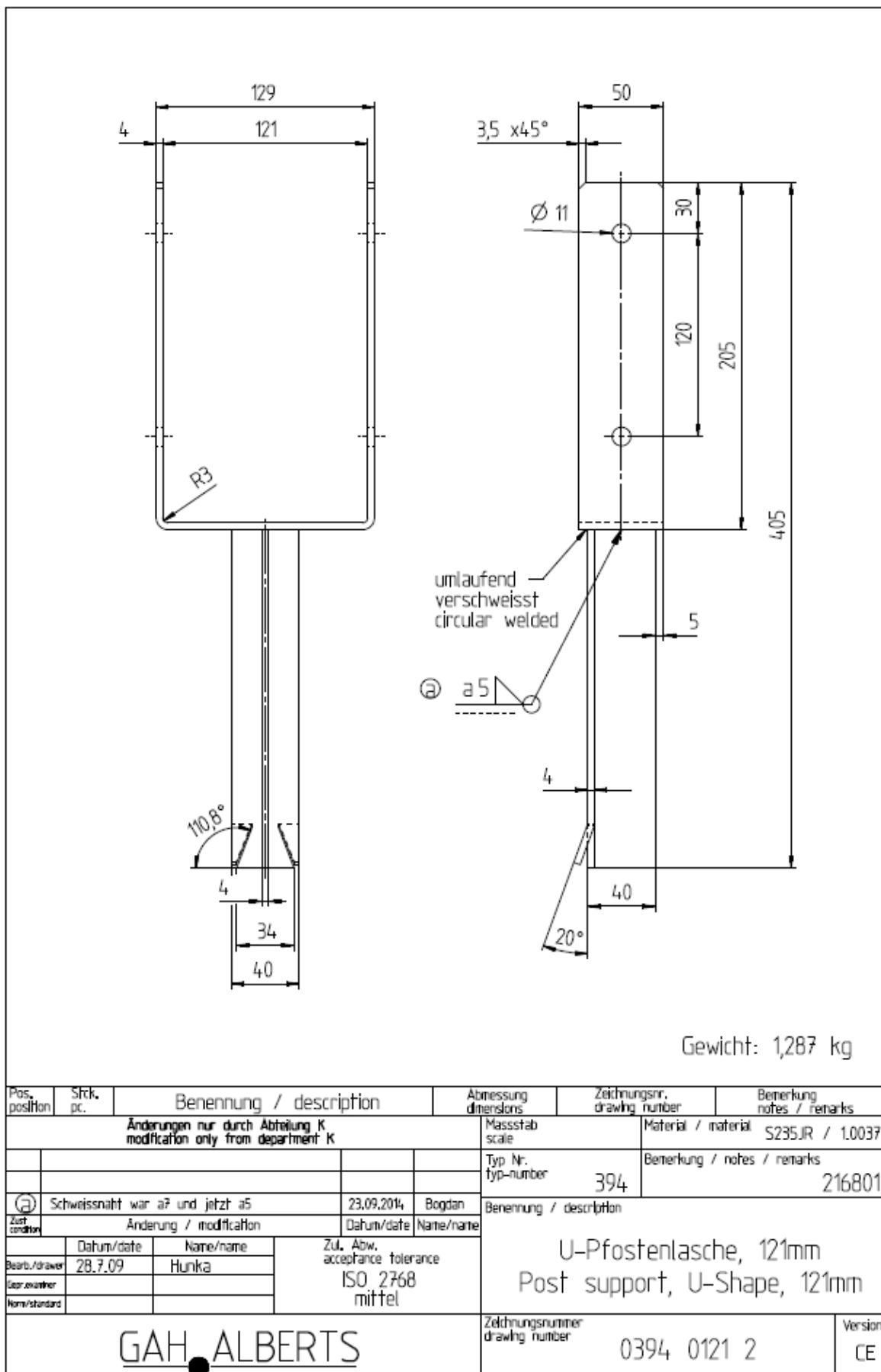


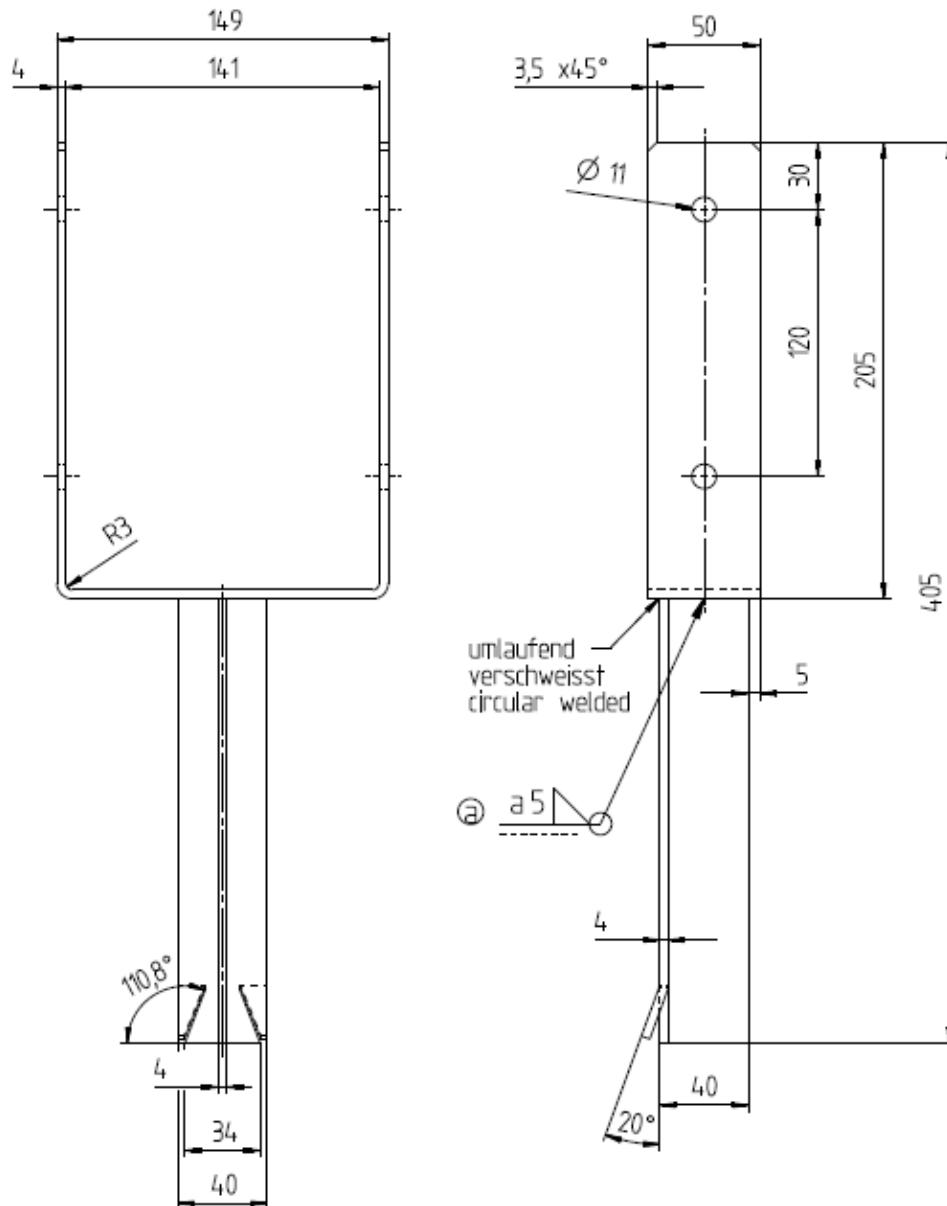




Gewicht: 1,477 kg

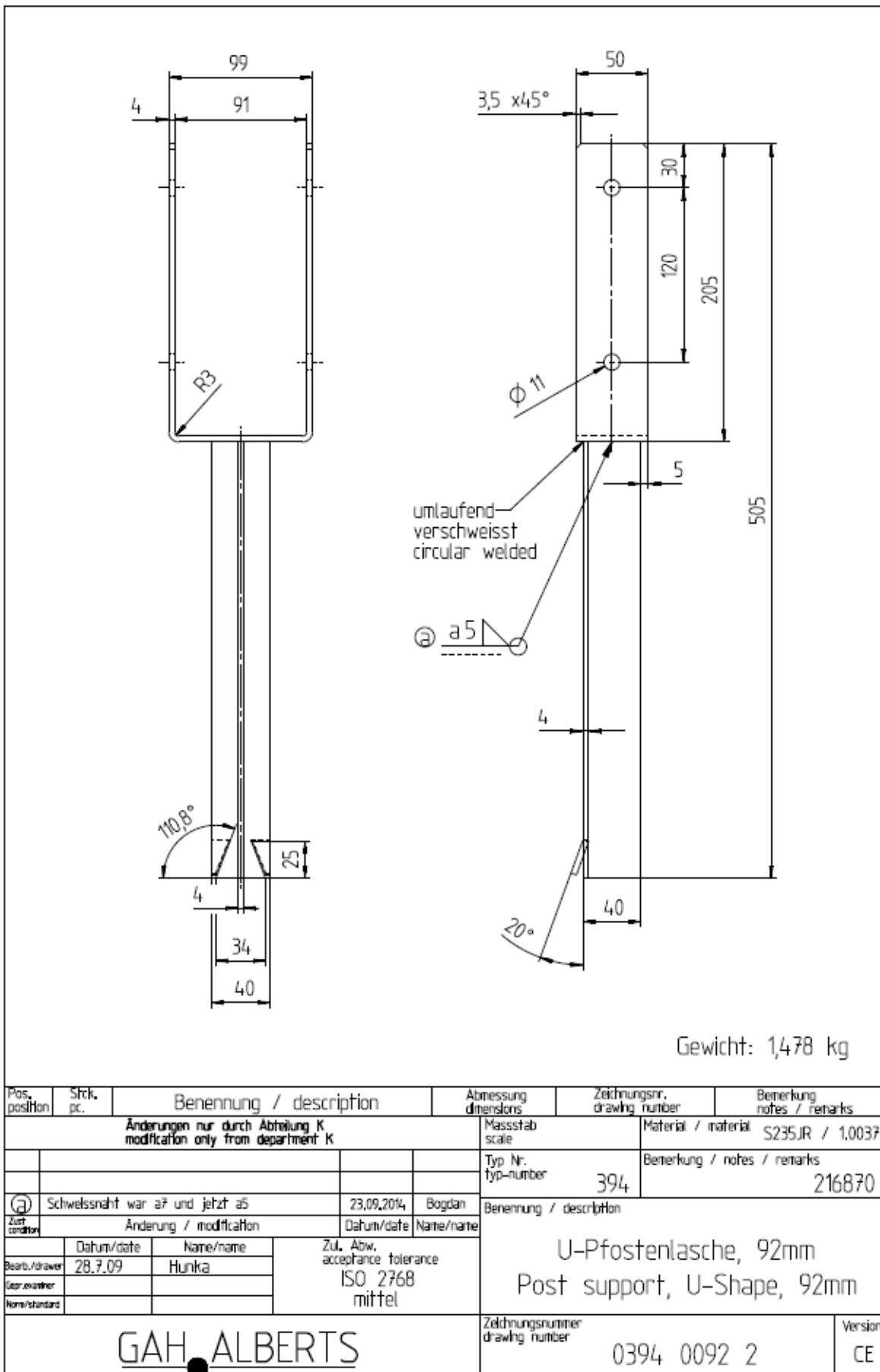
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Änderungen nur durch Abteilung K modification only from department K				Massstab scale	Material / material S235JR / 1.0037			
				Typ Nr. typ-number	Bemerkung / notes / remarks 394 216832			
(3)	Schweißnaht war a7 und jetzt a5	Datum/ date	Bogdan	Zu. Abw. acceptance tolerance	Benennung / description U-Pfostenlasche, 116mm Post support, U-Shape, 116mm			
Zust. condition	Änderung / modification	Datum/ date	Name/ name	ISO 2768 mittel				
Bearb./draver	Datum/ date	Name/ name						
Gepr./measured	28.7.09	Hunka						
Norm/standard			Zeichnungsnr. drawing number 0394 0116 2					
GAH ALBERTS				Version CE				

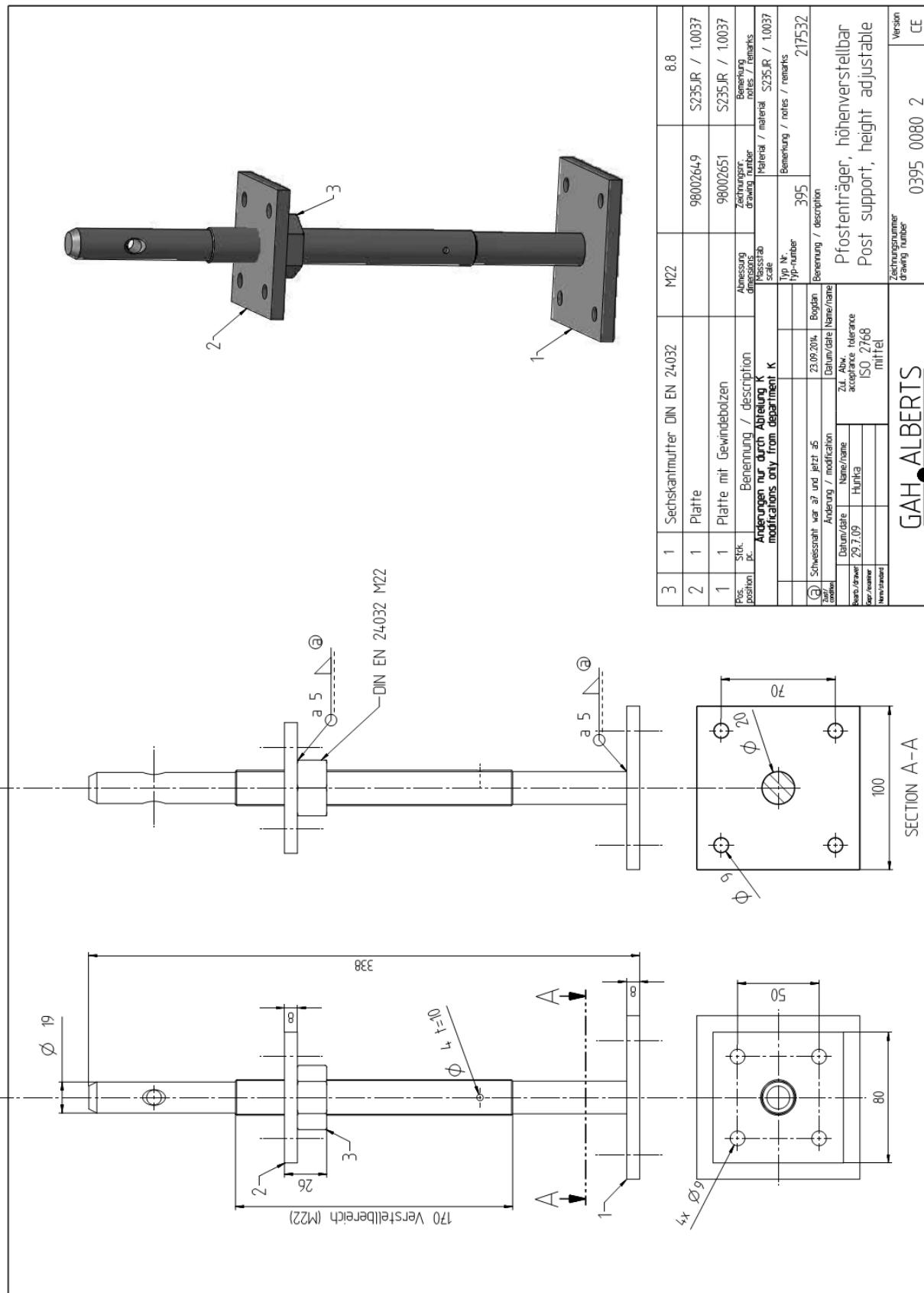


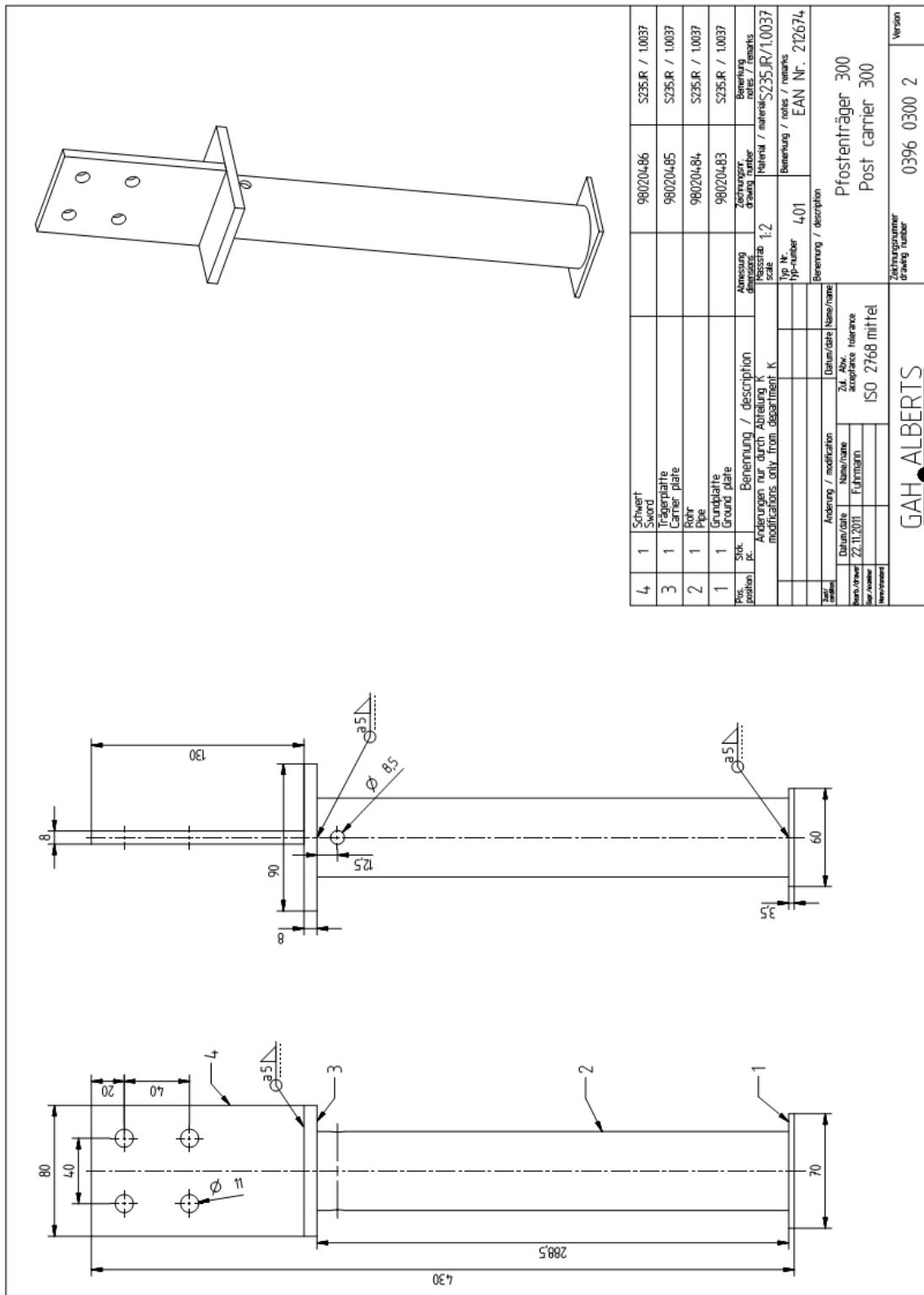


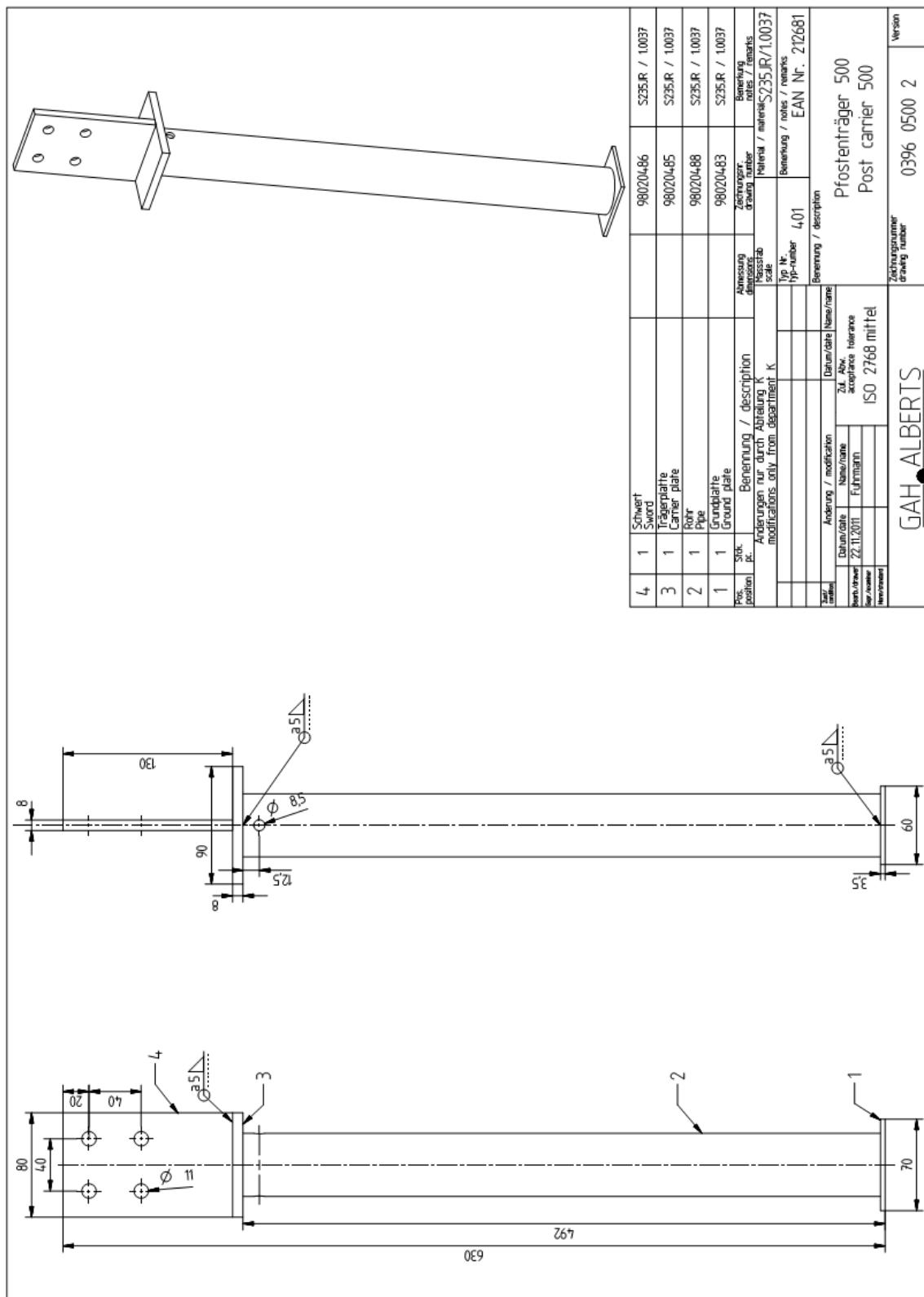
Gewicht: 1,318 kg

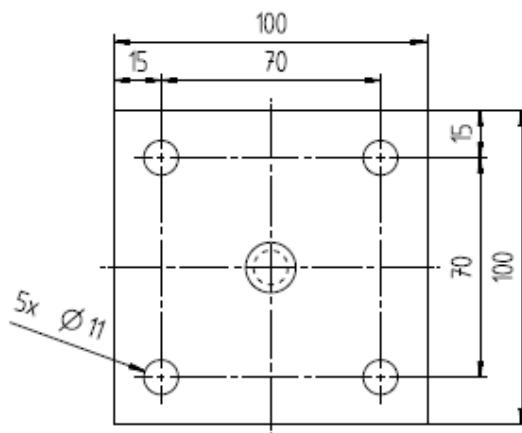
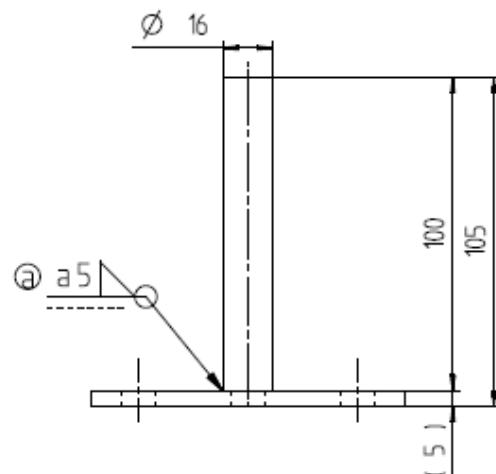
Pos. position	Sfck. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
Änderungen nur durch Abteilung K modification only from department K					Massstab scale	Material / material S235JR / 1.0037			
					Typ Nr. typ-number 394	Bemerkung / notes / remarks 216825			
@ Schweißnaht war a7 und jetzt a5			Datum/date 23.09.2014	Name/name Bogdan	Benennung / description U-Pfostenlasche, 141mm Post support, U-Shape, 141mm				
Zert. condition	Änderung / modification		Datum/date 28.7.09	Name/name Hunka					
Bearb./drawer	Datum/date 28.7.09	Name/name Hunka	Zul. Abw. acceptance tolerance ISO 2768 mittel		Zeichnungsnr. drawing number 0394 0141 2				
Norm/standard					Version CE				
<b>GAH ALBERTS</b>									



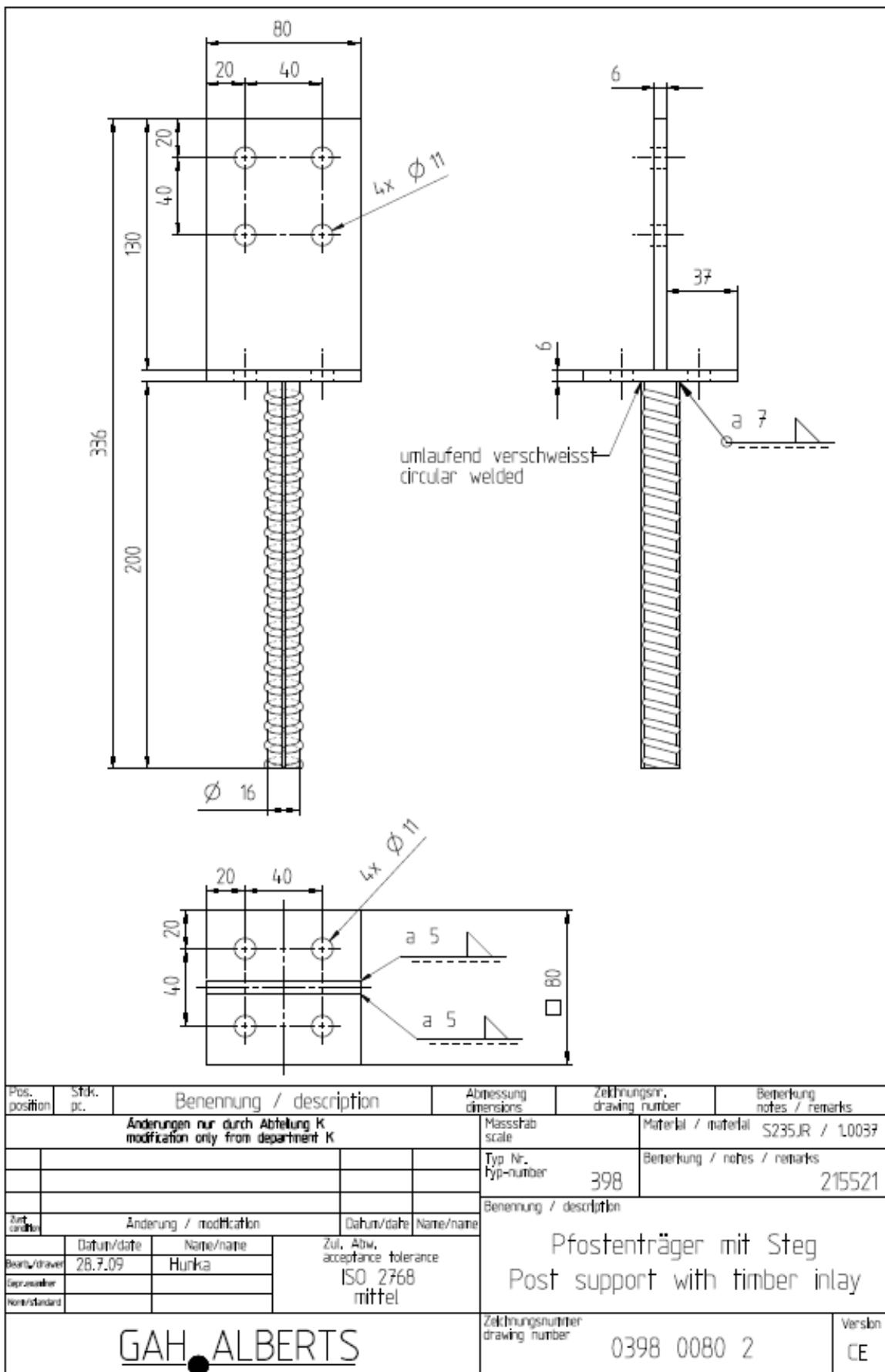


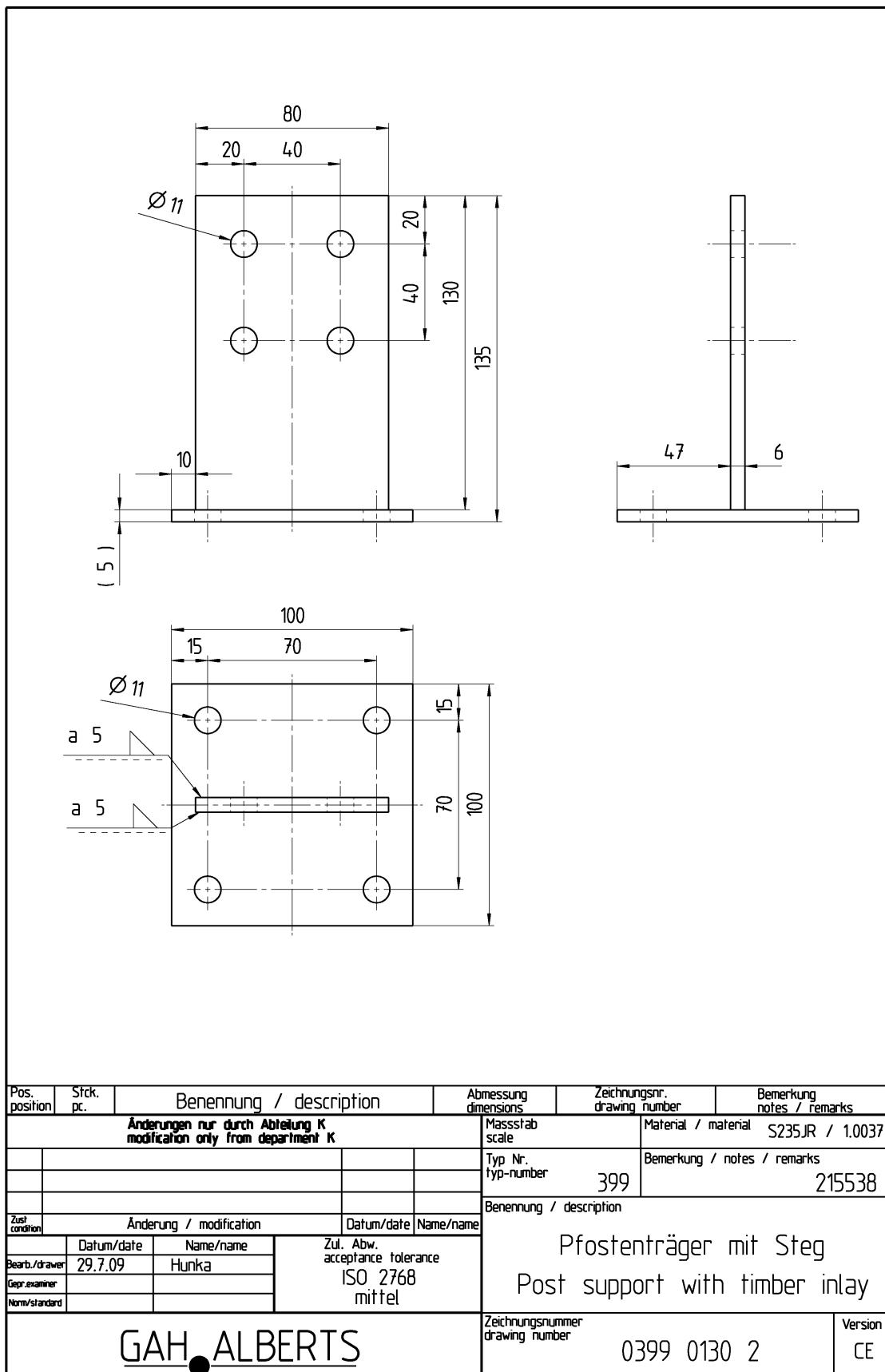


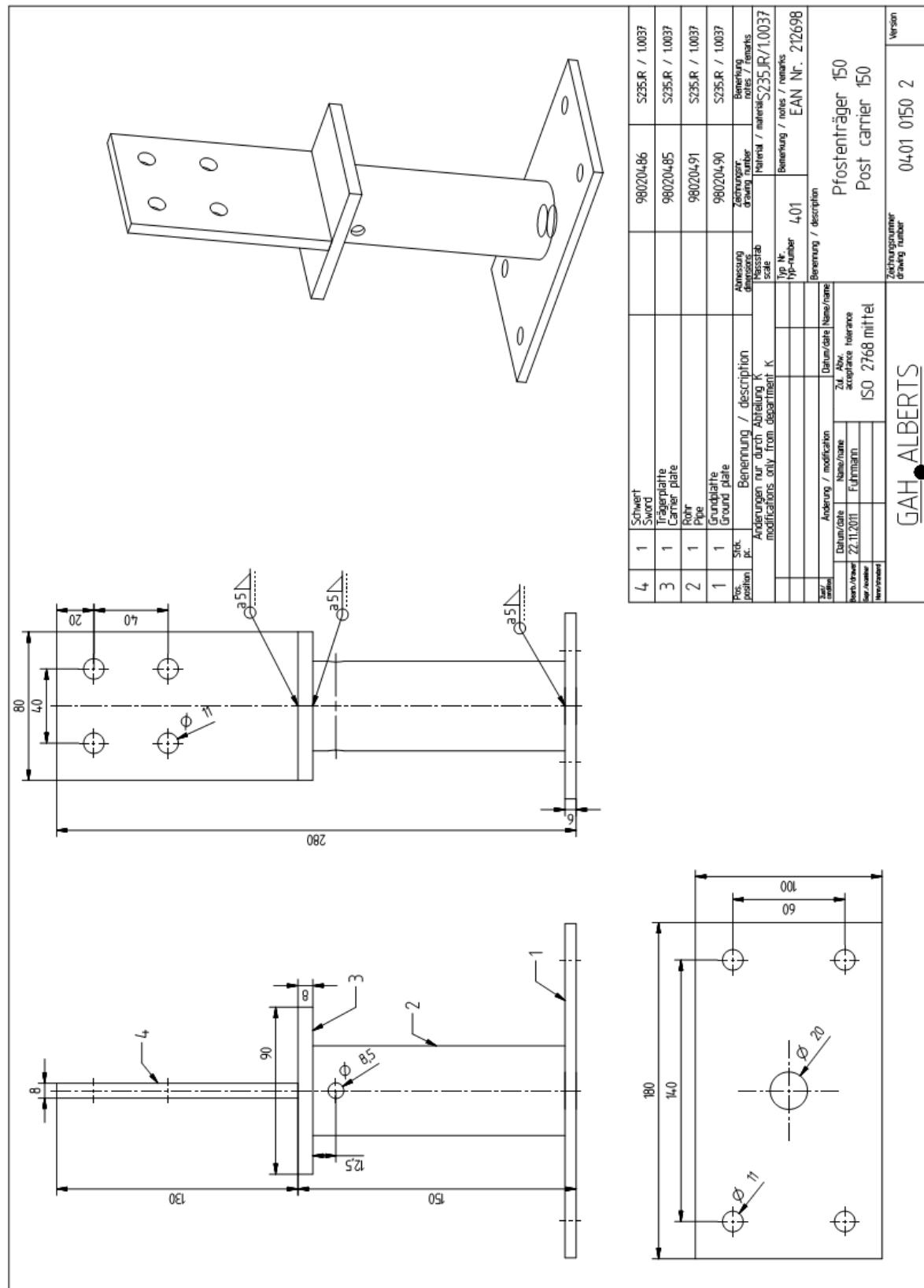


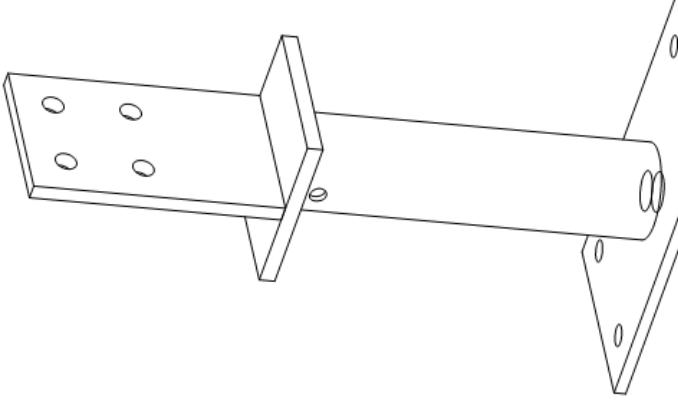
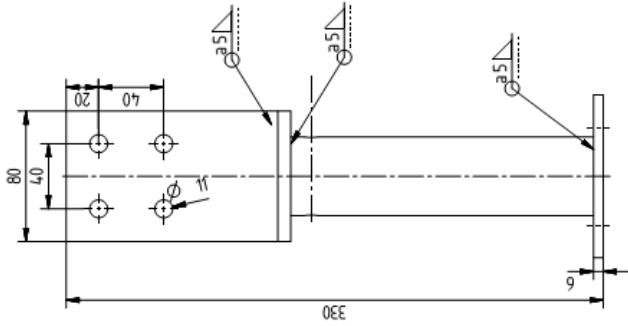
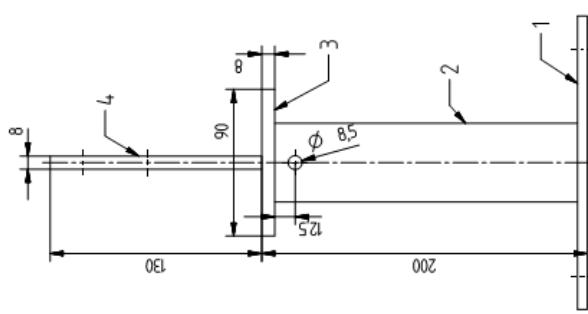
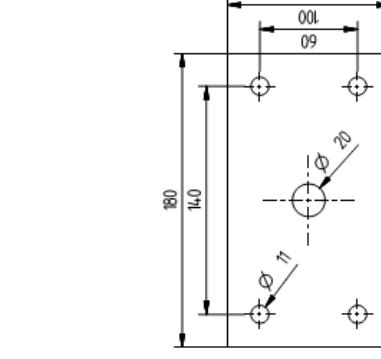


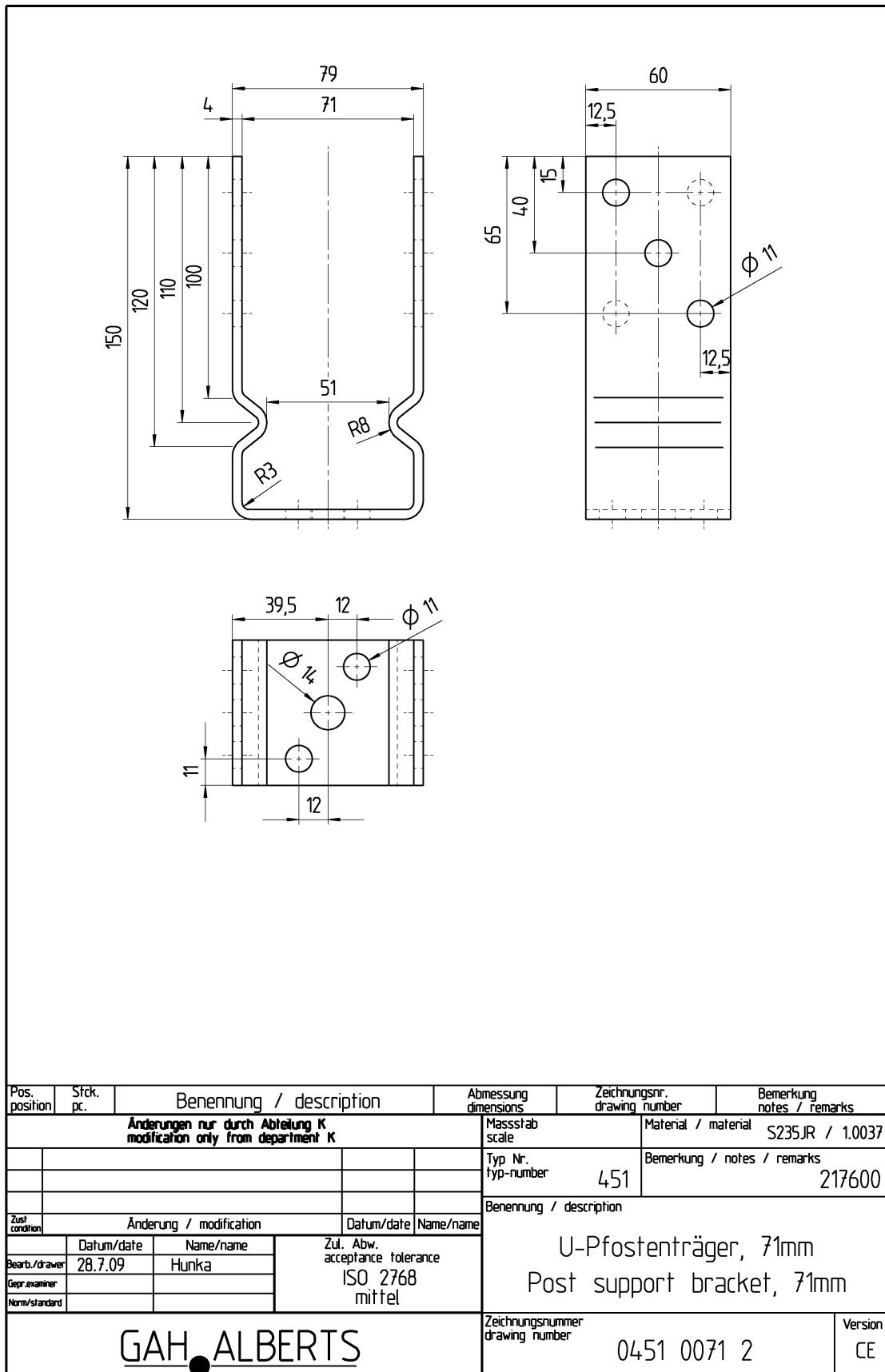
Pos. position	Stk. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks
Änderungen nur durch Abteilung K modification only from department K					Massstab scale	Material / material	S235JR / 1.0037
					Typ-Nr. typ-number	Bemerkung / notes / remarks	
					397		215453
Zust. condition	Schweißnaht war a7 und jetzt a5	Datum/date	23.09.2014	Name/name	Bogdan	Benennung / description  Pfostenträger mit Stift Post support with pin	
	Änderung / modification						
Bearb./dräher	Datum/date	Name/name			Zul. Abw. acceptance tolerance		
Gesamtausmaß					ISO 2768 mittel		
Konv./Standard						Zeichnungsnr. drawing number	Version
<b>GAH ALBERTS</b>						0397 0100 2	CE

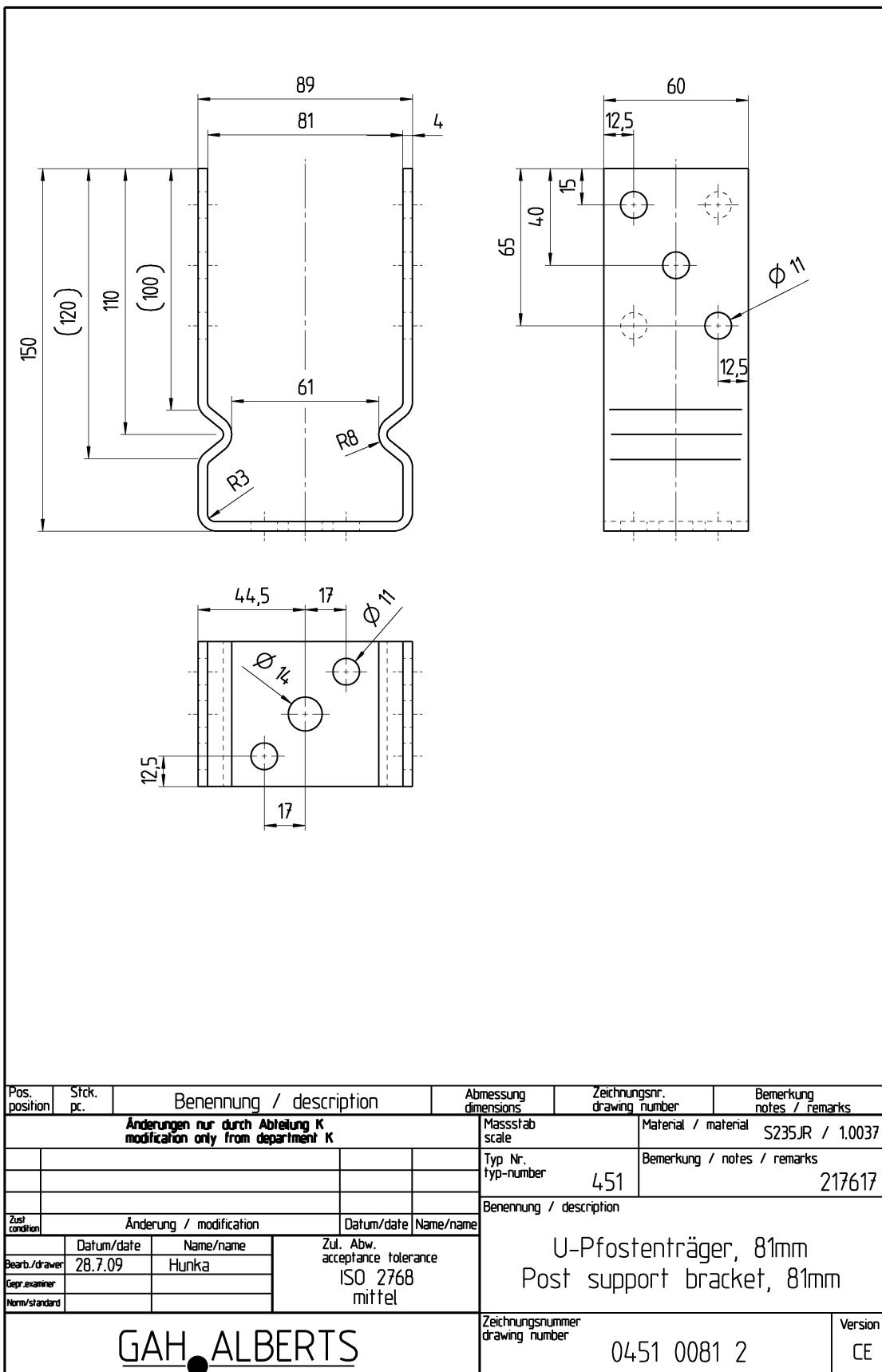


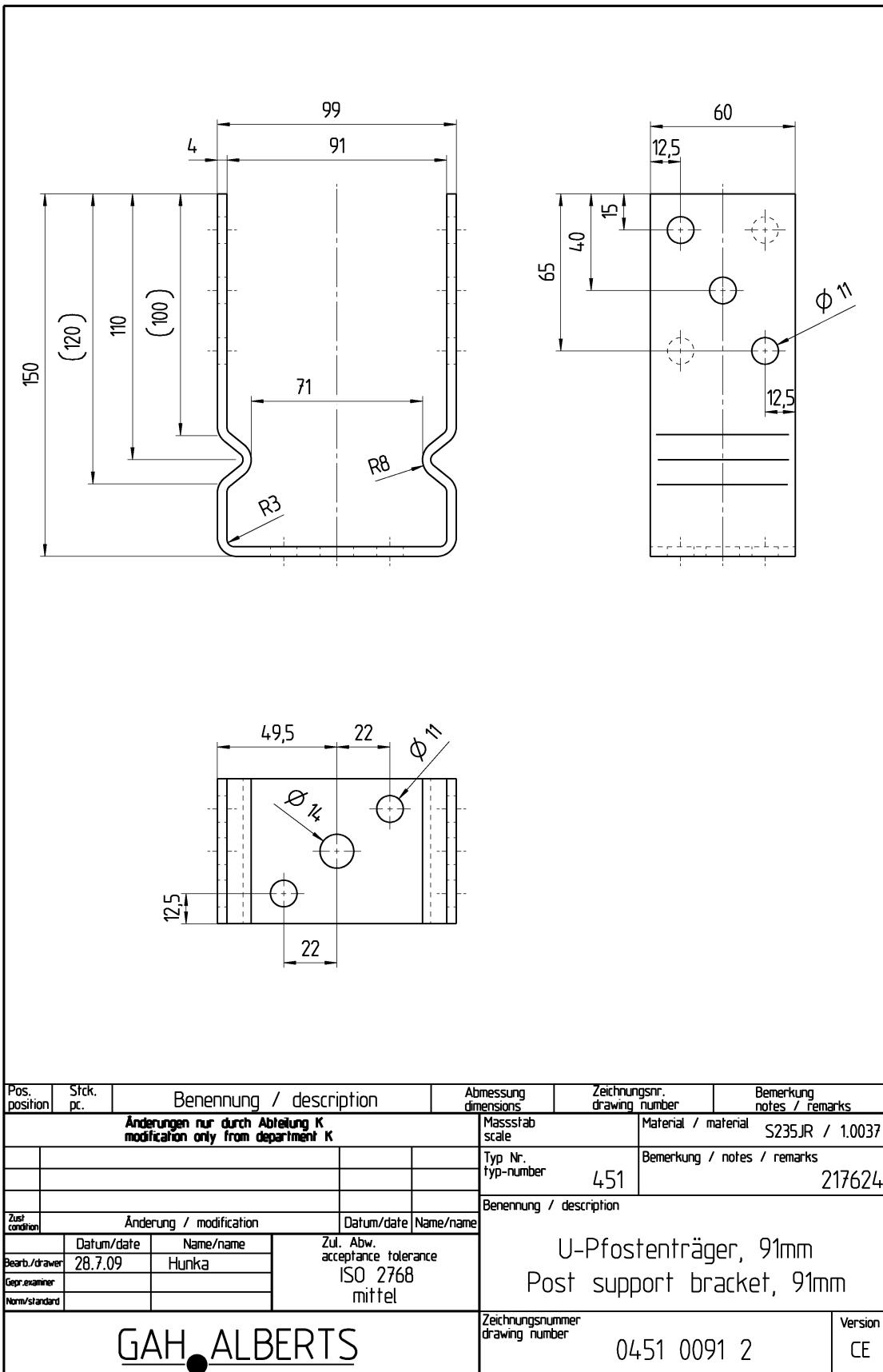


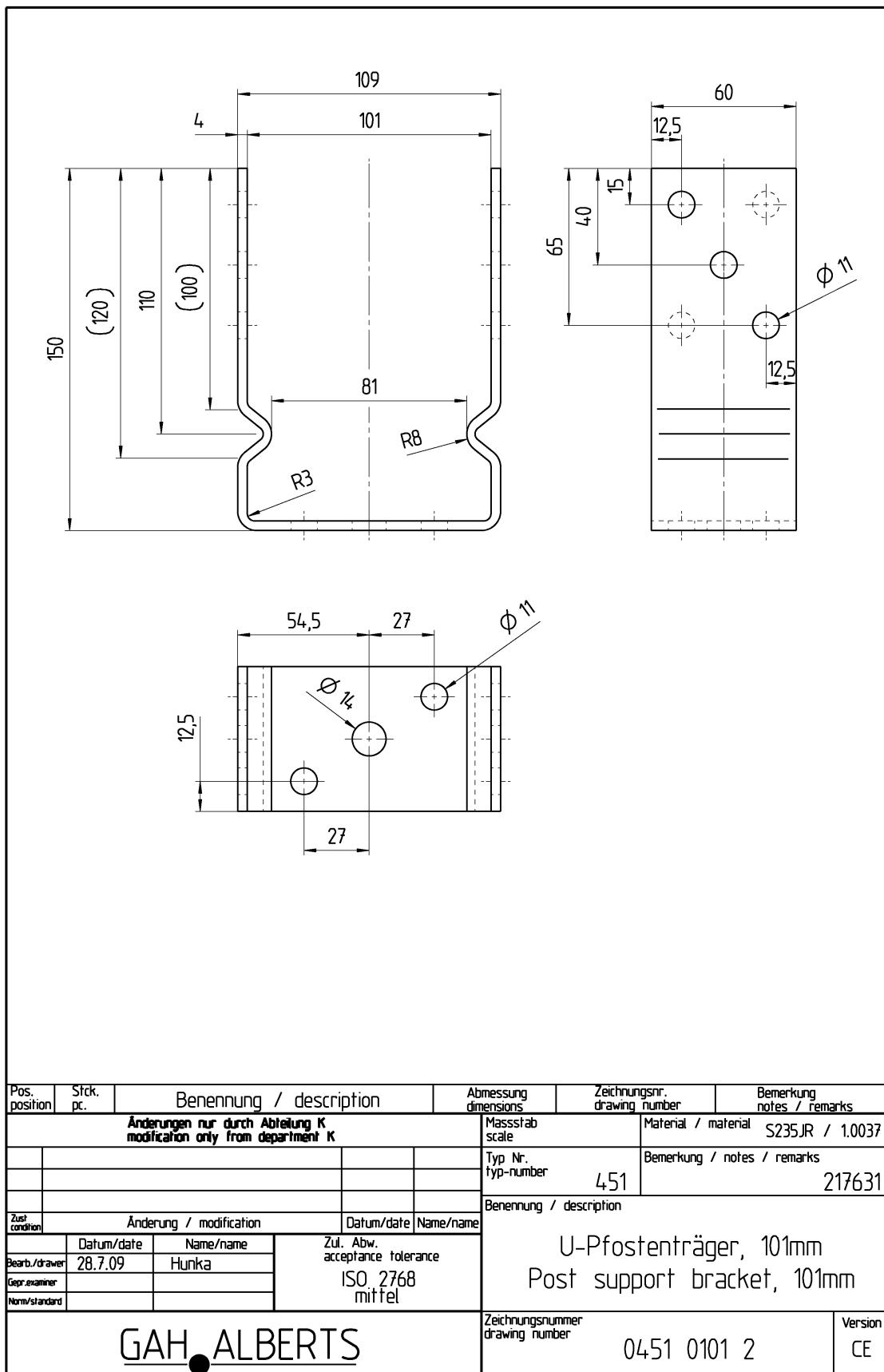


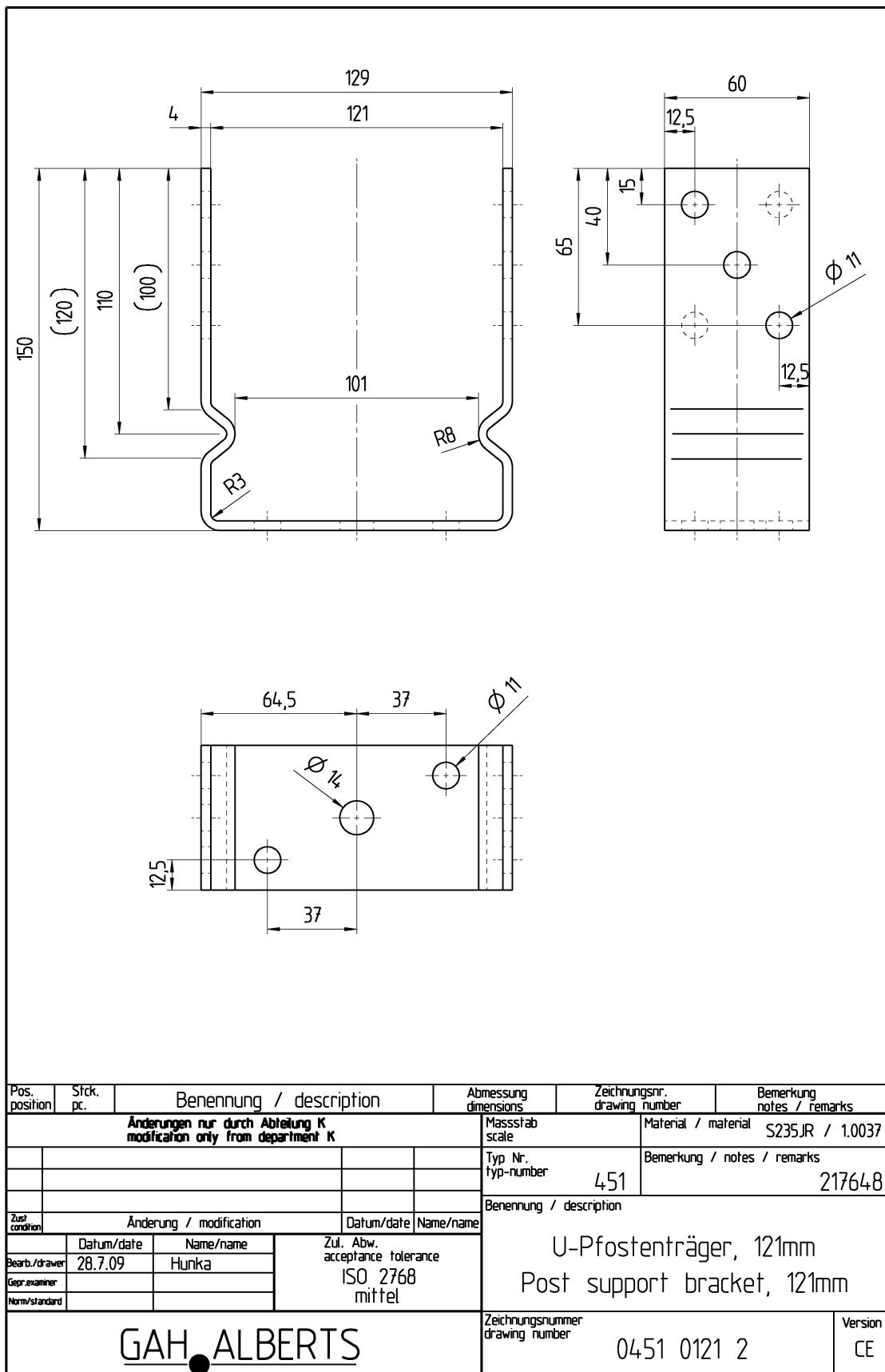
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Pos.	Stk.	Benennung / description	Anmerkung	Zeichnungsnummer																																		
		Änderungen nur durch Abstrichung K modifications only from description K																																				
4	1	Schwert Sword	980204-86 S235JR / 1.0037																																			
3	1	Trägerplatte Carrier plate	980204-85 S235JR / 1.0037																																			
2	1	Rohr Pipe	980204-93 S235JR / 1.0037																																			
1	1	Grundplatte Ground plate	980204-90 S235JR / 1.0037																																			
<table border="1"> <thead> <tr> <th>Zeilenummer</th> <th>Änderung / modification</th> <th>Datum/ date</th> <th>Name/ name</th> <th>Zul. Abw. accuracy tolerance</th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>			Zeilenummer	Änderung / modification	Datum/ date	Name/ name	Zul. Abw. accuracy tolerance																															
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<table border="1"> <thead> <tr> <th>Typ-Nr.</th> <th>Typ-Nr.</th> <th>Bemerkung / notes / remarks</th> <th>Material / material</th> <th>Bemerkung / notes / remarks</th> </tr> </thead> <tbody> <tr> <td>4,01</td><td>4,01</td><td>ISO 2768 mittel</td><td>S235JR / 1.0037</td><td>EAN Nr. 212704</td></tr> </tbody> </table>				Typ-Nr.	Typ-Nr.	Bemerkung / notes / remarks	Material / material	Bemerkung / notes / remarks	4,01	4,01	ISO 2768 mittel	S235JR / 1.0037	EAN Nr. 212704																									
Typ-Nr.	Typ-Nr.	Bemerkung / notes / remarks	Material / material	Bemerkung / notes / remarks																																		
4,01	4,01	ISO 2768 mittel	S235JR / 1.0037	EAN Nr. 212704																																		
<b>GAH ALBERTS</b>		Zeichnungsnr. druck number 0401 0200 2		Version																																		

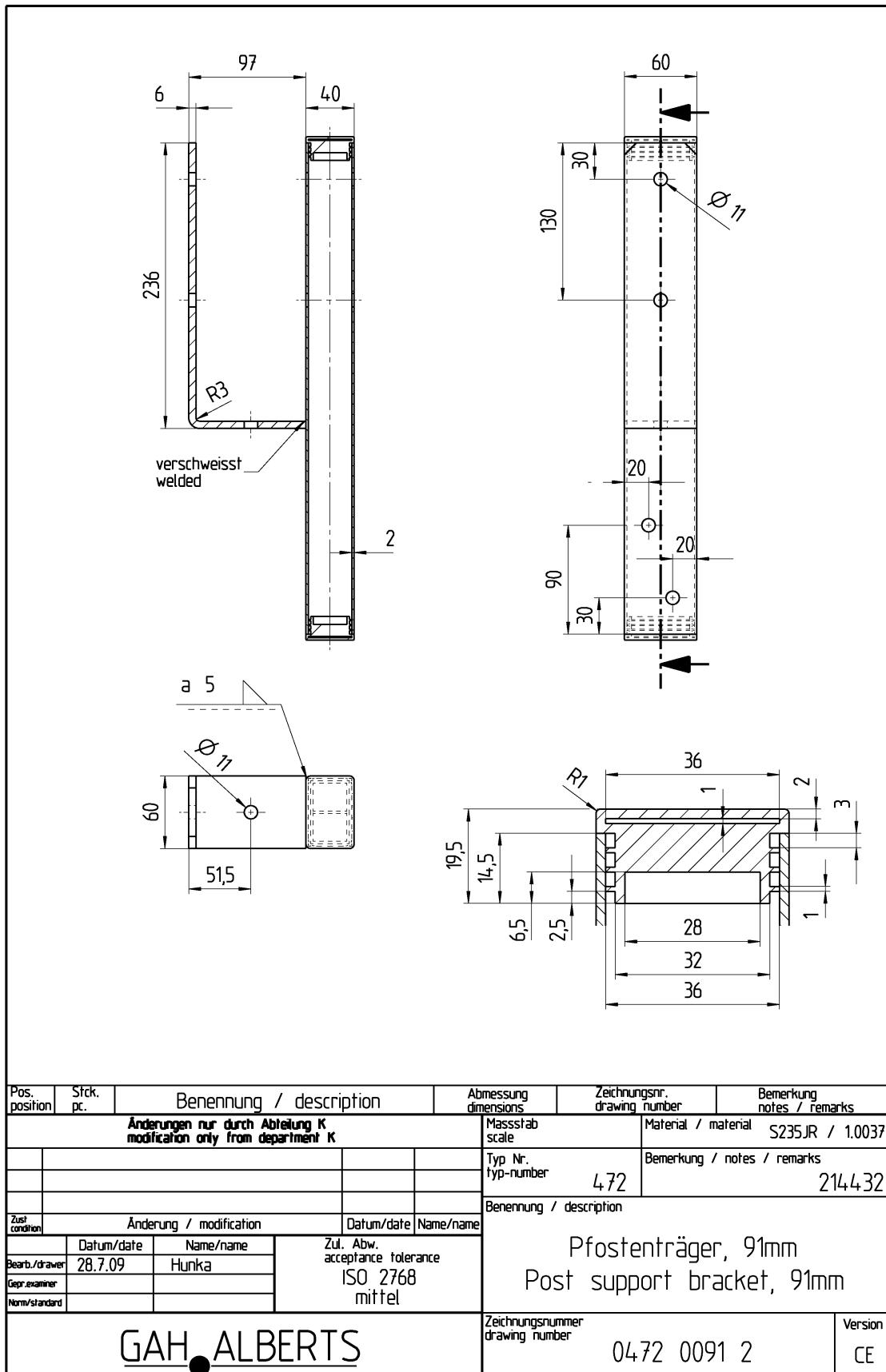


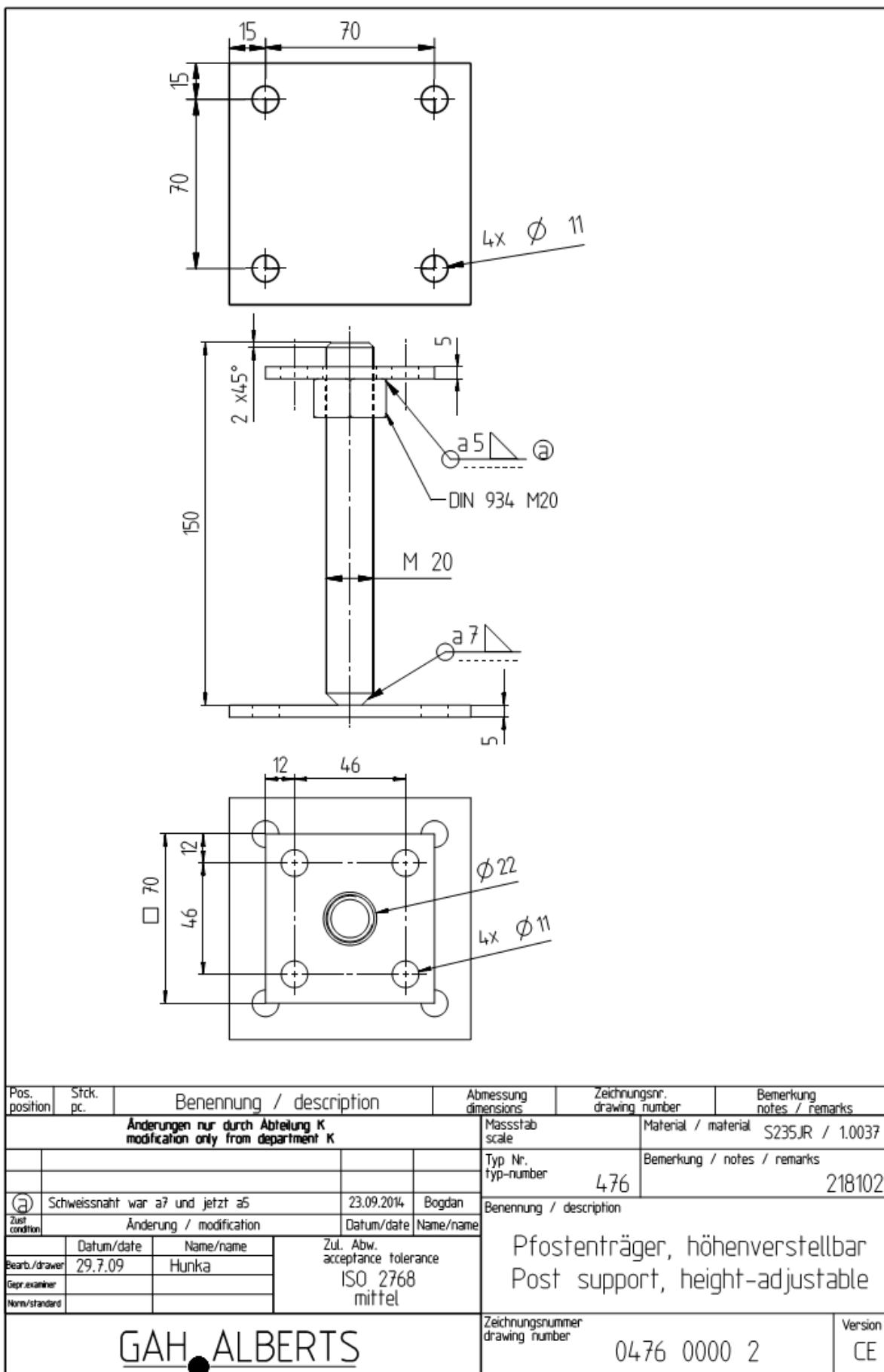


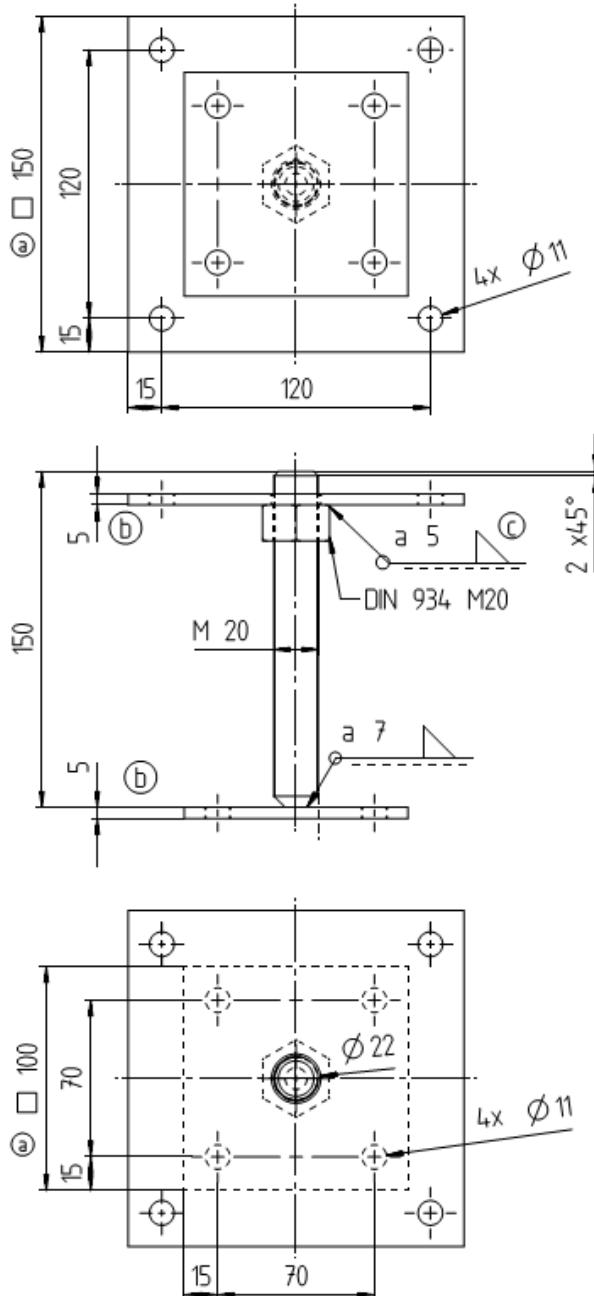








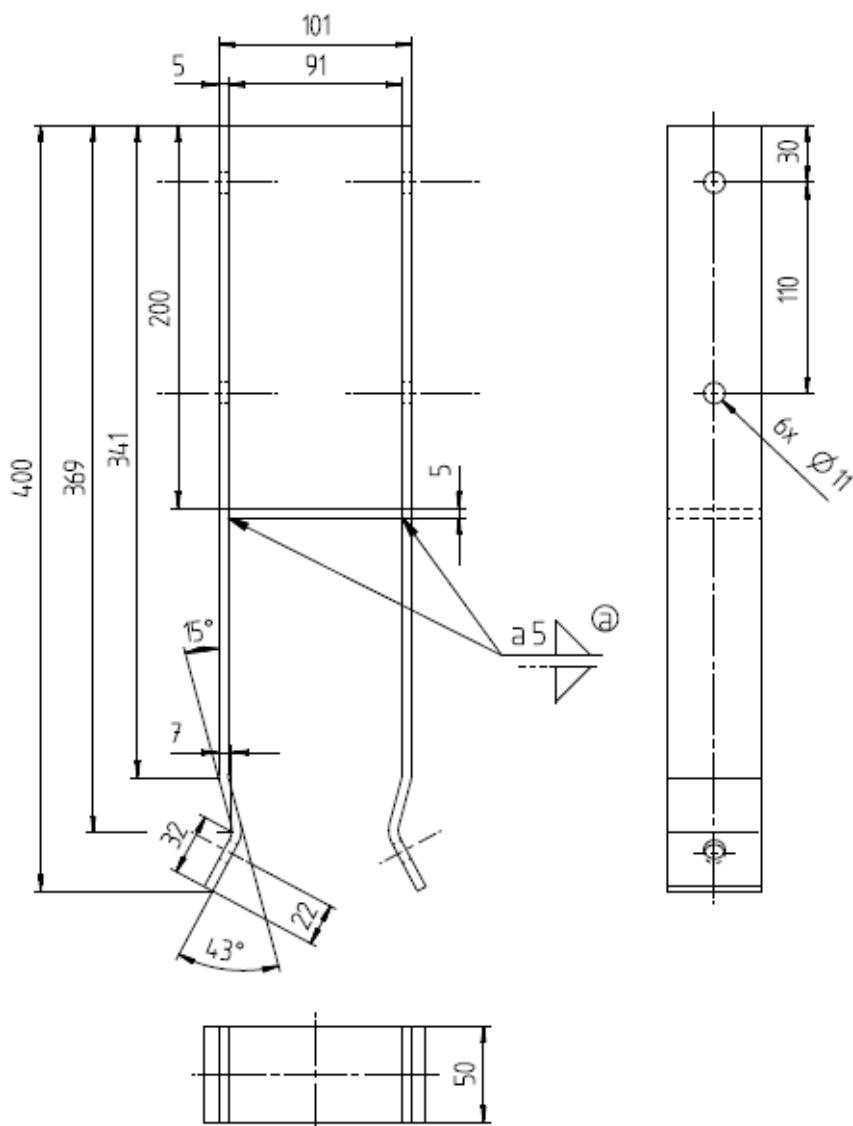




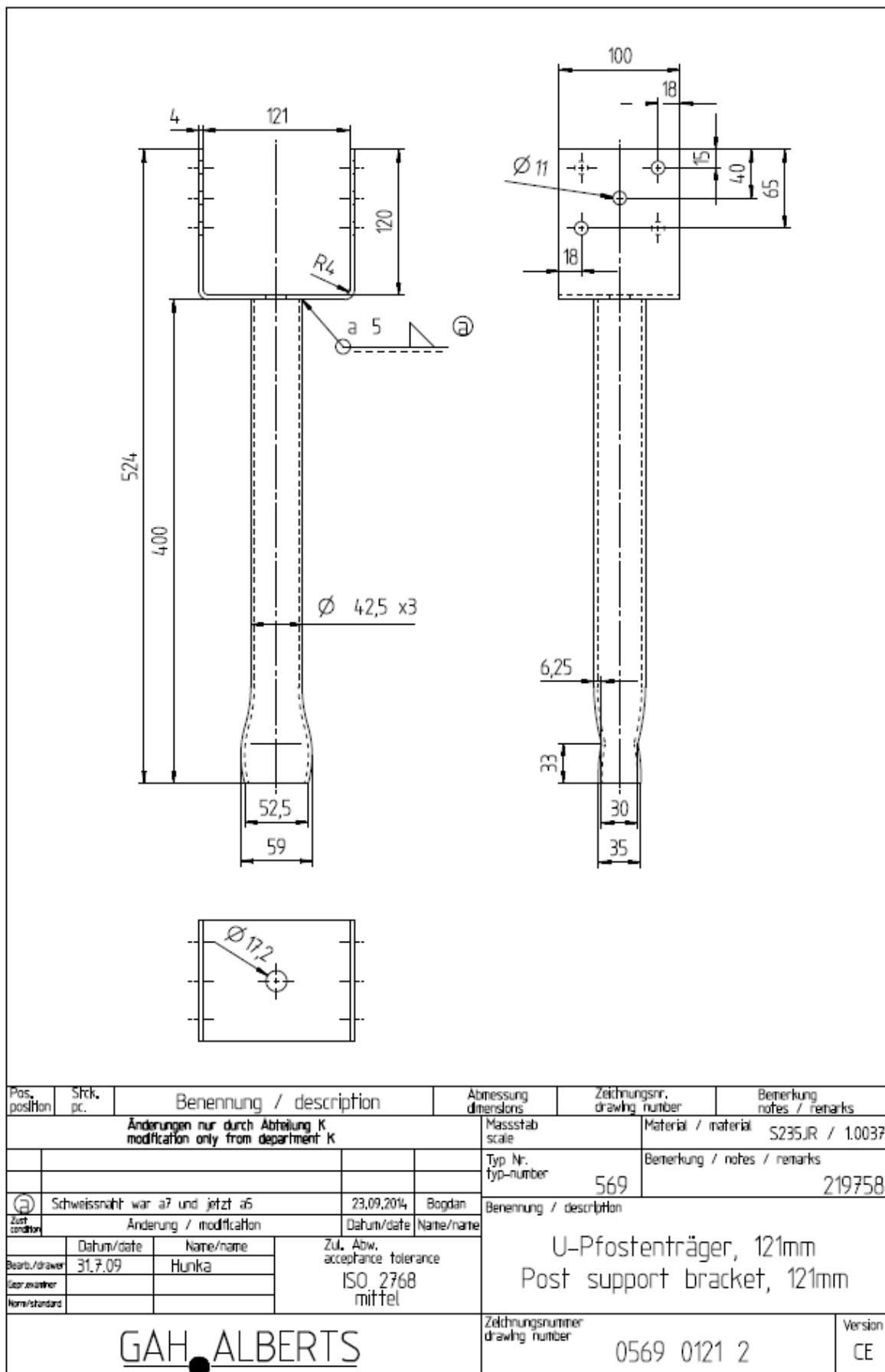
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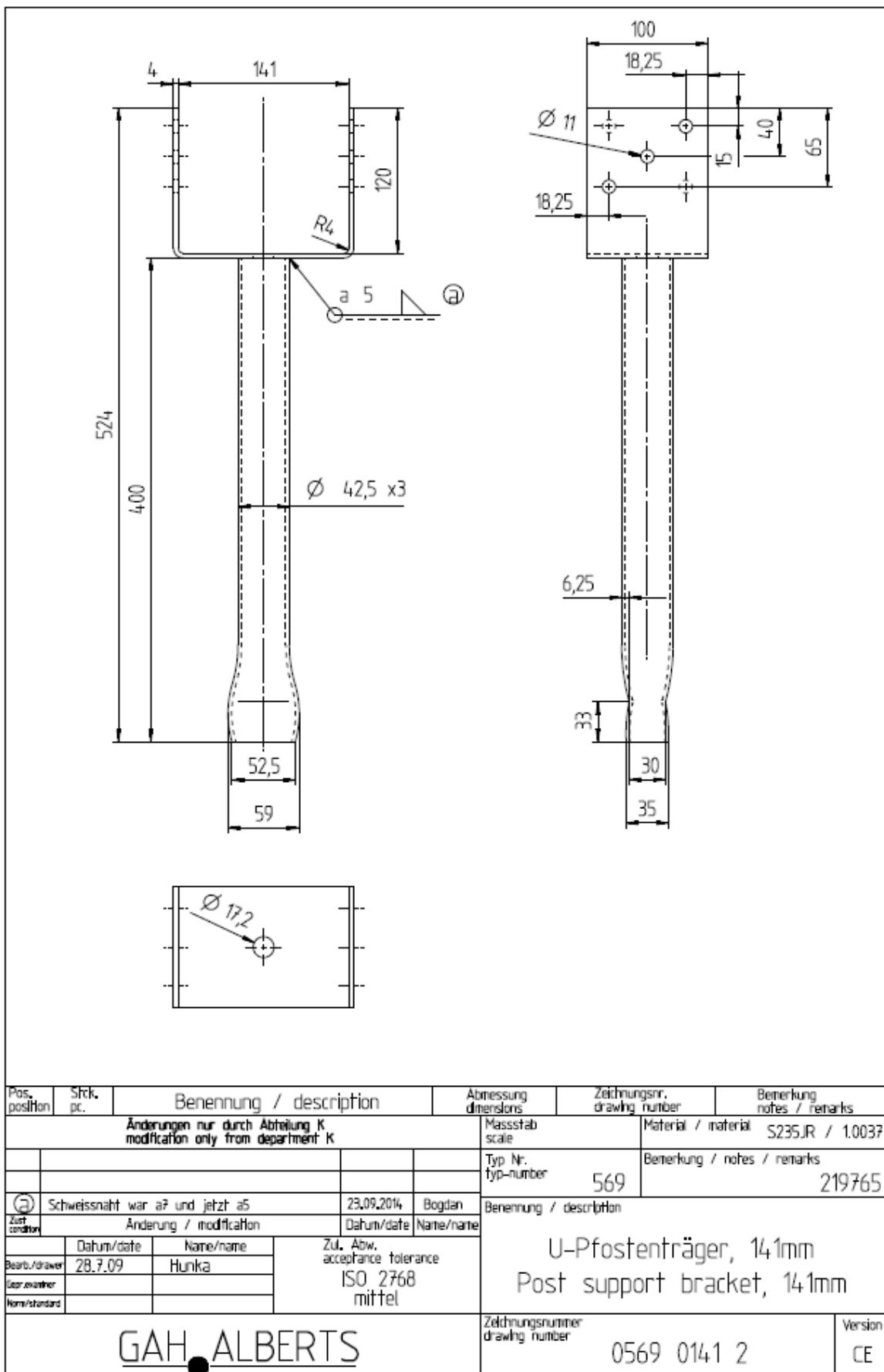
23.09.2014 Bogdan

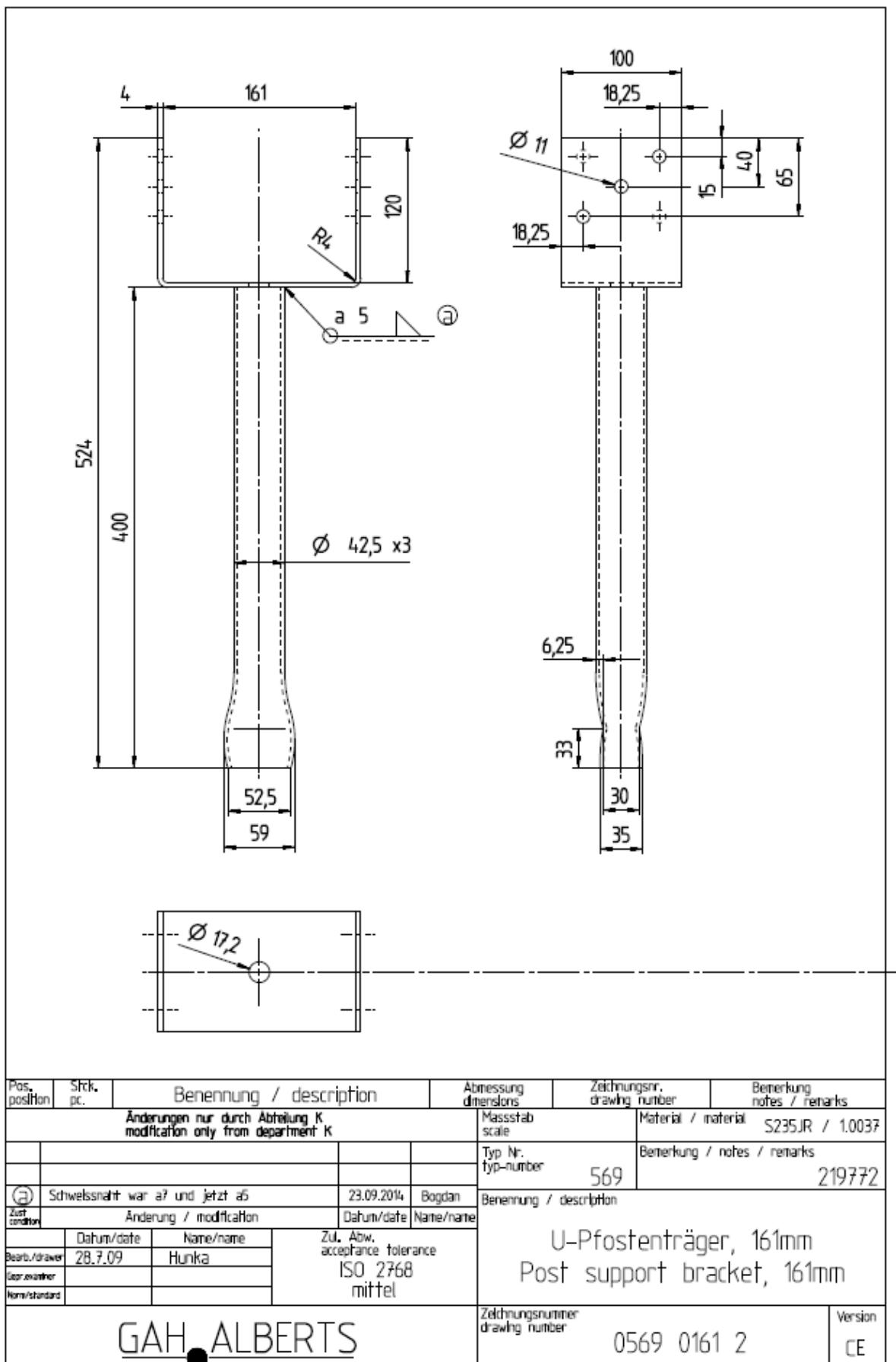
Pos. position	Stck. pc.	Benennung / description	Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks
Änderungen nur durch Abteilung K modification only from department K			Massstab scale		Material / material S235JR / 1.0037
(b)		<input type="checkbox"/> 150mm Platte war unten jetzt oben <input type="checkbox"/> 100mm Platte war oben jetzt unten	05.05.2014 02.08.2013	Bogdan G.Hunka	Typ Nr. typ-number 476
(a)		Mass war 150mm, Mass war 100			Bemerkung / notes / remarks 218119
Zust. condition	Änderung / modification		Datum/date Name/name	Benennung / description	
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance ISO 2768 mittel	Pfostenträger, höhenverstellbar Post support, height adjustable	
Gepr./examiner					
Norm/standard					
GAH ALBERTS				Zeichnungsnummer drawing number 0476 0150 2	Version CE

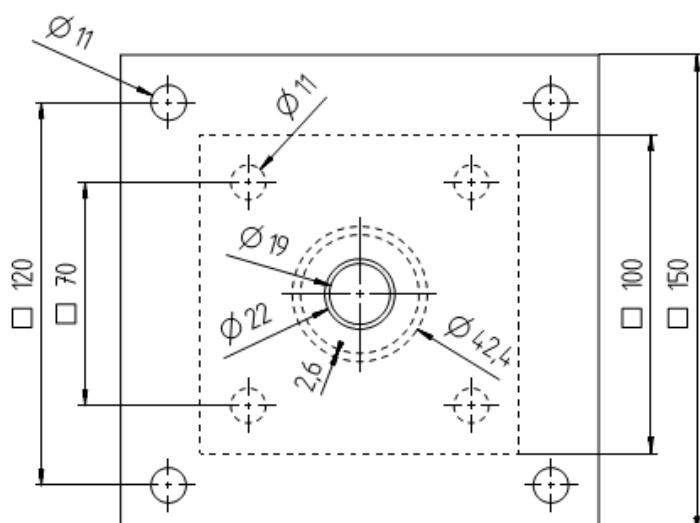
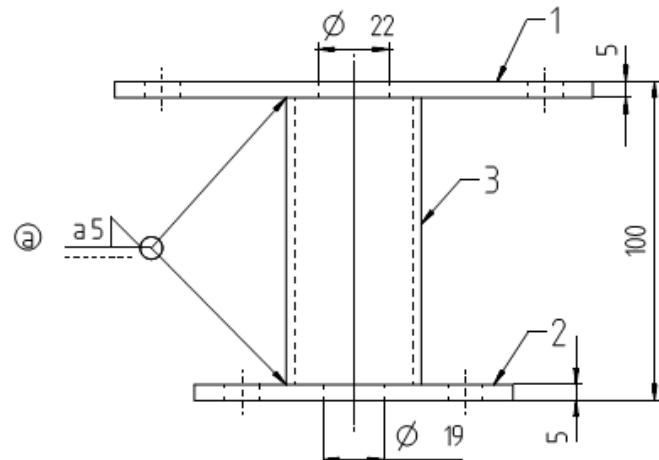


Pos. position	Stck. pc.	Benennung / description		Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
		Änderungen nur durch Abteilung K modification only from department K		Maßstab scale	Material / material S235JR / 1.0037			
				Typ Nr. typ-number	Bemerkung / notes / remarks 566 219703			
<input checked="" type="checkbox"/>	Schweißnaht war a7 und jetzt a5	Datum/date	Bogdan	Benennung / description				
Zust. status	Änderung / modification	Datum/date	Name/name	Pfostenträger, leicht Post support, light				
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance ISO 2768 mittel					
Gepr./geprüft	29.7.09	Hunka						
Norm/standard								
GAH ALBERTS				Zeichnungsnr. drawing number	0566 0091 2	Version CE		

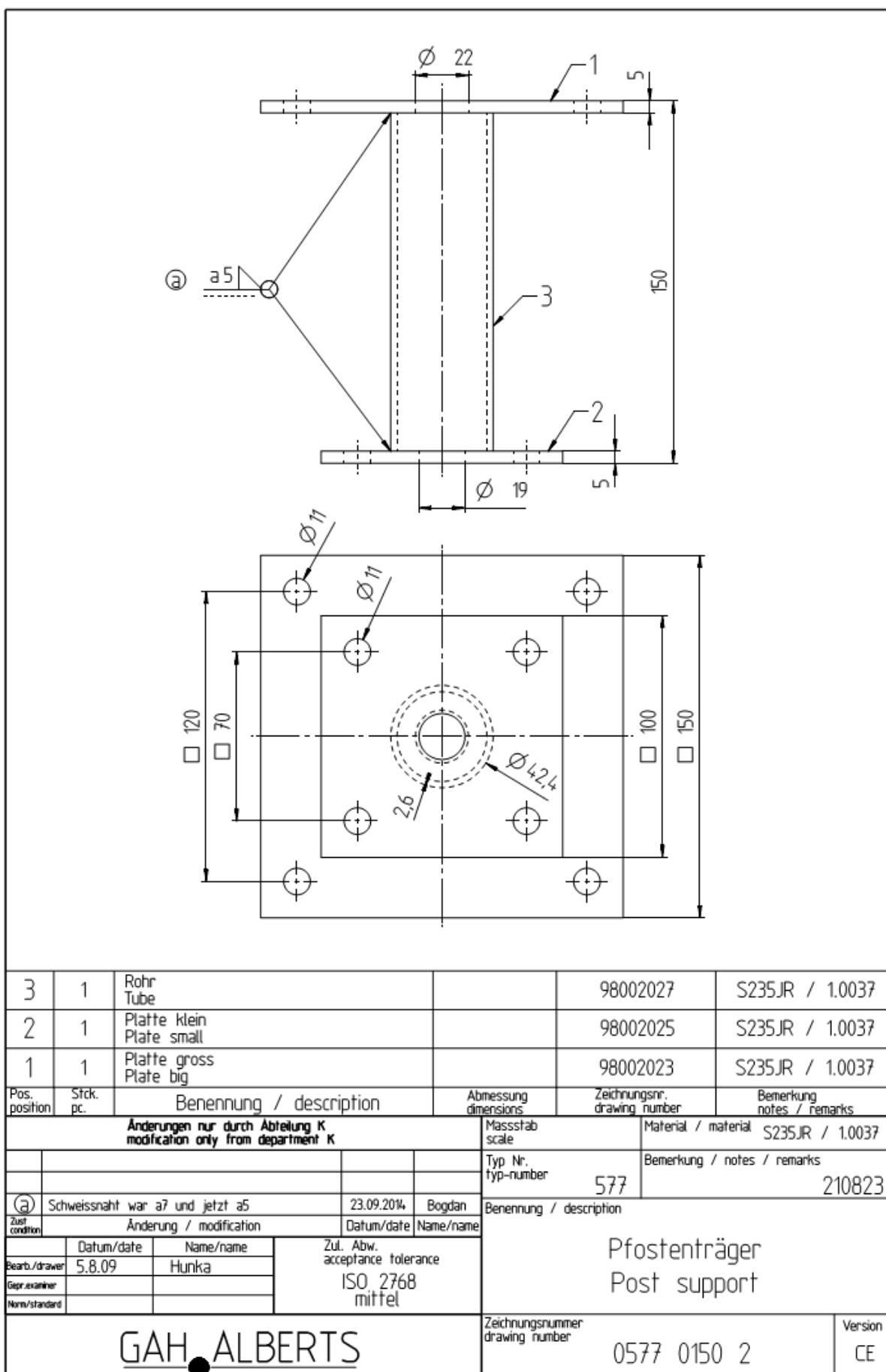


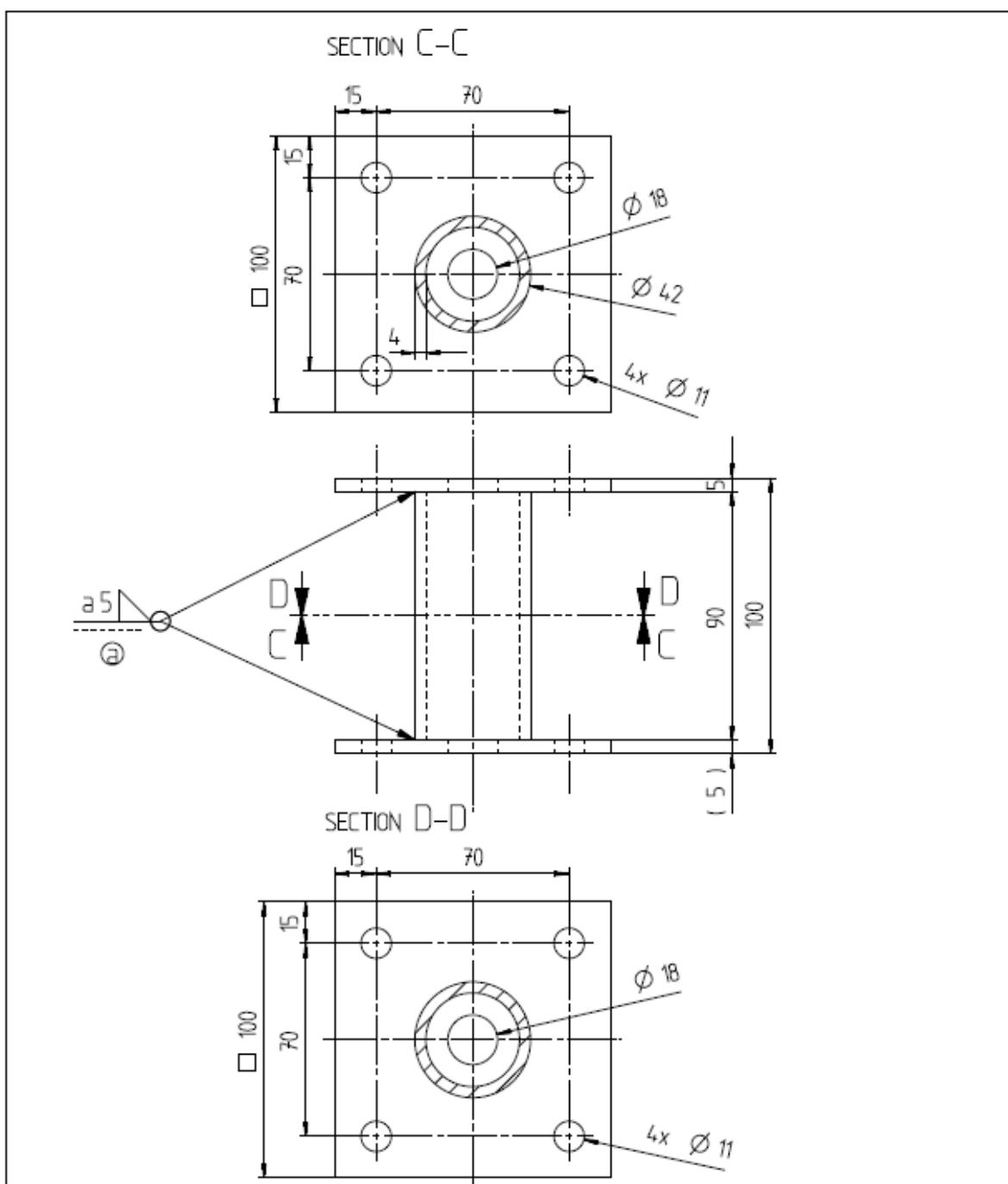




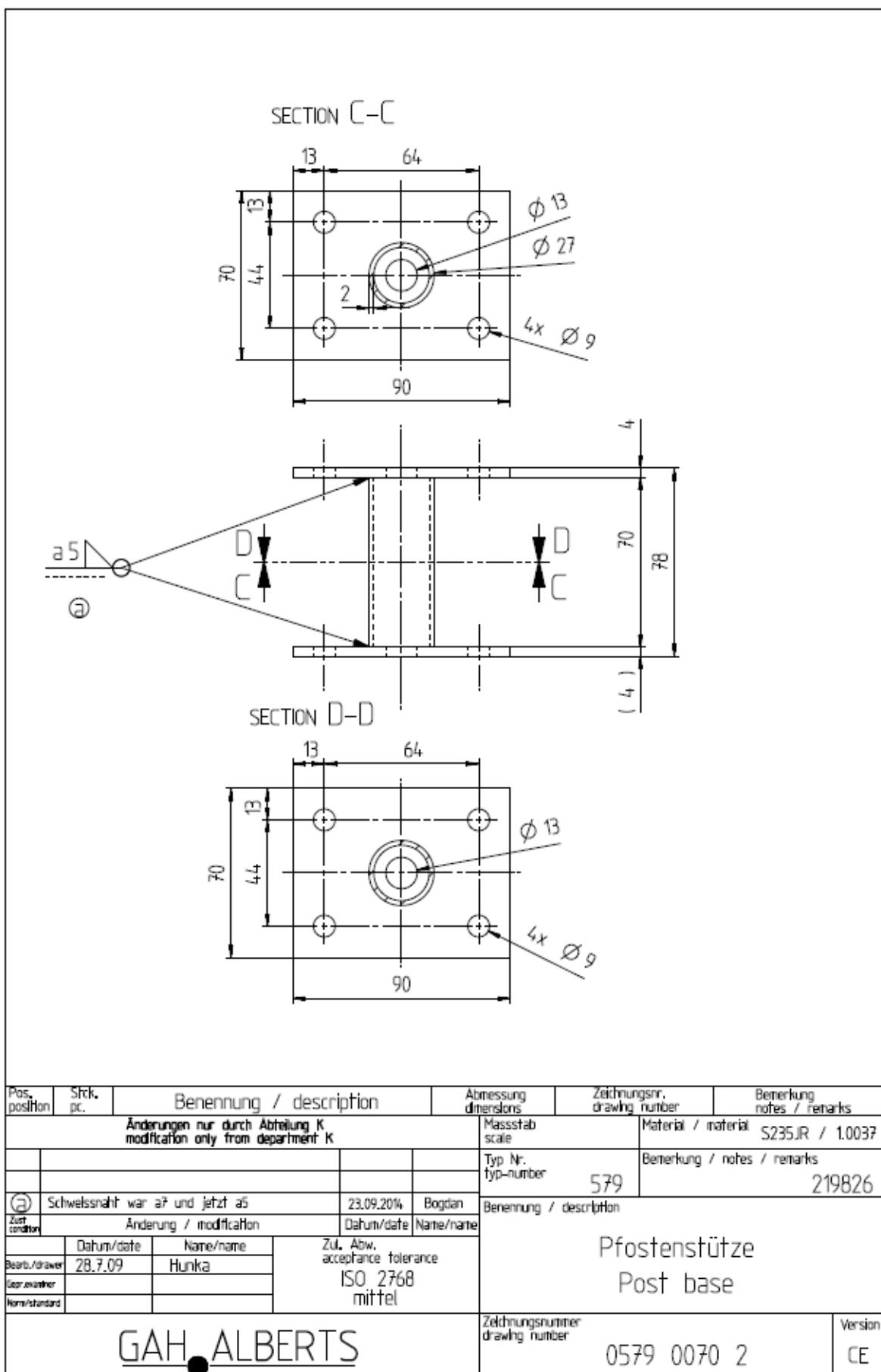


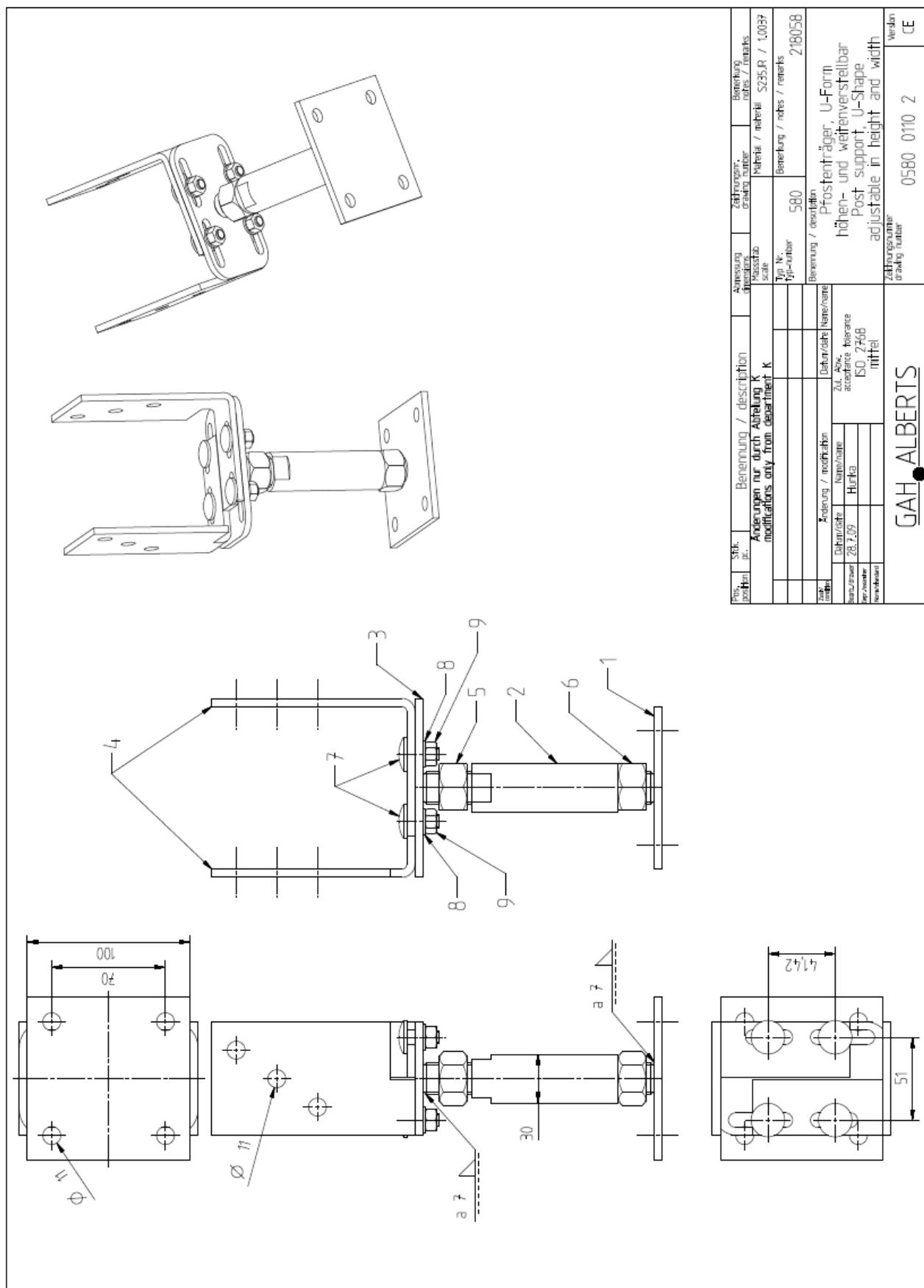
3	1	Rohr Tube		98007652	S235JR / 1.0037
2	1	Platte klein Plate small		98002025	S235JR / 1.0037
1	1	Platte gross Plate big		98002023	S235JR / 1.0037
Pos. position	Stck. pc.	Benennung / description	Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks
Änderungen nur durch Abteilung K modification only from department K				Massstab scale	Material / material S235JR / 1.0037
				Typ Nr. typ-number	Bemerkung / notes / remarks
				577	219819
(a) Zustand Zust. condition	Schweißnaht war a7 und jetzt a5		23.09.2014	Bogdan	Benennung / description  Pfostenträger Post support
	Änderung / modification		Datum/date	Name/name	
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance  ISO 2768 mittel	Zeichnungsnummer drawing number	Version
Gep. examiner	5.8.09	Hunka			
Norm/standard					
<b>GAH ALBERTS</b>				0577 0100 2	CE

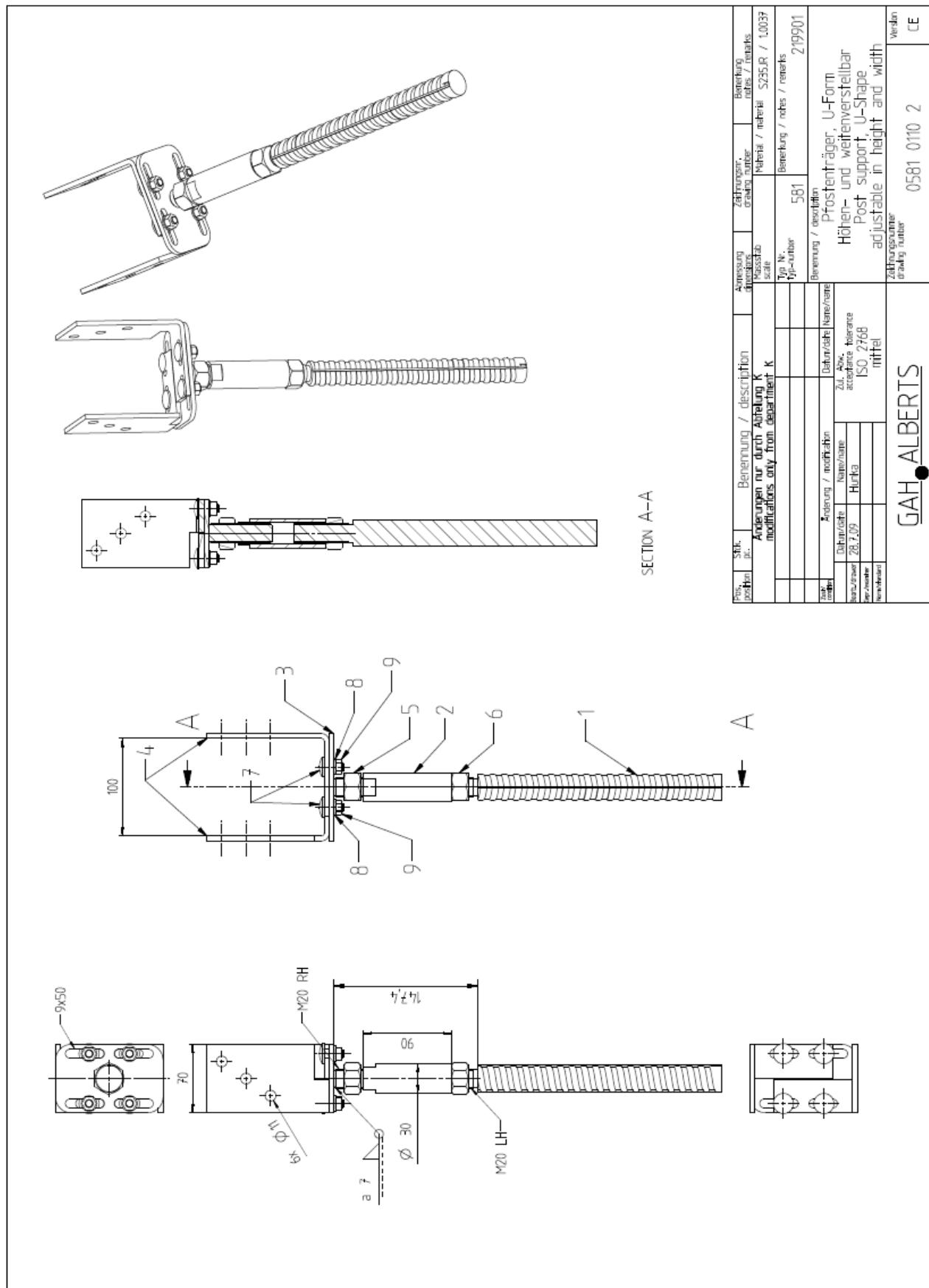


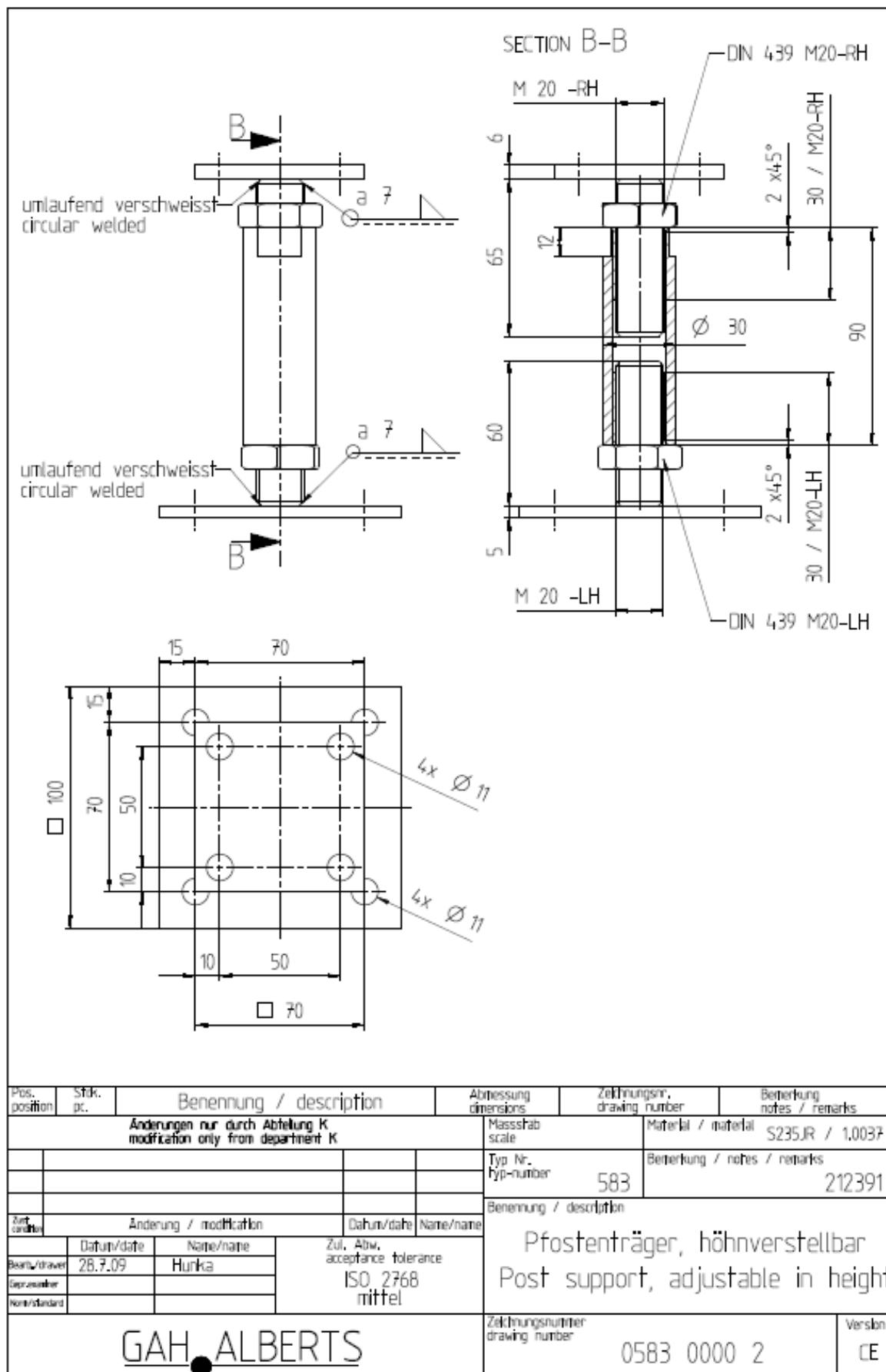


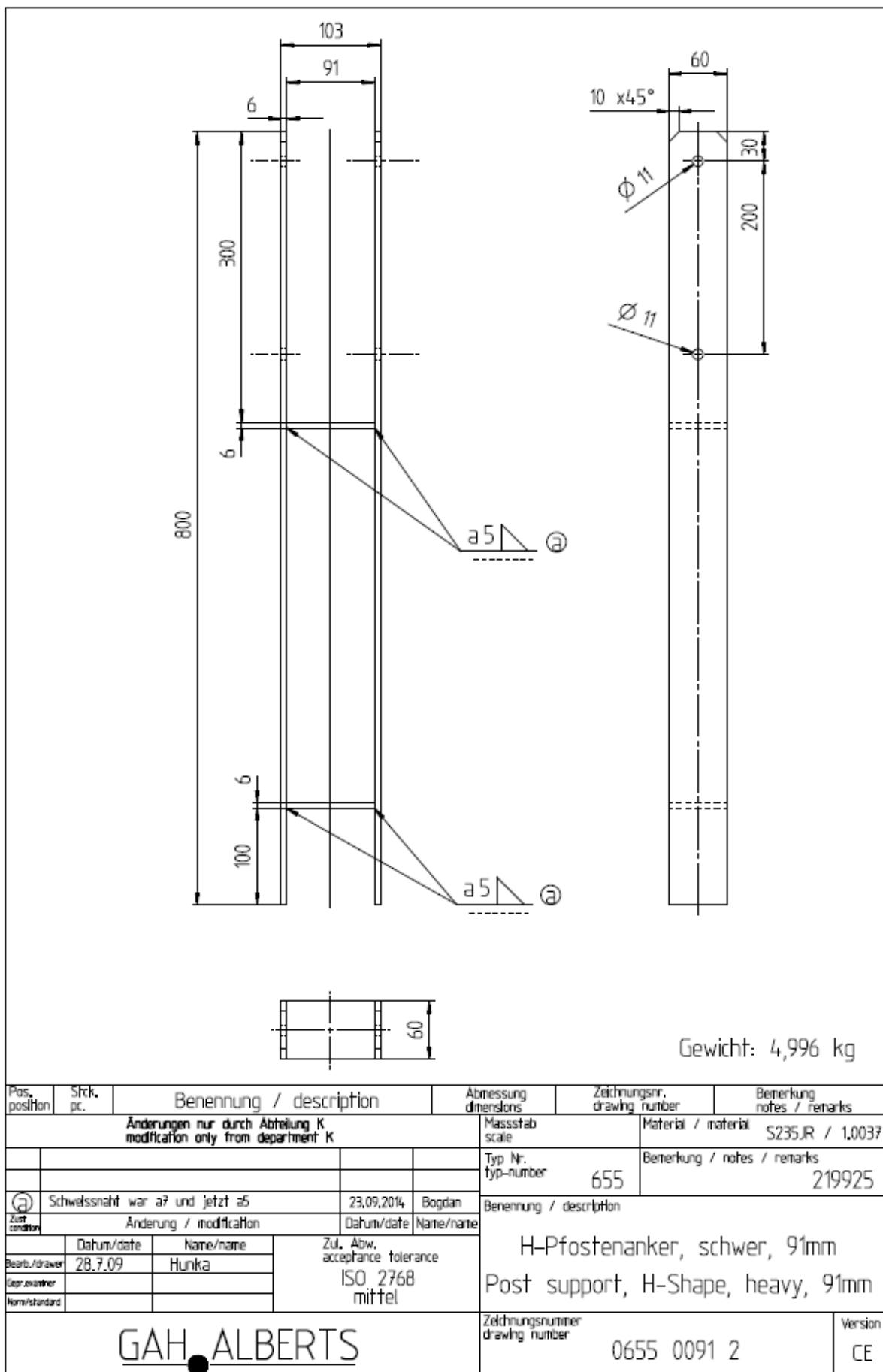
Pas. position	Stck. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
Änderungen nur durch Abteilung K modification only from department K					Massstab scale	Material / material S235JR / 1.0037			
					Typ Nr. typ-number 579	Bemerkung / notes / remarks 219802			
(@)	Schweissnaht war a7 und jetzt a5	23.09.2014 Bogdan		Benennung / description Pfostenstütze Post base					
Zust. standort	Änderung / modification	Datum/date	Name/nane						
Bearb./drawer	Datum/date	Name/nane	Zul. Abw. acceptance tolerance ISO 2768 mittel		Pfostenstütze Post base				
User/author	28.7.09	Hunka							
Norm/standard					Zeichnungsnr. drawing number 0579 0100 2				
GAH ALBERTS				Version CE					

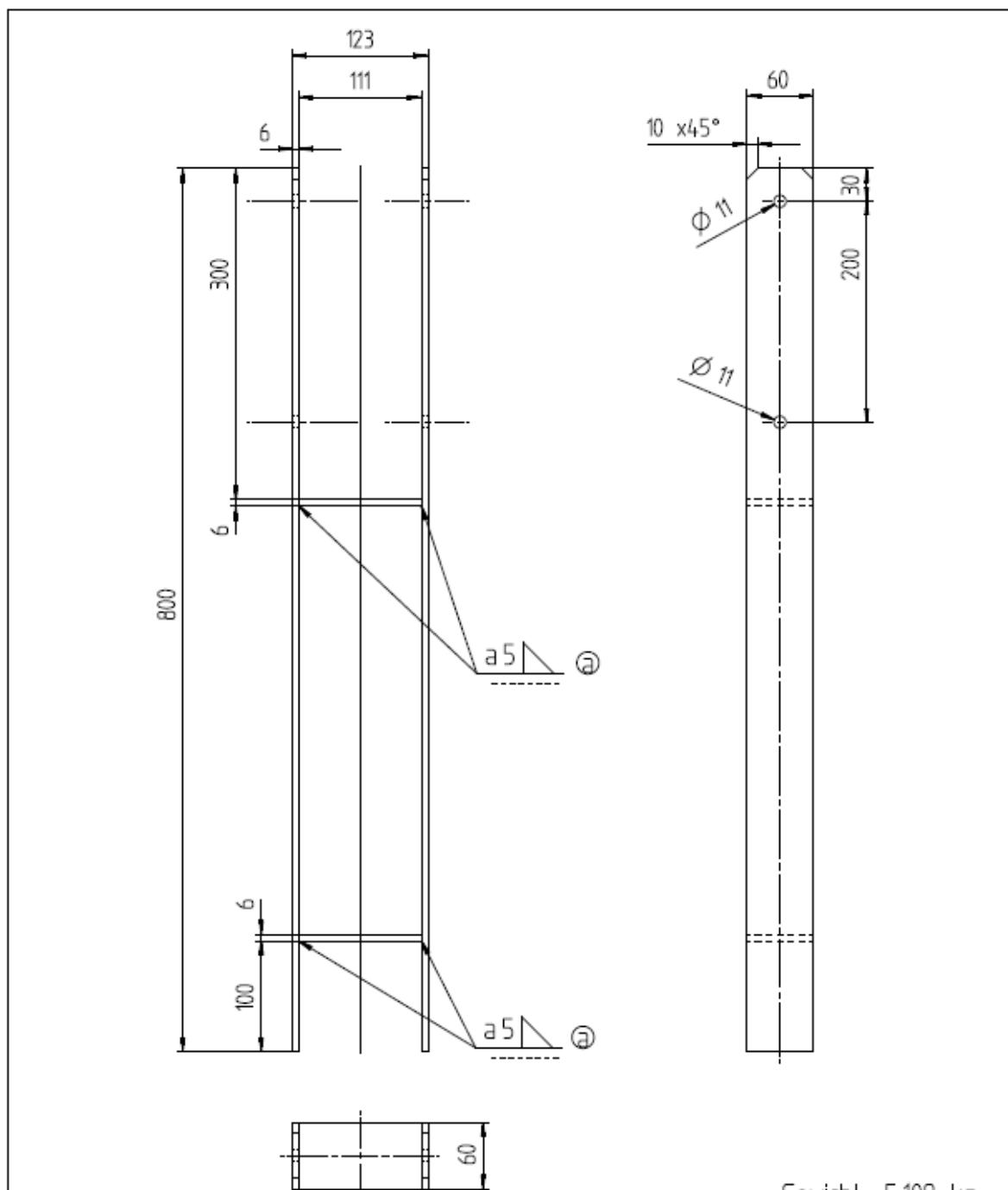




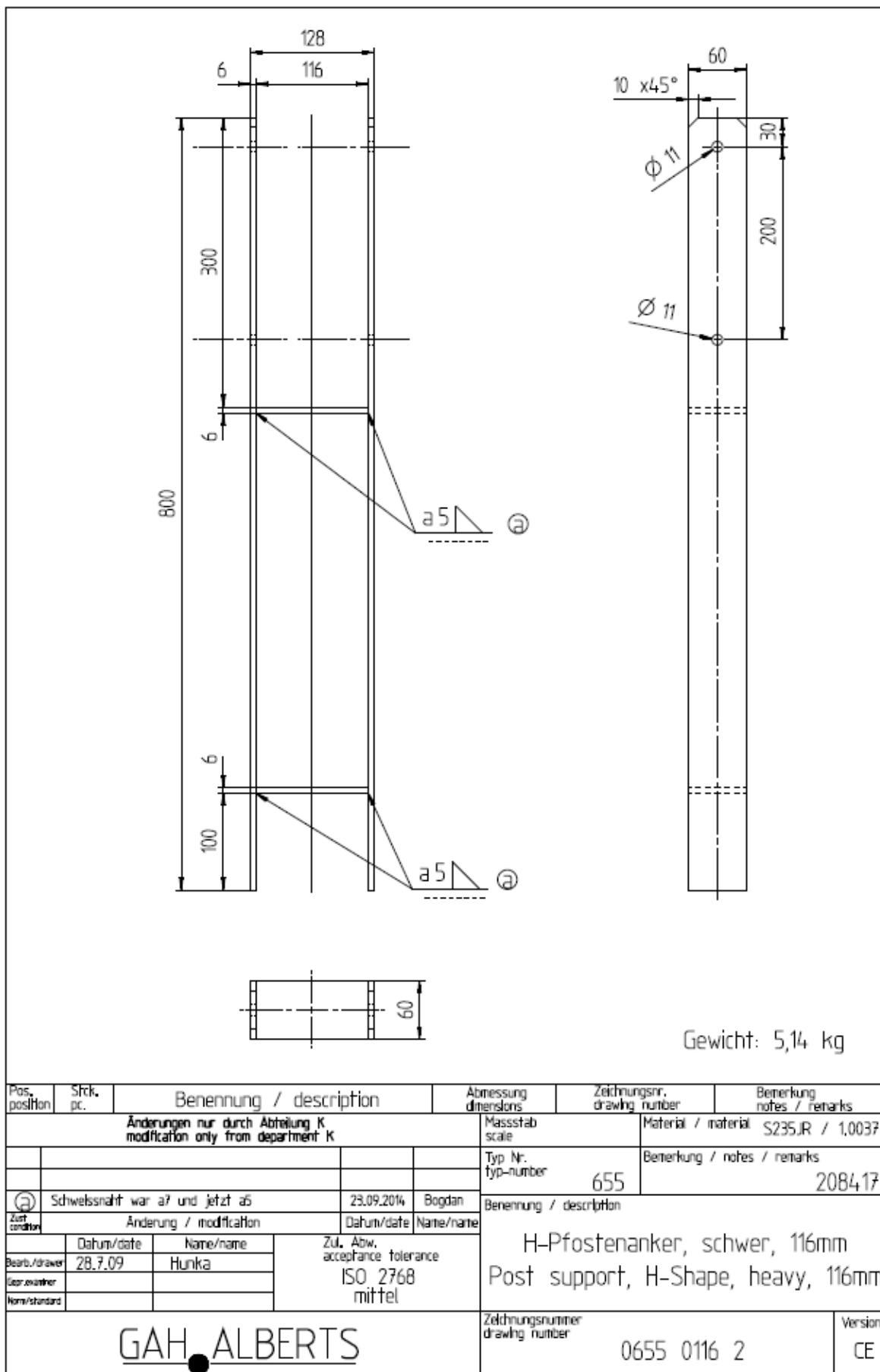


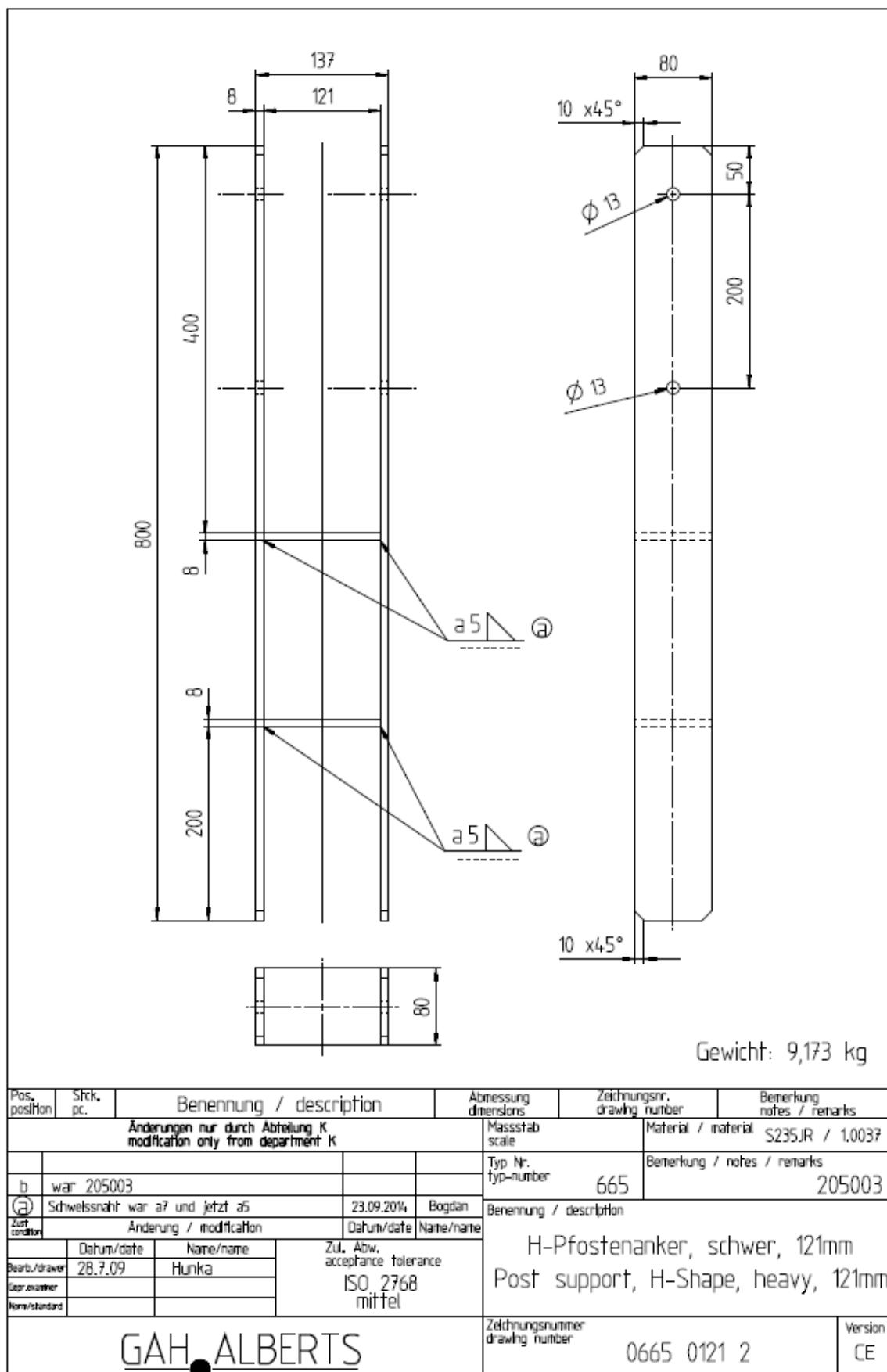


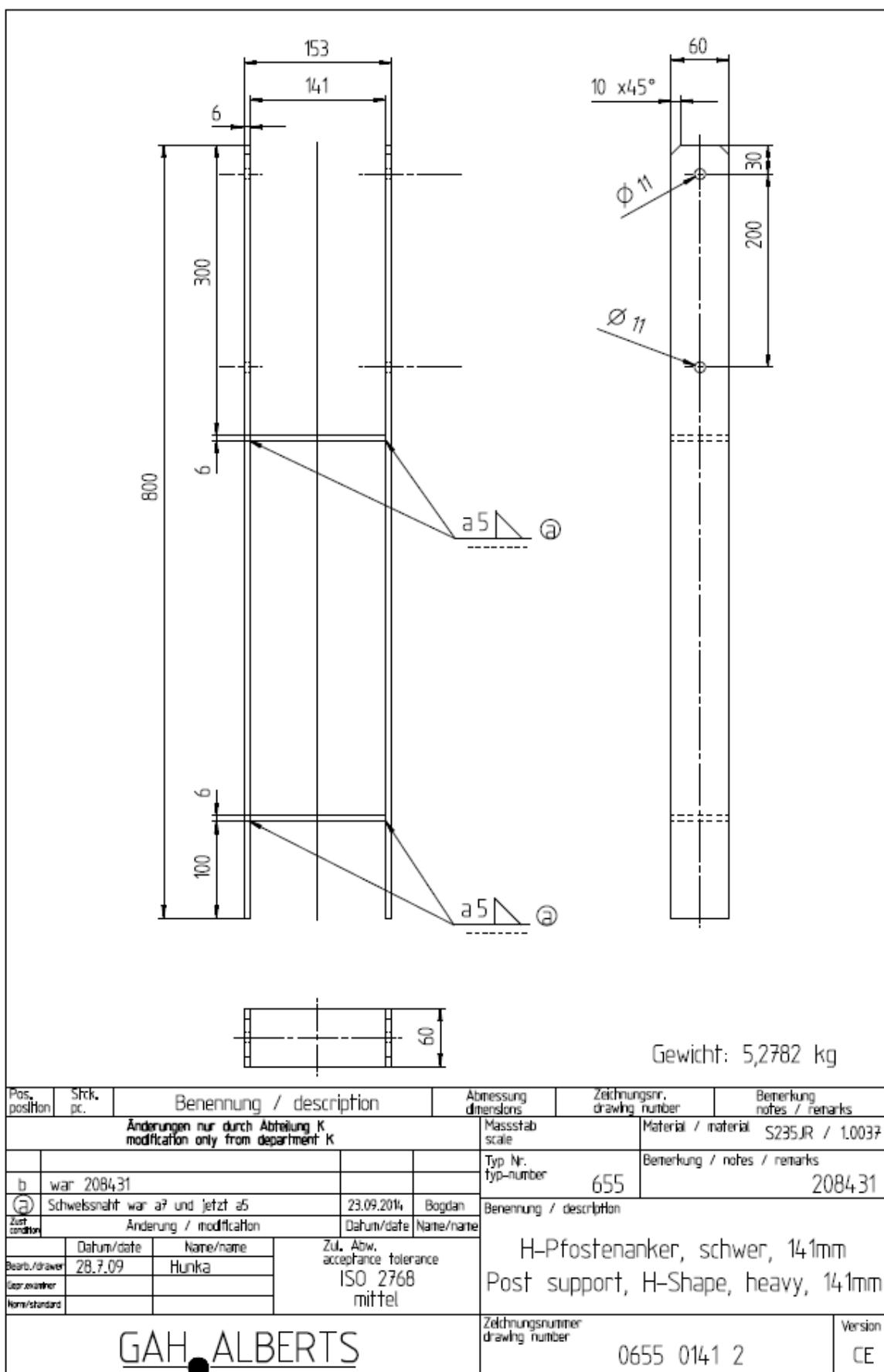


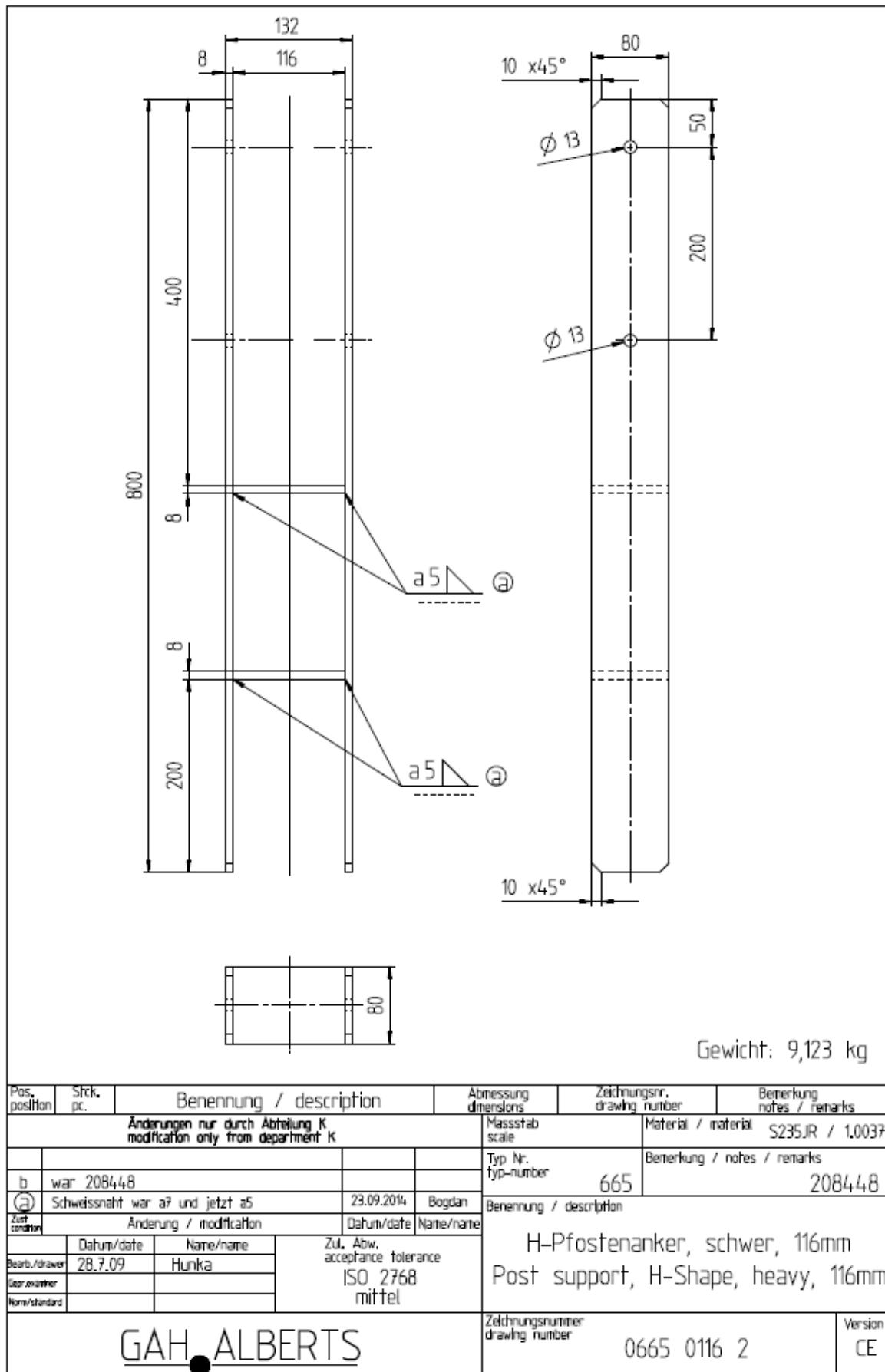


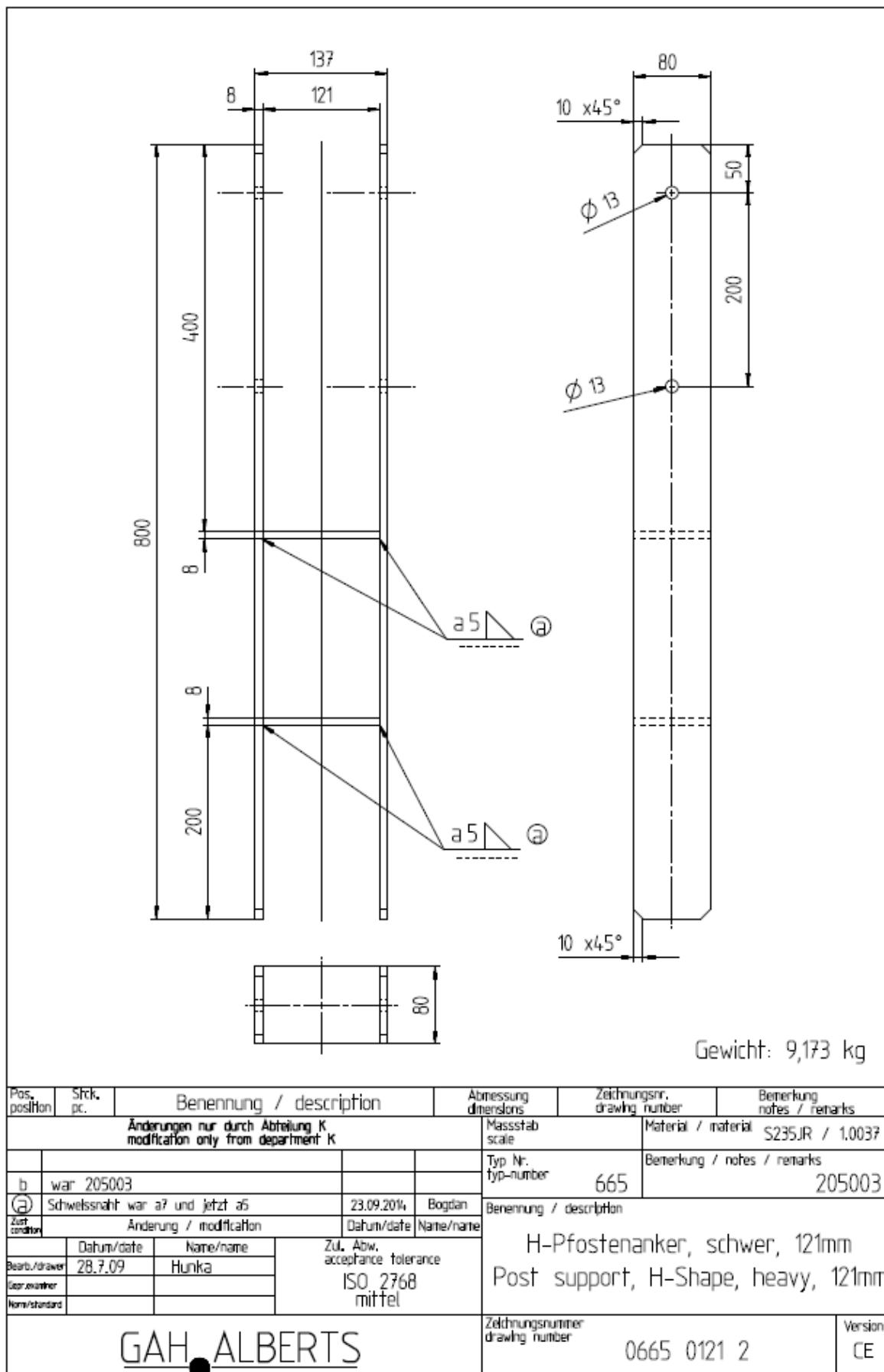
Pos. position	Stck. pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks		
Änderungen nur durch Abteilung K modification only from department K					Massstab scale	Material / material S235JR / 1.0037			
					Typ Nr. typ-number	Bemerkung / notes / remarks 219949			
(a) Schweißnaht war a7 und jetzt a5			23.09.2014	Bogdan	655	Benennung / description			
Zust. status	Änderung / modification		Datum/date	Name/name	H-Pfostenanker, schwer, 111mm Post support, H-Shape, heavy, 111mm				
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance ISO 2768 mittel		Zeichnungsnr. drawing number 0655 0111 2				
User/author	28.7.09	Hunka							
Norm/standard									
GAH ALBERTS					Version CE				

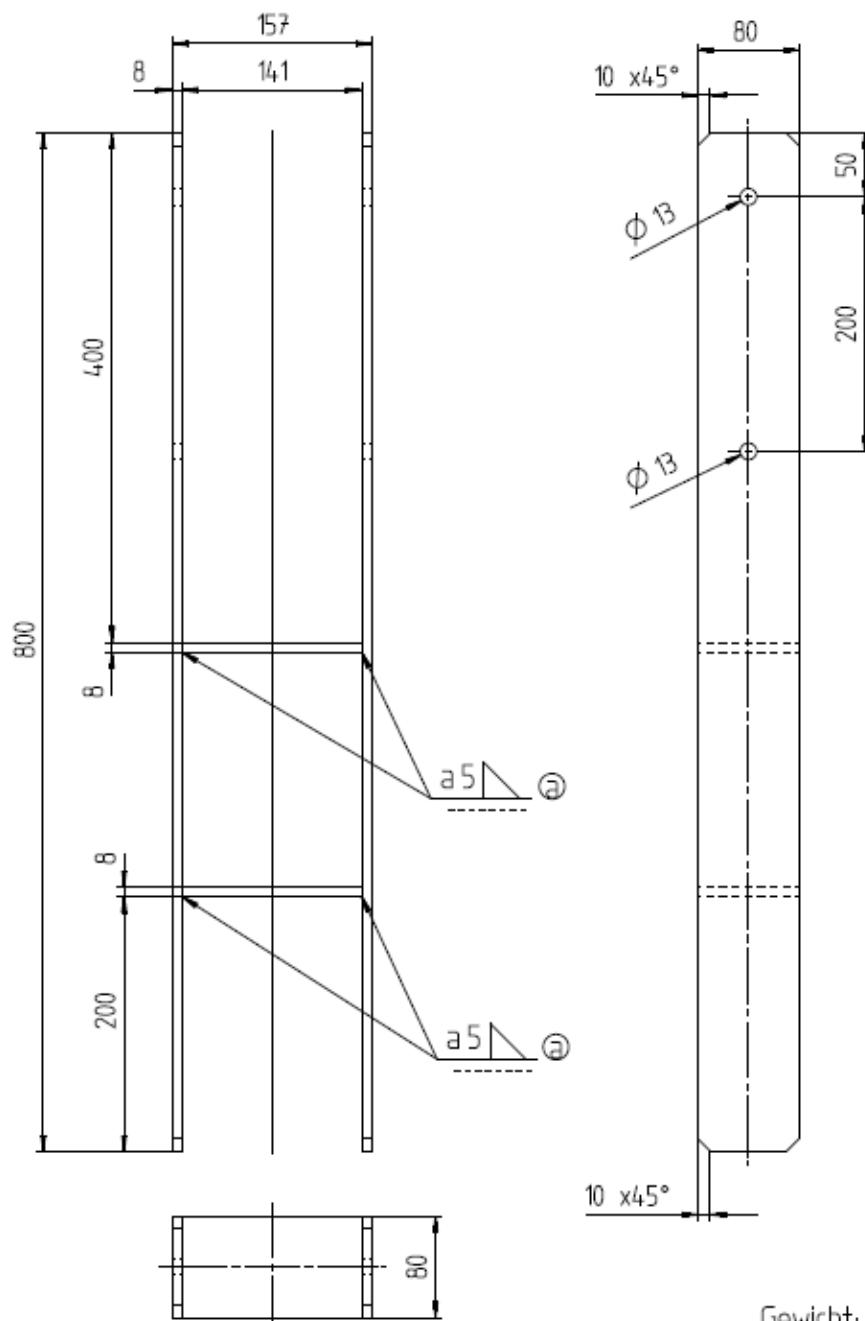




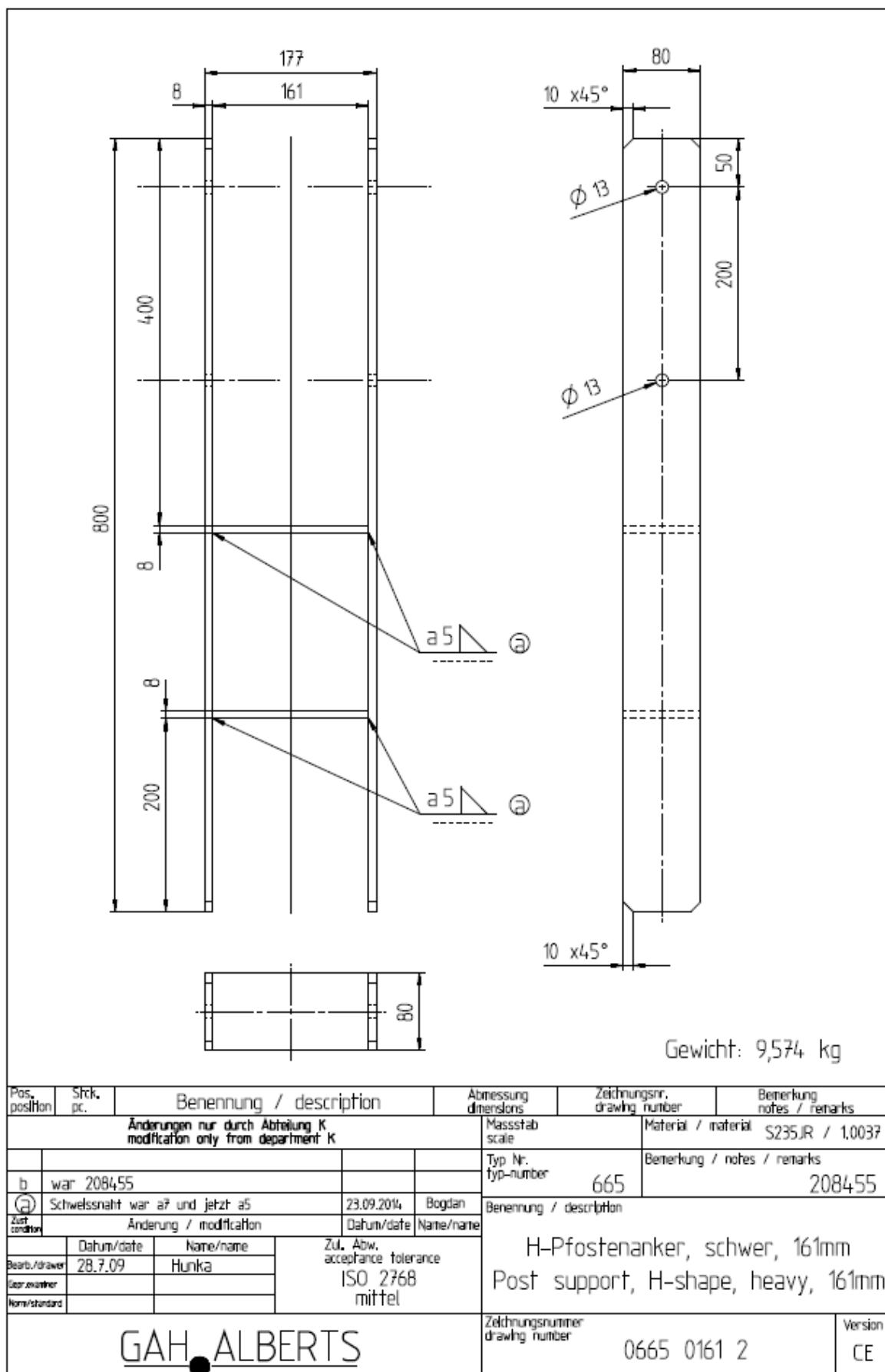


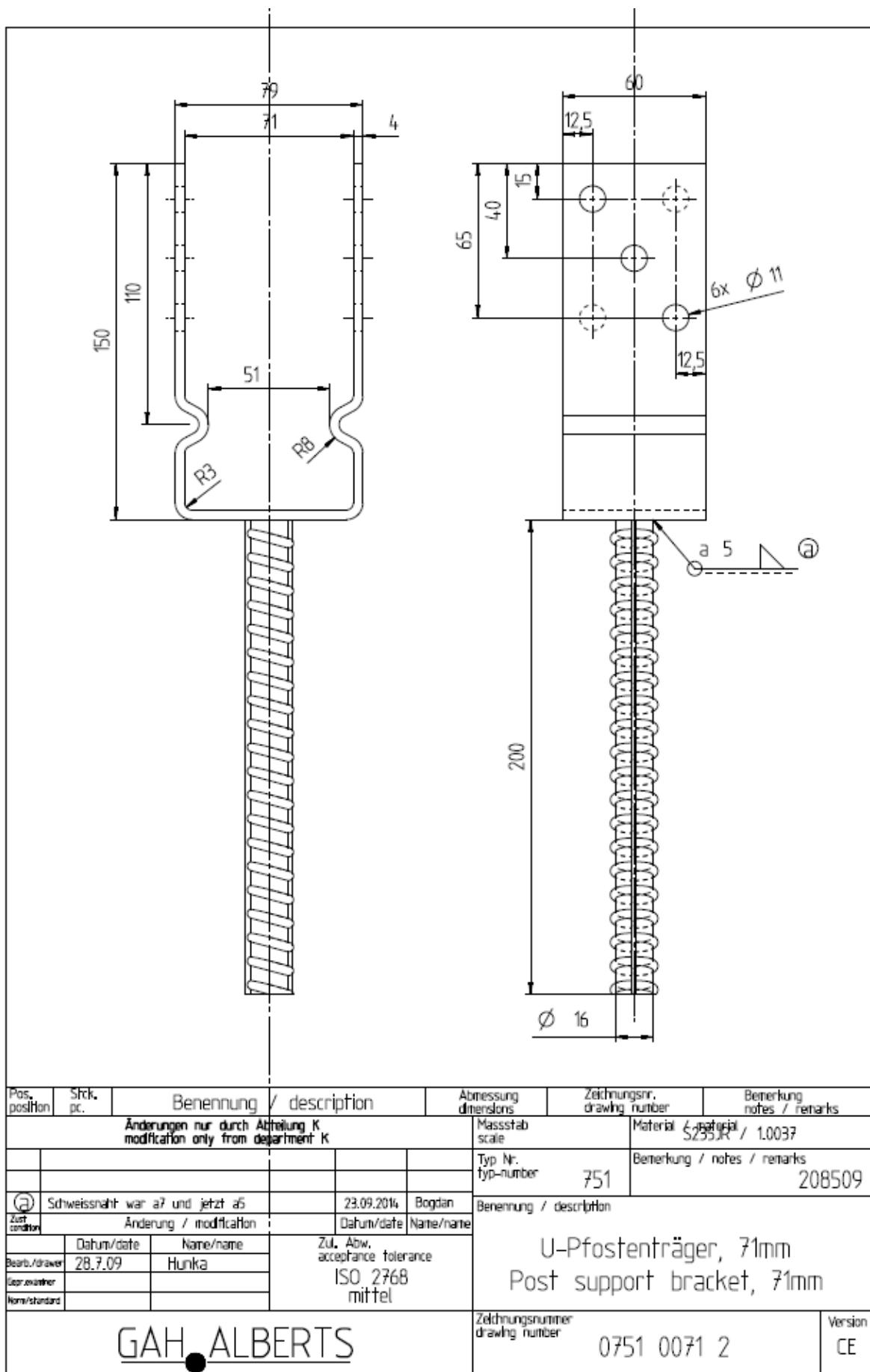


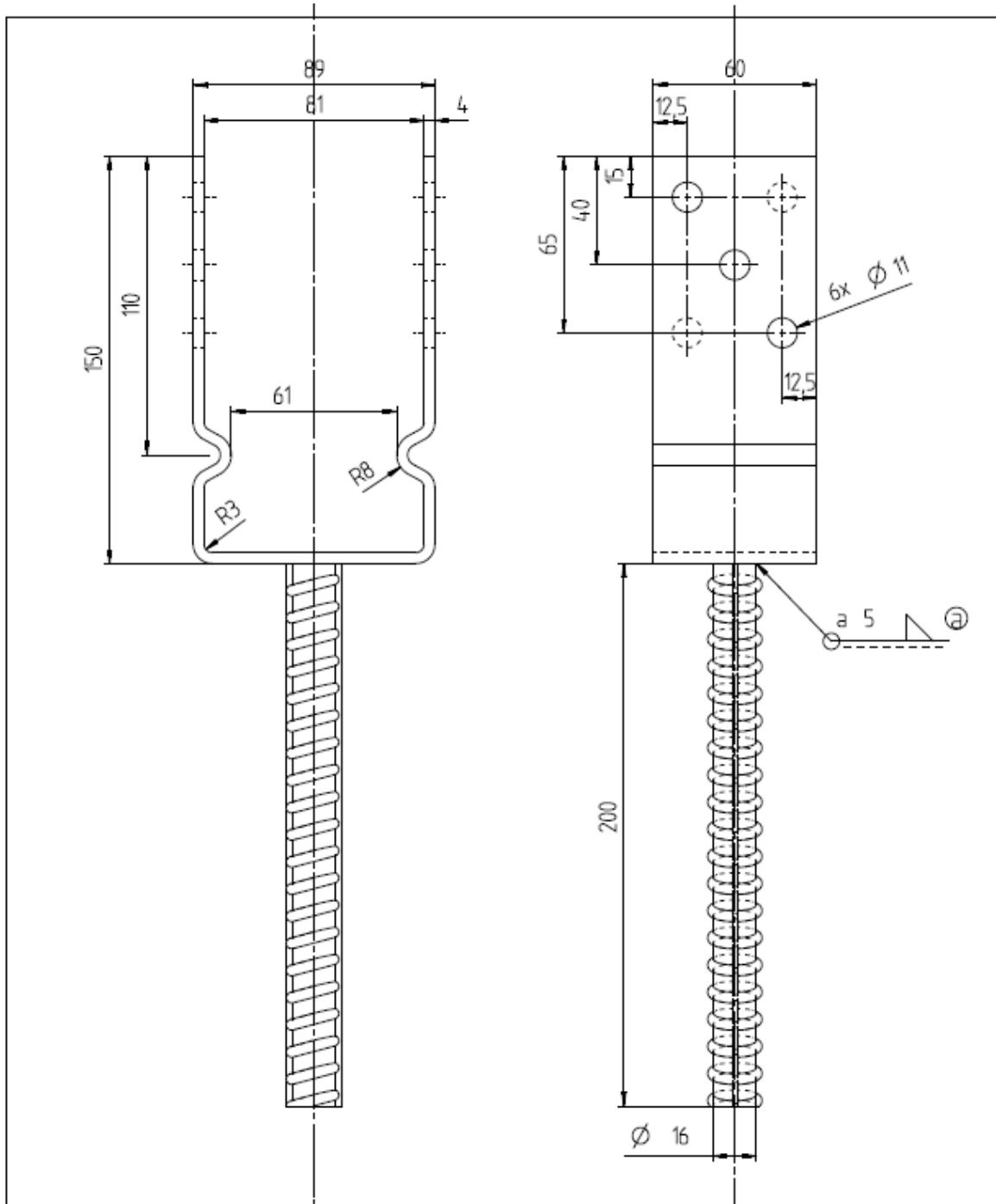




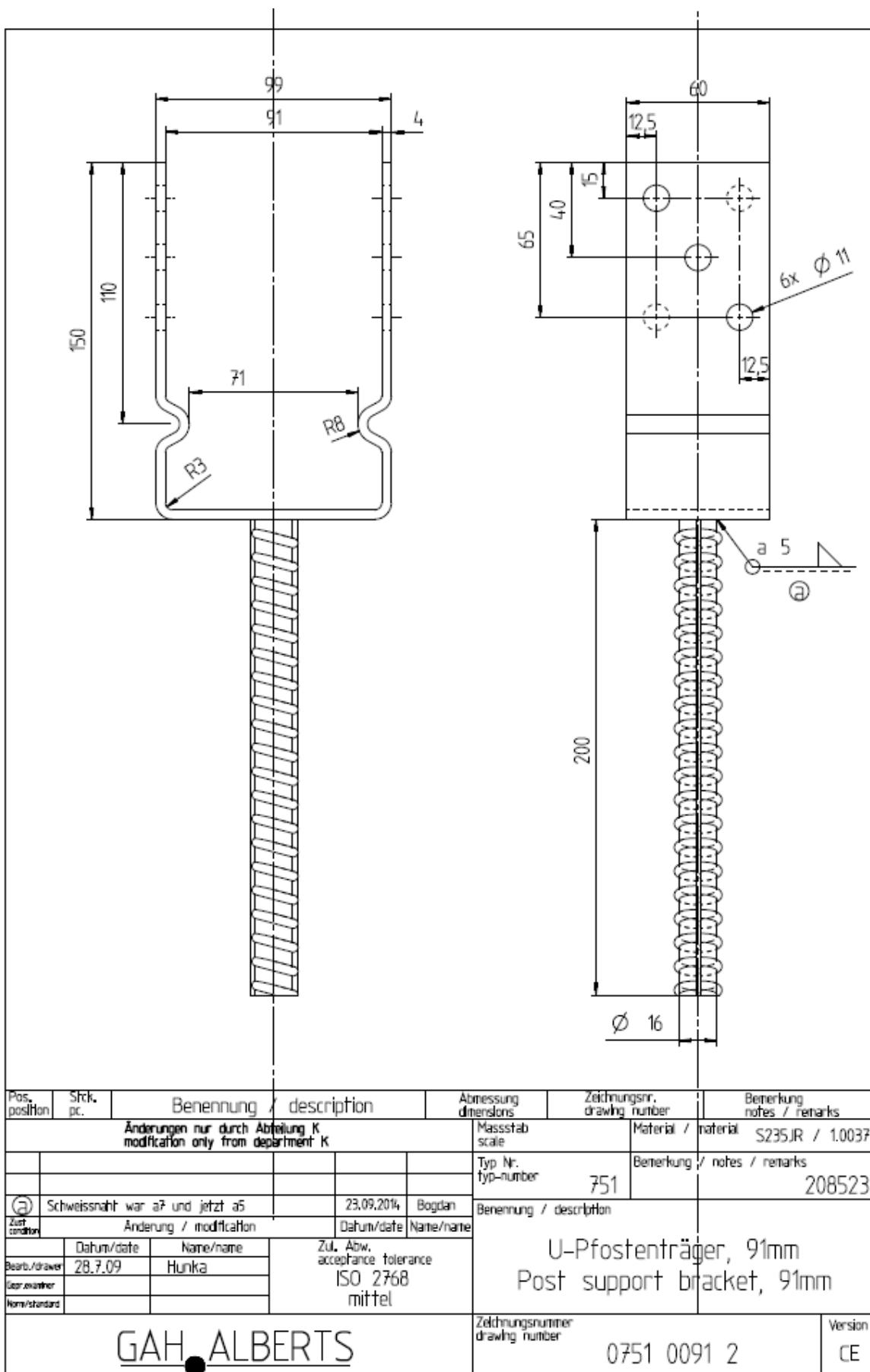
Pos. position	Stck.- pc.	Benennung / description			Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks
Änderungen nur durch Abteilung K modification only from department K					Massstab scale	Material / material S235JR / 1.0037	
b	war 205010				Typ Nr. typ-number	Bemerkung / notes / remarks	
(@)	Schweissnaht war a7 und jetzt a5	23.09.2014 Bogdan		665 205010			
Zust. condition	Aenderung / modification	Datum/date	Name/name	Benennung / description			
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance ISO 2768 mittel		H-Pfostenanker, schwer, 141mm Post support, H-Shape, heavy, 141mm		
Überreichter	28.7.09	Hunka					
Kont./standard							
GAH ALBERTS				Zeilungsnr. drawing number	0665 0141 2		Version CE

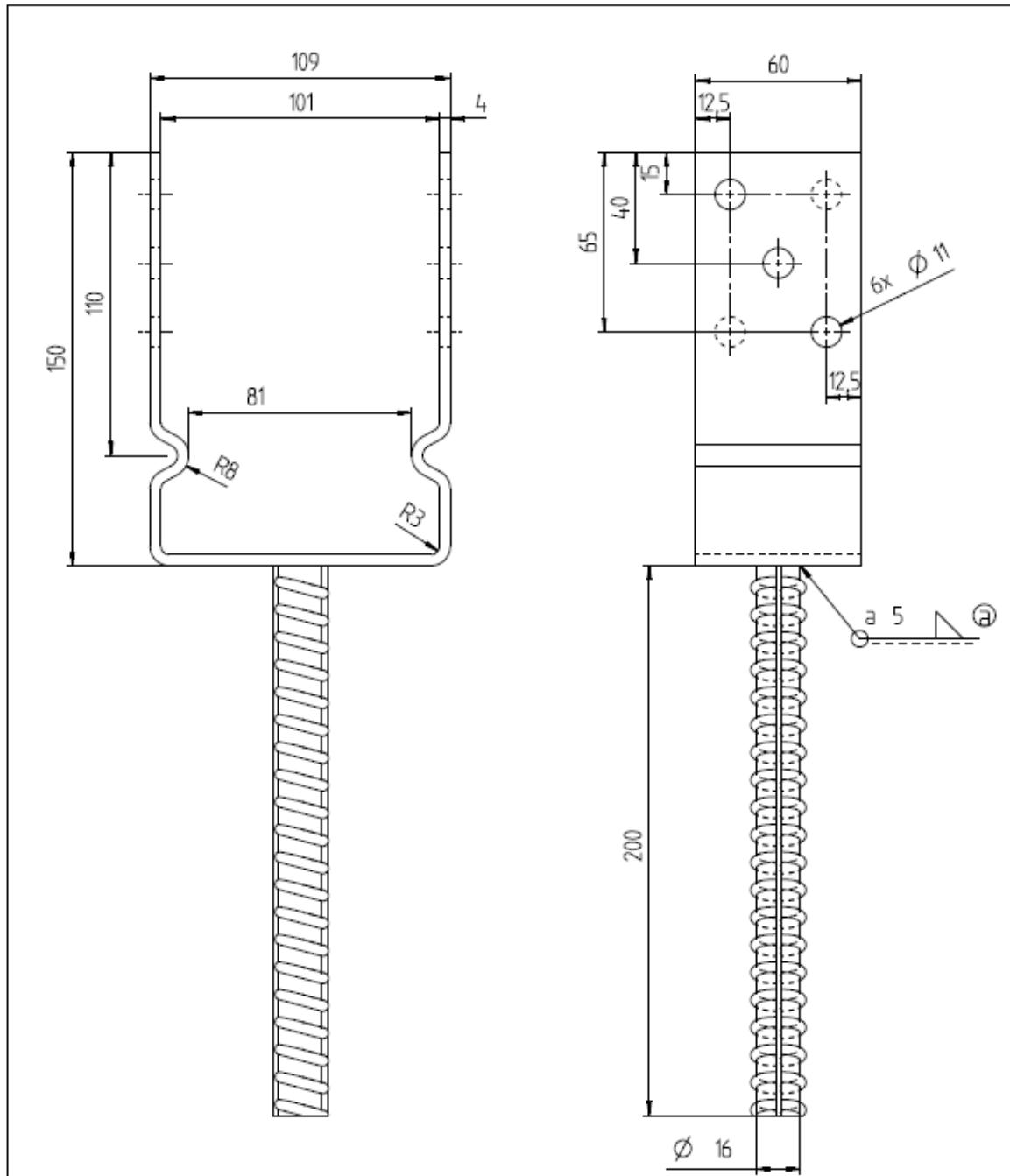




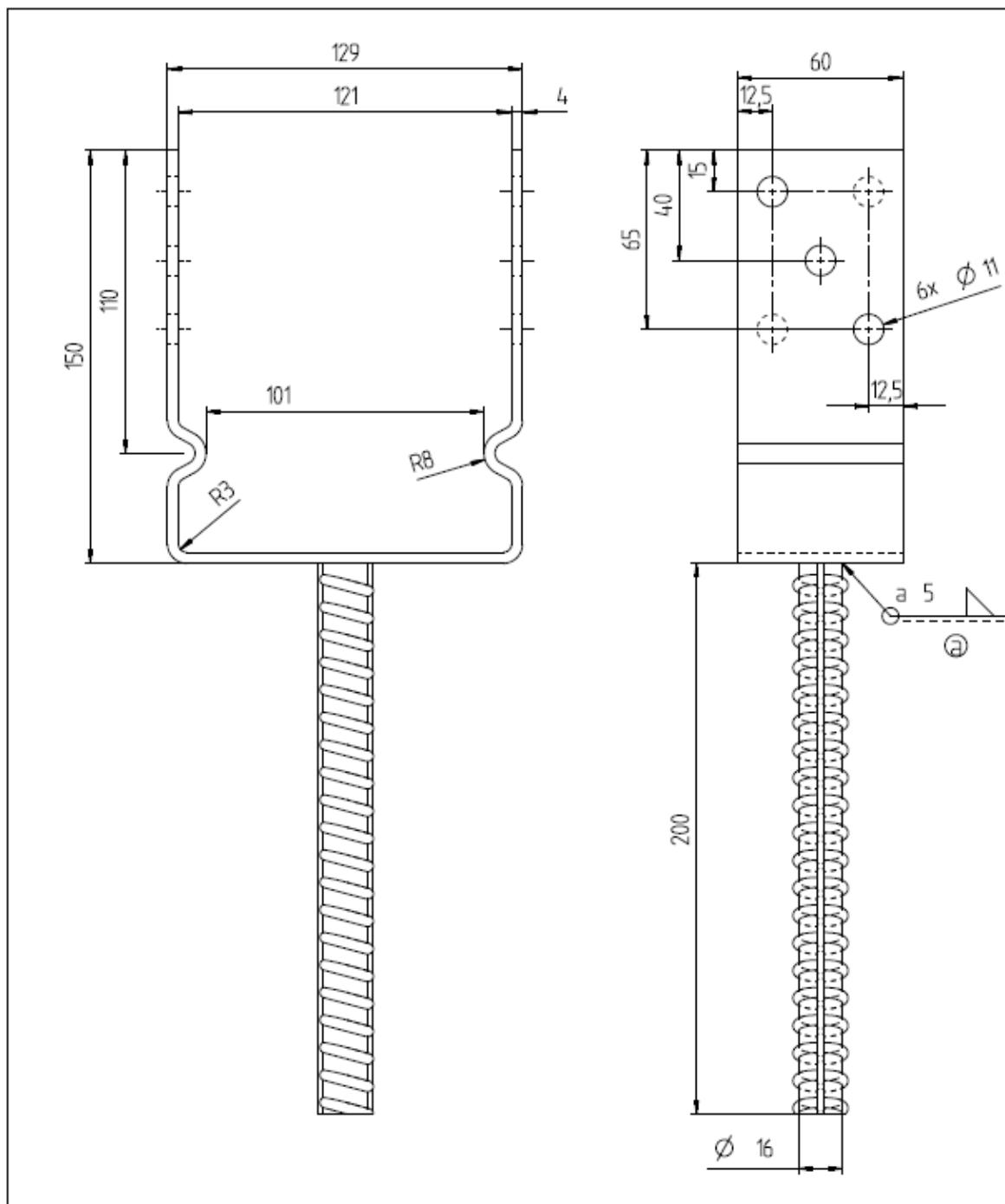


Pos. position	Stck. pc.	Benennung / description		Abmessung dimensions	Zeichnungsr. drawing number	Bemerkung notes / remarks
Änderungen nur durch Abteilung K modification only from department K				Massstab scale	Material / material	S235JR / 1.0037
				Typ Nr. typ-number	Bemerkung / notes / remarks	
				751		208516
(2)	Schweissnaht war a7 und jetzt a5	23.09.2014	Bogdan	Benennung / description		
Zust. condition	Aenderung / modification	Datum/date	Name/name			
Bearb./drawer	Datum/date	Name/name	Zu Abw. acceptance tolerance	U-Pfostenträger, 81mm Post support bracket, 81mm		
Bearb./drawer	28.7.09	Hunka	ISO 2768 mittel			
Norm/standard				Zeilenummer drawing number	0751 0081 2	Version CE
<b>GAH ALBERTS</b>						





Pos. position	Stk. pc.	Benennung / description	Abmessung dimensions	Zeichnungsnr. drawing number	Bemerkung notes / remarks
		Änderungen nur durch Abteilung K modification only from department K	Massstab scale	Material / material	S235JR / 1.0037
			Typ Nr. typ-number	Bemerkung / notes / remarks	
(2)		Schweißnaht war a7 und jetzt a5	23.09.2014	Bogdan	751 208530
Zust. condition		Änderung / modification	Datum/date	Name/name	Benennung / description
	Datum/date	Name/name	Zul. Abw. acceptance tolerance		U-Pfostenträger, 101mm
Bearb./drawer	28.7.09	Hunka	ISO 2768		Post support bracket, 101mm
Gepr./measured			mittel		
Norm/standard					
<b>GAH ALBERTS</b>			Zeichnungsnr. drawing number	0751 0101 2	Version CE



Pos. position	Stck. pc.	Benennung / description		Abmessung dimensions	Zeilenumm. drawing number	Bemerkung notes / remarks		
		Änderungen nur durch Abteilung K modifications only from department K		Massstab scale	Material / material S235JR / 1.0037			
				Typ Nr. typ-number	Bemerkung / notes / remarks			
				751	208547			
(@)	Schweißnaht war a7 und jetzt a6		23.09.2014	Bogdan	Benennung / description			
Zust. condition	Änderung / modification		Datum/date	Name/name	U-Pfostenträger, 121mm Post support bracket, 121mm			
Bearb./drawer	Datum/date	Name/name	Zul. Abw. acceptance tolerance ISO 2768 mittel					
Gepr.-zeichen	28.7.09	Hunka						
Norm/standard								
<u>GAH ALBERTS</u>				Zeilenumm. drawing number	0751 0121 2	Version CE		