

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

ETA-13/0271  
of 10 December 2021

English translation prepared by DIBt - Original version in German language

### General Part

Technical Assessment Body issuing the  
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

Multi-axis concealed hinge assemblies TECTUS TE...

Product family  
to which the construction product belongs

Multi-axis concealed hinge assemblies  
TECTUS TE 235 3D, TECTUS TE 240 3D, TECTUS TE  
340 3D, TECTUS TE 340 3D FR, TECTUS TE 540 3D,  
TECTUS TE 540 3D FR, TECTUS TE 540 3D A8,  
TECTUS TE 540 3D A8 FR, TECTUS TE 640 3D,  
TECTUS TE 640 3D FR, TECTUS TE 640 3D A8

Manufacturer

SIMONSWERK GmbH  
Bosfelder Weg 5  
33378 Rheda-Wiedenbrück  
DEUTSCHLAND

Manufacturing plant

SIMONSWERK GmbH  
Bosfelder Weg 5  
33378 Rheda-Wiedenbrück  
DEUTSCHLAND  
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Liesebühl 20  
37308 Heiligenstadt

This European Technical Assessment  
contains

17 pages including 12 annexes which form an integral  
part of this assessment

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

EAD 020001-01-0405

This version replaces

ETA-13/0271 issued on 11 July 2017

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## Specific Part

### 1 Technical description of the product

This European Technical Assessment applies to the variable concealed multi-axis hinges made of aluminium and zinc diecasting with the designation

"TECTUS TE 235 3D, TECTUS TE 240 3D"

"TECTUS TE 340 3D, TECTUS TE 340 3D FR"

"TECTUS TE 540 3D, TECTUS TE 540 3DFR, TECTUS TE 540 3D A8,  
TECTUS TE 540 3D A8 FR"

"TECTUS TE 640 3D, TECTUS TE 640 3D FR", TECTUS TE 640 3D A8".

Each product consists of three parts, one part a mounting plate for the door frame, one part a mounting plate for the door leaf with segmented plates connected laterally in such a way as to allow the door to swing freely and to maintain the leaf in the same horizontal and vertical plane during the full operational cycle. Between the two mounting plates provide a variable geometry moving axis within a concealed hinge assembly.

The system setup of the product is given in Annexes 1 to 11.

The further labelling of some hinges is according to Annex 12.

### 2 Specification of the intended use in accordance with the applicable European assessment Document

The hinges are intended for use on doors of timber and metal. The doors could be made of synthetic materials if there is no requirement on resistance to fire.

They are invisible (concealed) hinges to allow single and double swing door leaves to be mounted flush to its door leaf and frame, forming a flush panel surface when the door is closed, and allowing the door to open to 180°.

The hinges are available for use on doors with door mass up to

40 kg (TECTUS TE 235 3D)

60 kg (TECTUS TE 240 3D),

80 kg (TECTUS TE 340 3D, TECTUS TE 340 3D FR),

100 kg (TECTUS TE 540 3D A8, TECTUS TE 540 3D A8 FR),

120 kg (TECTUS TE 540 3D),),

160 kg (TECTUS TE 540 3D FR, TECTUS TE 640 3D, TECTUS TE 640 3D FR,  
TECTUS TE 640 3D A8)

each door leaf.

The verifications and assessment methods on which this European Technical Assessment is based lead the assumption of working life of the hinges of 10 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, 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.

English translation prepared by DIBt

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

#### 3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1
Resistance to fire	El <sub>2</sub> 30

#### 3.2 Sustainable use of natural resources (BWR 7)

For the sustainable use of natural resources no performance was investigated for this product.

#### 3.3 General aspects

The verification of durability is part of testing the essential characteristics.

Essential characteristic	Performance
Category of use	Grade 2 - TECTUS TE 235 3D, Grade 3 - TECTUS TE 240 3D, TECTUS TE 340 3D, TECTUS TE 340 3D FR Grade 4 - TECTUS TE 540 3D, TECTUS TE 540 3D FR, TECTUS TE 540 3D A8, TECTUS TE 540 3D A8 FR, TECTUS TE 640 3D, TECTUS TE 640 3D FR, " TECTUS TE 640 3D A8"
Durability	Grade 7
Test door mass	Grade 2 - TECTUS TE 235 3D, Grade 3 - TECTUS TE 240 3D Grade 4 - TECTUS TE 340 3D, TECTUS TE 340 3D FR Grade 5 - TECTUS TE 540 3D A8, TECTUS TE 540 3D A8 FR Grade 6 - TECTUS TE 540 3D, Grade 7 - TECTUS TE 540 3D FR, TECTUS TE 640 3D, TECTUS TE 640 3D FR, ", TECTUS TE 640 3D A8
Fire resistance	Grade 0 - TECTUS TE 235 3D Grade 1 - TECTUS TE 240 3D, TECTUS TE 540 3D A8, TECTUS TE 540 3D A8 FR TECTUS TE 340 3D, TECTUS TE 340 3D FR, TECTUS TE 540 3D, TECTUS TE 540 3D FR, TECTUS TE 640 3D, TECTUS TE 640 3D FR, TECTUS TE 640 3D A8
Safety	Grade 1
Corrosion resistance	Grade 3 - TECTUS TE 235 3D Grade 4 - TECTUS TE 240 3D TECTUS TE 340 3D, TECTUS TE 340 3D FR, TECTUS TE 540 3D, TECTUS TE 540 3D FR, TECTUS TE 540 3D A8, TECTUS TE 540 3D A8 FR TECTUS TE 640 3D, TECTUS TE 640 3D FR, TECTUS TE 640 3D A8

Essential characteristic	Performance
Security	Grade 0 - TECTUS TE 235 3D, TECTUS TE 240 3D, TECTUS TE 340 3D, TECTUS TE 340 3D FR Grade 1 - TECTUS TE 540 3D, TECTUS TE 540 3D FR, TECTUS TE 540 3D A8, TECTUS TE 540 3D A8 FR TECTUS TE 640 3D, TECTUS TE 640 3D FR
Hinge grade	Grade 7 - TECTUS TE 235 3D, Grade 10 TECTUS TE 240 3D, Grade 11 - TECTUS TE 340 3D, TECTUS TE 340 3D FR Grade 12 - TECTUS TE 540 3D A8, TECTUS TE 540 3D A8 FR Grade 13 - TECTUS TE 540 3D, TECTUS TE 540 3D FR Grade 14 - TECTUS TE 640 3D, TECTUS TE 640 3D FR, TECTUS TE 640 3D A8

**4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base**

According to Decision of the Commission 1999/93/EC (OJ L 29/51 of 26.01.1999 p. 51), as amended by Decision of the Commission 2011/246/EU (Letter of the European commission of 15/10/2004), the system of assessment and verification of constancy of performance (see Annex V and Article 65 Paragraph 2 to Regulation (EU) No 305/2011) given in the following table applies.

The system to be applied is: 1

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

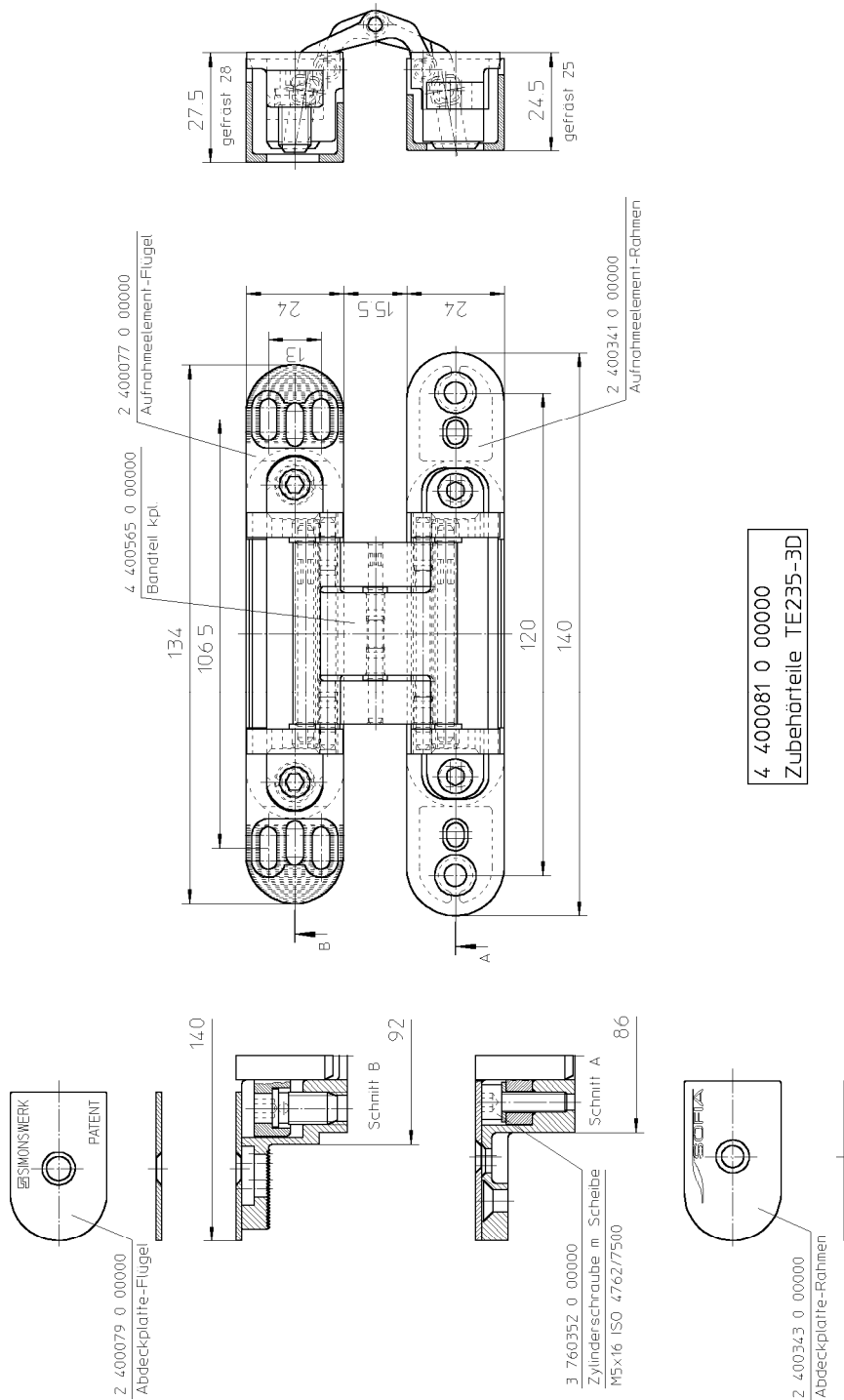
Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at Deutsches Institut für Bautechnik.

Issued in Berlin on 10. December 2021 by Deutsches Institut für Bautechnik

Christina Pritzkow  
Head of department

*beglaubigt:*  
Panneck

English translation prepared by DIBt

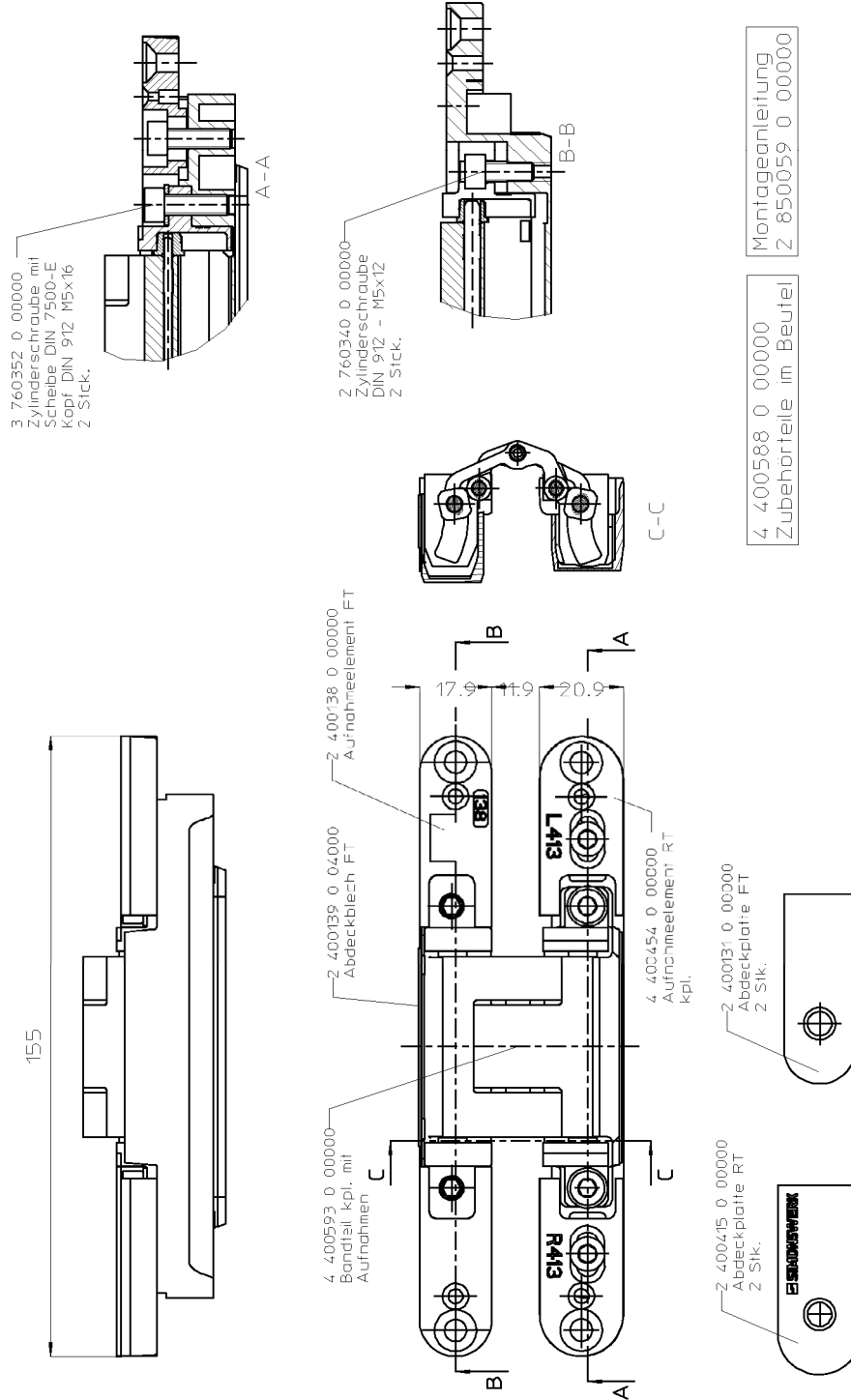


Multi-axis concealed hinge assemblies TECTUS TE...

Construction TECTUS TE 235 3D

Annex 1

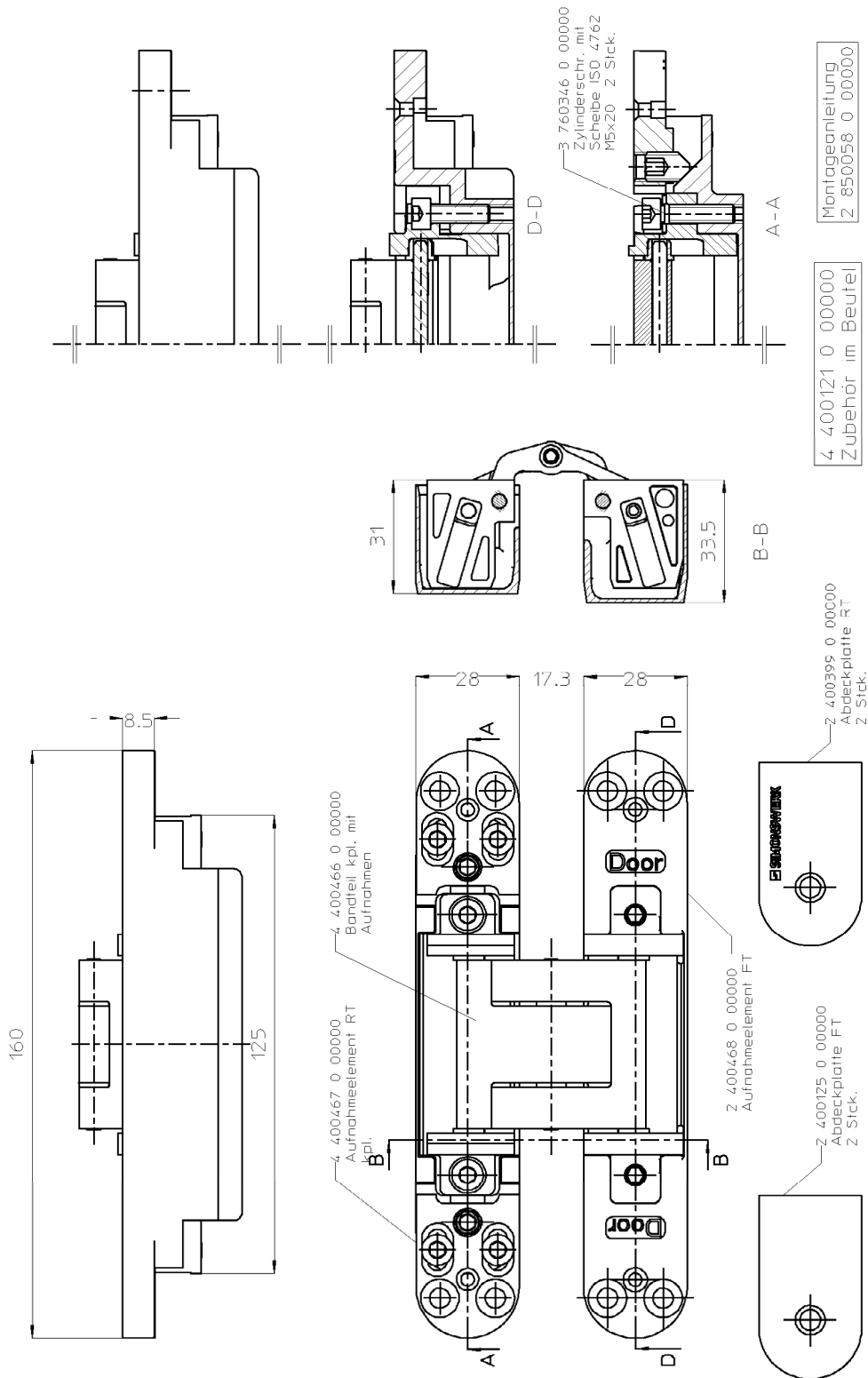
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Multi-axis concealed hinge assemblies TECTUS TE...

Construction TECTUS TE 240 3D

Annex 2

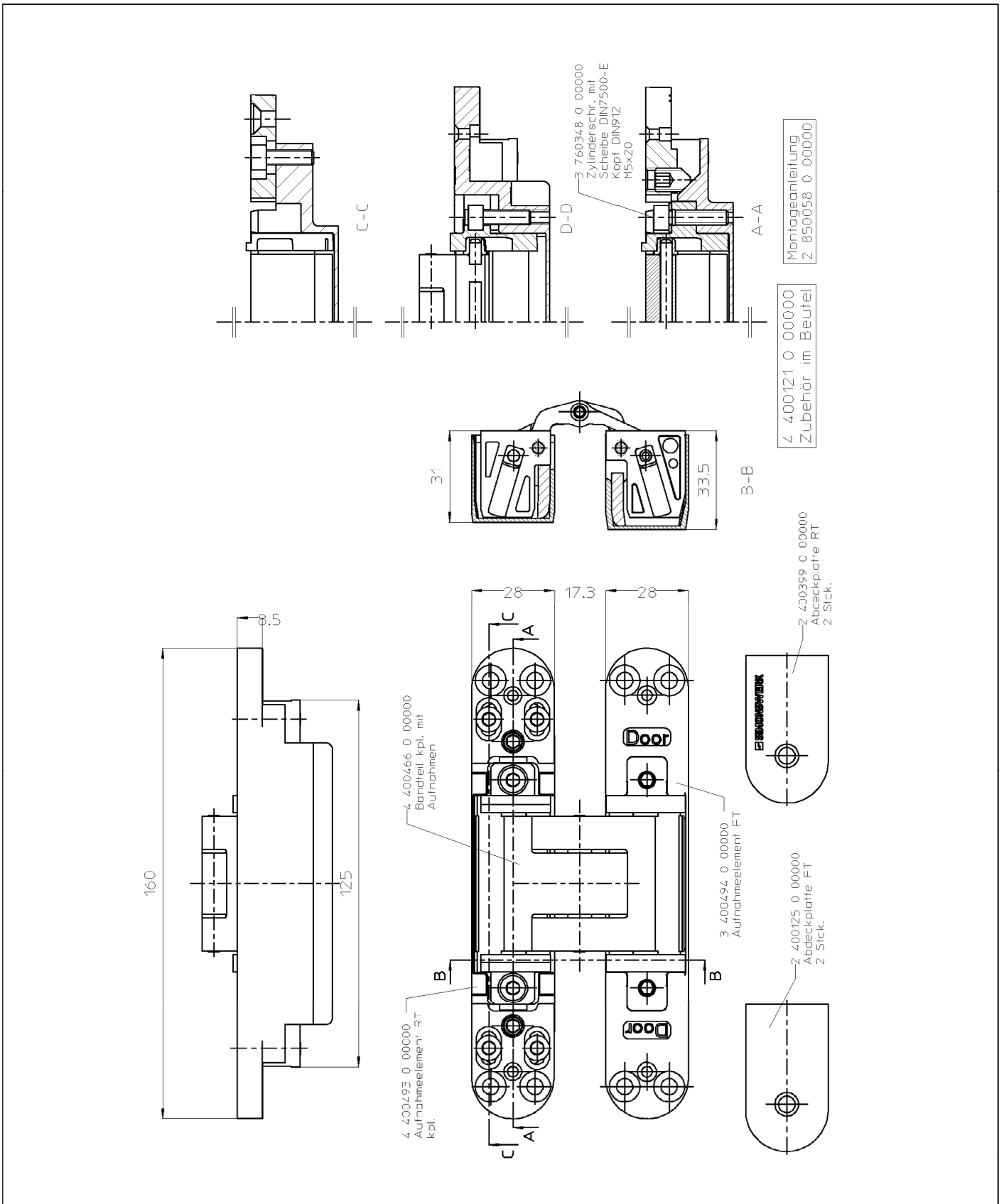


Multi-axis concealed hinge assemblies TECTUS TE...

Construction TE 340 3D

Annex 3



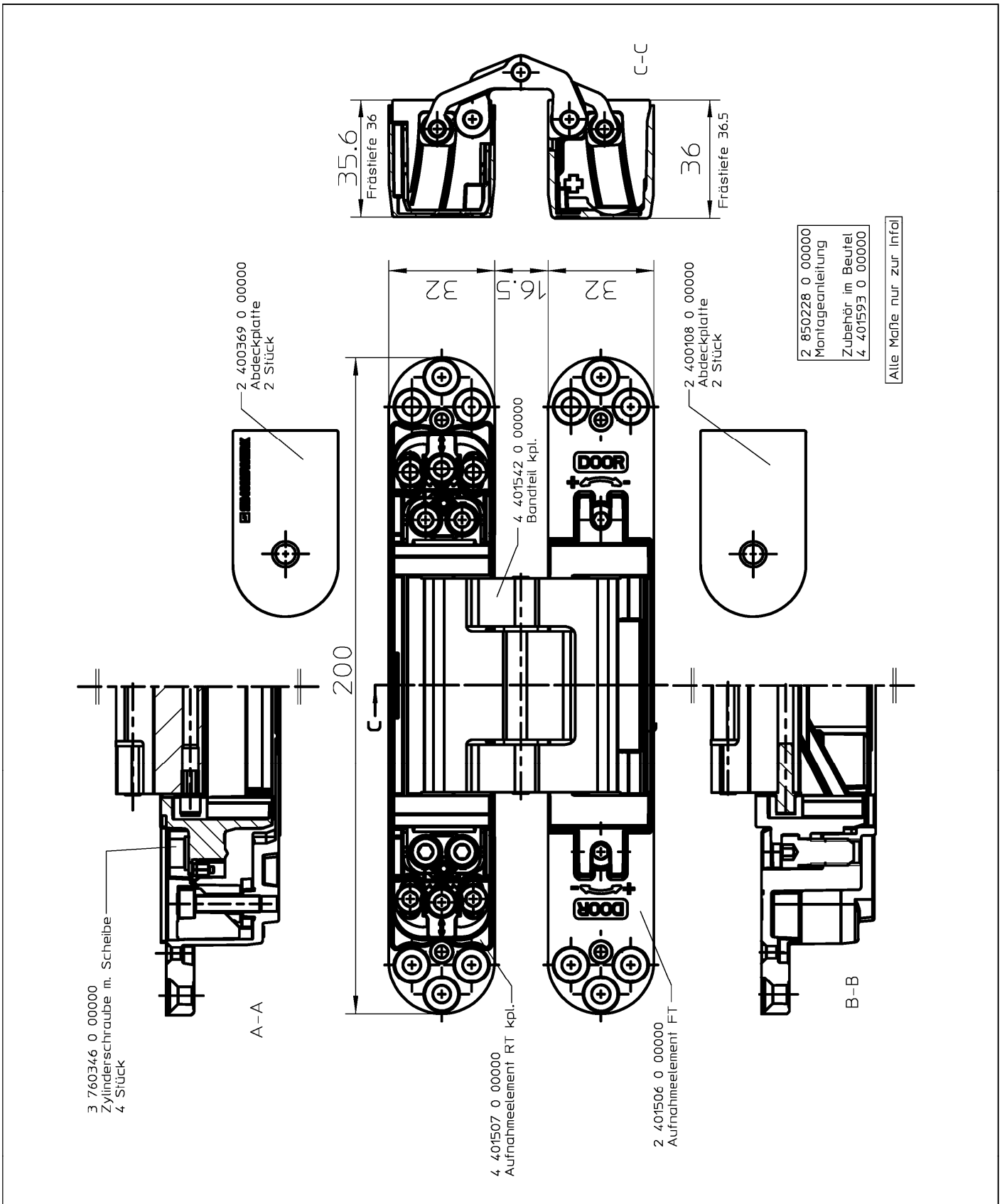


Electronic copy of the ETA by DIBt: ETA-13/0271

Multi-axis concealed hinge assemblies TECTUS TE...

Construction TECTUS TE 340 3D FR

Annex 4



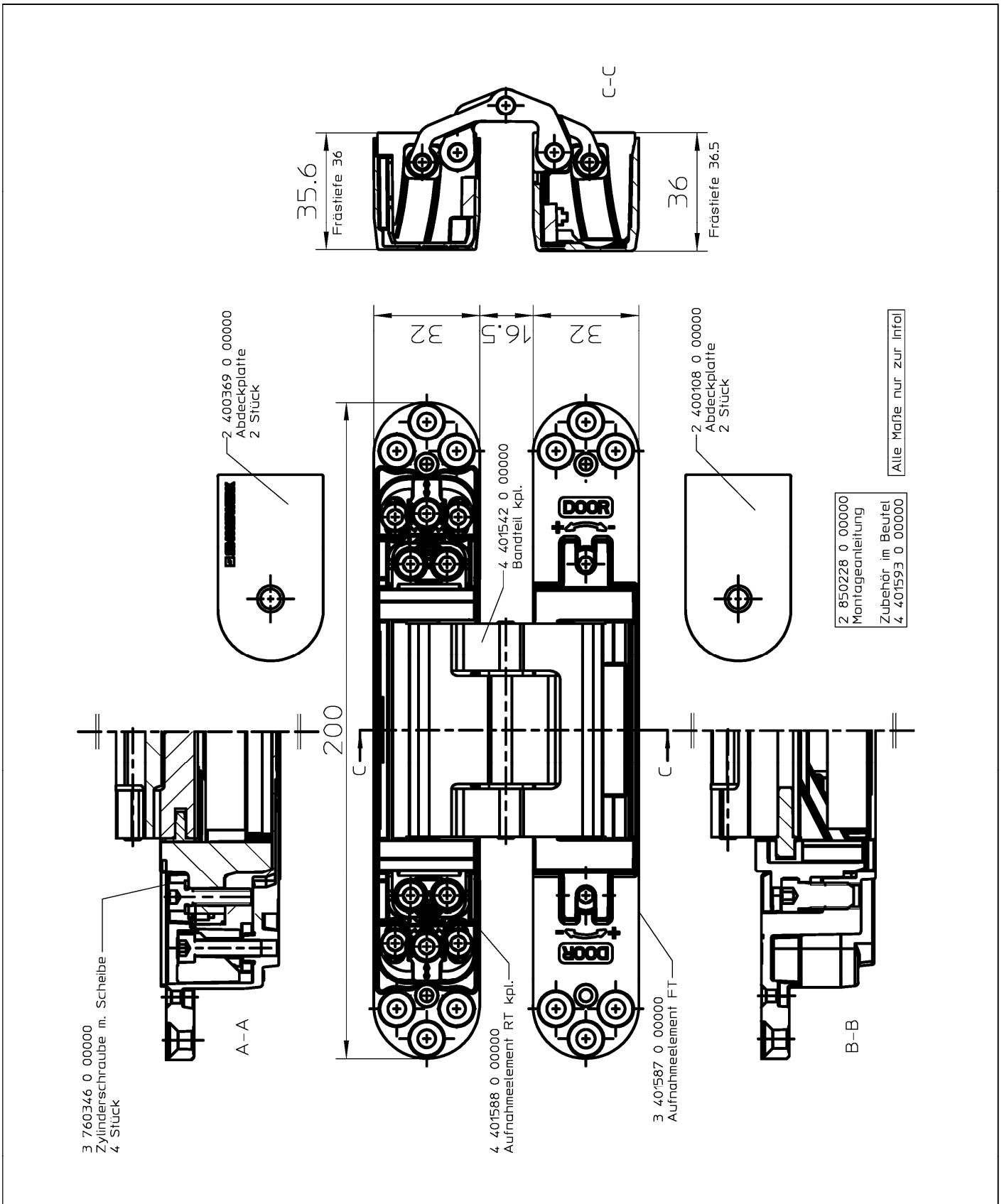
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Multi-axis concealed hinge assemblies TECTUS TE...

Construction TECTUS TE 540 3D

Annex 5

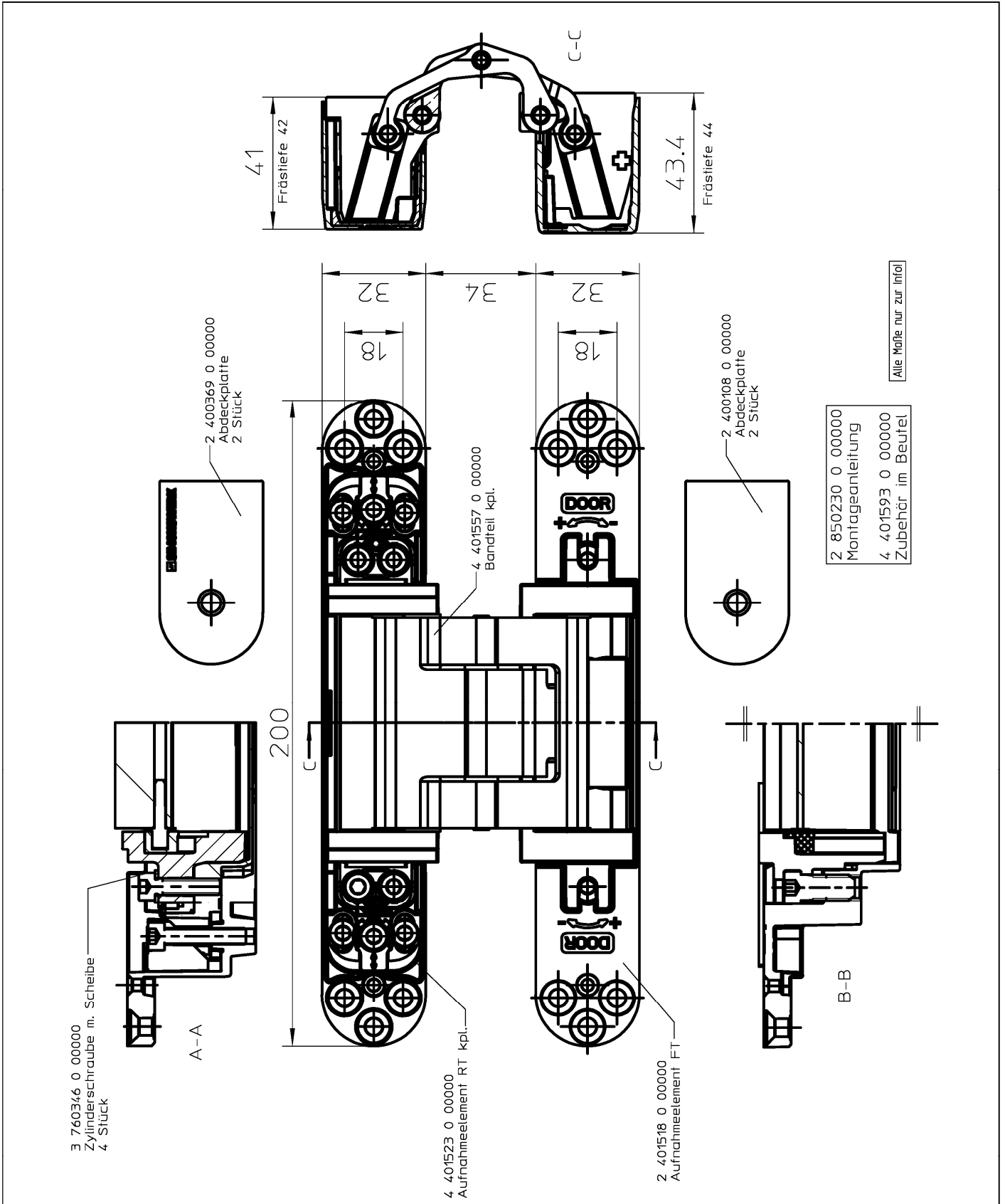
Electronic copy of the ETA by DIBt: ETA-13/0271



Multi-axis concealed hinge assemblies TECTUS TE...

Construction TECTUS TE 540 3D FR

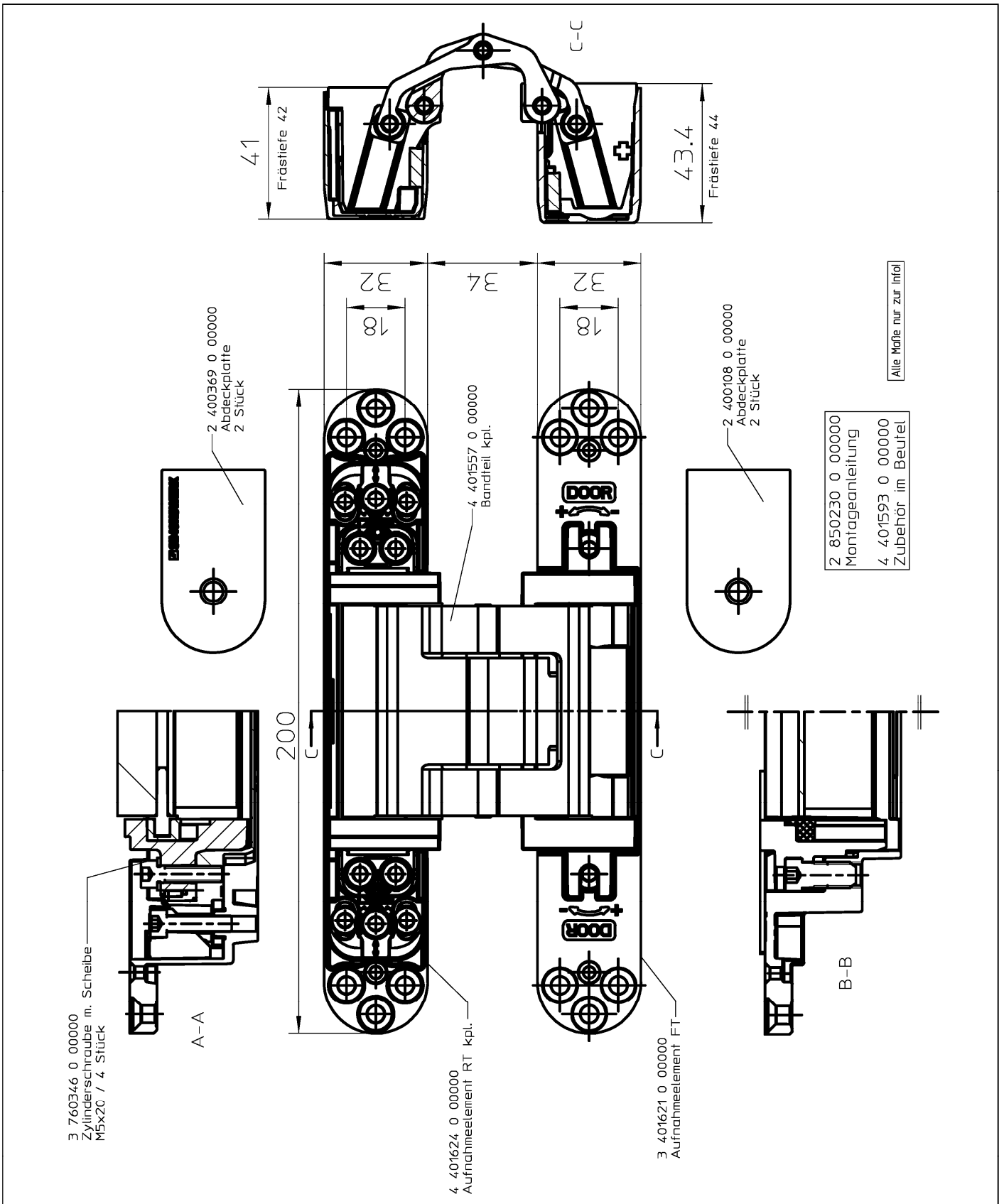
Annex 6



Multi-axis concealed hinge assemblies TECTUS TE...

Construction TECTUS TE 540 3D A8

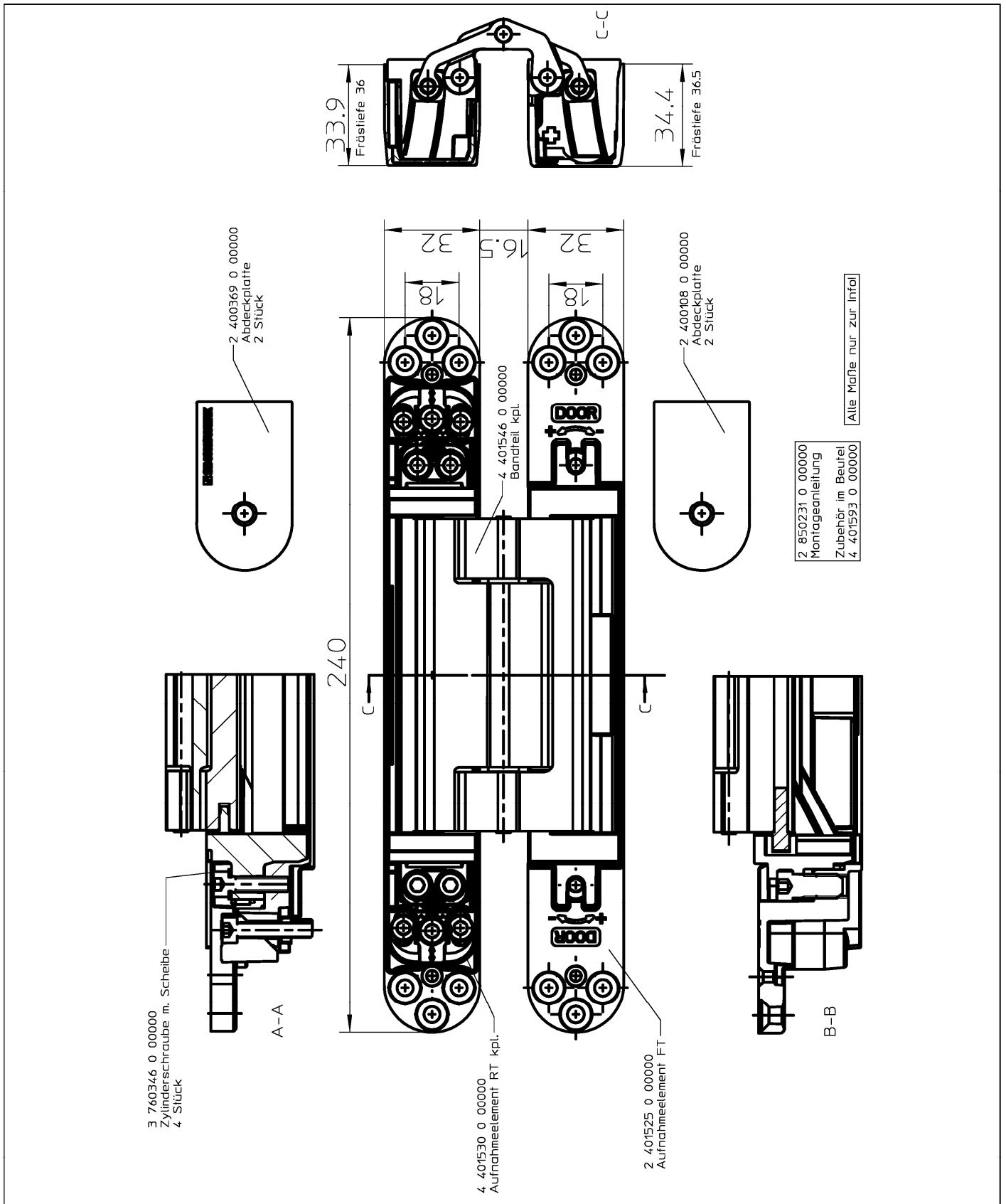
Annex 7



Multi-axis concealed hinge assemblies TECTUS TE...

Construction TECTUS TE 540 3D A8 FR

Annex 8

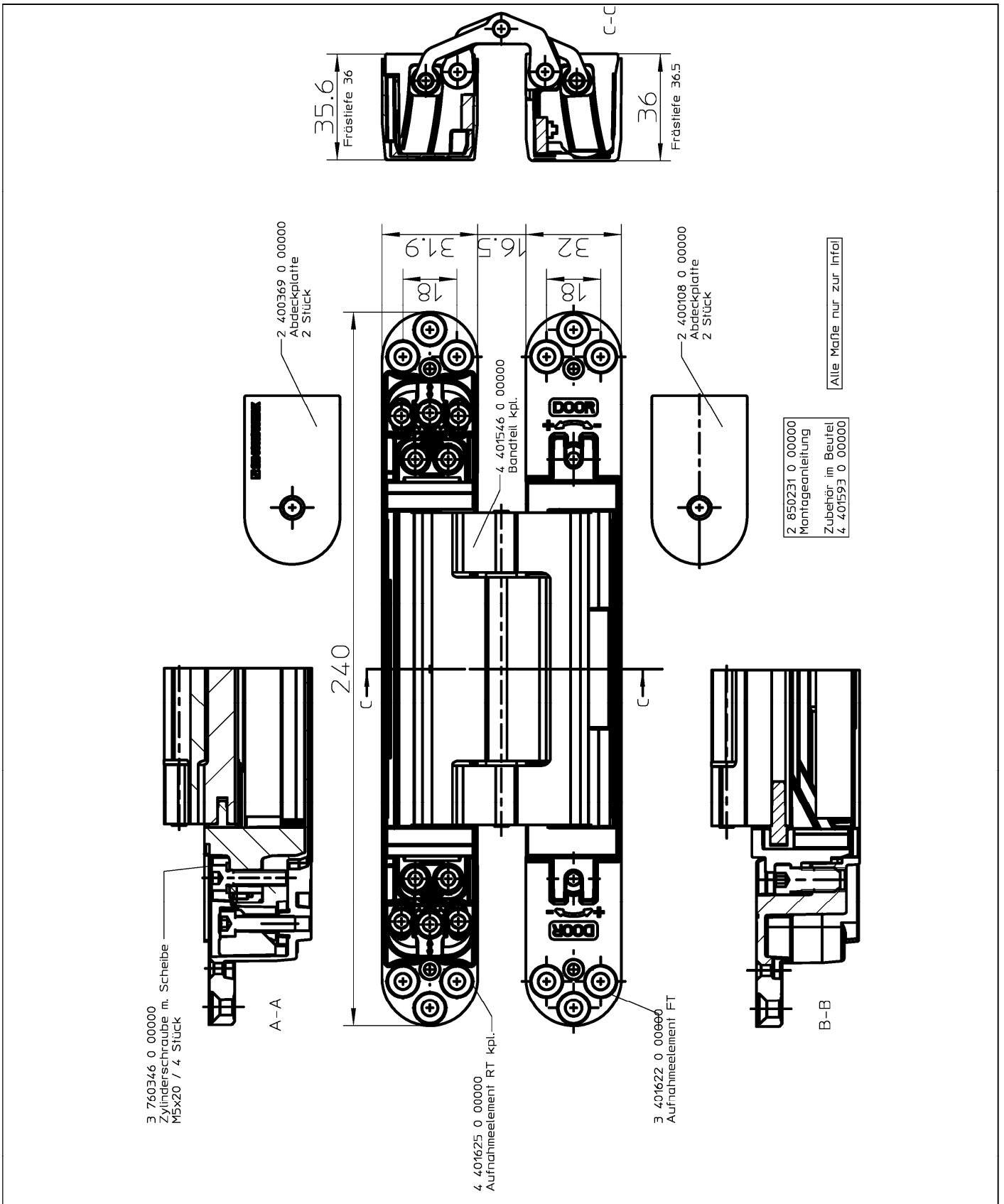


Multi-axis concealed hinge assemblies TECTUS TE...

Construction TECTUS TE 640 3D

Annex 9

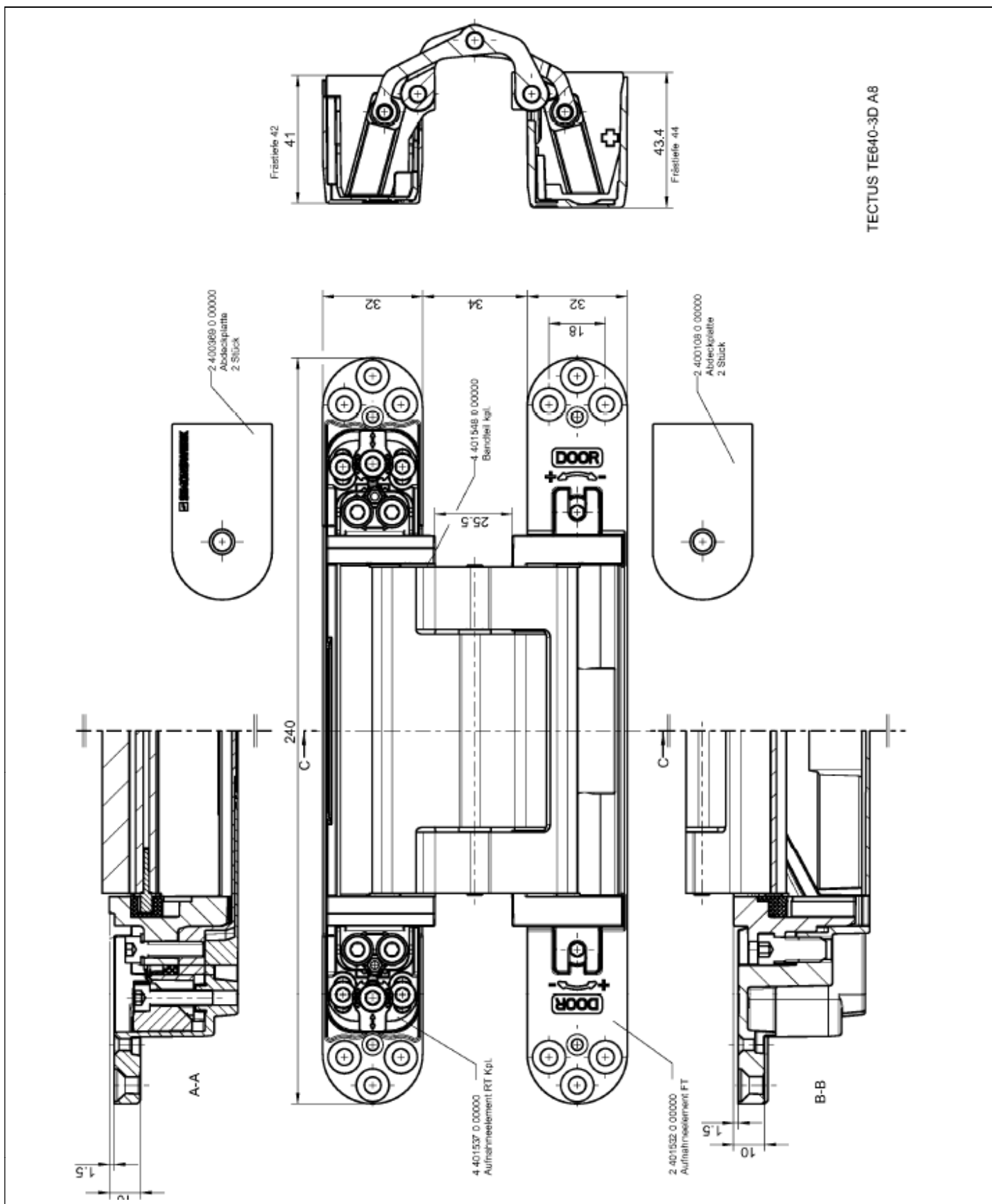
English translation prepared by DIBt



Multi-axis concealed hinge assemblies TECTUS TE...

Construction TECTUS TE 640 3D FR

Annex 10



TECTUS TE640-3D A8

Multi-axis concealed hinge assemblies TECTUS TE...

Construction TECTUS TE 640 3D A8

Annex 11



Hinge	Designation	Model number
TECTUS TE 340 3D	TECTUS TE 340 3D J10-01	400619
	TECTUS TE 340 3D SAPELI	400641
	TECTUS TE 340 3D V8-09	400642
	TECTUS TE 340 3D Energy	400659
	TECTUS TE 340 3D J9-09	400672
	TECTUS TE 340 3D M39-05	400723
	TECTUS TE 340 3D K46-05	400725
	TECTUS TE 340 3D V14-02	400732
TECTUS TE 540 3D	TECTUS TE 540 3D Energy	400690
	TECTUS TE 540 3D J9-12	400708
	TECTUS TE 540 3D V8-18	400709
	TECTUS TE 540 3D T32-03	400735
	TECTUS TE 540 3D SCH27-48	400737
TECTUS TE 540 3D A8	TECTUS TE 540 3D A8 Energy	400705
TECTUS TE 640 3D	TECTUS TE 640 3D Energy	400706
	TECTUS TE 640 3D V8-16	400712
	TECTUS TE 640 3D FR V8-14	400719
	TECTUS TE 640 3D SCH27-49	400738
TECTUS TE 640 3D A8	TECTUS TE 640 3D A8 Energy	400707
	TECTUS TE 640 3D A8 M39-04	400710

Multi-axis concealed hinge assemblies TECTUS TE...

Further labelling of some hinges according to applicants information

Annex 12