

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-17/0328
of 9 May 2017

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
"PIVOTA DX 65 3-D Design", "PIVOTA DX 300 3-D" and
"PIVOTA DXS 3-D Steel"

Product family
to which the construction product belongs

Multi-axis concealed hinge assemblies
"PIVOTA DX 65 3-D Design", "PIVOTA DX 300 3-D" and
"PIVOTA DXS 3-D Steel"

Manufacturer

Bartels Systembeschläge GmbH
Gewerbegebiet Echternhagen 2
32689 Kalletal
DEUTSCHLAND

Manufacturing plant

Bartels Systembeschläge GmbH
Gewerbegebiet Echternhagen 2
32689 Kalletal
DEUTSCHLAND

This European Technical Assessment
contains

8 pages including 3 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

European Assessment Document (EAD)
020001-01-0405

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Page 2 of 8 | 9 May 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 steel and aluminium with the designation "PIVOTA DX 65 3-D Design", "PIVOTA DX 300 3-D" and "PIVOTA DXS 3-D Steel".

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 products is given in Annex 1 and 2.

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 requirements 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 uses on doors with door mass up to 80 kg ("PIVOTA DX 65 3-D Design") and 250 kg ("PIVOTA DX 300 3-D" and "PIVOTA DXS 3-D Steel") 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.

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

3.1 Mechanical resistance and stability (BWR 1)

Not applicable

3.2 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	class A1
Resistance to fire	EI 30

3.3 Hygiene, health and the environment (BWR 3)

Not applicable

3.4 Safety and accessibility in use (BWR 4)

Not applicable

3.5 Protection against noise (BWR 5)

Not applicable

3.6 Energy economy and heat retention (BWR 6)

Not applicable

3.7 Sustainable use of natural resources (BWR 7)

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

3.8 General aspects

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

Essential characteristic	Performance
Category of use	Grade 3 - "PIVOTA DX 65 3-D Design" Grade 4 - "PIVOTA DX 300 3-D" "PIVOTA DXS 3-D Steel"
Durability	Grade 7 - 200.000 Zyklen
Test door mass	Grade 4 - "PIVOTA DX 65 3-D Design" Grade 7 - "PIVOTA DX 300 3-D" "PIVOTA DXS 3-D Steel"
Fire resistance	Grade 1
Safety	Grade 1
Corrosion resistance	Grade 4
Security	Grade 0 - "PIVOTA DX 65 3-D Design" Grade 1 - "PIVOTA DX 300 3-D" "PIVOTA DXS 3-D Steel"
Hinge grade	Grade 11 - "PIVOTA DX 65 3-D Design" Grade 14 - "PIVOTA DX 300 3-D" "PIVOTA DXS 3-D Steel"

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.

Product	Intended use	Level or class	System
"PIVOTA DX 65 3-D Design" "PIVOTA DX 300 3-D" "PIVOTA DXS 3-D Steel"	use doors in fire resisting and/or smoke compartmentation and/or escape routes	1	1

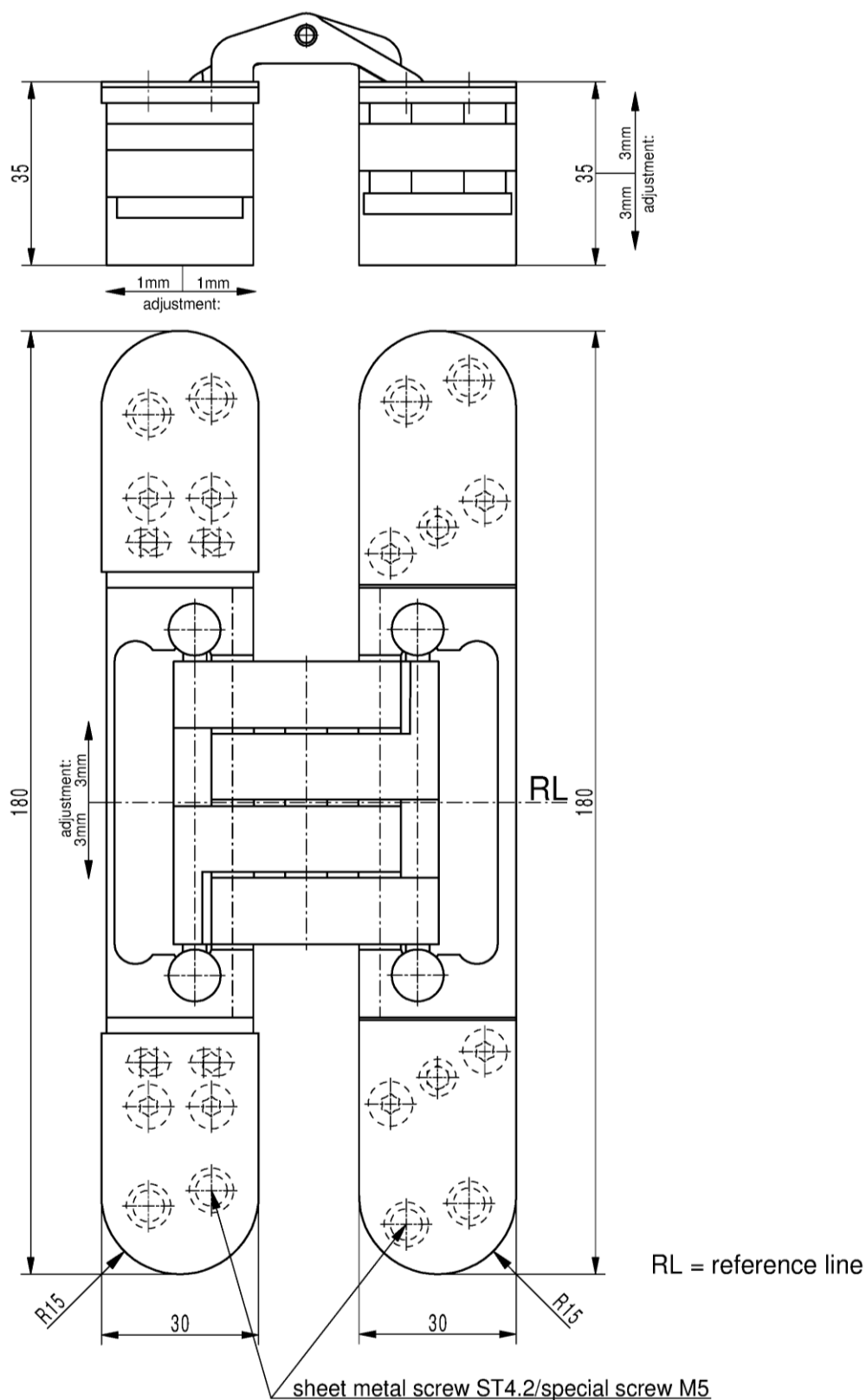
5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

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

Issued in Berlin on 9 May 2017 by Deutsches Institut für Bautechnik

Prof. Gunter Hoppe
Head of Department

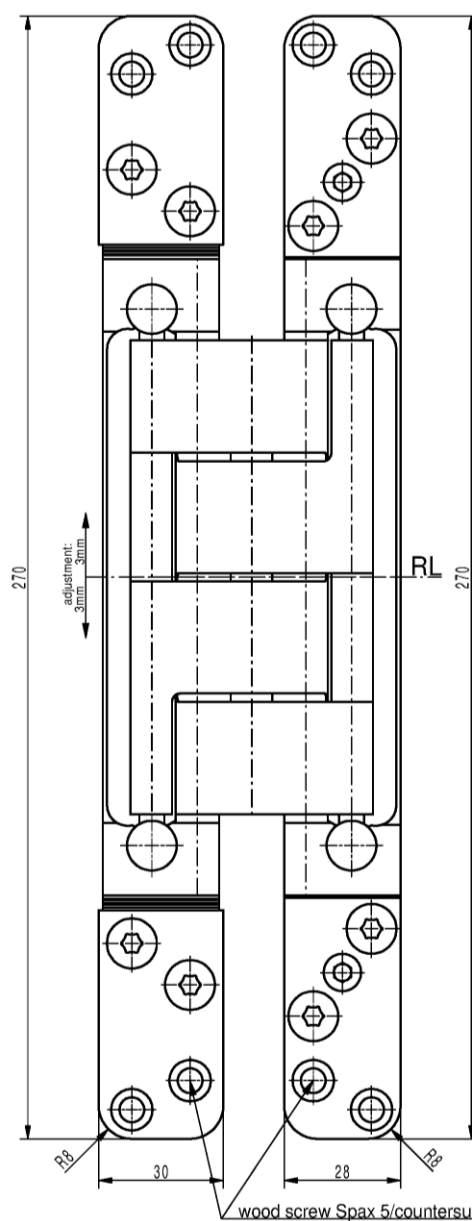
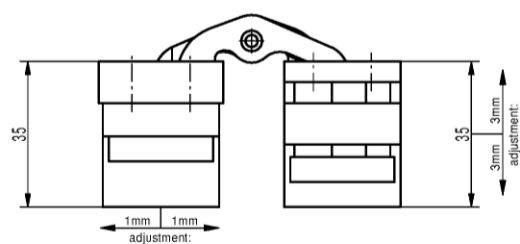
beglaubigt:
Pritzkow



Multi-axis concealed hinge assemblies
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Construction

Annex 1



RL = reference line

Multi-axis concealed hinge assemblies
"PIVOTA DX 65 3-D Design", "PIVOTA DX 300 3-D" and "PIVOTA DXS 3-D Steel"

Construction

Annex 2

Labelling of hinges:

"PIVOTA DX 300 3-D" - "Concealeo AH 300"

"PIVOTA DXS 3-D Steel" - "Concealeo AS 350"

Multi-axis concealed hinge assemblies
"PIVOTA DX 65 3-D Design", "PIVOTA DX 300 3-D" and "PIVOTA DXS 3-D Steel"

Labelling of hinges

Annex 3