

Approval body for construction products  
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and  
Laender Governments



## European Technical Assessment

**ETA-15/0672**  
**of 4 November 2015**

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 "ISIDOR"

Product family  
to which the construction product belongs

Multi-axis concealed hinge assemblies "ISIDOR"

Manufacturer

CHARMAG SA  
Route de Lully 2  
1470 ETAVAYER-LE-LAC  
SCHWEIZ

Manufacturing plant

CHARMAG SA  
Route de Lully 2  
1470 ETAVAYER-LE-LAC  
SCHWEIZ

This European Technical Assessment  
contains

5 pages including 1 annex 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)  
020001-00-0405 "MULTI-AXIS CONCEALED HINGE  
ASSEMBLIES"

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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 high-grade steel with the designation "ISIDOR".

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 Annex 1.

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

The hinges are intended for use on doors of timber, metal and synthetic materials.

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 160 kg 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    |

#### 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.

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**3.8 General aspects**

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

| Essential characteristic | Performance                              |
|--------------------------|--|
| Category of use          | Grade 4 - light up to severe duty hinges |
| Durability               | Grade 7 - 200.000 Cycles                 |
| Test door mass           | Grade 7                                  |
| Fire resistance          | Grade 0                                  |
| Safety                   | Grade 1                                  |
| Corrosion resistance     | Grade 4 - very high resistance           |
| Security                 | Grade 0                                  |
| Hinge grade              | Grade 14                                 |

**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 |
|---------|--------------|----------------|--------|
| ISIDOR  | use on doors | 0              | 1      |

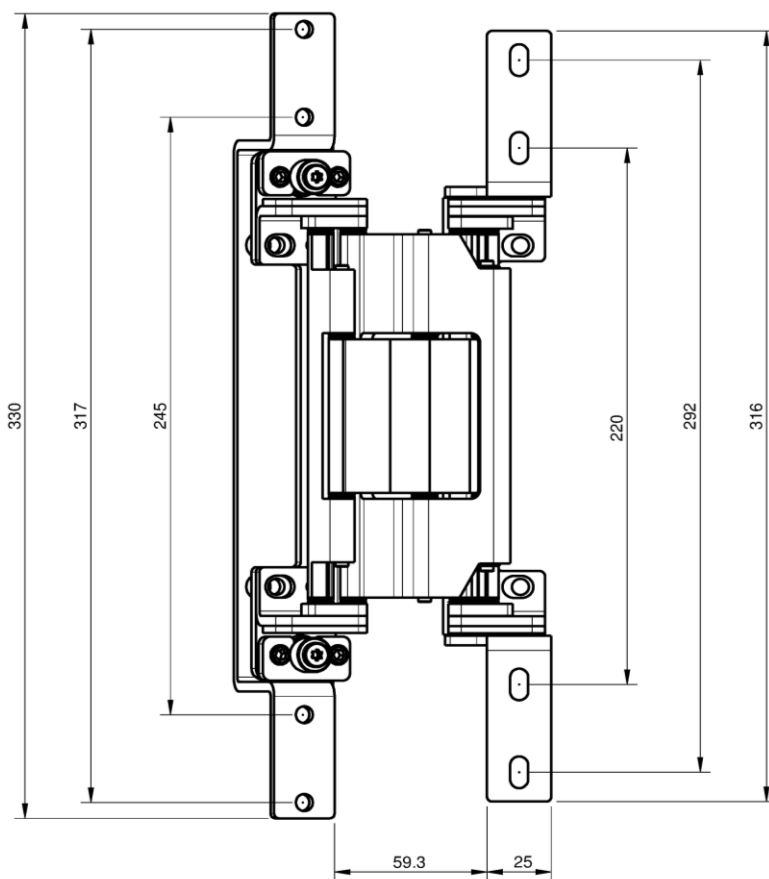
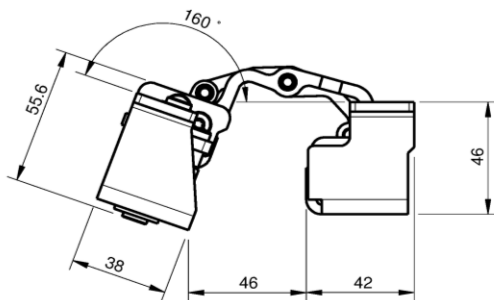
**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD**

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 4 November 2015 by Deutsches Institut für Bautechnik

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Head of Department

*beglaubigt:*  
Pritzkow



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Construction

Annex 1