# Centering Clamping Elements • with clamping balls, operation from the bottom



# **Product Description**

To be used for accurate centering and clamping in blind holes of workpieces with locating hole. Exact self-centering with a precision of ±0,025 mm. The clamping balls frictionally center and hold workpieces with raw or pre-machined surfaces down to the bearing points. Large adjustment stroke and a small building height are a feature of this center clamping element. Mounting from either top or bottom.

#### Material

#### **Body**

· Tool steel, hardened, blackened

Stainless steel

#### Clamping balls

· Stainless steel 1.4112, hardened and ground

#### **Assembly**

Assembly instruction for mounting from above: Remove clamping plate and screw. Screw in threaded pin from below, and tighten from above using female WS<sub>2</sub>.

Further or detailed information can be found in the assembly and operating instructions.

#### Operation

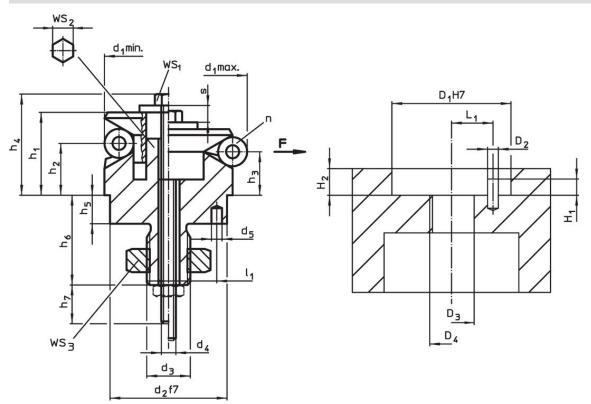
Operation from bottom manually or automatically with either pneumatic or hydraulic actuation.

#### More information

### **Further products**

- · Centering Clamping Elements, with clamping segments
- Centering Clamping Elements, with clamping balls
- Centering Clamping Elements, with clamping segments, operation from the bottom

# **Drawing**





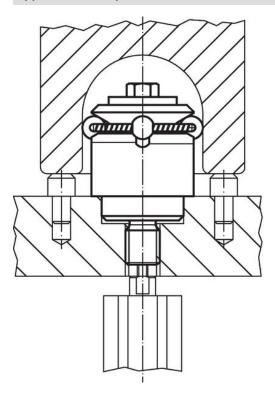
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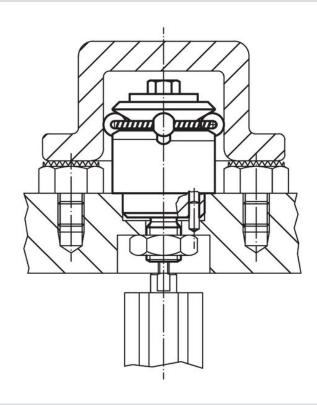
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#### **Order information**

|                | Dimensions Numb |                |                |                |      |                |                |                |                |                |                |                |                |         |   | Stroke | ws  |                 |                 | ClampincTightening Location |        |                                      | Art. No.    |
|----------------|-----------------|----------------|----------------|----------------|------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------|---|--------|-----|-----------------|-----------------|-----------------------------|--------|--------------------------------------|-------------|
|                | of i            |                |                |                |      |                |                |                |                |                |                |                |                |         |   | s      |     |                 |                 | force                       | torque | hole                                 |             |
| d <sub>1</sub> | d <sub>1</sub>  | d <sub>2</sub> | d <sub>3</sub> | d <sub>4</sub> | d₅   | h <sub>1</sub> | h <sub>2</sub> | h <sub>3</sub> | h <sub>4</sub> | h <sub>5</sub> | h <sub>6</sub> | h <sub>7</sub> | l <sub>1</sub> | Ball    | n |        | ws₁ | WS <sub>2</sub> | WS <sub>3</sub> | F                           | max.   | DDD D4HHL                            |             |
| min.           | max.            | f7             |                |                | +0.3 |                |                |                | -2             |                | +1             | ~              | ±0.1c          | liamete |   |        |     |                 |                 | max.                        |        | H: + <b>⊕</b> 0                      |             |
|                | [mm]            |                |                |                |      |                |                |                |                |                |                |                |                |         |   | [mm]   |     | [mm]            | İ               | [kN]                        | [Nm]   | [mm] [g                              |             |
| 70.5           | 86.5            | 60             | M16 x 1,5      | M8             | 5    | 46.1           | 28.3           | 23.7           | 55.4           | 10             | 29.4           | 20             | 17             | 16      | 6 | 9.2    | 13  | 12              | 24              | 10                          | 43     | 6 <b>105116</b> 6 x61 <b>5017</b> 32 | 623340.0370 |

# **Application example**





# Compliance

# **RoHS** compliant

Compliant according to Directive 2011/65/EU and Directive 2015/863.

### Does not contain SVHC substances

No SVHC substances with more than 0.1% w/w contained - SVHC list [REACH] as of 23.01.2024.

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# Does not contain Proposition 65 substances

No Proposition 65 substances included. https://www.P65Warnings.ca.gov/

# **Free from Conflict Minerals**

This product does not contain any substances designated as "conflict minerals" such as tantalum, tin, gold or tungsten from the Democratic Republic of Congo or adjacent countries.



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