

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

23340.0322



### 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  $\pm 0,025$  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

#### Spring

- 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  $WS_2$ .

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

### Operation

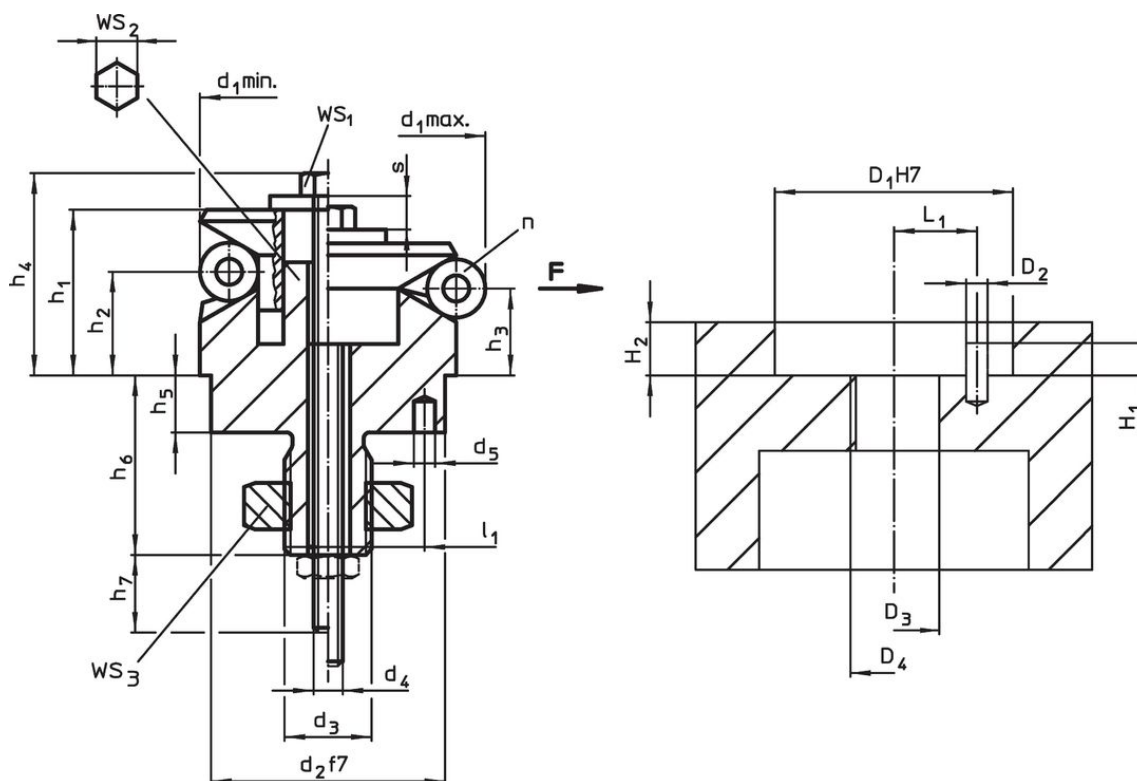
Operation from bottom manually or automatically with either pneumatic or hydraulic actuation.

### 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

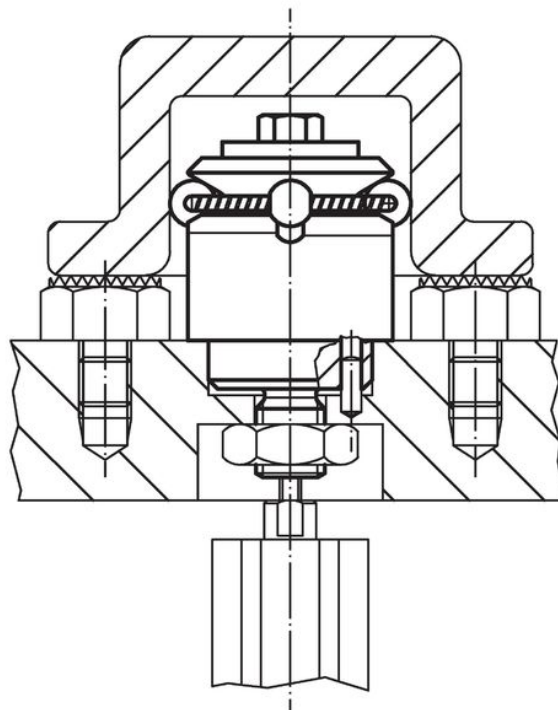
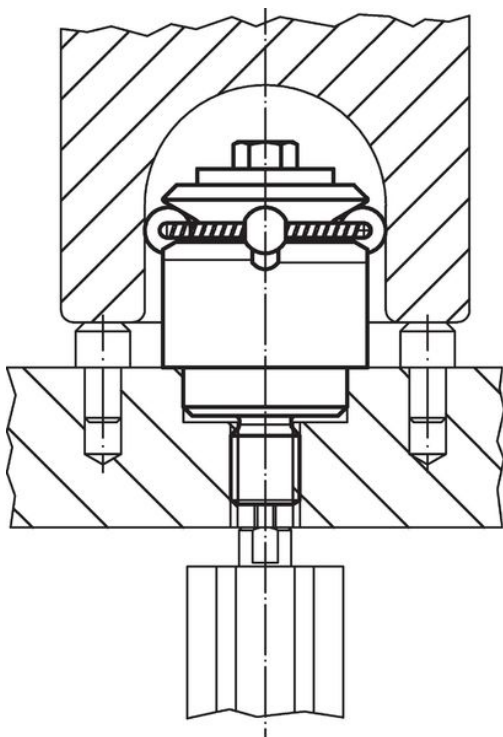
### Drawing



## Order information

Dimensions														Number of balls n	Stroke s [mm]	WS			Clamping force F max. [kN]	Tightening torque max. [Nm]	Location hole		Art. No.
d <sub>1</sub> min.	d <sub>1</sub> max.	d <sub>2</sub> f7	d <sub>3</sub>	d <sub>4</sub>	d <sub>5</sub> +0.3	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub> -2	h <sub>5</sub>	h <sub>6</sub> +1	h <sub>7</sub> ~	l <sub>1</sub> ±0.1			WS <sub>1</sub>	WS <sub>2</sub>	WS <sub>3</sub>			DDDD	H7	
[mm]														Ball diameter	[mm]	[mm]			[kN]	[Nm]	[mm]		[g]
22.5	26.5	20	M10	M5	3	19.6	14.1	12.9	24.3	6	17.4	15	7			8	6	16			20	M10	
														3	2.3				4.5	10	20	M10	23340.0322

## 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.

### 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.