# **Centering Clamping Elements** • with clamping balls, operation from the bottom 23340.0318



## **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.

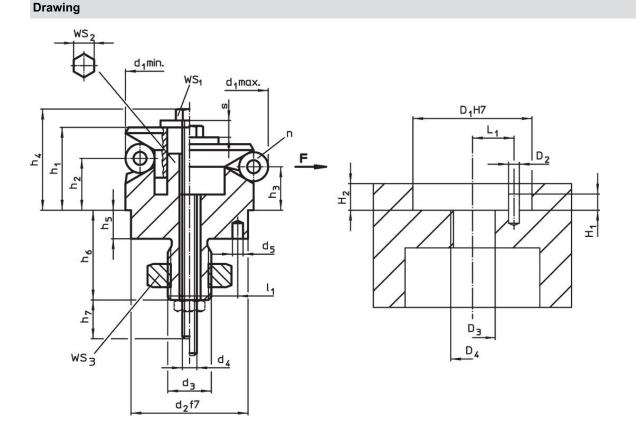
## Operation

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

#### More information

#### **Further products**

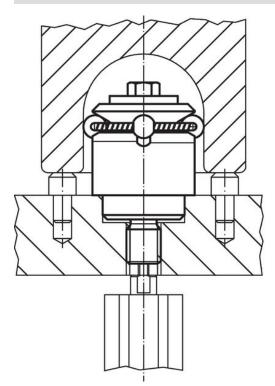
- Centering Clamping Elements, with clamping segments
- Centering Clamping Elements, with clamping balls
- Centering Clamping Elements, with clamping segments, operation from the bottom

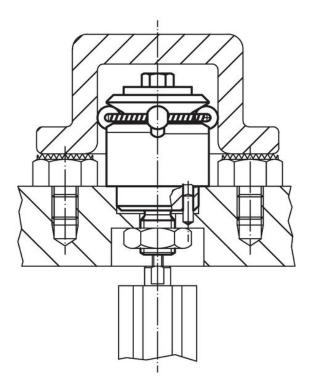


# **Order information**

	Dimensions															Number	Stroke		ws		Clamping	Tightening	Location	Art. No.
															of balls	s				force	torque	hole		
d <sub>1</sub>		<b>d</b> <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d4	d <sub>5</sub>	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h4	h₅	h <sub>6</sub>	h <sub>7</sub>	I1	Ball	n		ws₁	WS <sub>2</sub>	ws₃	F	max.	DDDDHHL	
min.	m	nax.	f7			+0.3				-2		+1	~	±0.1c	liamete						max.	1	Hi +0±0.	
	[mm]															[mm]		[mm]		[kN]	[Nm]	[mm] [g		
18.5	2	2.5	15	M8	M4	2.5	16.5	11.6	10.4	20.4	7.5	18.2	14	5.5	4	3	2.3	7	5	13	4	5	12.58/18.3.5.5	2 23340.0318

# **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.