# **Centering Clamping Elements** • with clamping balls

23340.0212



# **Product Description**

To be used for accurate centering and clamping of workpieces with locating hole on which light spherical marks are acceptable. 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  $WS_2$ .

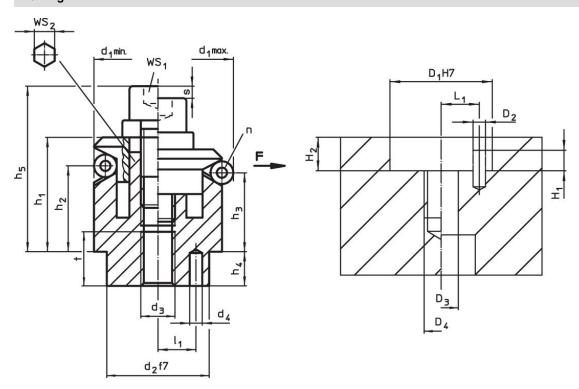
Further or detailed information can be found in the assembly and operating instructions.

#### More information

### **Further products**

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

# **Drawing**





Halder, Inc. www.halderusa.com Page 1 of 2

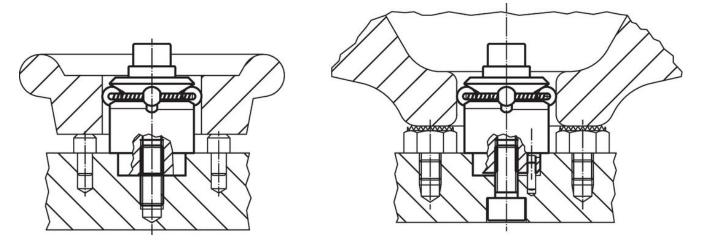
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### **Order information**

	Dimensions													ws			Location hole							I	Art. No. <sup>1)</sup>	
d <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	h <sub>5</sub>	l <sub>1</sub>	Ball	t	Number	Stroke	WS₁	Clamping	Tightening	D <sub>1</sub>	$D_2$	D <sub>3</sub>	D <sub>4</sub>	H₁	H <sub>2</sub>	L <sub>1</sub>		
min	max	. f7		+0.3	-1				-2	±0.1c	liamete		of balls			force	torque	H7				.	+0.5	±0.1		
													n			F	max.									
																max.										
	[mm]													[mm]	[mm]	[kN]	[Nm]	[mm]						[g]		
11.7	14.2	10	M4	1.5	8.6	3.9	3.2	3.5	14.7	3.5	2.5	4	3	1.3	3	0.5	5	10	1.5	4	M4	2	3.5	3.5	18	23340.0212

<sup>&</sup>lt;sup>1)</sup> no WS<sub>2</sub> clamping screw and threaded pin to be mounted from top

# **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.



www.halderusa.com Page 2 of 2
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