# **Centering Clamping Elements** • with clamping balls EH 23340.



## **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<sub>2</sub>.

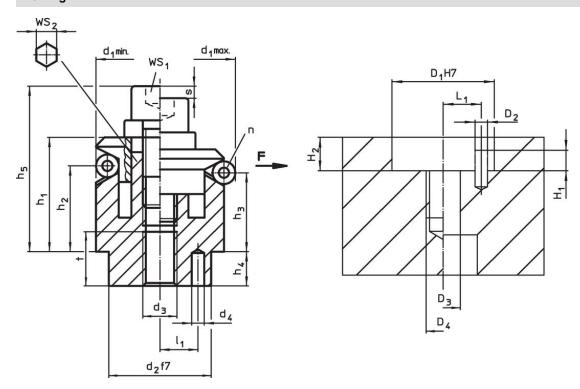
Further or detailed information can be found in the assembly and operating instructions.

#### 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**





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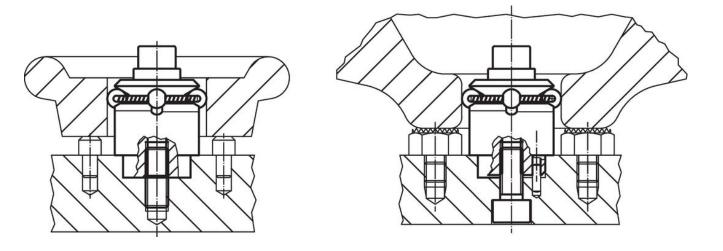
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#### **Order information**

Dimensions											Number	WS Clampii		Clamping	Tightening				Location hole					Art. No.			
d <sub>1</sub>	d₁	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	of balls	s	WS <sub>1</sub>	WS <sub>2</sub>	force	torque	D <sub>1</sub>	D <sub>2</sub>	$D_3$	D <sub>4</sub>	H <sub>1</sub>	H <sub>2</sub>	L <sub>1</sub>	I	
min.	max.	f7		+0.3	-1				-2	±0.1d	iamete		n				F	max.	H7					+0.5	±0.1		
														max.	<b></b>					١.							
	[mm]											[mm] [mm]			[kN]	[Nm]	[mm]					[g]					
11.7	14.2	10	M 4	1.5	8.6	3.9	3.2		14.7	3.5	2.5	4	3	1.3	3	-	0.5	5	10	1.5	4	M 4	2.0		3.5	18	23340.0212 <sup>1)</sup>
14.5	18.5	12	M 4	2.0	14.2	9.8	8.6	5.5	19.2	4.5	4.0	6	3	2.3	3	5	3.5	5	12	2.0	4	M 4	2.5	5.5	4.5	26	23340.0214
18.5	22.5	15	M 5	2.5	16.5	11.6	10.4	7.5	22.7	5.5	4.0	7	3	2.3	4	5	4.5	10	15	2.5	5	M 5	3.5	7.5	5.5	38	23340.0218
22.5	26.5	20	M 6	3.0	19.6	14.1	12.9	6.0	28.6	7.0	4.0	8	3	2.3	5	6	5.0	17	20	3.0	6	M 6	3.5	6.0	7.0	73	23340.0222
26.5	30.5	20	M 6	3.0	19.8	14.1	13.0	6.0	28.8	7.0	4.0	8	3	2.3	5	6	5.0	17	20	3.0	6	M 6	3.5	6.0	7.0	93	23340.0226
30.5	38.5	25	M 6	4.0	23.2	14.1	11.8	7.0	32.2	9.0	8.0	8	3	4.6	5	6	5.0	17	25	4.0	6	M 6	3.5	7.0	9.0	119	23340.0230
38.5	46.5	30	M 8	4.0	27.2	18.0	15.7	7.5	39.2	11.0	8.0	10	6	4.6	6	8	6.5	43	30	4.0	8	M 8	4.5	7.5	11.0	254	23340.0238
46.5	54.5	30	M 8	4.0	27.1	18.0	15.7	7.5	39.2	11.0	8.0	10	6	4.6	6	8	6.5	43	30	4.0	8	M 8	6.5	7.5	11.0	342	23340.0246
54.5	70.5	45	M10	5.0	40.6	23.7	19.1	9.0	54.6	15.0	16.0	12	6	9.2	8	10	8.0	79	45	5.0	10	M10	6.5	9.0	15.0	664	23340.0254
70.5	86.5	60	M12	5.0	46.1	28.3	23.7	10.0	63.1	17.0	16.0	15	6	9.2	10	12	10.0	141	60	5.0	12	M12	6.5	10.0	17.0	1312	23340.0270
86.5	102.5	60	M16	5.0	51.2	30.3	25.6	10.0	72.2	25.0	16.0	15	6	9.2	14	17	10.0	354	60	5.0	16	M16	6.5	10.0	25.0	2000	23340.0286

 $<sup>^{1)}</sup>$  no WS $_2$  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.



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