

## Ball-Ended Thrust Screws • headless, flat-faced ball

EH 22720.



### Product Description

Ball-ended thrust screws with thermoplastic ball are used for pressure sensitive pieces. Ball-ended thrust screws can also be used for clamping, tightening or supporting of non-parallel surfaces.

The flat-faced, movable ball enables a flat load transmission.

### Material

#### Ball

- Ball-bearing steel, hardened
- Stainless steel, hardened
- Thermoplastic POM, red

#### Screw

- Heat-treated steel,  $1200 \pm 100 \text{ N/mm}^2$
- Stainless steel 1.4305

### More information

#### Notes

Ball not secured against rotating.  
Special types on request.

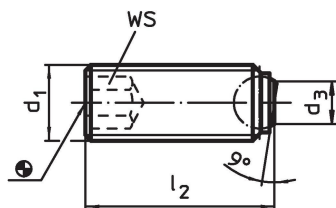
#### References

Thread lock on request, please refer to appendix - Technical Data -

#### Further products

- Ball-Ended Thrust Screws, headless, ball protected against rotating
- Ball-Ended Thrust Screws, headless, with fine-pitch thread
- Ball-Ended Thrust Screws, headless, short
- Ball-Ended Thrust Screws, headless, flat-faced ball and hexalobular socket



### Drawing





### Order information

Dimensions			Ball diameter	WS	Load capacity for static load <sup>1)</sup> max.	Temperature		Weight	Art. No.
d <sub>1</sub>	l <sub>2</sub>	d <sub>3</sub>				min.	max.		
[mm]				[mm]	[kN]	[°C]		[g]	
bearing surface plain, Heat-treated steel									
M 4	5.6	1.8	2.5	2.0	3.5	–	250	0.3	22720.0542
M 4	7.6	1.8	2.5	2.0	3.5	–	250	0.4	22720.0543
M 4	9.6	1.8	2.5	2.0	3.5	–	250	0.6	22720.0544
M 4	11.6	1.8	2.5	2.0	3.5	–	250	0.7	22720.0545
M 4	15.6	1.8	2.5	2.0	3.5	–	250	1.0	22720.0546
M 5	7.5	2.2	3.0	2.5	4.5	–	250	0.6	22720.0552
M 5	9.5	2.2	3.0	2.5	4.5	–	250	0.9	22720.0553
M 5	11.5	2.2	3.0	2.5	4.5	–	250	1.1	22720.0554
M 5	15.5	2.2	3.0	2.5	4.5	–	250	1.6	22720.0555
M 5	19.5	2.2	3.0	2.5	4.5	–	250	2.0	22720.0556
M 5	24.5	2.2	3.0	2.5	4.5	–	250	2.6	22720.0558
M 6	10.0	3.2	4.0	3.0	9.0	–	250	1.3	22720.0562
M 6	12.0	3.2	4.0	3.0	9.0	–	250	1.6	22720.0563
M 6	16.0	3.2	4.0	3.0	9.0	–	250	2.3	22720.0564
M 6	20.0	3.2	4.0	3.0	9.0	–	250	3.0	22720.0565
M 6	25.0	3.2	4.0	3.0	9.0	–	250	3.8	22720.0566
M 8	10.0	4.5	5.5	4.0	15.0	–	250	2.4	22720.0581
M 8	12.0	4.5	5.5	4.0	15.0	–	250	2.8	22720.0582
M 8	16.0	4.5	5.5	4.0	15.0	–	250	4.1	22720.0583



<sup>1)</sup> Statements on load capacity are not valid for the stainless steel type (except the type fitted with thermoplastic balls).

d <sub>1</sub>	Dimensions			WS	Load capacity for static load <sup>1)</sup> max.	 min. — max.		 [g]	Art. No.
	l <sub>2</sub>	d <sub>3</sub>	Ball diameter			[°C]			
[mm]									
M 8	20.0	4.5	5.5	4.0	15.0	–	250	5.1	22720.0584
M 8	25.0	4.5	5.5	4.0	15.0	–	250	6.7	22720.0585
M 8	30.0	4.5	5.5	4.0	15.0	–	250	8.2	22720.0586
M10	12.0	6.0	7.0	5.0	20.0	–	250	4.5	22720.0601
M10	16.0	6.0	7.0	5.0	20.0	–	250	5.9	22720.0602
M10	20.0	6.0	7.0	5.0	20.0	–	250	7.8	22720.0603
M10	25.0	6.0	7.0	5.0	20.0	–	250	10.0	22720.0604
M10	30.0	6.0	7.0	5.0	20.0	–	250	13.0	22720.0605
M10	35.0	6.0	7.0	5.0	20.0	–	250	15.0	22720.0606
M10	40.0	6.0	7.0	5.0	20.0	–	250	18.0	22720.0608
M12	16.0	7.2	8.5	6.0	30.0	–	250	8.8	22720.0621
M12	20.0	7.2	8.5	6.0	30.0	–	250	11.0	22720.0622
M12	25.0	7.2	8.5	6.0	30.0	–	250	14.0	22720.0623
M12	30.0	7.2	8.5	6.0	30.0	–	250	18.0	22720.0624
M12	40.0	7.2	8.5	6.0	30.0	–	250	25.0	22720.0626
M12	50.0	7.2	8.5	6.0	30.0	–	250	32.0	22720.0628
M16	20.0	10.7	12.0	8.0	60.0	–	250	21.0	22720.0661
M16	25.0	10.7	12.0	8.0	60.0	–	250	26.0	22720.0662
M16	35.0	10.7	12.0	8.0	60.0	–	250	40.0	22720.0664
M16	50.0	10.7	12.0	8.0	60.0	–	250	60.0	22720.0666
M20	30.0	13.5	15.0	10.0	90.0	–	250	50.0	22720.0702
M20	40.0	13.5	15.0	10.0	90.0	–	250	71.0	22720.0704
M20	50.0	13.5	15.0	10.0	90.0	–	250	92.0	22720.0705
M20	60.0	13.5	15.0	10.0	90.0	–	250	111.0	22720.0706
M24	35.0	15.8	18.0	12.0	120.0	–	250	85.0	22720.0742
M24	50.0	15.8	18.0	12.0	120.0	–	250	129.0	22720.0744
M24	80.0	15.8	18.0	12.0	120.0	–	250	218.0	22720.0746
<b>bearing surface plain , Stainless steel</b>									
M 4	5.6	1.8	2.5	2.0	3.5	–	250	0.3	22720.0827
M 4	7.6	1.8	2.5	2.0	3.5	–	250	0.4	22720.0828
M 4	9.6	1.8	2.5	2.0	3.5	–	250	0.6	22720.0829
M 4	11.6	1.8	2.5	2.0	3.5	–	250	0.7	22720.0830
M 4	15.6	1.8	2.5	2.0	3.5	–	250	1.0	22720.0832
M 5	7.5	2.2	3.0	2.5	4.5	–	250	0.6	22720.0833
M 5	9.5	2.2	3.0	2.5	4.5	–	250	0.9	22720.0834
M 5	11.5	2.2	3.0	2.5	4.5	–	250	1.1	22720.0835
M 5	15.5	2.2	3.0	2.5	4.5	–	250	1.6	22720.0836
M 5	19.5	2.2	3.0	2.5	4.5	–	250	2.0	22720.0837
M 5	24.5	2.2	3.0	2.5	4.5	–	250	2.6	22720.0838
M 6	10.0	3.2	4.0	3.0	9.0	–	250	1.3	22720.0840
M 6	12.0	3.2	4.0	3.0	9.0	–	250	1.6	22720.0842
M 6	16.0	3.2	4.0	3.0	9.0	–	250	2.3	22720.0844
M 6	20.0	3.2	4.0	3.0	9.0	–	250	3.0	22720.0845
M 6	25.0	3.2	4.0	3.0	9.0	–	250	3.8	22720.0846
M 8	10.0	4.5	5.5	4.0	15.0	–	250	2.4	22720.0850
M 8	12.0	4.5	5.5	4.0	15.0	–	250	2.8	22720.0852
M 8	16.0	4.5	5.5	4.0	15.0	–	250	4.1	22720.0853
M 8	20.0	4.5	5.5	4.0	15.0	–	250	5.1	22720.0854
M 8	25.0	4.5	5.5	4.0	15.0	–	250	6.7	22720.0855
M 8	30.0	4.5	5.5	4.0	15.0	–	250	8.2	22720.0856
M10	12.0	6.0	7.0	5.0	20.0	–	250	4.5	22720.0860
M10	16.0	6.0	7.0	5.0	20.0	–	250	5.9	22720.0862
M10	20.0	6.0	7.0	5.0	20.0	–	250	7.8	22720.0863
M10	25.0	6.0	7.0	5.0	20.0	–	250	10.0	22720.0864
M10	30.0	6.0	7.0	5.0	20.0	–	250	13.0	22720.0865
M10	35.0	6.0	7.0	5.0	20.0	–	250	15.0	22720.0866
M10	40.0	6.0	7.0	5.0	20.0	–	250	18.0	22720.0868
M12	16.0	7.2	8.5	6.0	30.0	–	250	8.8	22720.0870
M12	20.0	7.2	8.5	6.0	30.0	–	250	11.0	22720.0872
M12	25.0	7.2	8.5	6.0	30.0	–	250	14.0	22720.0873

<sup>1)</sup> Statements on load capacity are not valid for the stainless steel type (except the type fitted with thermoplastic balls).

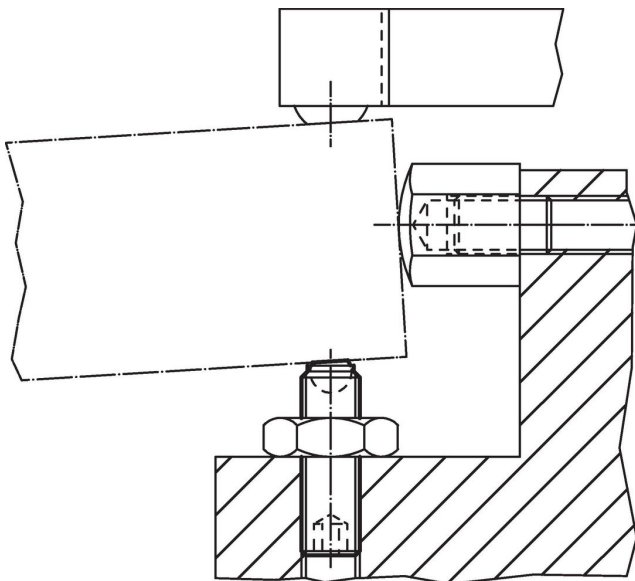
d <sub>1</sub>	Dimensions			WS [mm]	Load capacity for static load <sup>1)</sup> max. [kN]	 min. max. [°C]		 [g]	Art. No.
	l <sub>2</sub>	d <sub>3</sub>	Ball diameter						
		[mm]							
M12	30.0	7.2	8.5	6.0	30.0	–	250	18.0	22720.0874
M12	40.0	7.2	8.5	6.0	30.0	–	250	25.0	22720.0876
M12	50.0	7.2	8.5	6.0	30.0	–	250	32.0	22720.0878
M16	20.0	10.7	12.0	8.0	60.0	–	250	21.0	22720.0880
M16	25.0	10.7	12.0	8.0	60.0	–	250	26.0	22720.0882
M16	35.0	10.7	12.0	8.0	60.0	–	250	40.0	22720.0884
M16	50.0	10.7	12.0	8.0	60.0	–	250	60.0	22720.0886
<b>flat-faced ball from thermoplastic, bearing surface plain (protected against rotating), Heat-treated steel</b>									
M 4	5.9	1.8	2.5	2.0	0.3	-30	80	0.4	22720.0452
M 4	7.9	1.8	2.5	2.0	0.3	-30	80	0.3	22720.0453
M 4	9.9	1.8	2.5	2.0	0.3	-30	80	0.5	22720.0454
M 4	11.9	1.8	2.5	2.0	0.3	-30	80	0.7	22720.0455
M 4	15.9	1.8	2.5	2.0	0.3	-30	80	0.9	22720.0456
M 5	7.8	2.1	3.0	2.5	0.5	-30	80	0.6	22720.0462
M 5	9.8	2.1	3.0	2.5	0.5	-30	80	0.8	22720.0463
M 5	11.8	2.1	3.0	2.5	0.5	-30	80	1.0	22720.0464
M 5	15.8	2.1	3.0	2.5	0.5	-30	80	1.5	22720.0465
M 5	19.8	2.1	3.0	2.5	0.5	-30	80	1.9	22720.0466
M 5	24.8	2.1	3.0	2.5	0.5	-30	80	2.5	22720.0467
M 6	10.3	3.0	4.0	3.0	0.9	-30	80	1.1	22720.0472
M 6	12.3	3.0	4.0	3.0	0.9	-30	80	1.4	22720.0473
M 6	16.3	3.0	4.0	3.0	0.9	-30	80	2.1	22720.0474
M 6	20.3	3.0	4.0	3.0	0.9	-30	80	2.8	22720.0475
M 6	25.3	3.0	4.0	3.0	0.9	-30	80	3.6	22720.0476
M 8	10.4	4.2	5.5	4.0	1.5	-30	80	1.9	22720.0482
M 8	12.4	4.2	5.5	4.0	1.5	-30	80	2.3	22720.0483
M 8	16.4	4.2	5.5	4.0	1.5	-30	80	3.4	22720.0484
M 8	20.4	4.2	5.5	4.0	1.5	-30	80	4.6	22720.0485
M 8	25.4	4.2	5.5	4.0	1.5	-30	80	6.2	22720.0486
M 8	30.4	4.2	5.5	4.0	1.5	-30	80	7.8	22720.0487
<b>flat-faced ball from thermoplastic, bearing surface plain (protected against rotating), Stainless steel</b>									
M 4	5.9	1.8	2.5	2.0	0.3	-30	80	0.4	22720.0492
M 4	7.9	1.8	2.5	2.0	0.3	-30	80	0.3	22720.0493
M 4	9.9	1.8	2.5	2.0	0.3	-30	80	0.5	22720.0494
M 4	11.9	1.8	2.5	2.0	0.3	-30	80	0.7	22720.0495
M 4	15.9	1.8	2.5	2.0	0.3	-30	80	0.9	22720.0496
M 5	7.8	2.1	3.0	2.5	0.5	-30	80	0.6	22720.0502
M 5	9.8	2.1	3.0	2.5	0.5	-30	80	0.8	22720.0503
M 5	11.8	2.1	3.0	2.5	0.5	-30	80	1.0	22720.0504
M 5	15.8	2.1	3.0	2.5	0.5	-30	80	1.5	22720.0505
M 5	19.8	2.1	3.0	2.5	0.5	-30	80	1.9	22720.0506
M 5	24.8	2.1	3.0	2.5	0.5	-30	80	2.5	22720.0507
M 6	10.3	3.0	4.0	3.0	0.9	-30	80	1.1	22720.0512
M 6	12.3	3.0	4.0	3.0	0.9	-30	80	1.4	22720.0513
M 6	16.3	3.0	4.0	3.0	0.9	-30	80	2.1	22720.0514
M 6	20.3	3.0	4.0	3.0	0.9	-30	80	2.8	22720.0515
M 6	25.3	3.0	4.0	3.0	0.9	-30	80	3.6	22720.0516
M 8	10.4	4.2	5.5	4.0	1.5	-30	80	1.9	22720.0522
M 8	12.4	4.2	5.5	4.0	1.5	-30	80	2.3	22720.0523
M 8	16.4	4.2	5.5	4.0	1.5	-30	80	3.4	22720.0524
M 8	20.4	4.2	5.5	4.0	1.5	-30	80	4.6	22720.0525
M 8	25.4	4.2	5.5	4.0	1.5	-30	80	6.2	22720.0526
M 8	30.4	4.2	5.5	4.0	1.5	-30	80	7.8	22720.0527
<b>bearing surface ribbed, Heat-treated steel</b>									
M 8	10.0	4.5	5.5	4.0	15.0	–	250	2.4	22720.0891
M 8	12.0	4.5	5.5	4.0	15.0	–	250	2.7	22720.0892
M 8	16.0	4.5	5.5	4.0	15.0	–	250	3.9	22720.0893
M 8	20.0	4.5	5.5	4.0	15.0	–	250	5.1	22720.0894
M 8	25.0	4.5	5.5	4.0	15.0	–	250	6.7	22720.0895
M 8	30.0	4.5	5.5	4.0	15.0	–	250	8.2	22720.0896

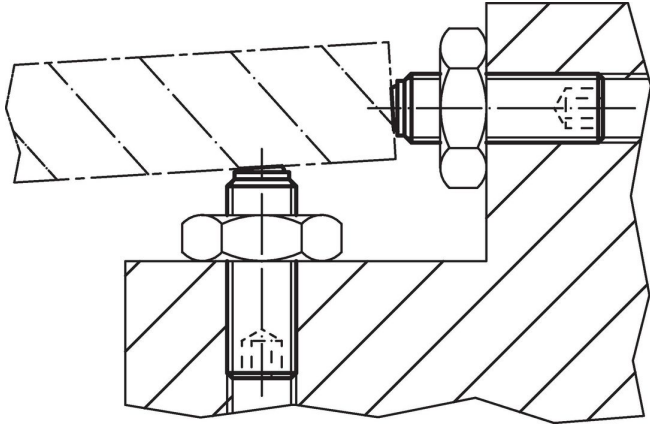
<sup>1)</sup> Statements on load capacity are not valid for the stainless steel type (except the type fitted with thermoplastic balls).

d <sub>1</sub>	Dimensions			WS [mm]	Load capacity for static load <sup>1)</sup> max. [kN]	 min.   max. [°C]		 [g]	Art. No.
	l <sub>2</sub>	d <sub>3</sub>	Ball diameter						
	[mm]								
M10	12.0	6.0	7.0	5.0	20.0	–	250	4.5	<a href="#">22720.0901</a>
M10	16.0	6.0	7.0	5.0	20.0	–	250	5.8	<a href="#">22720.0902</a>
M10	20.0	6.0	7.0	5.0	20.0	–	250	7.7	<a href="#">22720.0903</a>
M10	25.0	6.0	7.0	5.0	20.0	–	250	10.0	<a href="#">22720.0904</a>
M10	30.0	6.0	7.0	5.0	20.0	–	250	13.0	<a href="#">22720.0905</a>
M10	35.0	6.0	7.0	5.0	20.0	–	250	15.0	<a href="#">22720.0906</a>
M10	40.0	6.0	7.0	5.0	20.0	–	250	17.0	<a href="#">22720.0908</a>
M12	16.0	7.2	8.5	6.0	30.0	–	250	8.8	<a href="#">22720.0921</a>
M12	20.0	7.2	8.5	6.0	30.0	–	250	10.0	<a href="#">22720.0922</a>
M12	25.0	7.2	8.5	6.0	30.0	–	250	14.0	<a href="#">22720.0923</a>
M12	30.0	7.2	8.5	6.0	30.0	–	250	18.0	<a href="#">22720.0924</a>
M12	40.0	7.2	8.5	6.0	30.0	–	250	25.0	<a href="#">22720.0926</a>
M12	50.0	7.2	8.5	6.0	30.0	–	250	32.0	<a href="#">22720.0928</a>
M16	20.0	10.7	12.0	8.0	60.0	–	250	21.0	<a href="#">22720.0961</a>
M16	25.0	10.7	12.0	8.0	60.0	–	250	26.0	<a href="#">22720.0962</a>
M16	35.0	10.7	12.0	8.0	60.0	–	250	40.0	<a href="#">22720.0964</a>
M16	50.0	10.7	12.0	8.0	60.0	–	250	60.0	<a href="#">22720.0966</a>
M20	30.0	13.5	15.0	10.0	90.0	–	250	49.0	<a href="#">22720.0972</a>
M20	40.0	13.5	15.0	10.0	90.0	–	250	70.0	<a href="#">22720.0974</a>
M20	50.0	13.5	15.0	10.0	90.0	–	250	91.0	<a href="#">22720.0975</a>
M20	60.0	13.5	15.0	10.0	90.0	–	250	111.0	<a href="#">22720.0976</a>
M24	35.0	15.8	18.0	12.0	120.0	–	250	84.0	<a href="#">22720.0982</a>
M24	50.0	15.8	18.0	12.0	120.0	–	250	125.0	<a href="#">22720.0984</a>
M24	80.0	15.8	18.0	12.0	120.0	–	250	217.0	<a href="#">22720.0986</a>

<sup>1)</sup> Statements on load capacity are not valid for the stainless steel type (except the type fitted with thermoplastic balls).

### Application example





### Compliance

For detailed compliance information please select the desired article number.