

## Spring Plungers · with ball and internal hexagon EH 22030.



### Product Description

Spring plungers can be used for locating or for applying pressure, as a detent or for ejection.

#### Material

##### Body

- Free cutting steel, blackened
- Stainless steel 1.4305

##### Ball

- Ball-bearing steel, hardened
- Stainless steel, hardened

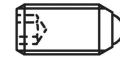
##### Spring

- Stainless steel

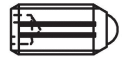
#### Characteristic

Standard spring load: no marking

Heavy spring load: marked with two lines



Standard spring load



Heavy spring load

#### More information

#### Notes

Special types on request.

Spring plungers are specially tested for spring range and forces.

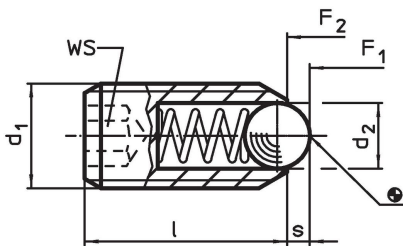
#### References

Thread lock on request, please refer to appendix - Technical Data -  
Calculation of indexing resistance, please refer to appendix - Technical Data -

#### Further products

- Locators, with bore hole, for spring plungers
- Locators, smooth, for spring plungers
- Holders, for spring plungers

### Drawing



### Order information

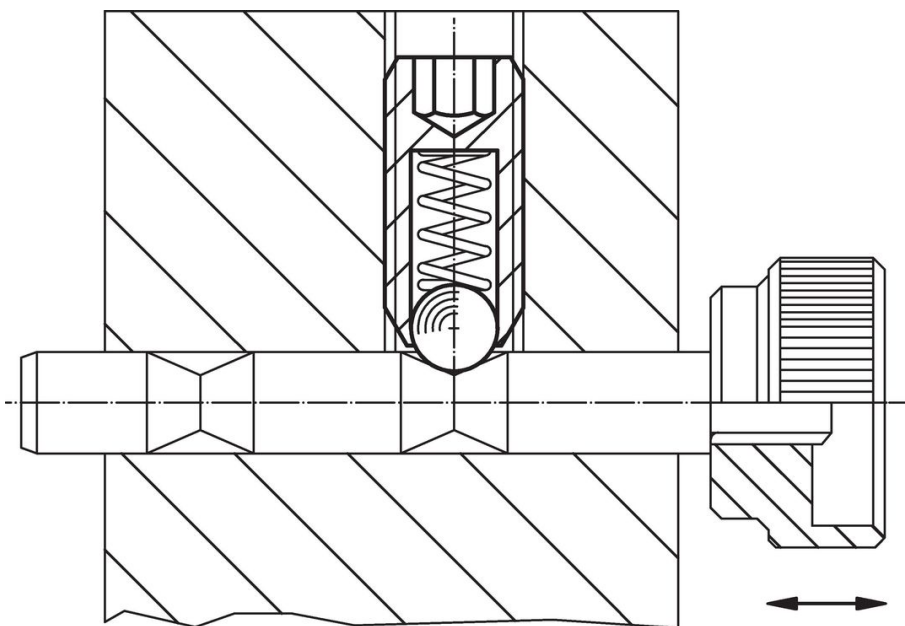
| Dimensions  |                |    | WS<br>[mm] | Stroke<br>s<br>[mm] | Spring load <sup>1)</sup> |                | max.<br>[°C] | [g]   | Art. No.   |
|---|----------------|----|------------|---------------------|---------------------------|----------------|--------------|-------|------------|
| d <sub>1</sub>                                    | d <sub>2</sub> | l  |            |                     | F <sub>1</sub>            | F <sub>2</sub> |              |       |            |
| [mm]  |                |    |            |                     | [N]                       | [N]            |              |       |            |
| <b>free cutting steel, standard spring load</b>   |                |    |            |                     |                           |                |              |       |            |
| M 3   | 1.5            | 8  | 1.5        | 0.4                 | 3.0                       | 4.5            | 250          | 0.2   | 22030.0003 |
| M 4   | 2.5            | 12 | 2.0        | 0.8                 | 8.5                       | 14.0           | 250          | 0.6   | 22030.0004 |
| M 5   | 3.0            | 14 | 2.5        | 0.9                 | 8.0                       | 14.0           | 250          | 1.2   | 22030.0005 |
| M 6   | 3.5            | 15 | 3.0        | 1.0                 | 11.0                      | 18.0           | 250          | 1.7   | 22030.0006 |
| M 8   | 4.5            | 18 | 4.0        | 1.5                 | 18.0                      | 31.0           | 250          | 3.9   | 22030.0008 |
| M10   | 6.0            | 23 | 5.0        | 2.0                 | 24.0                      | 45.0           | 250          | 8.0   | 22030.0010 |
| M12   | 8.0            | 26 | 6.0        | 2.5                 | 26.0                      | 49.0           | 250          | 13.0  | 22030.0012 |
| M16   | 10.0           | 33 | 8.0        | 3.5                 | 41.0                      | 86.0           | 250          | 32.0  | 22030.0016 |
| M20   | 12.0           | 43 | 10.0       | 4.5                 | 56.0                      | 111.0          | 250          | 67.0  | 22030.0020 |
| M24   | 15.0           | 48 | 12.0       | 5.5                 | 81.0                      | 151.0          | 250          | 105.0 | 22030.0024 |
| <b>free cutting steel, reinforced spring load</b> |                |    |            |                     |                           |                |              |       |            |
| M 3   | 1.5            | 8  | 1.5        | 0.4                 | 5.0                       | 9.0            | 250          | 0.3   | 22030.0043 |
| M 4   | 2.5            | 12 | 2.0        | 0.8                 | 12.0                      | 18.0           | 250          | 0.6   | 22030.0044 |
| M 5   | 3.0            | 14 | 2.5        | 0.9                 | 15.0                      | 22.0           | 250          | 1.2   | 22030.0045 |

<sup>1)</sup> statistical average value

| d <sub>1</sub>                               | Dimensions     |    | WS<br>[mm] | Stroke<br>s<br>[mm] | Spring load <sup>1)</sup> |                | max.<br>[°C] | [g]   | Art. No.                   |
|--|----------------|----|------------|---------------------|---------------------------|----------------|--------------|-------|----------------------------|
|  | d <sub>2</sub> | l  |            |                     | F <sub>1</sub>            | F <sub>2</sub> |              |       |                            |
|  | [mm]           |    |            |                     | [N]                       |                |              |       |                            |
| <b>M 6</b>                                   | 3.5            | 15 | 3.0        | 1.0                 | 19.0                      | 28.0           | 250          | 1.7   | <a href="#">22030.0046</a> |
| <b>M 8</b>                                   | 4.5            | 18 | 4.0        | 1.5                 | 36.0                      | 62.0           | 250          | 4.0   | <a href="#">22030.0048</a> |
| <b>M10</b>                                   | 6.0            | 23 | 5.0        | 2.0                 | 57.0                      | 104.0          | 250          | 8.2   | <a href="#">22030.0050</a> |
| <b>M12</b>                                   | 8.0            | 26 | 6.0        | 2.5                 | 61.0                      | 110.0          | 250          | 13.0  | <a href="#">22030.0052</a> |
| <b>M16</b>                                   | 10.0           | 33 | 8.0        | 3.5                 | 68.0                      | 142.0          | 250          | 32.0  | <a href="#">22030.0056</a> |
| <b>M20</b>                                   | 12.0           | 43 | 10.0       | 4.5                 | 84.0                      | 166.0          | 250          | 67.0  | <a href="#">22030.0060</a> |
| <b>M24</b>                                   | 15.0           | 48 | 12.0       | 5.5                 | 127.0                     | 237.0          | 250          | 106.0 | <a href="#">22030.0064</a> |
| <b>stainless steel, standard spring load</b> |                |    |            |                     |                           |                |              |       |                            |
| <b>M 3</b>                                   | 1.5            | 8  | 1.5        | 0.4                 | 3.0                       | 4.5            | 250          | 0.2   | <a href="#">22030.0203</a> |
| <b>M 4</b>                                   | 2.5            | 12 | 2.0        | 0.8                 | 8.5                       | 14.0           | 250          | 0.6   | <a href="#">22030.0204</a> |
| <b>M 5</b>                                   | 3.0            | 14 | 2.5        | 0.9                 | 8.0                       | 14.0           | 250          | 1.2   | <a href="#">22030.0205</a> |
| <b>M 6</b>                                   | 3.5            | 15 | 3.0        | 1.0                 | 11.0                      | 18.0           | 250          | 1.7   | <a href="#">22030.0206</a> |
| <b>M 8</b>                                   | 4.5            | 18 | 4.0        | 1.5                 | 18.0                      | 31.0           | 250          | 4.0   | <a href="#">22030.0208</a> |
| <b>M10</b>                                   | 6.0            | 23 | 5.0        | 2.0                 | 24.0                      | 45.0           | 250          | 8.0   | <a href="#">22030.0210</a> |
| <b>M12</b>                                   | 8.0            | 26 | 6.0        | 2.5                 | 26.0                      | 49.0           | 250          | 12.0  | <a href="#">22030.0212</a> |
| <b>M16</b>                                   | 10.0           | 33 | 8.0        | 3.5                 | 41.0                      | 86.0           | 250          | 32.0  | <a href="#">22030.0216</a> |
| <b>M20</b>                                   | 12.0           | 43 | 10.0       | 4.5                 | 56.0                      | 111.0          | 250          | 67.0  | <a href="#">22030.0220</a> |
| <b>M24</b>                                   | 15.0           | 48 | 12.0       | 5.5                 | 81.0                      | 151.0          | 250          | 106.0 | <a href="#">22030.0224</a> |
| <b>stainless steel, heavy spring load</b>    |                |    |            |                     |                           |                |              |       |                            |
| <b>M 3</b>                                   | 1.5            | 8  | 1.5        | 0.4                 | 5.0                       | 9.0            | 250          | 0.3   | <a href="#">22030.0243</a> |
| <b>M 4</b>                                   | 2.5            | 12 | 2.0        | 0.8                 | 12.0                      | 18.0           | 250          | 0.6   | <a href="#">22030.0244</a> |
| <b>M 5</b>                                   | 3.0            | 14 | 2.5        | 0.9                 | 15.0                      | 22.0           | 250          | 1.2   | <a href="#">22030.0245</a> |
| <b>M 6</b>                                   | 3.5            | 15 | 3.0        | 1.0                 | 19.0                      | 28.0           | 250          | 1.8   | <a href="#">22030.0246</a> |
| <b>M 8</b>                                   | 4.5            | 18 | 4.0        | 1.5                 | 36.0                      | 62.0           | 250          | 4.0   | <a href="#">22030.0248</a> |
| <b>M10</b>                                   | 6.0            | 23 | 5.0        | 2.0                 | 57.0                      | 104.0          | 250          | 8.2   | <a href="#">22030.0250</a> |
| <b>M12</b>                                   | 8.0            | 26 | 6.0        | 2.5                 | 61.0                      | 110.0          | 250          | 13.0  | <a href="#">22030.0252</a> |
| <b>M16</b>                                   | 10.0           | 33 | 8.0        | 3.5                 | 68.0                      | 142.0          | 250          | 32.0  | <a href="#">22030.0256</a> |
| <b>M20</b>                                   | 12.0           | 43 | 10.0       | 4.5                 | 84.0                      | 166.0          | 250          | 67.0  | <a href="#">22030.0260</a> |
| <b>M24</b>                                   | 15.0           | 48 | 12.0       | 5.5                 | 127.0                     | 237.0          | 250          | 106.0 | <a href="#">22030.0264</a> |

<sup>1)</sup> statistical average value

### Application example



### Compliance

For detailed compliance information please select the desired article number.