



### PRODUCT INFO

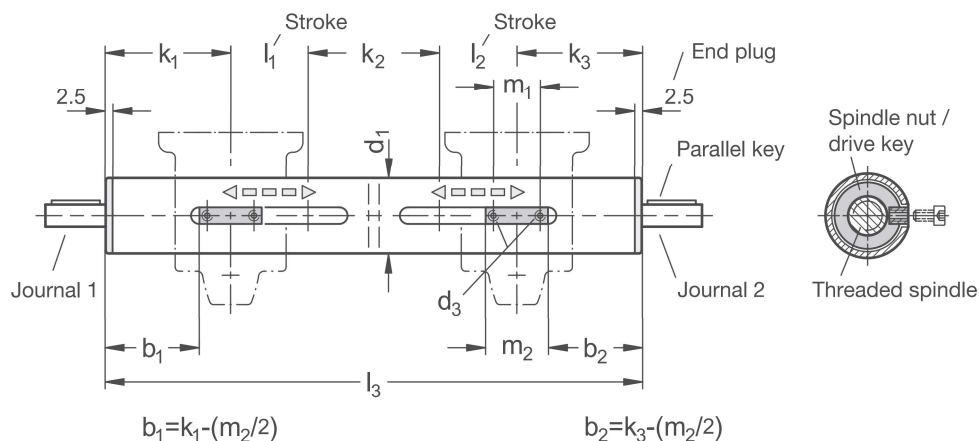
The guide tubes of the **linear units VE3R** are made of chrome-plated steel or bright stainless steel precision tubes. Two independent spindles with ball bearings on each side are installed in the guide tube. The thread direction of the spindles can be chosen as desired for each side. The spindle nuts positioned on each spindle transmit the linear movements to the linear unit connector via a drive key along the guide groove, independently of the opposite side.

The guide element bores form solid linear round guides together with the guide tube. Multiple connector types are available for selection and can be adjusted or clamped for low play using the slitted bore. The parts to be moved are fastened to the guide element, such as for format adjustments, in which one side guide is moved independently from the opposite side to various widths.

Possible accessories are already taken into account in the selection of the linear units according to the options given in the tables. This ensures, for example, that the journal lengths  $z_1$  and  $z_2$  are appropriate for attachment of the accessories. The linear unit connectors and the accessories are not included with the linear units and must be ordered separately.

Adjustable hand levers are intended for repeated, tool-free clamping of the guide elements. Under the designation HSK, these are available separately for individual use and in other designs. Compared with the tool-operated hex socket cap screw, the clamping force achievable with an adjustable hand lever is lower due to the shorter lever length.

### RoHS-compliant product



| $d_1$ | Stroke max.<br>$l_1$ | Stroke max.<br>$l_2$ | Edge distance 1 min.<br>$k_1$ | Spacing min.<br>$k_2$ | Edge distance 2 min.<br>$k_3$ | $d_3$ | Total length max.<br>( $k_1 + k_2 + k_3 + l_1 + l_2$ )<br>$l_3$ | $m_1$ | $m_2$ |
|-------|----------------------|----------------------|-------------------------------|-----------------------|-------------------------------|-------|-----------------------------------------------------------------|-------|-------|
| 30    | 601                  | 601                  | 57                            | 50                    | 57                            | M 4   | 1455                                                            | 23    | 38    |
| 40    | 753                  | 753                  | 76                            | 66                    | 76                            | M 5   | 1805                                                            | 42    | 54    |
| 50    | 748                  | 748                  | 80                            | 70                    | 80                            | M 6   | 1805                                                            | 42    | 54    |
| 60    | 715                  | 715                  | 98                            | 90                    | 98                            | M 8   | 1805                                                            | 58    | 70    |

#### Material $W$

|    |                                                                                                                                                                                                            |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ST | Steel<br>• Guide tube, DIN EN 10305-4: Steel, chrome-plated<br>• Trapezoidal / fine thread spindle: Steel, with ball bearing<br>• Spindle nut: Red brass / end plug: Plastic                               |
| ED | Stainless steel<br>• Guide tubes, EN 10216-5: Stainless steel AISI 304<br>• Trapezoidal / fine thread spindle: Stainless steel AISI 303, with ball bearing<br>• Spindle nut: Red brass / end plug: Plastic |

#### Spindle 1 thread direction (on journal $z_1$ ) $r_1$

|    |                   |
|----|-------------------|
| RH | Right-hand thread |
| LH | Left-hand thread  |

#### Spindle 2 thread direction (on journal $z_2$ ) $r_2$

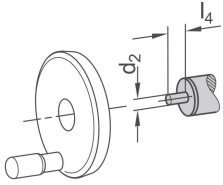
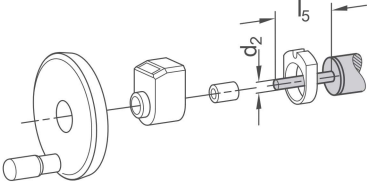
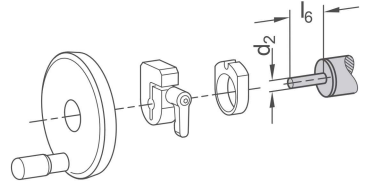
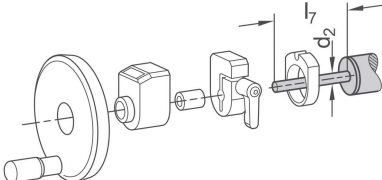
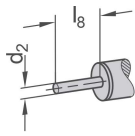
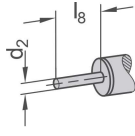
|    |                   |
|----|-------------------|
| RH | Right-hand thread |
| LH | Left-hand thread  |

| $d_1$ | Spindle<br>$\varnothing$ | Spindle pitch spindle 1<br>$p_1$ |                     | Spindle pitch spindle 2<br>$p_2$ |                     | Journal diameter<br>$d_2$ | Journal length<br>B<br>$l_4$ | Journal length<br>D<br>$l_5$ | Journal length<br>E<br>$l_6$ | Journal length<br>F<br>$l_7$ | individual journal length<br>$l_8$ |
|-------|--------------------------|----------------------------------|---------------------|----------------------------------|---------------------|---------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------------|
|       |                          | Trapezoidal thread               | Fine thread, metric | Trapezoidal thread               | Fine thread, metric |                           |                              |                              |                              |                              |                                    |
| 30    | 14                       | 4                                | 1                   | 4                                | 1                   | 8                         | 16                           | 52                           | 31                           | 67                           | 16...67                            |
| 40    | 20                       | 4                                | 1                   | 4                                | 1                   | 12                        | 17                           | 59                           | 32                           | 74                           | 17...74                            |
| 50    | 20                       | 4                                | 1                   | 4                                | 1                   | 12                        | 18                           | 60                           | 33                           | 75                           | 18...75                            |
| 60    | 24                       | 5                                | 1,5                 | 5                                | 1                   | 14                        | 19                           | 61                           | 34                           | 76                           | 19...76                            |

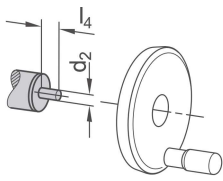
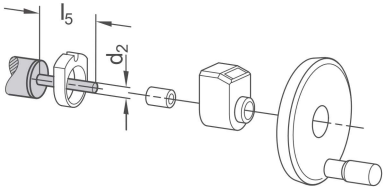
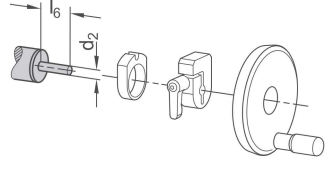
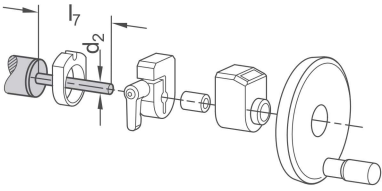
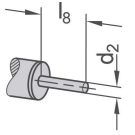
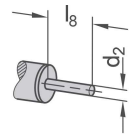
#### Accessories:

| $d_1$ | Torque support | Clamping plate | Position indicator             |      | Handwheel |
|-------|----------------|----------------|--------------------------------|------|-----------|
| 30    | VZDR           | VZK            | VZPM                           | VZPE | VZH       |
| 40    | VZDR           | VZK            | VZPM                           | VZPE | VZH       |
| 50    | VZDR           | VZK            | VZPM                           | VZPE | VZH       |
| 60    | VZDR           | VZK            | VZPM (only trapezoidal thread) | VZPE | VZH       |

Journal  
Z<sub>1</sub>

|                                                                                                                          |                                                                                      |                                                                                                                          |                                                                          |                                                                                                                            |                                                                             |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| B                                                                                                                        | Journal for handwheel                                                                | D                                                                                                                        | Journal for position indicator and handwheel                             | E                                                                                                                          | Journal for spacer plate and handwheel<br>(only for $d_1 \geq 30$ )         |
|  <p>Journal length <math>l_4</math></p> |                                                                                      |  <p>Journal length <math>l_5</math></p> |                                                                          |  <p>Journal length <math>l_6</math></p> |                                                                             |
| F                                                                                                                        | Journal for spacer plate, position indicator and handwheel (only for $d_1 \geq 30$ ) | Gxx                                                                                                                      | Individual length with keyway<br>(for xx enter value from column $l_8$ ) | Hxx                                                                                                                        | Individual length without keyway<br>(for xx enter value from column $l_8$ ) |
|  <p>Journal length <math>l_7</math></p> |                                                                                      |  <p>Journal length <math>l_8</math></p> |                                                                          |  <p>Journal length <math>l_8</math></p> |                                                                             |

Journal  
Z<sub>2</sub>

|                                                                                                                            |                                                                                      |                                                                                                                            |                                                                          |                                                                                                                              |                                                                             |
|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| B                                                                                                                          | Journal for handwheel                                                                | D                                                                                                                          | Journal for position indicator and handwheel                             | E                                                                                                                            | Journal for spacer plate and handwheel<br>(only for $d_1 \geq 30$ )         |
|  <p>Journal length <math>l_4</math></p> |                                                                                      |  <p>Journal length <math>l_5</math></p> |                                                                          |  <p>Journal length <math>l_6</math></p> |                                                                             |
| F                                                                                                                          | Journal for spacer plate, position indicator and handwheel (only for $d_1 \geq 30$ ) | Gxx                                                                                                                        | Individual length with keyway<br>(for xx enter value from column $l_8$ ) | Hxx                                                                                                                          | Individual length without keyway<br>(for xx enter value from column $l_8$ ) |
|  <p>Journal length <math>l_7</math></p> |                                                                                      |  <p>Journal length <math>l_8</math></p> |                                                                          |  <p>Journal length <math>l_8</math></p> |                                                                             |

ACCESSORIES

- Handwheels **VZH** → see page 356
- Position indicators **VZPM** / **VZPE** → see page 358 / 360
- Clamping plates **VZK** → see page 362
- Torque supports **VZDR** → see page 364
- Angle gears **YLS** / **YTS** → see page 374 / 376
- Transfer units **VA** → see page 370

ORDER KEY

|                            | Name key                                                                                                                                                                                                             | Supplemental key |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
|                            | VE3R - d <sub>1</sub> - w - l <sub>1</sub> - l <sub>2</sub> - k <sub>1</sub> - k <sub>2</sub> - k <sub>3</sub> - r <sub>1</sub> - p <sub>1</sub> - z <sub>1</sub> - r <sub>2</sub> - p <sub>2</sub> - z <sub>2</sub> |                  |
| Single tube linear unit    |                                                                                                                                                                                                                      |                  |
| Outer diameter             |                                                                                                                                                                                                                      |                  |
| Material                   |                                                                                                                                                                                                                      |                  |
| Stroke 1                   |                                                                                                                                                                                                                      |                  |
| Stroke 2                   |                                                                                                                                                                                                                      |                  |
| Edge distance 1            |                                                                                                                                                                                                                      |                  |
| Spacing                    |                                                                                                                                                                                                                      |                  |
| Edge distance 2            |                                                                                                                                                                                                                      |                  |
| Spindle 1 thread direction |                                                                                                                                                                                                                      |                  |
| Spindle 1 thread pitch     |                                                                                                                                                                                                                      |                  |
| Journal z <sub>1</sub>     |                                                                                                                                                                                                                      |                  |
| Spindle 2 thread direction |                                                                                                                                                                                                                      |                  |
| Spindle 2 thread pitch     |                                                                                                                                                                                                                      |                  |
| Journal z <sub>2</sub>     |                                                                                                                                                                                                                      |                  |

LINEAR UNIT CONNECTORS

The single tube linear unit VE3R only becomes a functional axis after attachment of a linear unit connector. Linear unit connectors are available in a variety of designs for different applications. To simplify the selection process, an overview is provided on page 238.

