

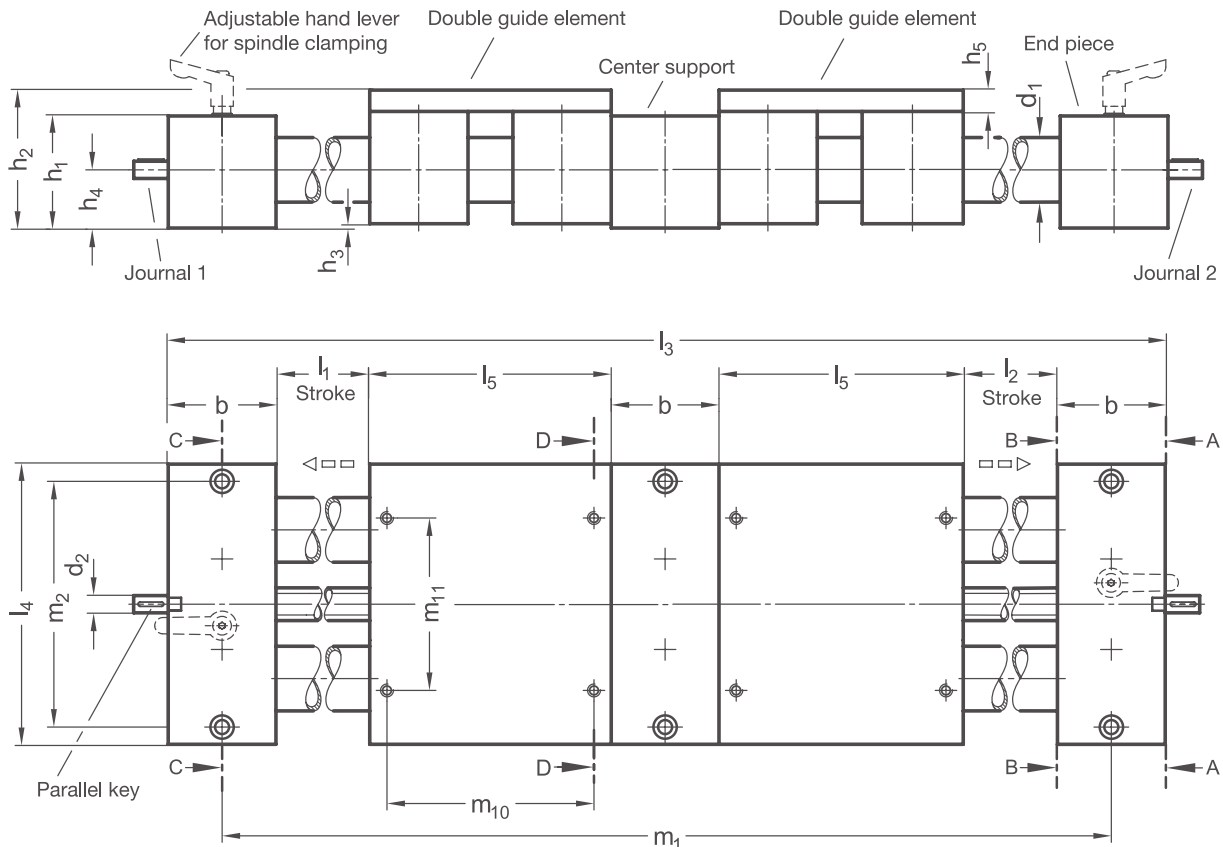
PRODUCT INFO

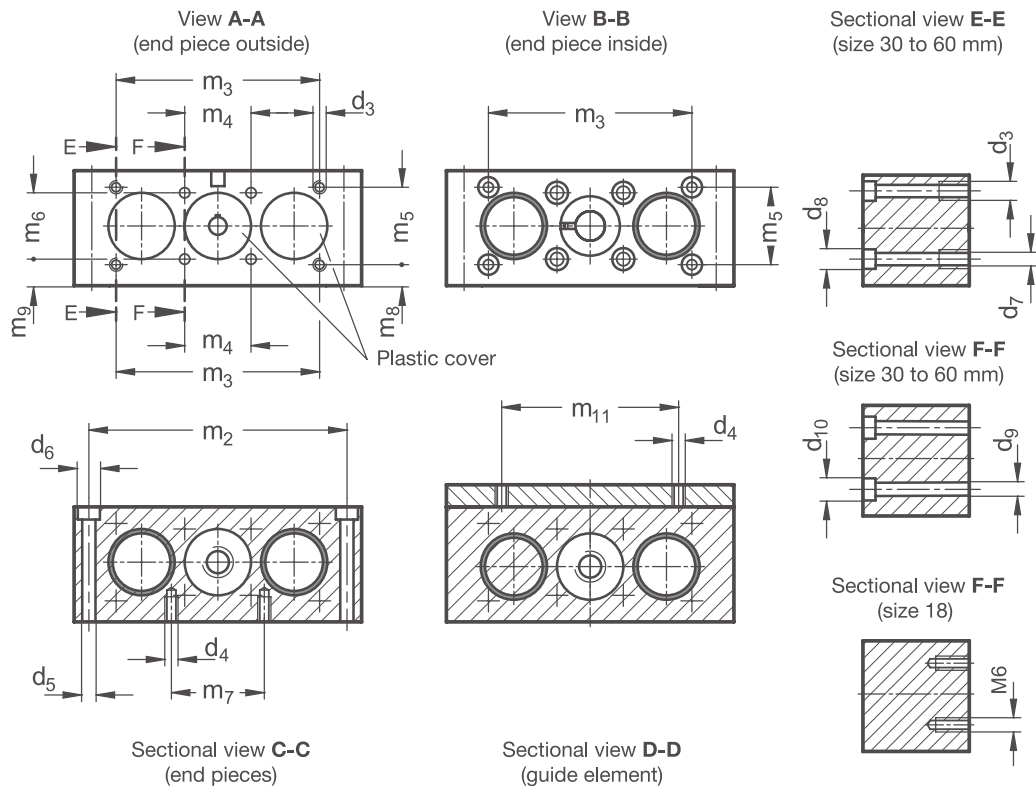
The guide tubes of the **precision double tube linear units PD3D** are made of chrome-plated steel or polished stainless steel precision tubes. The end pieces of aluminum connect the tubes and form a precise linear guide together with the guide elements. The centered independent spindles have trapezoidal or fine thread and ball bearings on both sides. The slide-guided double guide elements are moved linearly along the spindle threads by the integrated spindle nuts – independently of the opposite side.

Double tube linear units have high torsional stiffness and can handle high weights and torques. The double guide element distributes the load among four guide points, allowing for even higher loads.

Accessory parts are listed in the tables and are already taken into account when selecting the linear units. This ensures, for example, that the lengths of the journals z_1 and z_2 are correct for attachment of the accessories. The accessories are not included with the linear units.

RoHS-compliant product





| d_1 | Stroke l_1 | Stroke l_2 | b | d_2 | d_3 | d_4 | d_5 | d_6 | For screws DIN 912 | d_7 | d_8 | For screws DIN 912 | d_9 | d_{10} | For screws DIN 912 |
|-------|--------------|--------------|-----|-------|-------|-------|-------|-------|--------------------|-------|-------|--------------------|-------|----------|--------------------|
| 18 | ...450 | ...450 | 28 | 6 | - | M 5 | 5,5 | 10 | M 5 | - | - | - | - | - | - |
| 30 | ...750 | ...750 | 50 | 8 | M 6 | M 6 | 6,6 | 11 | M 6 | 5,5 | 10 | M 5 | 6,6 | 11 | M 6 |
| 40 | ...1030 | ...1030 | 60 | 12 | M 8 | M 8 | 9 | 15 | M 8 | 6,6 | 11 | M 6 | 8,6 | 13,5 | M 8 |
| 50 | ...1130 | ...1130 | 72 | 12 | M 10 | M 8 | 9 | 15 | M 8 | 9 | 13,5 | M 8 | 9 | 13,5 | M 8 |
| 60 | ...1390 | ...1390 | 80 | 14 | M 10 | M 10 | 10,5 | 16,5 | M 10 | 9 | 13,5 | M 8 | 11 | 16,5 | M 10 |

| d_1 | h_1 | h_2 | h_3 | h_4 | h_5 | l_3 | l_4 | l_5 | m_1 | m_2 | m_3 | m_4 | m_5 | m_6 |
|-------|-------|-------|-------|-------|-------|---------------------------|-------|-------|---------------------------|-------|-------|-------|-------|-------|
| 18 | 28 | 37 | 1 | 14,5 | 8 | $3xb + 2xl_5 + l_1 + l_2$ | 81 | 81 | $2xb + 2xl_5 + l_1 + l_2$ | 68 | - | 20 | - | 20 |
| 30 | 52 | 64 | 2 | 27 | 10 | $3xb + 2xl_5 + l_1 + l_2$ | 130 | 130 | $2xb + 2xl_5 + l_1 + l_2$ | 114 | 92 | 30 | 35 | 30 |
| 40 | 60 | 75 | 3 | 31,5 | 12 | $3xb + 2xl_5 + l_1 + l_2$ | 180 | 180 | $2xb + 2xl_5 + l_1 + l_2$ | 160 | 132 | 39 | 38 | 39 |
| 50 | 72 | 92 | 4 | 38 | 16 | $3xb + 2xl_5 + l_1 + l_2$ | 206 | 206 | $2xb + 2xl_5 + l_1 + l_2$ | 184 | 150 | 46 | 50 | 46 |
| 60 | 86 | 106 | 4 | 45 | 16 | $3xb + 2xl_5 + l_1 + l_2$ | 240 | 240 | $2xb + 2xl_5 + l_1 + l_2$ | 216 | 185 | 55 | 60 | 55 |

| d_1 | m_7 | m_8 | m_9 | m_{10} | m_{11} | Accessories: | | | | | |
|-------|-------|-------|-------|----------|----------|-----------------------|----------------|------------------------------------|--|-----------|-----|
| | | | | | | Parallel key DIN 6885 | Torque support | Position indicator | | Handwheel | |
| 18 | 18 | - | 4,5 | 68 | 52 | A2x2x12 | VZDD | VZPM | | - | VZH |
| 30 | 42 | 9,5 | 12 | 114 | 80 | A2x2x12 | - | VZPM | | VZPE | VZH |
| 40 | 62 | 12,5 | 12 | 160 | 120 | A4x4x12 | - | VZPM | | VZPE | VZH |
| 50 | 62 | 13 | 15 | 184 | 134 | A4x4x12 | - | VZPM | | VZPE | VZH |
| 60 | 74 | 15 | 17,5 | 216 | 160 | A5x5x16 | - | VZPM (only for trapezoidal thread) | | VZPE | VZH |

Version
a

| | |
|-----|---|
| 1ST | Double tube sliding guide / trapezoidal lead screw • Guide tubes: Steel, chrome-plated • End pieces / guide elements: Aluminum, bright. Assembly surfaces: Machined • Trapezoidal / fine thread spindle: Steel, with ball bearing |
| 1ED | Double tube sliding guide / trapezoidal lead screw • Guide tubes: Stainless steel AISI 304, polished • End pieces / guide elements: Aluminum, bright. Assembly surfaces: Machined • Trapezoidal / fine thread spindle: Stainless steel AISI 303, with ball bearing |

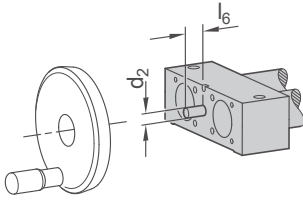
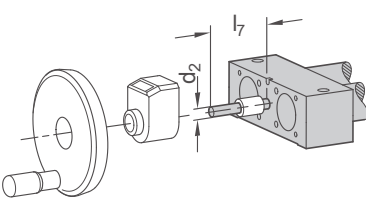
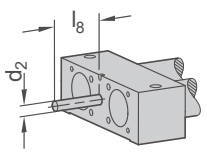
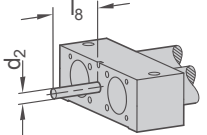
Thread direction / clamping spindle 1
r₁

Thread direction / clamping spindle 2
r₂

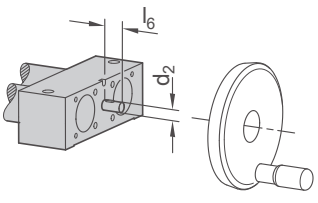
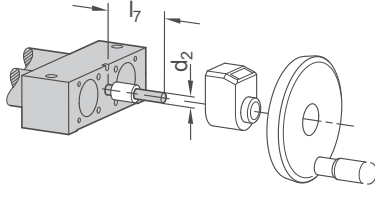
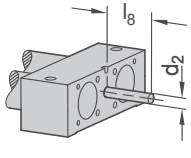
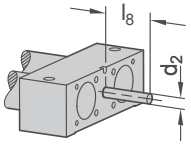
| | | | |
|-----|--|-----|--|
| RH | Right-hand thread | RH | Right-hand thread |
| RHK | Right-hand thread with clamping ring and hand lever for spindle clamping | RHK | Right-hand thread with clamping ring and hand lever for spindle clamping |
| LH | Left-hand thread | LH | Left-hand thread |
| LHK | Left-hand thread with clamping ring and hand lever for spindle clamping | LHK | Left-hand thread with clamping ring and hand lever for spindle clamping |

| d₁ | Spindle ∅ | Spindle pitch p₁ | | Spindle pitch p₂ | | Journal diameter d₂ | Journal length B l₆ | Journal length D l₇ | Individual journal length l₈ |
|----------------------|---------------------|---------------------------------------|------------------------|---------------------------------------|------------------------|--|---|---|--|
| | | Trapezoidal thread | Fine thread, metric | Trapezoidal thread | Fine thread, metric | | | | |
| 18 | 10 | 3 | 1 | 3 | 1 | 6 | 16 | 46 | 16...46 |
| 30 | 14 | 4 | 1 | 4 | 1 | 8 | 16 | 52 | 16...67 |
| 40 | 20 | 4 | 1 | 4 | 1 | 12 | 17 | 59 | 17...74 |
| 50 | 20 | 4 | 1 | 4 | 1 | 12 | 18 | 60 | 18...75 |
| 60 | 24 | 5 | 1,5 | 5 | 1,5 | 14 | 19 | 61 | 19...76 |

Journal
z₁

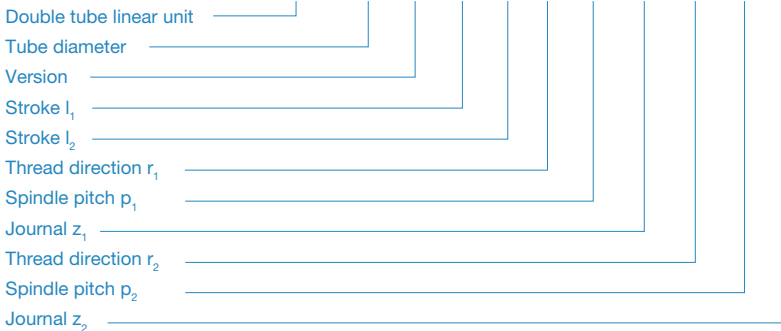
| | | | | | |
|---|--|---|--|---|---|
| B | Journal for handwheel | D | Journal for position indicator and handwheel (torque support required for d ₁ =18) | Gxx | Individual journal length with keyway (for xx, enter values from column l ₈) |
|  <p>Journal length l₆</p> | |  <p>Journal length l₇</p> | |  <p>Journal length l₈</p> | |
| Hxx | Individual journal length without keyway (for xx, enter values from column l ₈) | | | | |
|  <p>Journal length l₈</p> | | | | | |

Journal **Z₂**

| | | |
|---|---|---|
| <p>B Journal for handwheel</p> | <p>D Journal for position indicator and handwheel (torque support required for $d_1=18$)</p> | <p>Gxx Individual journal length with keyway (for xx, enter values from column I₉)</p> |
|  <p>Journal length I₆</p> |  <p>Journal length I₇</p> |  <p>Journal length I₈</p> |
| <p>Hxx Individual journal length without keyway (for xx, enter values from column I₉)</p> | | |
|  <p>Journal length I₈</p> | | |

ORDER KEY

Name key | Supplemental key
PD3D - d₁ - a - l₁ - l₂ - r₁ - p₁ - z₁ - r₂ - p₂ - z₂



ACCESSORIES

- Handwheels **VZH** → see page 356
- Position indicators **VZPM / VZPE** → see page 358 / 360
- Torque supports **VZDD** → see page 368
- Angle gears **YLD** → see page 378
- Transfer units **VA** → see page 370

ON REQUEST

- Additional following guide elements
- Guide element connector plates
- Multiple guide elements with scissors synchronization
- Bellows covers
- Complete linear unit of stainless steel