

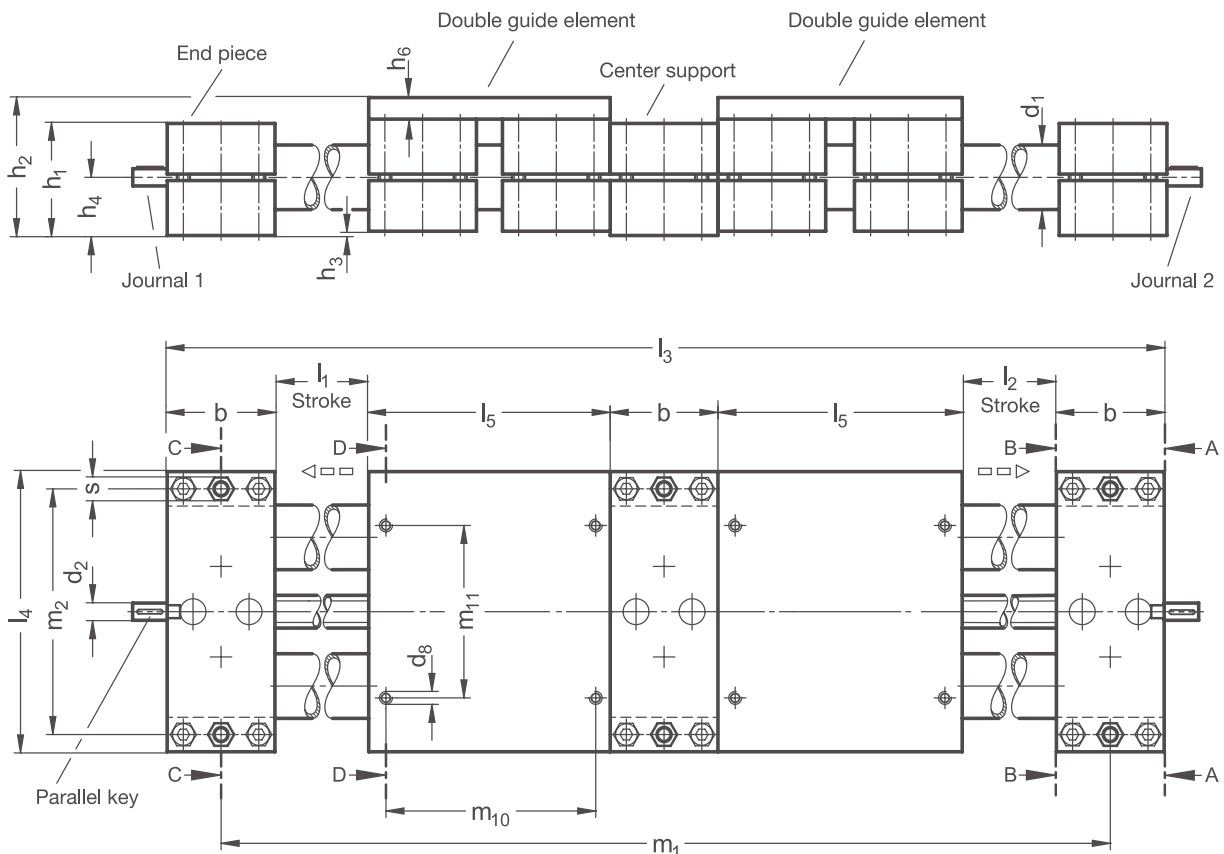
### PRODUCT INFO

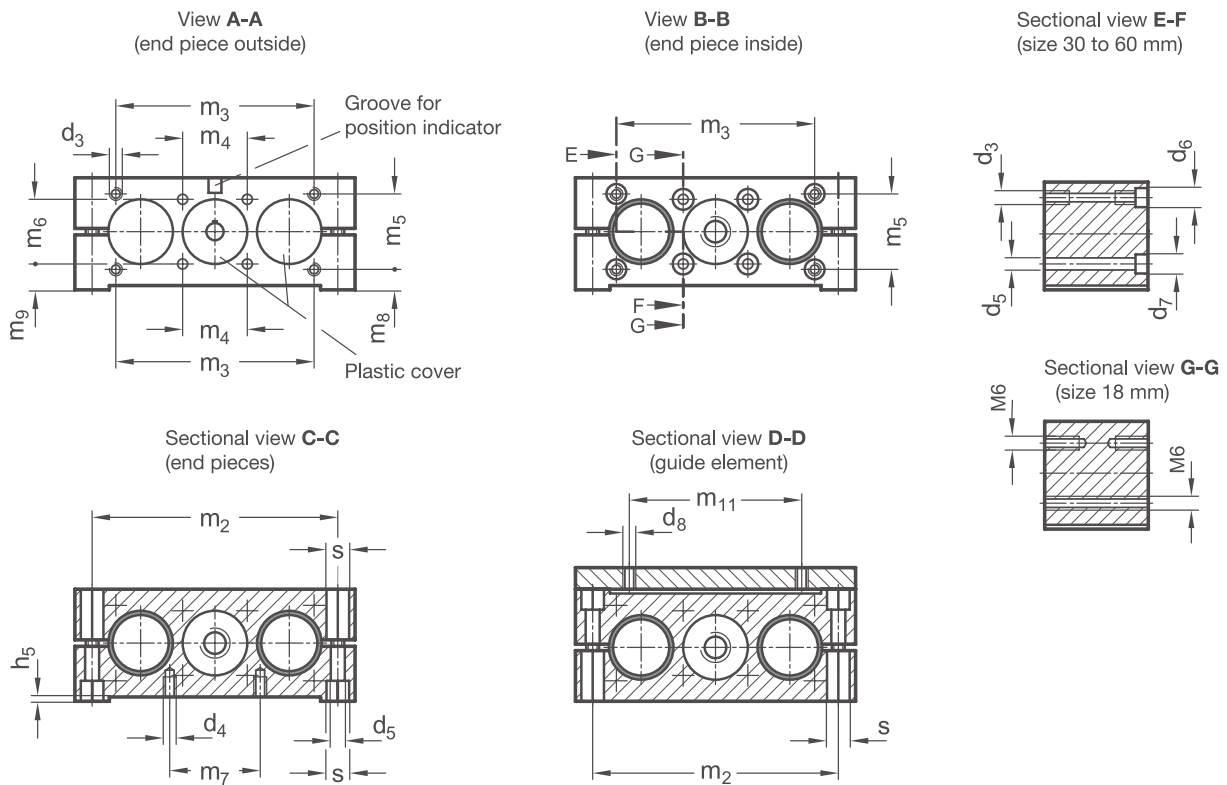
The guide tubes of the **double tube linear units VD3D** are made of chrome-plated steel or polished stainless steel precision tubes. The aluminum end pieces connect the tubes and form a solid linear guide together with the guide element. Two independent spindles with ball bearings on each side are installed in the center. The thread direction of the spindles can be chosen as desired for each side. Together with the double guide elements, the affixed spindle nuts move linearly along the spindle thread, 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 higher loads. Depending on the design, the part to be moved is fastened to the guide element or the guide element itself is installed at the place of use such that the entire linear unit moves together.

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 accessories are not included with the linear units.

### RoHS-compliant product





d <sub>1</sub>	Stroke l <sub>1</sub>	Stroke l <sub>2</sub>	b	d <sub>2</sub>	d <sub>3</sub> *	d <sub>4</sub> **	d <sub>5</sub>	d <sub>6</sub>	For screws DIN 912	d <sub>7</sub>	For screws DIN 912	h <sub>1</sub>
18	...450	...450	28	6	-	M 5	5,3	-	-	-	-	28
30	...750	...750	50	8	M 6	M 6	6,5	9	M 5	10,5	M 6	52
40	...1030	...1030	60	12	M 8	M 8	8,5	13,5	M 6	13,5	M 8	60
50	...1130	...1130	72	12	M 10	M 8	8,5	13,5	M 8	13,5	M 8	72
60	...1550	...1550	80	14	M 10	M 10	10,5	13,5	M 8	16,5	M 10	86

d <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	h <sub>5</sub>	h <sub>6</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	m <sub>1</sub>	m <sub>2</sub>	m <sub>3</sub>	m <sub>4</sub>	m <sub>5</sub>	m <sub>6</sub>	m <sub>7</sub>	m <sub>8</sub>
18	37	1	14,5	0,75	8	3xb+2xl <sub>5</sub> +l <sub>1</sub> +l <sub>2</sub>	81	81	2xb+2xl <sub>5</sub> +l <sub>1</sub> +l <sub>2</sub>	68	-	20	-	20	18	-
30	64	2	27	0,85	10	3xb+2xl <sub>5</sub> +l <sub>1</sub> +l <sub>2</sub>	130	130	2xb+2xl <sub>5</sub> +l <sub>1</sub> +l <sub>2</sub>	114	92	30	35	30	42	9,5
40	75	3	31,5	1,05	12	3xb+2xl <sub>5</sub> +l <sub>1</sub> +l <sub>2</sub>	180	180	2xb+2xl <sub>5</sub> +l <sub>1</sub> +l <sub>2</sub>	160	132	39	38	39	62	12,5
50	92	4	38	1,2	16	3xb+2xl <sub>5</sub> +l <sub>1</sub> +l <sub>2</sub>	206	206	2xb+2xl <sub>5</sub> +l <sub>1</sub> +l <sub>2</sub>	184	150	46	50	46	62	13
60	106	4	45	1,35	16	3xb+2xl <sub>5</sub> +l <sub>1</sub> +l <sub>2</sub>	240	240	2xb+2xl <sub>5</sub> +l <sub>1</sub> +l <sub>2</sub>	216	185	55	60	55	74	15

d <sub>1</sub>	m <sub>9</sub>	m <sub>10</sub>	m <sub>11</sub>	s	Parallel key DIN 6885	Torque support	Clamping plate	Position indicator	Handwheel	
18	4,5	68	52	8	A2x2x12	VZDD	-	VZPM	-	VZH
30	12	114	80	10	A2x2x12	-	VZK	VZPM (only for stroke ≤ 1000 mm)	VZPE	VZH
40	12	160	120	13	A4x4x12	-	VZK	VZPM	VZPE	VZH
50	15	184	134	13	A4x4x12	-	VZK	VZPM	VZPE	VZH
60	17,5	216	160	17	A5x5x16	-	VZK	VZPM (only for trapezoidal thread)	VZPE	VZH

\* usable thread depth on both sides min. 2 x d<sub>3</sub> \*\* usable thread depth min. 1,5 x d<sub>4</sub>

2D  
2C  
2B  
2A  
1D  
1C  
1B  
1A

Material  
**W**

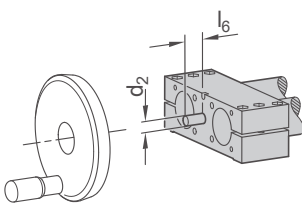
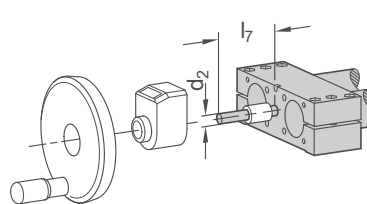
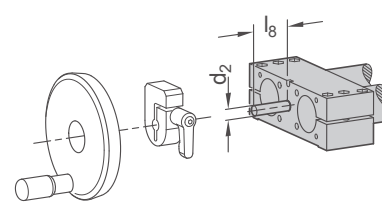
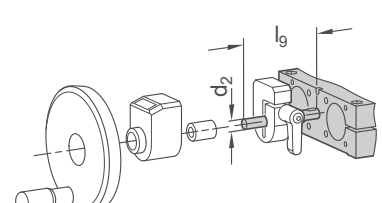
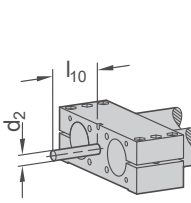
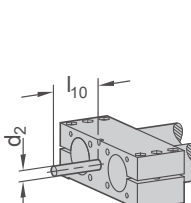
ST	Aluminum - steel • Guide tubes: Steel, chrome-plated • End pieces / guide elements: Aluminum, bright. Assembly surfaces: Machined • Trapezoidal / fine thread spindle: Steel, with ball bearing	STS	Aluminum - steel • Guide tubes: Steel, chrome-plated • End pieces / guide elements: Aluminum, powder-coated, Black RAL 9005, Assembly surfaces: Machined bright • Trapezoidal / fine thread spindle: Steel, with ball bearing
ED	Aluminum - stainless steel • 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	EDS	Aluminum - stainless steel • Guide tubes: Stainless steel AISI 304, polished • End pieces / guide elements: Aluminum, powder-coated, Black RAL 9005, Assembly surfaces: Machined bright • Trapezoidal / fine thread spindle: Stainless steel AISI 303, with ball bearing

Spindle thread direction  
**r**

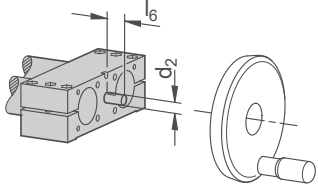
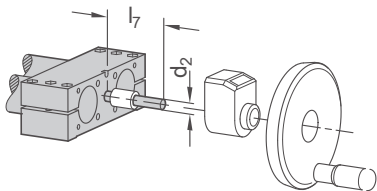
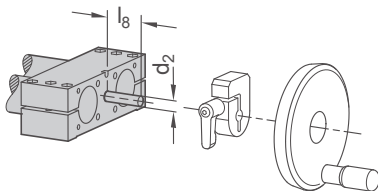
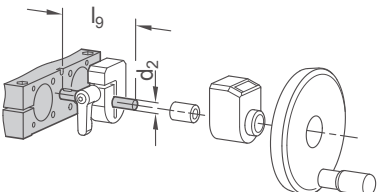
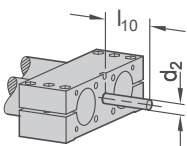
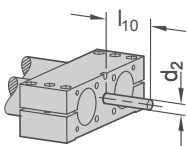
RH	Right-hand thread
LH	Left-hand thread

$d_1$	Spindle $\emptyset$	Spindle pitch $p_1$		Spindle pitch $p_2$		Journal diameter $d_2$	Journal length B $l_6$	Journal length D $l_7$	Journal length E $l_8$	Journal length F $l_9$	Individual journal length $l_{10}$
		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	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	1,5	14	19	61	34	76	19...76

Journal  
**Z<sub>1</sub>**

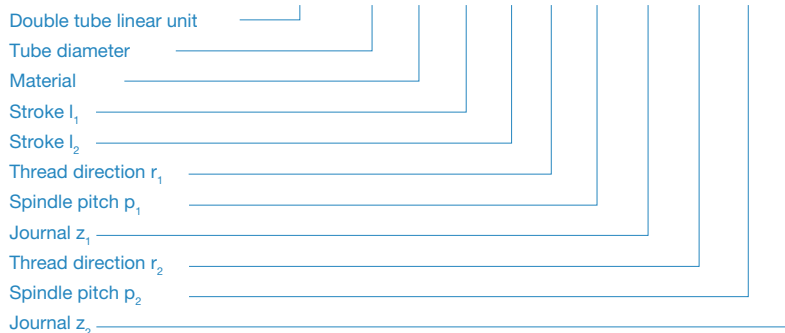
B	Journal for handwheel	D	Journal for position indicator and handwheel (torque support required for $d_1 = 18$ )	E	Journal for spacer plate and handwheel (only for $d_1 \geq 30$ )
 <p>Journal length <math>l_6</math></p>		 <p>Journal length <math>l_7</math></p>		 <p>Journal length <math>l_8</math></p>	
F	Journal for spacer plate, Position indicator und handwheel (only for $d_1 \geq 30$ )	Gxx	Individual journal length with keyway (for xx, enter values from column $l_{10}$ )	Hxx	Individual journal length without keyway (for xx, enter values from column $l_{10}$ )
 <p>Journal length <math>l_9</math></p>		 <p>Journal length <math>l_{10}</math></p>		 <p>Journal length <math>l_{10}</math></p>	

Journal **Z<sub>2</sub>**

<p><b>B</b> Journal for handwheel</p>	<p><b>D</b> Journal for position indicator and handwheel (torque support required for <math>d_1 = 18</math>)</p>	<p><b>E</b> Journal for spacer plate and handwheel (only for <math>d_1 \geq 30</math>)</p>
 <p>Journal length <math>l_6</math></p>	 <p>Journal length <math>l_7</math></p>	 <p>Journal length <math>l_8</math></p>
<p><b>F</b> Journal for spacer plate, position indicator and handwheel (only for <math>d_1 \geq 30</math>)</p>	<p><b>Gxx</b> Individual journal length with keyway (for xx, enter values from column <math>l_{10}</math>)</p>	<p><b>Hxx</b> Individual journal length without keyway (for xx, enter values from column <math>l_{10}</math>)</p>
 <p>Journal length <math>l_9</math></p>	 <p>Journal length <math>l_{10}</math></p>	 <p>Journal length <math>l_{10}</math></p>

**ORDER KEY**

Name key | Supplemental key  
**VD3D - d<sub>1</sub> - w - l<sub>1</sub> - l<sub>2</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>**



**ACCESSORIES**

- Handwheels **VZH** → see page 356
- Position indicators **VZPM / VZPE** → see page 358/360
- Clamping plates **VZK** → see page 362
- 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

2D  
2C  
2B  
2A  
1D  
1C  
1B  
1A