VE1R | Single tube linear units, round, for one guide element

PRODUCT INFO

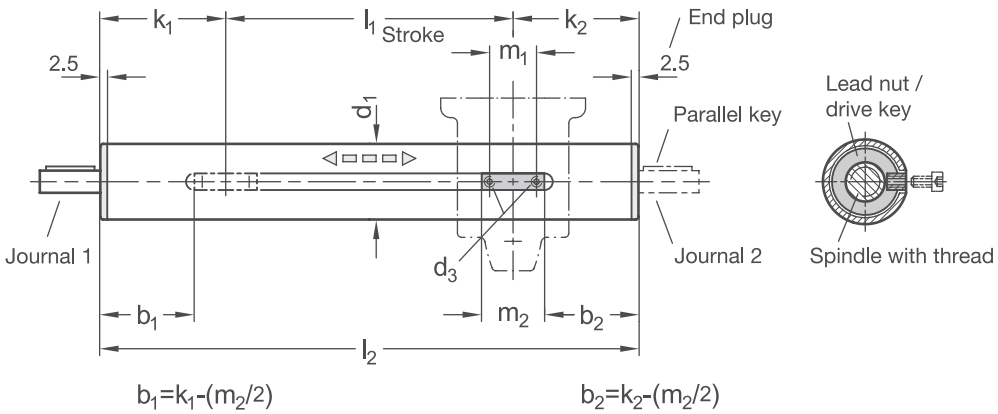
The guide tubes of the **linear units VE1R** are made of chrome-plated steel or bright stainless steel precision tubes. A continuous spindle with ball bearings on each side is installed in the guide tube. The spindle nut transmits the linear movements to a linear unit connector via a drive key along the guide groove.

The guide element bore forms a solid linear round guide 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. 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 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. l_1	Edge distance 1 min. k_1	Edge distance 2 min. k_2	d_3	Total length max. ($k_1 + l_1 + k_2$) l_2	m_1	m_2
18	350	40	40	M 3	490	17	24
30	1250	57	57	M 4	1455	23	38
40	1570	70	70	M 5	1805	42	54
50	1565	75	75	M 6	1805	42	54
60	1520	88	88	M 8	1805	58	70

Material
w

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

Spindle thread direction
r

RH	Right-hand thread
LH	Left-hand thread

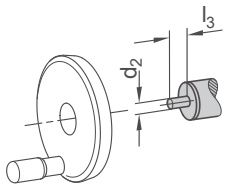
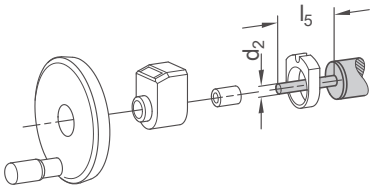
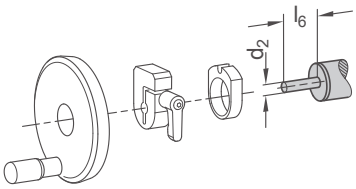
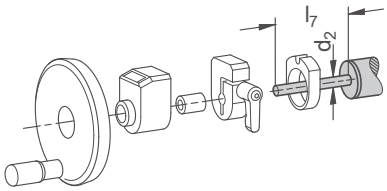
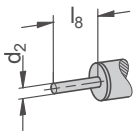
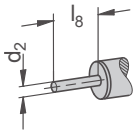
d_1	Spindle Ø	Spindle pitch **p**		Journal diameter d_2	Journal length B l_3	Journal length C l_4	Journal length D l_5	Journal length E l_6	Journal length F l_7	Individual journal length l_8
		Trapezoidal thread	Fine thread, metric							
18	10	3	1	6	16	28	44	-	-	16...65
30	14	4	1	8	16	36	52	31	67	16...67
40	20	4	1	12	17	42	59	32	74	17...74
50	20	4	1	12	18	42	60	33	75	18...75
60	24	5	1,5	14	19	42	61	34	76	19...76

Accessories:

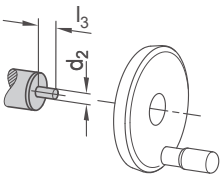
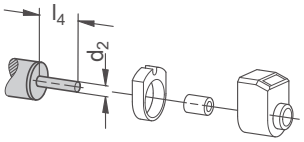
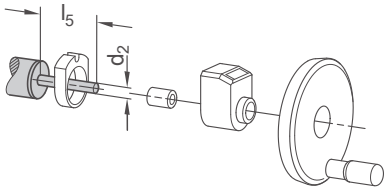
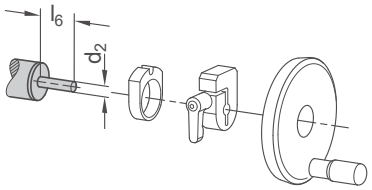
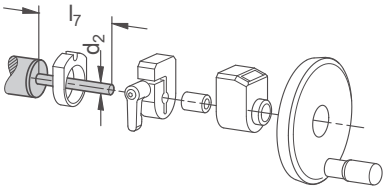
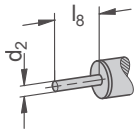
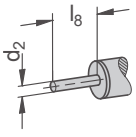
d_1	Torque support	Clamping plate	Position indicator		Handwheel
18	VZDR	-	VZPM	-	VZH
30	VZDR	VZK	VZPM *	VZPE	VZH
40	VZDR	VZK	VZPM	VZPE	VZH
50	VZDR	VZK	VZPM	VZPE	VZH
60	VZDR	VZK	VZPM (only trapezoidal thread)	VZPE	VZH

* only for stroke ≤ 1000 mm

Journal
z_1

B	Journal for handwheel	D	Journal for position indicator and handwheel	E	Journal for spacer plate and handwheel (only for $d_1 \geq 30$)
 Journal length l_3		 Journal length l_5		 Journal length l_6	
F	Journal for spacer plate, position indicator and handwheel (only for $d_1 \geq 30$)	Gxx	Individual length with keyway (for xx enter value from column l_8)	Hxx	Individual length without keyway (for xx enter value from column l_8)
 Journal length l_7		 Journal length l_8		 Journal length l_8	

Journal
z_2

A	Without journal	B	Journal for handwheel	C	Journal for position indicator
		 Journal length l_3		 Journal length l_4	
D	Journal for position indicator and handwheel	E	Journal for spacer plate and handwheel (only for $d_1 \geq 30$)	F	Journal for spacer plate, position indicator and handwheel (only for $d_1 \geq 30$)
 Journal length l_5		 Journal length l_6		 Journal length l_7	
Gxx	Individual length with keyway (for xx enter value from column l_8)	Hxx	Individual length without keyway (for xx enter value from column l_8)		
 Journal length l_8		 Journal length l_8			

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

VE1R - d_1 - w - l_1 - k_1 - k_2 - r - p - z_1 - z_2

- Single tube linear unit
- Outer diameter
- Material
- Stroke
- Edge distance 1
- Edge distance 2
- Spindle thread direction
- Spindle pitch
- Journal z_1
- Journal z_2

LINEAR UNIT CONNECTORS

The single tube linear unit VE1R 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.