

Clamping unit KPE

FESTO



Characteristics

At a glance

- Clamping cartridges/units are not suitable for positioning
- Can be held in position for long periods, even with changing loads, fluctuating operating pressure and system leaks
- The clamping force is released by applying pressure to the clamping cartridge
- Clamping cartridges/units use spring force to hold round material in any desired position
- Ready-to-install combination of clamping cartridge KP and housing
- Not suitable for positioning
- Not suitable for dynamic operation

Note:

- Additional measures are required for use in safety-related applications; in Europe, for example, the standards listed under the EC Machinery Directive must be observed. Without additional measures in accordance with legally specified minimum requirements, the product is not suitable as a safety-relevant component in control systems

Type code

001	Series	002	Piston rod diameter [mm]
KPE	Clamping unit	4	4
		6	6
		8	8
		10	10
		12	12
		16	16
		20	20
		25	25
		32	32

Datasheet

Requirements for the round material to be clamped

- Material:
 - Steel, hard chrome-plated
 - Steel, hardened
 - Steel, rolled:Tensile strength > 650 N/mm², hardness (HB30) > 175
- Diameter tolerance: h8
- Surface roughness:R_{max} = 4 µm
- The specified holding forces refer to a static load.If these values are exceeded, slippage may occur.

General technical data

Piston rod diameter [mm]	4	6	8	10	12	16	20	25	32
Design	Tilting wedge mechanism								
Type of clamping with direction of action	on both sides Clamping via spring force, released via compressed air								
Variants	Piston rod at one end								
Round material to be clamped	4 mm	6 mm	8 mm	10 mm	12 mm	16 mm	20 mm	25 mm	32 mm
Static holding force	80 N	180 N	350 N		600 N	1,000 N	2,000 N	5,000 N	7,500 N
Mounting position	optional								
Product weight	100 g	150 g	240 g	260 g	270 g	410 g	930 g	2,000 g	4,600 g

Operating and environmental conditions

Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]
Note on operating and pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)
Operating pressure	≤1 MPa
Operating pressure	≤10 bar
Ambient temperature	-10 ... 80°C
Release pressure	≥0.3 MPa
Release pressure	≥3 bar
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress

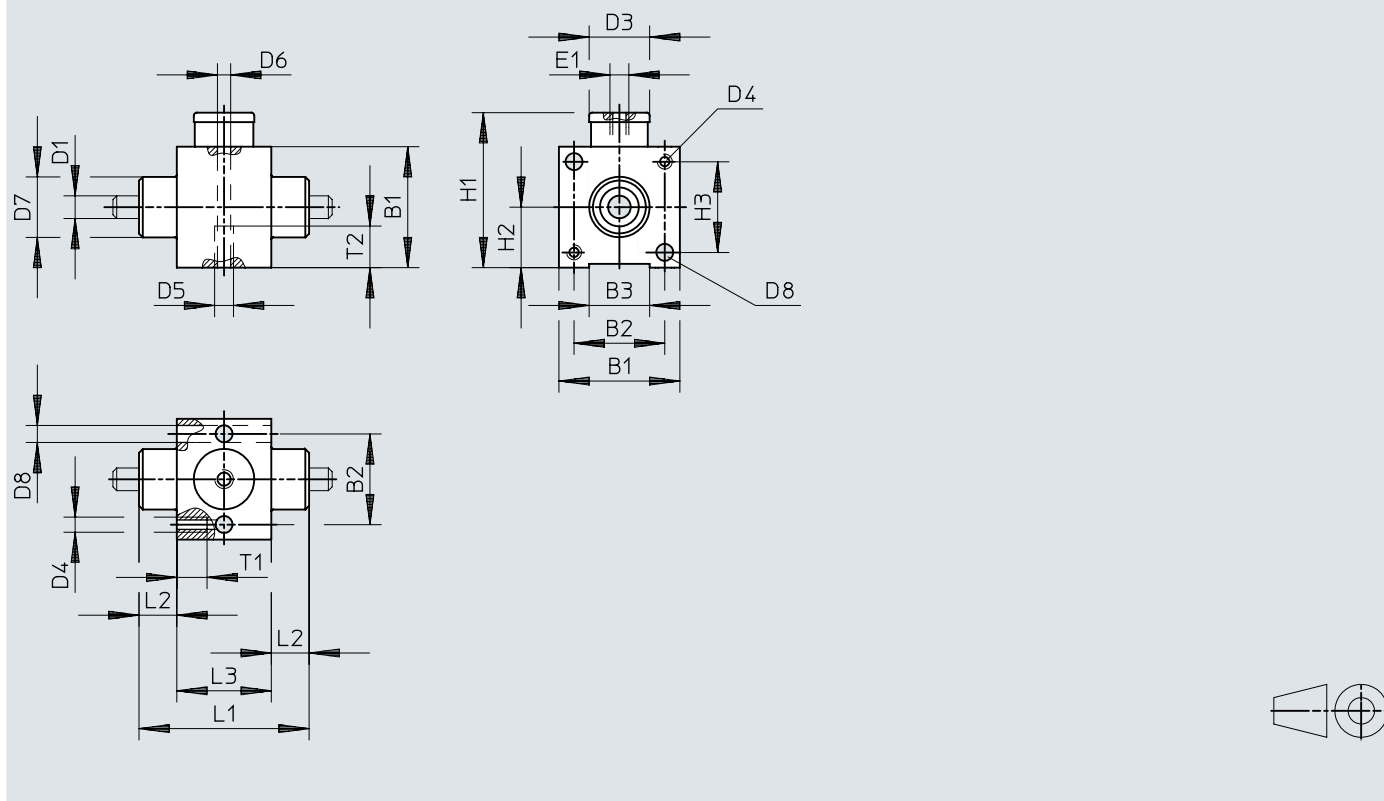
1) More information www.festo.com/x/topic/kbk

Materials

Material housing	Aluminium, Anodised
Material clamp jaws	Brass
Material piston	POM
Material spring	Spring steel
Material seals	NBR, TPE-U(PU)
RoHS status	RoHS compliant in accordance with EU directive
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Dimensions

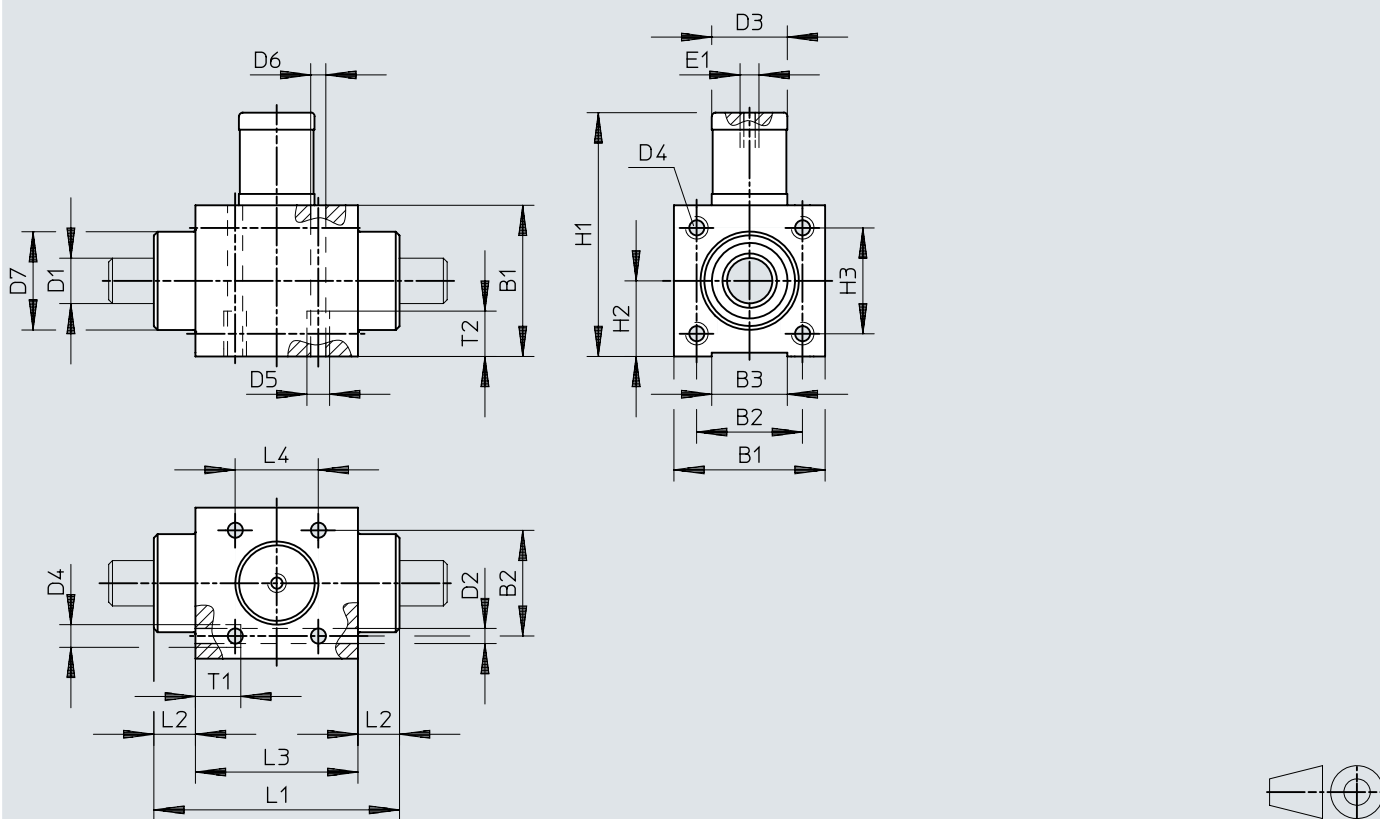
Dimensions – For round material Ø 4 ... 6 mm

Download CAD data www.festo.com

	B1	B2	B3	D1 Ø	D3 Ø	D5	D6 Ø	D7 Ø d11	D8 Ø
KPE-4	27	19,5	12	4	12	M5	4,2	12	4,5
KPE-6	32	24	16	6	16	M5	4,2	16	4,5

	E1	H1	H2	H3	L1	L2	L3	T1	T2
KPE-4	M5	34,5	13,5	19,5	33	7,5	18	9	11
KPE-6	M5	41	16	24	45	10	25	9	11

Dimensions

Dimensions – For round material $\varnothing 8 \dots 32$ mmDownload CAD data www.festo.com

	B1	B2	B3	D1 $\varnothing$	D2 $\varnothing$	D3 $\varnothing$	D4	D5	D6 $\varnothing$	D7 $\varnothing$ d11
KPE-8	36	27	20	8	4,2	20	M5	M5	4,2	22
KPE-10	36	27	20	10	4,2	20	M5	M5	4,2	22
KPE-12	40	28	20	12	5,2	20	M6	M6	5,2	28
KPE-16	45	32,5	25	16	5,2	24	M6	M6	5,2	32
KPE-20	65	50	38	20	6,5	38	M8	M8	6,5	45
KPE-25	88	65	50	25	8,5	48	M10	M10	8,5	55
KPE-32	118	90	70	32	10,3	65	M12	M12	10,3	60

	E1	H1	H2	H3	L1	L2	L3	L4	T1	T2
KPE-8	M5	62,5	18	27	58	10	38	20	10	11
KPE-10	M5	62,5	18	27	62	12	38	20	10	11
KPE-12	M5	64,5	20	28	65	11	43	22	12	12
KPE-16	G1/8	83,5	22,5	32,5	69	12,5	44	22	12	12
KPE-20	G1/8	118	32,5	50	83	12,5	58	30	16	16
KPE-25	G1/8	163	44	65	100	15	70	34	20	20
KPE-32	G1/8	199	59	90	154	25	104	60	24	24

Ordering data

Clamping unit KPE				
	Piston rod diameter [mm]	Static holding force	Part no.	Type
	4 mm	80 N	178462	KPE-4
	6 mm	180 N	178463	KPE-6
	8 mm	350 N	178464	KPE-8
	10 mm		178465	KPE-10
	12 mm	600 N	178466	KPE-12
	16 mm	1,000 N	178467	KPE-16
	20 mm	2,000 N	178468	KPE-20
	25 mm	5,000 N	178469	KPE-25
	32 mm	7,500 N	178470	KPE-32