

Clamping cartridges KP

FESTO



Characteristics

At a glance

- Clamping cartridges/units use spring force to hold round material in any desired position
- 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 are not suitable for positioning
- For in-house assembly of clamping units
- 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	
KP	Clamping cartridge	
002	Piston rod diameter [mm]	
4	4	
6	6	
8	8	
10	10	
12	12	
16	16	
20	20	
25	25	
32	32	

003	Static holding force [N]	
80	80	
180	180	
350	350	
600	600	
1000	1000	
1400	1400	
2000	2000	
5000	5000	
7500	7500	

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

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	1,400 N, 2,000 N	5,000 N	7,500 N
Mounting position	optional								
Product weight	10 g	15 g	50 g			90 g	170 g	700 g	1,600 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

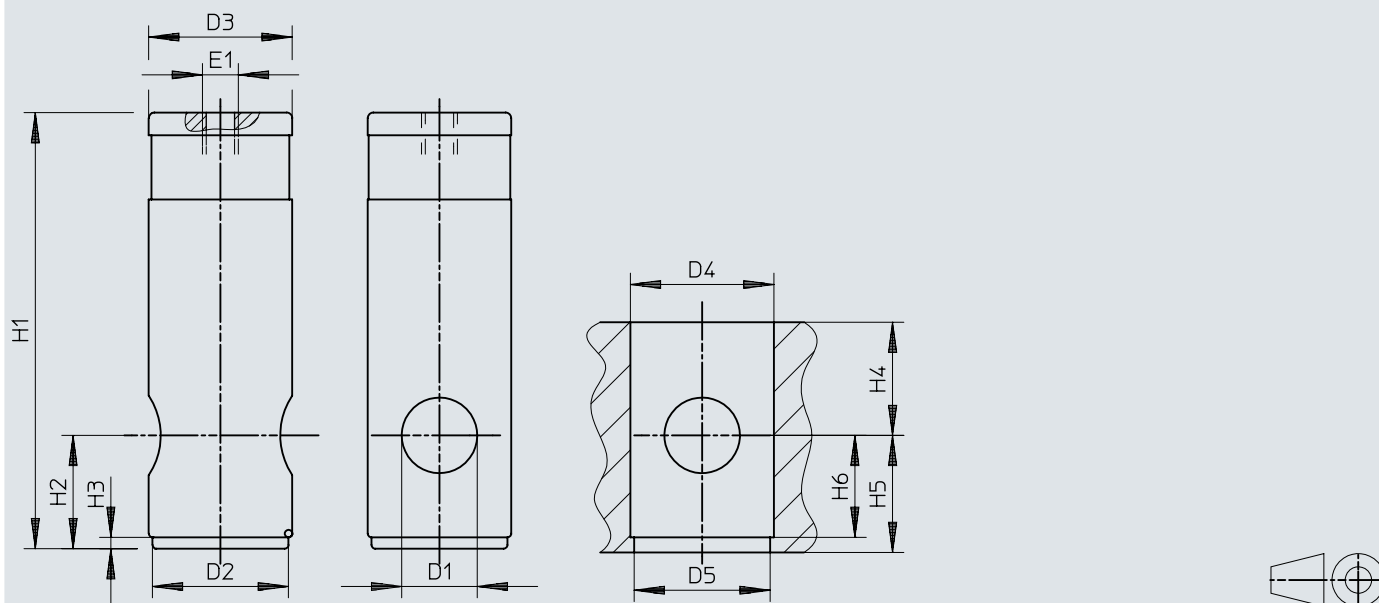
1) More information www.festo.com/x/topic/kbk

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 – Clamping cartridges KP

Download CAD data www.festo.com

[1] Note: When installing the clamping cartridge in a housing, ensure that plain bearings are used on both sides of the housing.

	D1 Ø	D2 Ø h12	D3 Ø f9	D4 Ø D9	D5 Ø	E1	H1	H2	H3	H4 min.	H5 min.	H6
KP-4-80	4	10	12	12	11	M5	28	7	2	9	7,5	6
KP-6-180	6	14	16	16	15	M5	35	10	3	10	11	8
KP-8-350	8	18	20	20	19	M5	62	17,5	3	18	18,5	15,5
KP-10-350	10	18	20	20	19	M5	62	17,5	3	18	18,5	15,5
KP-12-600	12	18	20	20	19	M5	62	17,5	3	18	18,5	15,5
KP-16-1000	16	22	24	24	23	G1/8	83	22	3	22	23	20
KP-20-1400	20	28	30	30	29	G1/8	100	25	3	25	26	23
KP-20-2000	20	36	38	38	37	G1/8	115,5	30	3	30	31	28
KP-25-5000	25	46	48	48	47	G1/8	155	36	3	36	37	34
KP-32-7500	32	63	65	65	64	G1/8	195	55	3	55	56	53

Ordering data

Clamping cartridge KP				
	Piston rod diameter [mm]	Static holding force [N]	Part no.	Type
	4 mm	80 N	178452	KP-4-80
	6 mm	180 N	178453	KP-6-180
	8 mm	350 N	178454	KP-8-350
	10 mm		178455	KP-10-350
	12 mm	600 N	178456	KP-12-600
	16 mm	1,000 N	178457	KP-16-1000
	20 mm	1,400 N	178458	KP-20-1400
		2,000 N	178459	KP-20-2000
	25 mm	5,000 N	178460	KP-25-5000
	32 mm	7,500 N	178461	KP-32-7500