K03
Piston Packing



K03 is a single-acting piston seal set consisting of a thermoplastic header ring, a fabric-reinforced elastomer intermediate ring, and a fabric-reinforced elastomer backup ring. The header ring provides preload, while the V-shaped intermediate ring ensures effective sealing through radial contact with the cylinder bore. The backup ring offers high extrusion resistance and supports the other components under dynamic load.

Advantages
- Good sealing effect
- High abrasion resistance
- Long service life
- Good performance in harsh conditions

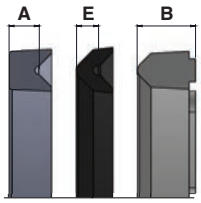
Application
- Mining industry
- Iron and steel industry
- Injection moulding machines
- Presses
- Heavy duty cylinders

Operating Conditions

MOTION:	Linear		
PRESSURE (bar):	400 bar (max)		
SPEED (m/s):	0.5 m/s (max)		
TEMPERATURE (°C):	-30/+100 °C	+5/+60 °C	-30/+60 °C
MEDIA TYPE:	Mineral Oils	HFA /HFB	HFC

NOTE: The above values (speed, pressure, temperature) are maximum values, all cannot be used at the same time.

Material Information

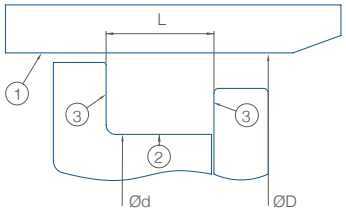


A=Height of Back Ring
E=Height of Middle Ring
B=Height of Header

Back Ring	Fabric Middle Ring	Header	Remarks
Fabric Elastomer-FB9001	Fabric Elastomer-FB8001	Thermoplastic-PM9903S	Standard produced material code
Fabric Elastomer-FB8005	Fabric Elastomer-FB8005	Thermoplastic-PA9901	For systems with higher temperatures (up to 150°C), product can be produced in FKM and fabric reinforced FKM. The front parts are produced in PA material.
Fabric Elastomer-FB7003	Fabric Elastomer-FB7003	PTFE-PT5501	For systems with higher temperatures (up to 200°C), product can be produced in FKM and fabric reinforced FKM. The front parts are produced in PTFE material.
Thermoplastic	Thermoplastic	Thermoplastic	Dimensions up to diameter of 1500 mm are available with machined polyurethane middle parts and machined hard thermoplastic header/back rings. The middle rings can be produced from materials such as polyurethane - UHMW-PE, while the header and back rings can be produced as hard thermoplastic POM or PA.
PTFE	PTFE	PTFE	It can be produced from various PTFE materials for special applications for heavy conditions such as chemical resistance and high temperature etc.

Note: In the special application conditions (temperature, media, etc.) Can be produced from different materials. Table 2.6 for details, you can refer to Table 2.7 and Table 2.8, or you can contact the sales department.

Surface Roughness

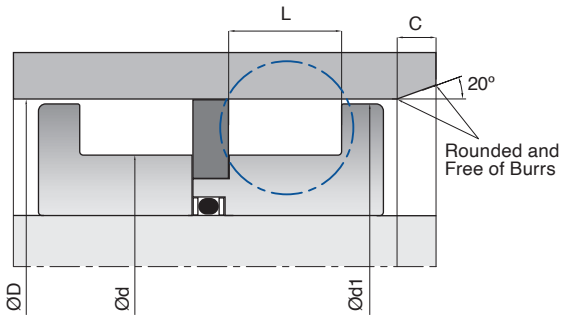


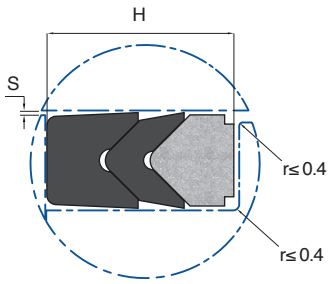
	1 (boru)	2 (groove base)	3 (groove flanks)
Ra	0.1-0.4 μm	0.2-1.6 μm	0.2-3.2 μm
Rmax	< 2.5 μm	< 6.3 μm	< 15 μm
Rmr	When C = 0.25xRz on the dynamic work surface and reference line C_{ref} = 5% , the working surface contact area should be approximately between 55% and 80%.		

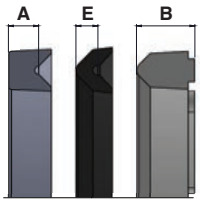
Installation Information

Shoud be mounted into the open grooves. The tube chamfers should be according to the catalogue values (See page 59). Recommended to make the installation using system oil or suitable greases (See Installation instructions * Page 51-57)

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A=Height of Back Ring
E=Height of Middle Ring
B=Height of Header

CALCULATION OF THE SEAL HEIGHT FOR PISTON PACKING
K03 (H) = A + E + B
NOTE: In cases where the groove height is different from the standard dimensions, this formula is used by adding a multiplier for E which defines the number of the middle ring.

The extrusion gap valye S given here depends on the value of the machined part from bronze or cast iron. The diameter of this part should be machined within the tolerance of ØD f7 and the maximum extrusion gap value cannot exceed 0.15 mm.

KASTAŞ NO	D (H9)	d (h11)	L (+0.2/-0)	E	H	d1	C	KASTAŞ CODE
K03-020	20	10	9.3	2.5	8.9	19.5	6	10000543
K03-022	22	12	9.3	2.5	8.9	21.5	6	10000545
K03-025	25	15	9.3	2.5	8.9	24.5	6	10000546
K03-028	28	18	9.3	2.5	8.9	27.5	6	10000548
K03-030	30	20	9.3	2.5	8.9	29.5	6	10000549
K03-032	32	20	10.9	2.75	10.4	31	6	10000550
K03-035	35	23	10.9	2.75	10.4	34	6	10000551
K03-036	36	24	10.9	2.75	10.4	35	6	10000553
K03-040	40	25	11.5	3	11	39	6	10000554
K03-042	42	27	11.5	3	11	41	6	10000556
K03-045	45	30	11.5	3	11	44	6	10000558
K03-050	50	35	11.5	3	11	49	6	10000560
K03-055	55	40	11.5	3	11	54	6	10000562
K03-056	56	41	11.5	3	11	55	6	10000564
K03-060	60	45	11.5	3	11	59	6	10000566
K03-063	63	48	13	3	12.5	62	6	10000568
K03-070	70	50	15.2	4	14.6	69	7	10000570
K03-080	80	60	15.2	5	14.6	79	7	10000572
K03-090	90	70	21.2	5	20.6	89	7	10000576
K03-100	100	80	21.2	5	20.6	99	7	10000578
K03-110	110	90	21.2	5	20.6	109	7	10000580
K03-115	115	95	21.2	5	20.6	114	7	10000582
K03-125	125	100	25.8	6	25	124	8	10000587
K03-140	140	115	25.8	6	25	139	8	10000593
K03-150	150	120	29	7.5	28	148.5	8	10000596
K03-160	160	130	29	7.5	28	158.5	8	10000599
K03-180	180	150	31.5	7.5	30.5	178.5	8	10000603
K03-200	200	170	33.5	7.5	32.5	198.5	8	10000605
K03-250	250	220	33.5	7.5	32.5	248.5	8	10000611
K03-275	275	245	33.5	9	32.5	273.5	8	10000621
K03-280	280	250	33.5	7.5	32.5	278.5	8	10000624
K03-300	300	270	33.5	7.5	32.5	298.5	8	10000632