



MINING INDUSTRY SEALING SOLUTIONS







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

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SEAL PROGRAMME




ROD SEALS

KASTAS CODE	PRODUCT NAME	DRAWING	APPLICATION	MATERIAL	CODE	PRESSURE (max) bar	TEMPERATURE (max) °C	SLIDING SPEED (max) - m/sec	PAGE
K31	Heavy Duty Rod Seal		Rod	NBR PU POM	NB7001 PU9401 PM9901	630	-30/+100	0.5	8
K32	Rod Seal		Rod	PU POM	PU9401 PM9901	400	-30/+100	0.5	12
K37	Rod Seal		Rod	NBR FABRIC NBR POM	NB8001 FB8001 PM9901	400	-30/+105	0.5	16
K29	Buffer Seal		Rod	PU POM	PU9201 PM9901	400	-30/+100	0.5	18



PISTON SEALS

KASTAS CODE	PRODUCT NAME	DRAWING	APPLICATION	MATERIAL	CODE	PRESSURE (max) bar	TEMPERATURE (max) °C	SLIDING SPEED (max) - m/sec	PAGE
K48	Piston Seal		Piston	NBR TPE POM	NB8001 TP5501 PM9901	700	-30/+105	0.3	20
K504	Compact Piston Seal		Piston	NBR FABRIC NBR POM	NB8001 FB8001 PM9901	500	-30/+105	0.5	22
K505	Compact Piston Seal		Piston	NBR FABRIC NBR POM	NB8001 FB8001 PM9901	500	-30/+105	0.5	24




WIPERS

KASTAS CODE	PRODUCT NAME	DRAWING	APPLICATION	MATERIAL	CODE	PRESSURE (max) bar	TEMPERATURE (max) °C	SLIDING SPEED (max) - m/sec	PAGE
K05	Wiper		Rod	PU	PU9401		-40/+120	1.0	26
K11	Wiper		Rod	TPE	TP5501		-40/+120	2.0	28
K94	Wiper		Rod	PU	PU9401		-40/+120	1.0	32

GUIDE RINGS

KASTAS CODE	PRODUCT NAME	DRAWING	APPLICATION	MATERIAL	CODE	PRESSURE (max) bar	TEMPERATURE (max) °C	SLIDING SPEED (max) - m/sec	PAGE
K73	Piston Rod Guide Ring		Rod Piston	POLYESTER RESIN	PR6501		-40/+120	1.0	34
K75	Piston Rod Guide Ring		Rod Piston	PHENOLIC RESIN	PH6501		-40/+120	1.0	38

STATIC SEALS

KASTAS CODE	PRODUCT NAME	DRAWING	APPLICATION	MATERIAL	CODE	PRESSURE (max) bar	TEMPERATURE (max) °C	SLIDING SPEED (max) - m/sec	PAGE
K83	Cover Seal			PU	PU9401	600	-30/+100		42
K84	Cover Seal			PU	PU9401	600	-30/+100		44
K86	Cover Seal			PU	PU9201	500	-45/+100		48

Sealing Solutions for Mining Industry

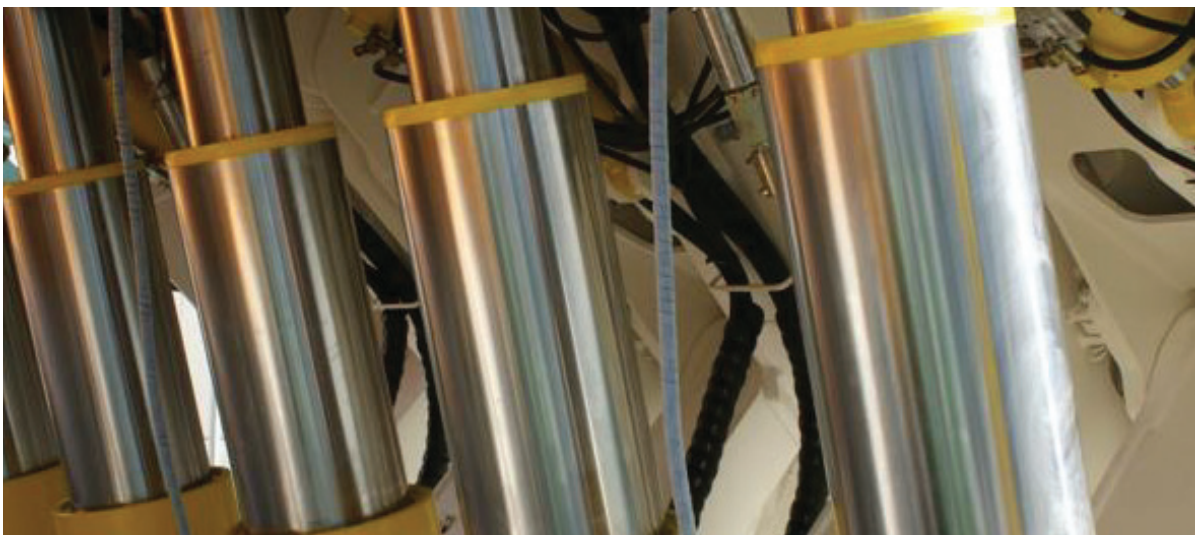


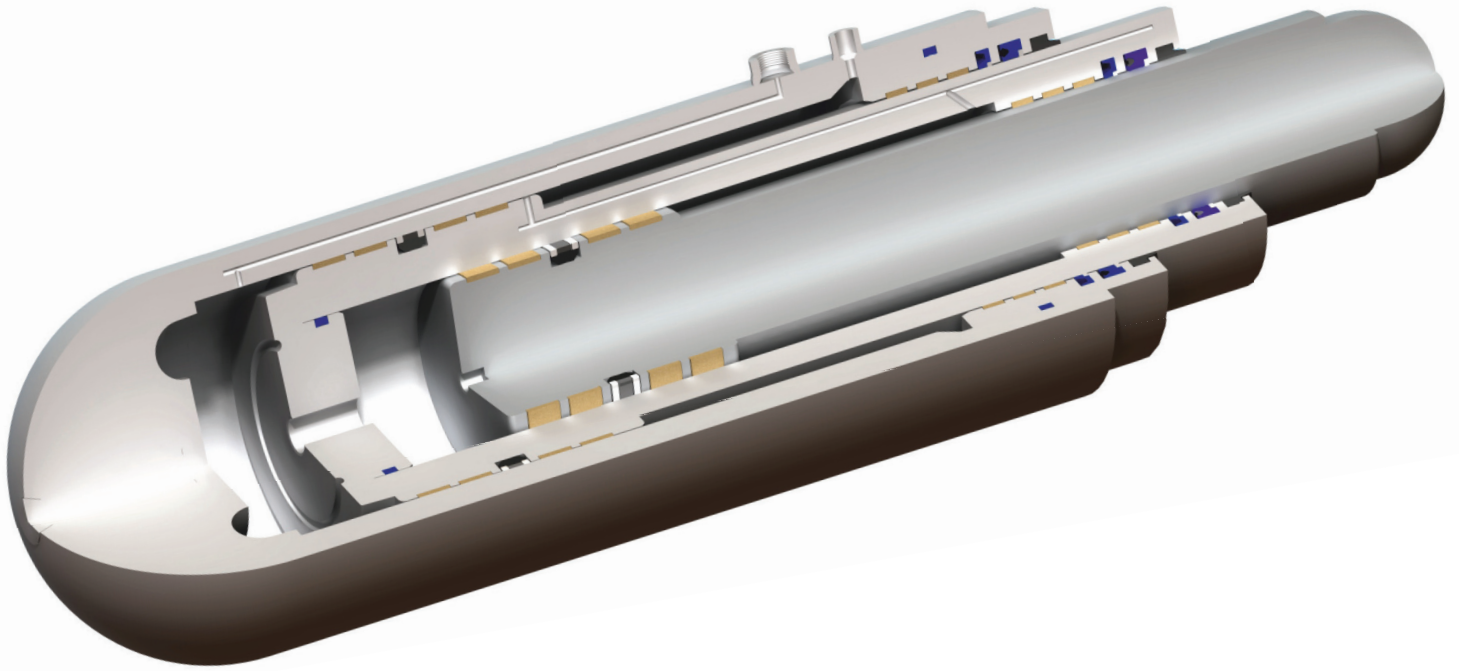
Mining Industry needs reliable and safe solutions which match the requirements of demanding applications and severe working conditions.

With over 30 years of experience in Hydraulic and Pneumatic Sealing, Kastas understand the very nature of Mining and requirements of mining applications.

Kastas offers a wide product program in order to supply the demand for return and transfer systems, heading and lowering systems, continuous mining machines and plunger pumps with Piston and Rod Seals, Wipers and Guides.

We also offer customer-specific solutions in order to satisfy all the requirements of demanding mining applications.





Test and Development

Each mining application has its own challenges which require careful selection of materials and sealing profiles. All development states needs carefully and methodically studied product properties in order to match the expectations of each application.

All seals are tested in our in-house test facilities by reproducing operating conditions and recording and monitoring, dynamic and breakout friction, pressure, speed an temperature with;

- Dynamic Test Rigs
- Finite Element Analysis
- High Pressure Test Rigs

Mining Industry Focus

Kastas offers rubber, rubber and fabric compounds and thermoplastic elastomers all developed for Mining Applications.

- Long wall Roof Support
- Tunneling Machines
- Roof Bolting Machines
- Excavators
- Scoop trams
- Shearers
- Drilling Machines
- Stamping and Pushers

Top Level Service

High reliability and optimal leakage / friction ratio

Extensive ex-stock capability for standard products

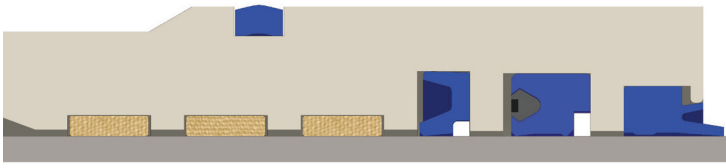
High production and services flexibility for customer-specific needs

Reliable quality and competitive prices

Industry's best lead times for customized and standard products

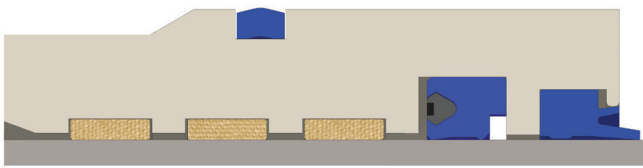
Custom-designed products with lifecycle management

Sealing Configurations for Mining Industry



Configuration K31-K29-K05-K75-K84

OPERATING CONDITIONS			
MEDIA	Mineral oil (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	- 30°C +100°C	+5°C +50°C	- 30°C +40°C
PRESSURE	≤400 Bar	≤400 Bar	≤400 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

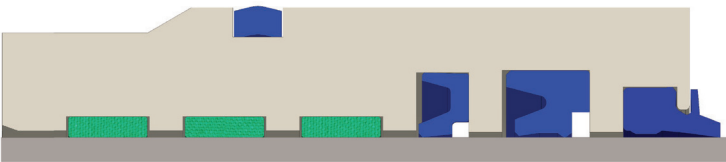


Configuration K31-K05-K75-K84

OPERATING CONDITIONS			
MEDIA	Mineral oil (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	- 30°C +100°C	+5°C +50°C	- 30°C +40°C
PRESSURE	≤400 Bar	≤400 Bar	≤400 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

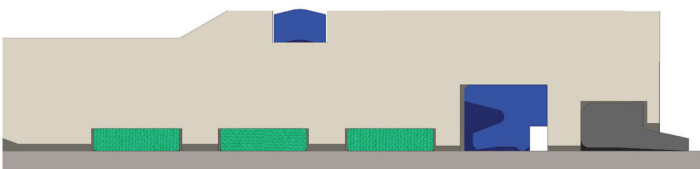
Rod sealing system designed for roof supports, pushers and ancillary cylinders and composed of K31 rod seal, optionally K29 buffer seal for pressure peaks and fluctuating pressures, K05 wiper and K75 phenolic guide rings.

This design ensures excellent guiding and high load bearing capacity, easy installation, high wear resistance, very good wiping with second lip of K05, good sealing performance even in unsuitable surface roughness, superior performance in shock and variable pressures.



Configuration K32-K29-K94-K73-K84

OPERATING CONDITIONS			
MEDIA	Mineral oil (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	- 30°C +100°C	+5°C +50°C	- 30°C +40°C
PRESSURE	≤400 Bar	≤400 Bar	≤400 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec



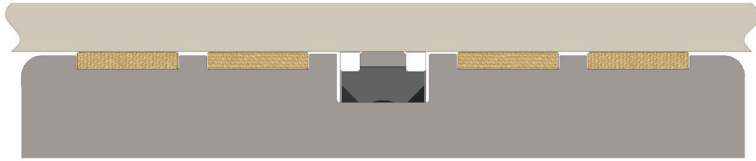
Configuration K32-K11-K73-K84

OPERATING CONDITIONS			
MEDIA	Mineral oil (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	- 30°C +100°C	+5°C +50°C	- 30°C +40°C
PRESSURE	≤400 Bar	≤400 Bar	≤400 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

Rod sealing system designed for roof supports, pushers and ancillary cylinders and composed of K32 rod seal, optionally K29 buffer seal for pressure peaks and fluctuating pressures, K11 wiper and K73 polyester guide rings.

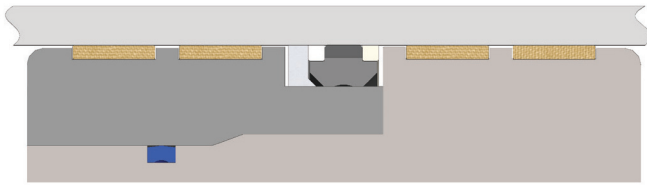
Designed to provide very good wiping performance, high sealing performance in variable pressures, excellent guiding performance, low leakage line.

Note: The above data are maximum values and cannot be used at the same time.



Configuration K48-K75-K84

OPERATING CONDITIONS		
MEDIA	Mineral oil (DIN 51524)	HFA and HFB
TEMPERATURE	- 30°C +105°C	+5°C +60°C
PRESSURE	≤700 Bar	≤700 Bar
SPEED	≤0.3 m/sec	≤0.3 m/sec

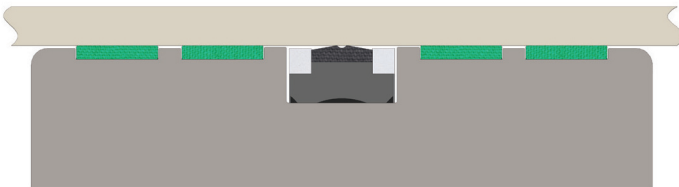


Configuration K48B-K75

OPERATING CONDITIONS		
MEDIA	Mineral oil (DIN 51524)	HFA and HFB
TEMPERATURE	- 30°C +100°C	+5°C +50°C
PRESSURE (Dynamic) (Static)	≤700 Bar ≤1500 Bar	≤700 Bar ≤1500 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec

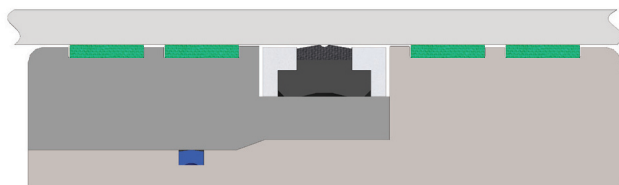
Piston sealing system designed for roof supports, pushers and ancillary cylinders and composed of K48 piston seal and K75 phenolic guide rings.

This design ensures high wear and extrusion resistance, excellent guiding and sealing performance, simple groove design and easy installation, hydrolysis resistance for improved service life, excellent performance in high pressures, very good compatibility with water based hydraulic fluids and stick-slip free operation.



Configuration K504-K73

OPERATING CONDITIONS			
MEDIA	Mineral oil (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	- 30°C +100°C	+5°C +50°C	- 30°C +40°C
PRESSURE	≤500 Bar	≤500 Bar	≤500 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec



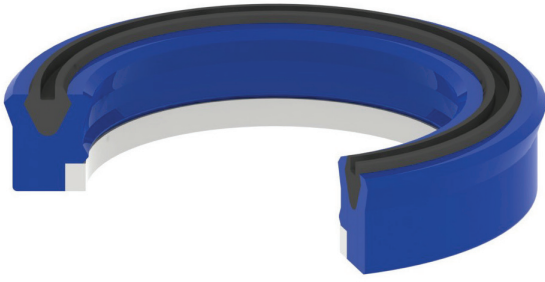
Configuration K505-K73-K84

OPERATING CONDITIONS			
MEDIA	Mineral oil (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	- 30°C +100°C	+5°C +50°C	- 30°C +40°C
PRESSURE (Dynamic) (Static)	≤500 Bar ≤1500 Bar	≤500 Bar ≤1500 Bar	≤500 Bar ≤1500 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

Piston sealing system designed for roof supports, pushers and ancillary cylinders and composed of K504 for piston seal which is designed for single-sided high pressure or K505 dual-sided high pressure and K73 polyester guide rings.

Design offers high load bearing capacity with excellent guiding and sealing performance, superior sealing in shock and variable pressures and allows larger sealing gap due to active back-up ring.

Note: The above data are maximum values and cannot be used at the same time.



K31 is a three piece single acting sealing set which consist of one elastomeric main sealing element with additional sealing lip, one special profile elastomer nitrile rubber that goes into the main sealing component and one thermoplastic back-up ring.

PRODUCT ADVANTAGES

- Able to work in high pressures
- Superior sealing effect in low pressures
- Easy assembly into closed grooves
- Superior sealing effect with the secondary lip
- Secondary sealing lip provides extra protection against the ingress of dirt particles.
- Highly wear resistant
- Improved sealing gap due to the active back-up ring

APPLICATION

Mining equipment, iron and steel industry, metal injection machines, scrap cutters, marine hydraulics, cranes and mobile hydraulics.

MATERIAL		CODE
NBR	70 SHORE A	NB7001
PU	94 SHORE A	PU9401
POM		PM9901

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +100°C	+5°C +50°C	-30°C +40°C
PRESSURE	≤630 Bar	≤630 Bar	≤630 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

Note: The above data are maximum values and cannot be used at the same time.

SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	Ød	≤0.4 µm	≤3.2 µm
Groove Base	ØD	≤1.6 µm	≤10 µm
Groove Flanks	B	≤3.2 µm	≤16 µm

Note: It is recommended to have 50% to 90% of the working surface material contact area value

INSTALLATION

Easily assembled into closed grooves according to the minimum diameter values that are given in the below table. Open grooves or special assembly tools should be used for the values that are outside this table. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the rod seal must be oiled with system oil.

MINIMUM DIAMETER VALUES FOR CLOSED TYPE OF GROOVES

(D-d)/2 (mm)	≤7.5	10	12.5	15
d min (mm)	50	80	100	105

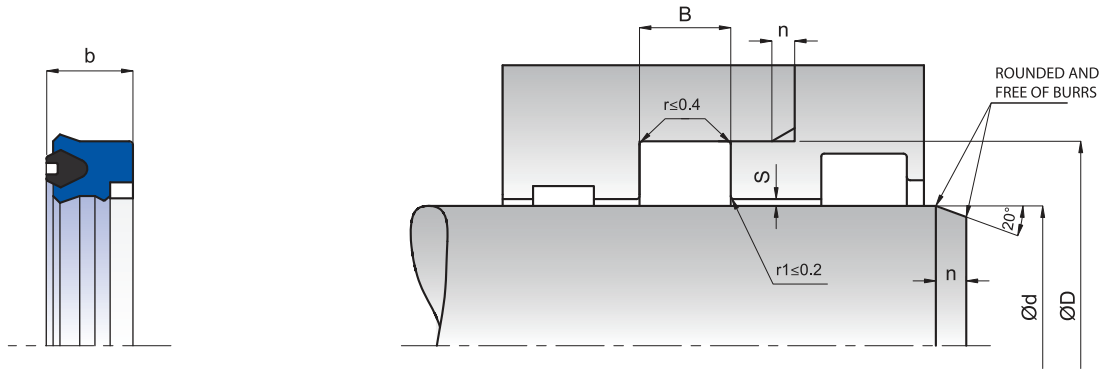
NOTES

K31 can be used in all type of cylinders safely due to the reason of perfect adaptation to the pressure changes.

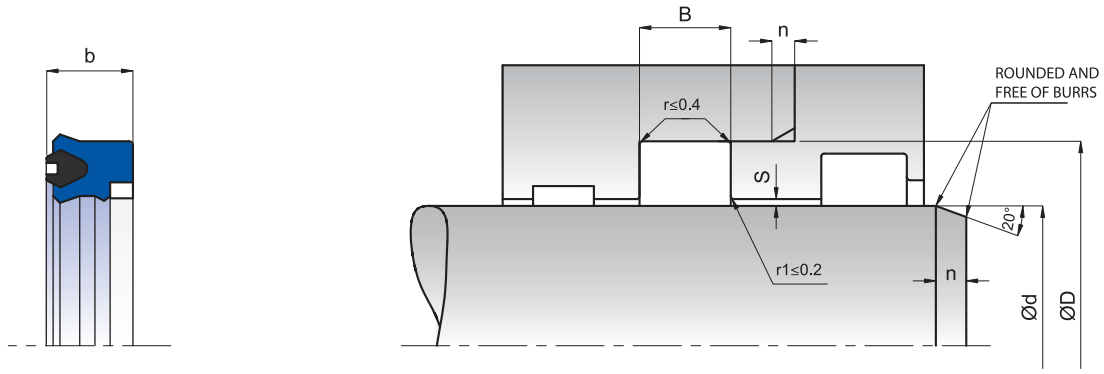
PERMISSIBLE SEALING GAP

Pressure (Bar)	Smax (mm)
150	1.0
250	0.8
400	0.6
630	0.4

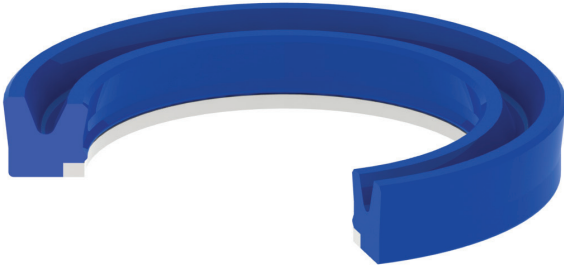
Note: The largest sealing gap value occurring on the non-pressurized side of the seal does have a vital importance for the function of the seal and in this respect it is quite important to use the S value lower than the above indicated numbers.



KASTAŞ NO	d (f8)	D(H11)	B(-0/+0.2)	b	n	
K31-025	25	35	8	7.3	4	■
K31-030	30	40	11	10	4	■
K31-030/1	30	40	8	7.3	4	■
K31-031	31.75	38.1	6.985	6.35	3	■
K31-031/1	31.75	41.28	6.985	6.35	4	■
K31-035	35	50	10.5	9.5	5	■
K31-038	38.1	47.63	6.985	6.35	4	■
K31-040	40	55	10.5	9.5	5	■
K31-040/1	40	50	8	7.3	4	■
K31-040/2	40	55	12.5	11.4	5	■
K31-40/3	40	52	9.5	8.6	4	□
K31-044	44.45	57.15	10.49	9.52	4.5	■
K31-045	45	60	12.5	11.4	5	■
K31-050	50	65	12.5	11.4	5	■
K31-050/3	50	60	8	7.3	4	■
K31-50/4	50	62	9.5	8.6	4	□
K31-050/1	50.8	60.32	10.49	9.52	4	■
K31-050/2	50.8	63.5	10.49	9.52	4.5	■
K31-055	55	70	12.5	11.4	5	■
K31-055/1	55	68	14.3	13	4.5	■
K31-057	57.15	69.85	10.49	9.52	4.5	■
K31-060	60	75	12.5	11.4	5	■
K31-060/1	60	73	14.3	13	4.5	■
K31-060/2	60	72	9.5	8.6	4	■
K31-60/3	60	69.8	12.6	11.5	4	□
K31-60/4	60	75	13	12	5	□
K31-063/1	63	75	9.6	8.7	4	■
K31-063	63.5	76.2	10.49	9.52	4.5	■
K31-065	65	78	11	10	4.5	■
K31-065/1	65	80	10	9	5	■
K31-069	69.85	82.55	10.49	9.52	4.5	■
K31-070	70	85	12.5	11.4	5	■
K31-070/1	70	83	11	10	4.5	■
K31-070/2	70	85	10	9	5	■
K31-070/3	70	80	13	12	4	■
K31-070/4	70	85	11	10	5	■
K31-070/5	70	82	9.5	8.6	4	■
K31-075	75	88	11	10	4.5	■
K31-075/1	75	90	10	9	5	■
K31-076	76.2	92.07	13.9	12.7	5.5	■
K31-076/2	76.2	88.9	10.49	9.52	4.5	■
K31-080	80	95	12.5	11.4	5	■
K31-080/1	80	93	11	10	4.5	■
K31-080/2	80	95	10	9	5	■
K31-80/3	80	95	16.5	15	5	□
K31-082	82.55	95.25	10.49	9.52	4.5	■
K31-085	85	100	11	10	5	■
K31-085/1	85	105	16.5	15	6.5	■
K31-085/2	85	97	9.5	8.6	4	■



KASTAŞ NO	d(f8)	D(H11)	B(-0/+0.2)	b	n	
K31-088	88.9	101.6	10.49	9.52	4.5	■
K31-088/1	88.9	104.77	13.9	12.7	5.5	■
K31-090	90	105	12.5	11.4	5	■
K31-090/1	90	105	11	10	5	■
K31-090/2	90	110	18.7	17	6.5	■
K31-090/3	90	110	16	14.5	6.5	■
K31-090/4	90	100	13	12	4	■
K31-090/5	90	105	16.5	15	5	■
K31-095	95	110	11	10	5	■
K31-095/1	95	115	16.5	15	6.5	■
K31-100	100	120	16	14.5	6.5	■
K31-100/1	100	115	11	10	5	■
K31-100/2	100	120	15.4	14	6.5	■
K31-100/3	100	115	12	11	5	□
K31-100/4	100	115	16.5	15	5	□
K31-101	101.6	114.3	15.7	14.28	4.5	■
K31-101/1	101.6	117.47	15.7	14.27	5.5	■
K31-105	105	120	13	12	5	■
K31-105/1	105	125	16	14.5	6.5	■
K31-105/2	105	120	16	14.5	5	■
K31-107	107.95	120.65	15	13.6	4.5	■
K31-110	110	130	13	12	6.5	■
K31-110/1	110	125	13	12	5	■
K31-110/2	110	130	16	14.5	6.5	■
K31-114	114.3	127	15.7	14.28	4.5	■
K31-114/1	114.3	133.35	17.457	15.87	6	■
K31-115	115	135	16	14.5	6.5	■
K31-115/1	115	130	16.5	15	5	■
K31-120	120	140	13	12	6.5	■
K31-120/1	120	135	16.5	15	5	□
K31-125	125	145	16	14.5	6.5	■
K31-127	127	146.05	17.457	15.87	6	■
K31-130	130	150	16	14.5	6.5	■
K31-139	139.7	152.4	15.7	14.28	4.5	■
K31-140	140	160	16	14.5	6.5	■
K31-140/1	140	155	16.5	15	5	□
K31-150	150	160	16	14.5	4	■
K31-150/1	150	170	16	14.5	6.5	■
K31-152	152.4	171.45	17.457	15.87	6	■
K31-160	160	175	16	14.5	5	□
K31-165	165	182	16	14.5	5.5	□
K3-170	170	185	16	14.5	5	□
K31-180	180	205	20	18.2	7	■
K31-180/1	180	195	16	14.5	5	□
K31-185	185	205	20.3	18.5	6.5	■
K31-190	190	205	16	14.5	5	□
K31-195	195	215	16	14.5	6.5	□
K31-200	200	220	16	14.5	6.5	□
K31-210	210	230	16	14.5	6.5	□



K32 is a two piece single acting rod seal which consists of one elastomeric sealing element specially designed with additional sealing lip and one thermoplastic back-up ring.

PRODUCT ADVANTAGES

- Superior sealing effect with the secondary lip
- High wear resistant
- Secondary sealing lip provides extra protection against the ingress of dirt particles.
- Improved sealing gap due to the active back-up ring
- Simple groove design

APPLICATION

Construction machinery, fork-lift trucks, injection moulding machines, agricultural machinery, mining equipment and standard cylinders.

MATERIAL		CODE
PU	94 SHORE A	PU9401
POM		PM9901

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +100°C	+5°C +50°C	-30°C +40°C
PRESSURE	≤400 Bar	≤400 Bar	≤400 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

Note: The above data are maximum values and cannot be used at the same time.

SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	Ød	≤0.4 µm	≤3 µm
Groove Base	ØD	≤1.6 µm	≤10 µm
Groove Flanks	B	≤3.2 µm	≤16 µm

Note: It is recommended to have 50% to 90% of the working surface material contact area value.

INSTALLATION

Easily assembled into closed grooves according to the minimum diameter values that are given in the below table. Open grooves or special assembly tools should be used for the values that are outside this table. Before installation the sealing element must be oiled with system oil.

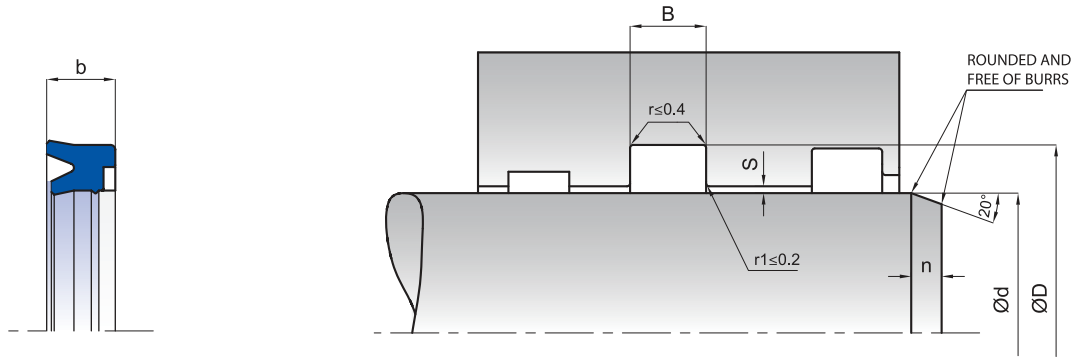
MINIMUM DIAMETER VALUES FOR CLOSED TYPE OF GROOVES							
(D-d)/2 (mm)	4	5	6	7.5	10	12.5	15
d min (mm)	25	30	40	50	80	100	105

NOTES

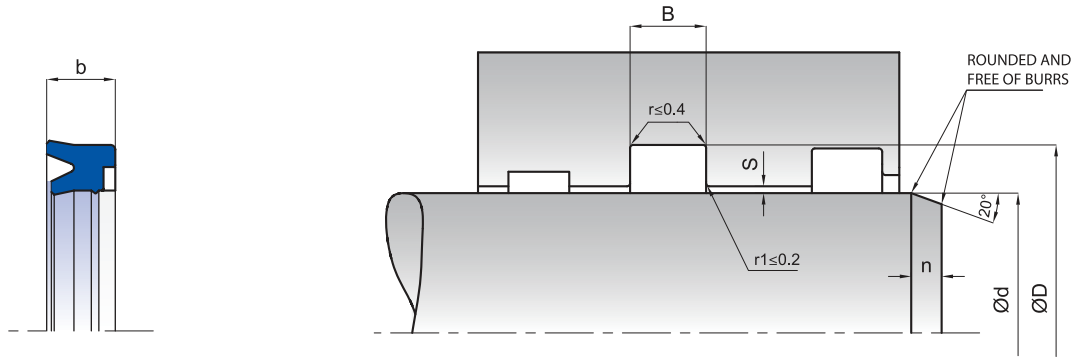
The permissible sealing gap values of K32 rod seal is given in the below table.

PERMISSIBLE SEALING GAP	
Pressure (Bar)	Smax (mm)
150	1.0
250	0.8
400	0.6

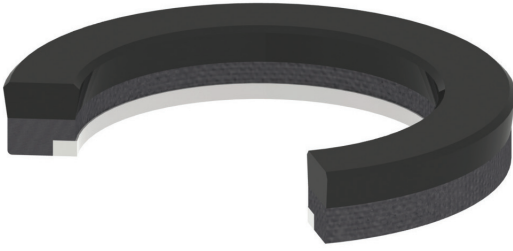
Note: The largest sealing gap value occurring on the non-pressurized side of the seal does have a vital importance for the function of the seal and in this respect it is quite important to use the S value lower than the above indicated numbers.



KASTAŞ NO	d(f8)	D(H11)	B(-0/+0.2)	b	n	
K32-030	30	40	9	8	4	■
K32-031	31.75	38.1	7.35	6.35	3	■
K32-032	32	45	10.5	9.5	6	■
K32-034	34.92	41.27	7.35	6.35	3	■
K32-035	35	45	9	8	4	■
K32-035/1	35	45	8	7	4	■
K32-036	36	46	9	8	4	■
K32-038	38.1	44.45	7.35	6.35	3	■
K32-040	40	50	11	10	4	■
K32-040/1	40	52	13.2	12	6	■
K32-040/2	40	52	12	10.9	6	■
K32-040/3	40	48	9	8	4	■
K32-044	44.45	53.97	10.52	9.52	4	■
K32-044/1	44.45	50.8	7.35	6.35	3	■
K32-045	45	55	11	10	4	■
K32-050	50	60	11	10	4	■
K32-050/1	50	62	9	8	6	■
K32-050/3	50	65	12.5	11.4	7	■
K32-050/2	50.8	57.15	7.35	6.35	3	■
K32-052	52	68	11	10	7	■
K32-055	55	65	11	10	4	■
K32-055/1	55	65	13.2	12	4	■
K32-056	56	71	11	10	7	■
K32-060	60	70	11	10	4	■
K32-60/1	60	72	12.5	11.4	6	□
K32-063	63	75	9	8	6	■
K32-063/1	63	78	11.9	10.8	7	■
K32-065	65	80	13.2	12	7	■
K32-070	70	80	11	10	4	■
K32-070/1	70	82	13.2	12	6	■
K32-70/2	70	85	12.5	11.4	7	□
K32-075	75	85	13.2	12	4	■
K32-080	80	90	13.2	12	4	■
K32-080/1	80	92	12.1	11	6	■
K32-80/2	80	95	16	14.6	7	□
K32-085	85	100	13.2	12	7	■
K32-85/1	85	100	12.5	11.4	7	□
K32-090	90	100	13.2	12	4	■
K32-90/1	90	110	16	14.6	8.5	□
K32-095	95	105	13.2	12	4	■
K32-95/1	95	110	12.5	11.4	7	□
K32-100	100	115	13.2	12	7	■
K32-100/1	100	120	13.2	12	8.5	■
K32-100/2	100	115	11.6	10.5	7	□
K32-100/3	100	115	16	14.6	7	□
K32-105	105	115	13.2	12	4	■
K32-110	110	125	16	14.6	7	■
K32-110/1	110	130	16.5	15	8.5	■
K32-110/2	110	130	16	14.6	8.5	□



KASTAŞ NO	d(f8)	D(H11)	B(-0/+0.2)	b	n	
K32-115	115	125	13.2	12	4	■
K32-120	120	140	16	14.6	8.5	■
K32-120/1	120	135	12.5	11.4	7	□
K32-125	125	145	13.2	12	8.5	■
K32-125/1	125	140	12.5	11.4	7	□
K32-130	130	140	13.2	12	4	■
K32-135	135	145	13.2	12	4	■
K32-135/1	135	155	16	14.6	8.5	□
K32-140	140	160	16	14.6	8.5	■
K32-145	145	162	16	14.6	8	□
K32-145/1	145	165	17.6	16	8.5	□
K32-149	149	165	20	18.2	7	□
K32-150	150	165	16	14.6	7	□
K32-150/1	150	168	21	19.1	8	□
K32-155	155	170	16	14.6	7	□
K32-155/1	155	175	16	14.6	8.5	□
K32-160	160	170	13.2	12	4	■
K32-160/1	160	175	16	14.6	7	□
K32-165	165	180	12.5	11.4	7	□
K32-165/1	165	182	12.5	11.4	8	□
K32-165/2	165	182	16	14.6	8	□
K32-170	170	185	16	14.6	7	□
K32-170/1	170	190	16	14.6	8.5	□
K32-180	180	195	12.5	11.4	7	□
K32-180/1	180	195	16	14.6	7	□
K32-180/2	180	200	16	14.6	8.5	□
K32-180/3	180	200	21	19.1	8.5	□
K32-185	185	200	22.7	20.6	7	□
K32-185/1	185	210	20	18.2	9.5	□
K32-185/2	185	214	20	18.2	11	□
K32-190	190	210	16.5	15	8.5	■
K32-190/1	190	210	16	14.6	8.5	□
K32-195	195	215	16.5	15	8.5	■
K32-195/1	195	210	16	14.6	7	□
K32-195/2	195	215	16	14.6	8.5	□
K32-205	205	220	16	14.6	7	□
K32-205/1	205	225	16	14.6	8.5	□
K32-210	210	235	20	18.2	9.5	■
K32-210/1	210	230	16	14.6	8.5	□
K32-220	220	235	16	14.6	7	□
K32-222	222	237	22.2	20.2	7	□
K32-225	225	250	20	18.2	9.5	□
K32-230	230	255	25	22.8	9.5	□
K32-235	235	255	16	14.6	8.5	□
K32-245	245	270	20	18.2	9.5	□
K32-260	260	280	16	14.6	8.5	■
K32-260/1	260	280	18.3	16.6	8.5	□
K32-265	265	294	22	20	11	□
K32-275	275	295	12.1	11	8.5	■



K37 is a two piece single acting rod seal which consists of a reinforced cotton fabric and nitrile rubber vulcanized together forming an integral sealing element and one thermoplastic back-up ring.

PRODUCT ADVANTAGES

- Functions well even with poor surfaces
- Reinforced cotton fabric base prevents the seal from extrusion
- Good sealing effect at low pressures
- Improved sealing gap due to the active back-up ring

APPLICATION

Mining equipment, after market, mobile hydraulics, presses and standard cylinders.

MATERIAL		CODE
NBR	80 SHORE A	NB8001
COTTON FABRIC NBR		FB8001
POM		PM9901

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +105°C	+5°C +60°C	-30°C +60°C
PRESSURE	≤400 Bar	≤400 Bar	≤400 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

Note: The above data are maximum values and cannot be used at the same time.

SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	Ød	≤0.4 µm	≤3.2 µm
Groove Base	ØD	≤1.8 µm	≤6.3 µm
Groove Flanks	B	≤3.2 µm	≤16 µm

Note: It is recommended to have 50% to 90% of the working surface material contact area value.

INSTALLATION

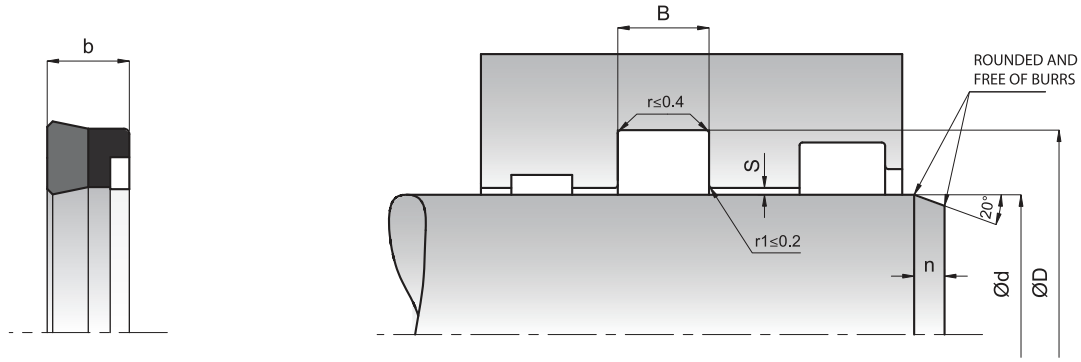
K37 is to be assembled into open grooves. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation all individual parts of the seal must be oiled with system oil.

NOTES

The permissible sealing gap values of K37 rod seal is given in the below table.

PERMISSIBLE SEALING GAP	
Pressure (Bar)	Smax (mm)
150	0.4
250	0.3
400	0.2

Note: The largest sealing gap value occurring on the non-pressurized side of the seal does have a vital importance for the function of the seal and in this respect it is quite important to use the S value lower than the above indicated numbers.



KASTAŞ NO	d(f8)	D(H9)	B(-/+0.2)	n	
K37-030/5	30	50	14.5	6	■
K37-035/1	35	50	10.5	5	■
K37-035/3	35	50	11.5	5	■
K37-040/8	40	60	14.5	6	■
K37-045/6	45	65	14.5	6	■
K37-050/9	50	70	14.5	6	■
K37-055/6	55	75	14.5	6	■
K37-056/2	56	76	14.5	6	■
K37-060/11	60	80	14.5	6	■
K37-060/12	60	75	22.5	5	□
K37-063/3	63	83	14.5	6	■
K37-070/3	70	90	14	6	■
K37-075/5	75	95	14.5	6	■
K37-080/7	80	100	14.5	6	■
K37-080/9	80	95	22.5	5	□
K37-085/3	85	105	14.5	6	■
K37-090/1	90	110	12.5	6	■
K37-095/2	95	115	14.5	6	■
K37-100/2	100	125	20	7	■
K37-100/3	100	120	24.5	6	■
K37-100/6	100	120	14.5	6	■
K37-105/2	105	120	16	5	□
K37-110	110	130	12.5	6	■
K37-110/2	110	135	15.5	7	■
K37-120/3	120	140	12.5	6	■
K37-120/4	120	145	18.8	7	■
K37-120/5	120	130	18.5	3	□
K37-125/1	125	150	14.5	7	■
K37-130/2	130	150	16	6	■
K37-133	133.5	155	20	6	□
K37-135/1	135	160	14	7	■
K37-140/2	140	160	14.5	6	■
K37-140/4	140	170	22.8	8.5	■
K37-150/1	150	170	14.5	6	■
K37-160/1	160	180	14.5	6	■
K37-175	175	200	23	7	■
K37-180	180	200	14.5	6	■
K37-180/1	180	210	20.5	8.5	■
K37-190	190	210	14.5	6	■
K37-200	200	220	14.5	6	■
K37-210	210	240	22.5	8.5	■
K37-220	220	250	20.5	8.5	■
K37-230	230	260	20.5	8.5	■



K29 is a two piece single acting buffer seal which consists of one special designed elastomeric sealing element to evacuate the back pressure and one thermoplastic back-up ring.

PRODUCT ADVANTAGES

- No pressure build up between the primary and secondary seal
- Highly wear resistant
- Low friction
- Low axial housing heights
- Good protection to the secondary seal with pressure peaks

APPLICATION

Construction machinery, fork-lift trucks, injection moulding machines, agricultural machinery, cranes, earth moving equipment and standard cylinders.

MATERIAL	CODE	
PU	92 SHORE A	PU9201
POM		PM9901

OPERATING CONDITIONS			
MEDIA	Mineral oil (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +100°C	+5°C +50°C	-30°C +40°C
PRESSURE	≤400 Bar	≤400 Bar	≤400 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

Note: The above data are maximum values and cannot be used at the same time.

SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	∅d	≤0.4 μm	≤3.2 μm
Groove Base	∅D	≤1.6 μm	≤6.3 μm
Groove Flanks	B	≤3.2 μm	≤16 μm

Note: It is recommended to have 50% to 90% of the working surface material contact area value.

INSTALLATION

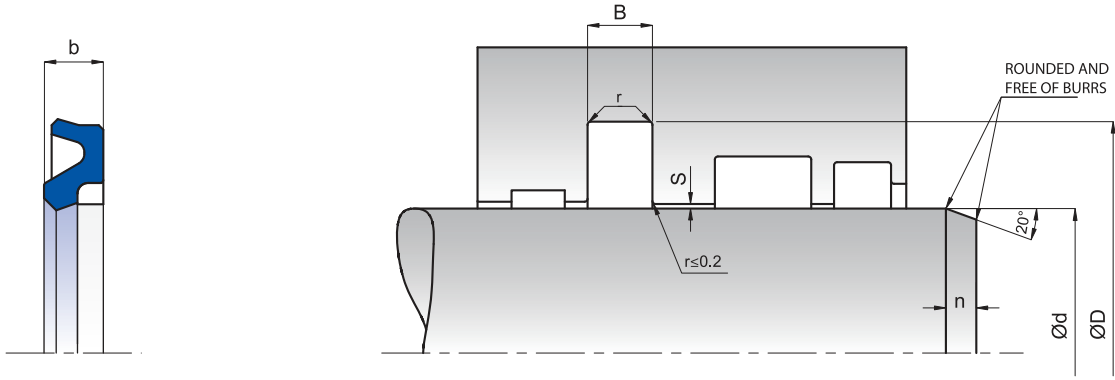
Easily assembled into closed grooves. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the sealing element must be oiled with system oil.

NOTES

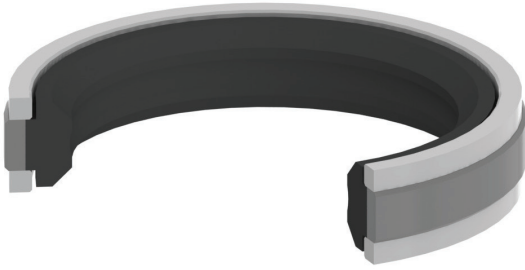
K29 buffer seal is always used in a sealing system in combination with u-ring (K22, K33, etc) as they are not designed as being the main sealing element. K29 reduces the pressure peaks on itself in order to save the main sealing element with pressure fluctuations. The permissible sealing gap values of K29 seal is given below.

PERMISSIBLE SEALING GAP			
B (mm)	S _{max} (mm)		
	150 bar	250 bar	400 bar
≤6.3	0.6	0.5	0.4

Note: The largest sealing gap value occurring on the non-pressurized side of the seal does have a vital importance for the function of the seal and in this respect it is quite important to use the S value lower than the above indicated numbers.



KASTAŞ NO	d(f8)	D(H11)	B(-0/+0.2)	r	n	
K29-036	36	46.7	4.2	0.2	5	■
K29-038	38	48.7	4.2	0.2	5	■
K29-040	40	55.5	6.3	0.2	6	■
K29-045	45	60.5	6.3	0.2	6	■
K29-050	50	65.5	6.3	0.2	6	■
K29-055	55	70.5	6.3	0.2	6	■
K29-056	56	71.1	6.3	0.2	6	■
K29-060	60	75.5	6.3	0.2	6	■
K29-065	65	80.5	6.3	0.2	6	■
K29-070	70	85.5	6.3	0.2	6	■
K29-075	75	90.5	6.3	0.2	6	■
K29-080	80	95.5	6.3	0.2	6	■
K29-085	85	100.5	6.3	0.2	6	■
K29-090	90	105.5	6.3	0.2	6	■
K29-095	95	110.5	6.3	0.2	6	■
K29-100	100	115.5	6.3	0.2	6	■
K29-105	105	120.5	6.3	0.2	6	■
K29-110	110	125.5	6.3	0.2	6	■
K29-115	115	130.5	6.3	0.2	6	■
K29-120	120	135.5	6.3	0.2	6	■
K29-125	125	140.5	6.3	0.2	6	■
K29-130	130	145.5	6.3	0.2	6	■
K29-140	140	155.5	6.3	0.2	6	■
K29-150	150	165.5	6.3	0.2	6	■



K48 is a four piece double acting heavy duty piston seal which consists of one TPE profile ring, one elastomeric nitrile rubber to pre load sealing element and two thermoplastic back-up rings.

PRODUCT ADVANTAGES

- Simple groove design
- Superior performance in high and variable pressure
- Long service life
- Very good sealing performance at shock pressures
- High resistance to abrasion
- Ultimate resistance in water based fluids.

APPLICATION

Mining industry
Heavy duty applications

MATERIAL		CODE
NBR	80 SHORE A	NB8001
TPE		TP5501
POM		PM9901

OPERATING CONDITIONS		
MEDIA	Mineral oils (DIN 51524)	HFA and HFB
TEMPERATURE	-30°C +105°C	+5°C +60°C
PRESSURE	≤700 Bar	≤700 Bar
SPEED	≤0.3 m/sec	≤0.3 m/sec

Note: The above data are maximum values and cannot be used at the same time.

SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	∅D	≤0.4 μm	≤4 μm
Groove Base	∅d	≤1.6 μm	≤10 μm
Groove Flanks	B	≤3.2 μm	≤16 μm

Note: It is recommended to have 50% to 90% of the working surface material contact area value.

INSTALLATION

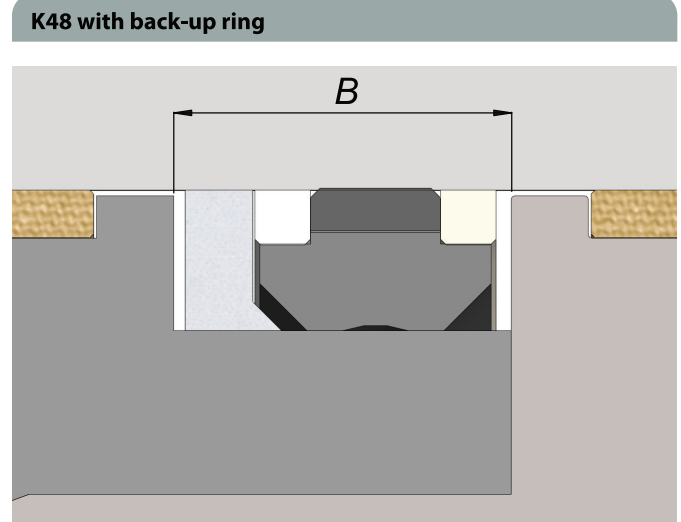
Easily assembled into one-piece piston because the back-up rings are been produced in split forms. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the sealing element must be oiled with system oil.

NOTES

It is recommended to choose suitable material and quantity for guiding element regarding the purpose of application.

PERMISSIBLE SEALING GAP	
Pressure(Bar)	Smax (mm)
P≤350	0.45
350P≤600	0.25

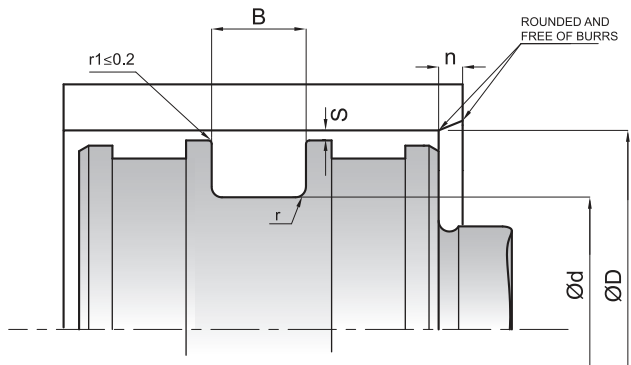
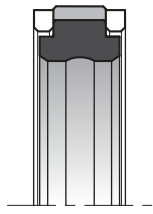
Note: The largest sealing gap value occurring on the non-pressurized side of the seal does have a vital importance for the function of the seal and in this respect it is quite important to use the S value lower than the above indicated numbers.



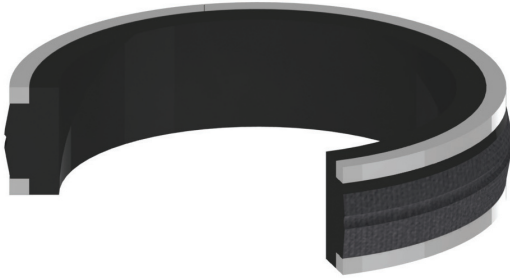
If a back up ring is used in unpressurized side, the seal could resist up to 1500 bar static pressure.

Note: Please add "a" to B dimension.

∅D	a
≤200	4 mm
>200	5 mm



KASTAŞ NO	D(H10)	d(h9)	B(-0/+0.2)	r	n	
K48-63-50	63	50	14.5	0.2	8	■
K48-80-66	80	66	17	0.2	8	■
K48-90-75	90	75	13.5	0.2	8	■
K48-100-82	100	82	22.5	0.4	10	■
K48-100-85	100	85	13.5	0.2	8	■
K48-110-95	110	95	16	0.2	8	■
K48-120-105	120	105	16	0.2	8	■
K48-125-110	125	110	15.8	0.2	8	■
K48-130-105	130	105	30	0.8	14	■
K48-140-123	140	123	16	0.4	10	■
K48-140-125	140	125	16	0.2	8	■
K48-150-133	150	133	20	0.4	10	□
K48-160-145	160	145	16	0.2	8	■
K48-160-143	160	143	20	0.4	10	□
K48-165-145	165	145	20	0.4	12	□
K48-180-160	180	160	16	0.2	12	□
K48-180-163	180	163	20	0.4	10	□
K48-186-166	186	166	16	0.2	12	■
K48-200-175	200	175	28	0.8	14	□
K48-200-180	200	180	20	0.4	12	■
K48-200-183	200	183	20	0.4	10	□
K48 230-205	230	205	25	0.8	14	□
K48 230-210	230	210	20	0.4	12	□
K48 250-225	250	225	25	0.8	14	□
K48 260-235	260	235	30	0.8	14	□
K48 270-245	270	245	24	0.8	14	□
K48 280-255	280	255	25	0.8	14	□
K48-300-275	300	275	33	0.8	14	□
K48 320-290	320	290	30	0.8	16	□
K48 345-315	345	315	30	0.8	16	□
K48 360-330	360	330	31.5	0.8	16	□
K48 360-330/1	360	330	30	0.8	16	□
K48 400-370	400	370	32	0.8	16	□
K48 420-390	420	390	32	0.8	16	□



K504 is a three piece double acting compact seal which consists of one fabric reinforced elastomeric sealing element and two thermoplastic guide back-up rings.

PRODUCT ADVANTAGES

- Low friction, free of stick-slip
- Improved abrasion resistance
- Good dynamic and static sealing
- Long service life
- Reliable solution in water and water based media

APPLICATION

Mining equipment, iron and steel industry, marine hydraulics and earth moving equipment.

MATERIAL		CODE
NBR	80 SHORE A	NB8001
COTTON FABRIC NBR		FB8001
POM		PM9901

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +105°C	+5°C +60°C	-30°C +60°C
PRESSURE	≤500 Bar	≤500 Bar	≤500 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

Note: The above data are maximum values and cannot be used at the same time.

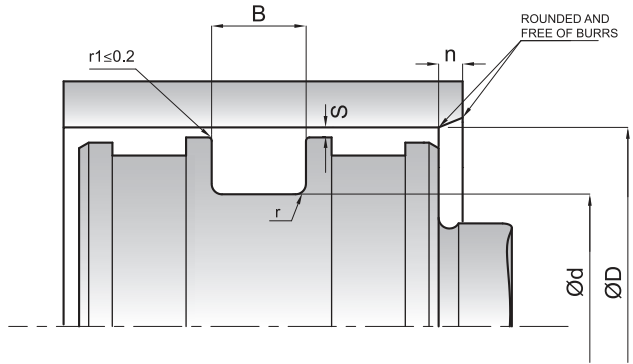
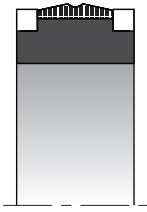
SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	ØD	≤0.4 µm	≤3.2 µm
Groove Base	Ød	≤1.6 µm	≤6.3 µm
Groove Flanks	B	≤3.2 µm	≤16 µm

Note: It is recommended to have 50% to 90% of the working surface material contact area value

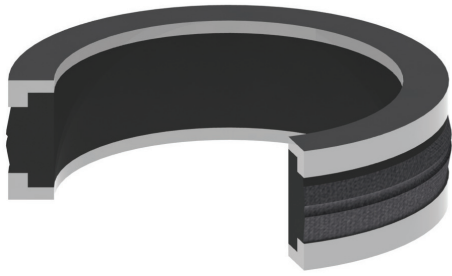
INSTALLATION

K504 profile has been designed to be installed in a closed or open grooves taking the indicated catalogue information into consideration. We recommend having open groove design for dimensions that are smaller than Ø 50 mm. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the sealing element must be oiled with system oil.

PERMISSIBLE SEALING GAP				
ØD	Smax (mm)			
	250 Bar	320 Bar	400 Bar	500 Bar
≤80 mm	0.60	0.55	0.45	0.35
>80 mm	0.65	0.60	0.50	0.40



KASTAŞ NO	D(H8)	d(h9)	B(+0/-0.2)	n	
K504 080-066	80	66	16.5	5	■
K504 110-095	110	95	15.5	5	■
K504-120-105	120	105	15.5	5	■
K504 125-110	125	110	15.7	5	■
K504 130-113	130	113	20.5	6	■
K504 140-125	140	125	15.9	5	■
K504 150-135	150	135	15.5	5	■
K504 170-150	170	150	15.5	6	■
K504 180-163	180	163	20	6	■
K504 185-165	185	165	15.5	6	■
K504 200-180	200	180	15.5	6	■
K504 225-205	225	205	24.5	6	■
K504-240-220	240	220	25	6	■
K504 250-230	250	230	25.5	6	■
K504 320-300	320	300	25.5	6	■



K505 is a three piece double acting compact seal which consists of one fabric reinforced elastomeric sealing element and two thermoplastic guide back-up rings.

PRODUCT ADVANTAGES

- Low friction, free of stick-slip
- Improved abrasion resistance
- Good dynamic and static sealing
- Long service life
- Reliable solution in water and water based media
- Designed to withstand up to 1500 bar static pressure

APPLICATION

Mining equipment, iron and steel industry, marine hydraulics and earth moving equipment.

MATERIAL		CODE
NBR	80 SHORE A	NB8001
COTTON FABRIC NBR		FB8001
POM		PM9901

OPERATING CONDITIONS

MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +105°C	+5°C +60°C	-30°C +60°C
Dynamic PRESSURE	≤500 Bar	≤500 Bar	≤500 Bar
Static PRESSURE	≤1500 Bar	≤1500 Bar	≤1500 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

Note: The above data are maximum values and cannot be used at the same time.

SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	∅D	≤0.4 μm	≤3.2 μm
Groove Base	∅d	≤1.6 μm	≤6.3 μm
Groove Flanks	B	≤3.2 μm	≤16 μm

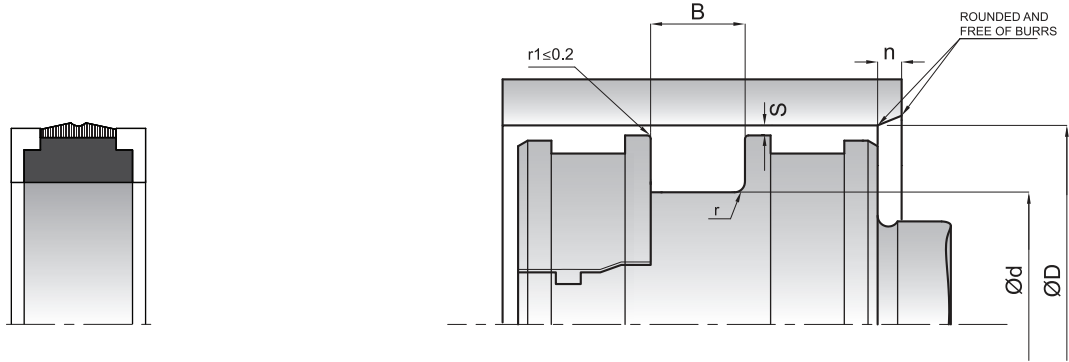
Note: It is recommended to have 50% to 90% of the working surface material contact area value

INSTALLATION

K505 profile has been designed to be installed in a closed or open grooves taking the indicated catalogue information into consideration. Open groove piston design should be used with K505 design. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the sealing element must be oiled with system oil.

PERMISSIBLE SEALING GAP

∅D	Smax (mm)			
	250 Bar	320 Bar	400 Bar	500 Bar
≤80 mm	0.60	0.55	0.45	0.35
>80 mm	0.65	0.60	0.50	0.40



KASTAŞ NO	D(H8)	d(h9)	B(+0/-0.2)	n	
K505 080-066	80	66	20.5	5	□
K505 110-095	110	95	20.5	5	□
K505-120-105	120	105	20.5	5	□
K505 125-110	125	110	20.5	5	□
K505 130-113	130	113	25.5	6	□
K505 140-125	140	125	20.5	5	□
K505 150-135	150	135	20.5	5	□
K505 170-150	170	150	20.5	6	□
K505 180-163	180	163	25.5	6	□
K505 185-165	185	165	20.5	6	□
K505 200-180	200	180	20.5	6	□
K505 225-205	225	205	30.5	6	□
K505-240-220	240	220	30.5	6	□
K505 250-230	250	230	30.5	6	□
K505 320-300	320	300	30.5	6	□



K05 is a single acting wiper ensuring that foreign particles do not penetrate into the hydraulic systems, avoiding wear and damage to all the internal components including seals.

PRODUCT ADVANTAGES

- Superior wiping performance
- Improved wiping effect of dirt, water spray, etc with the help of the secondary sealing lip on the outer diameter
- Simple, easy-construction groove
- Wide range of dimensions
- No twisting in the housing
- Used in heavy conditions by the good tear and rupture properties of PU material.
- Easy installation
- Specially design to prevent big particles to go into the system

APPLICATION

Used especially in earth moving equipment, agricultural machinery, telescopic cylinders, cranes, mining equipment and loading platforms.

MATERIAL		CODE
PU	94 SHORE A	PU9401

OPERATING CONDITIONS			
MEDIA	Mineral oils	HFA and	HFC
	(DIN 51524)	HFB	
TEMPERATURE	-30°C	+5°C	-30°C
	+100°C	+50°C	+40°C
SPEED	≤1.0 m/sec	≤1.0 m/sec	≤1.0 m/sec

Note: The above data are maximum values and cannot be used at the same time.

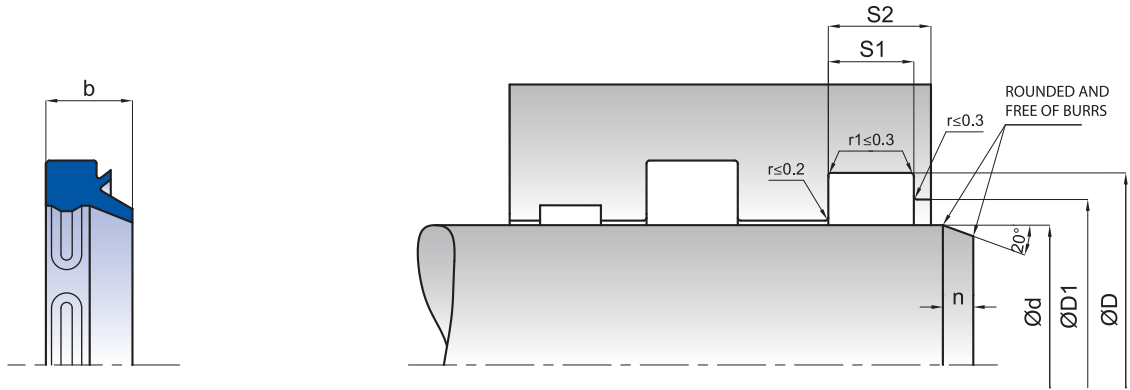
SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	Ød	≤0.4 µm	≤3.2 µm
Groove Base	ØD	≤1.6 µm	≤10 µm
Groove Flanks	S1	≤3.2 µm	≤16 µm

INSTALLATION

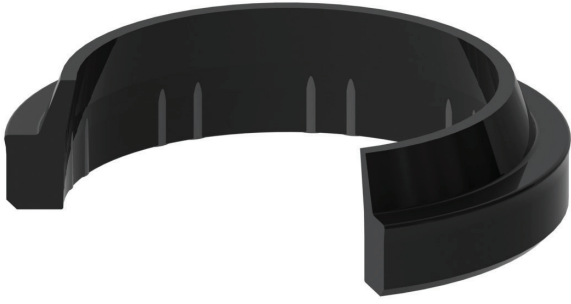
Generally, wiper can be easily fitted into the closed housing by deforming into a kidney shape. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the wiper must be oiled with system oil.

NOTES

K05 wipers are single acting and can be used with combination of all rod sealing elements.



KASTAŞ NO	d(f8)	D(H10)	D1(H11)	S1(-0/+0.2)	S2	b	
K05-030 PU	30	38	36	4	5	7	■
K05-032 PU	32	40	38	4	5	7	■
K05-035 PU	35	43	41	4	5	7	■
K05-036 PU	36	44	42	4	5	7	■
K05-040 PU	40	48	46	4	5	7	■
K05-040/1 PU	40	48	45.5	5	5	7	■
K05-045 PU	45	53	51	4	5	7	■
K05-050 PU	50	58	56	4	5	7	■
K05-050/1 PU	50	58	55.5	5	5	7	■
K05-055 PU	55	63	61	4	5	7	■
K05-060 PU	60	68	66	4	5	7	■
K05-063 PU	63	71	69	4	5	7	■
K05-065 PU	65	73	71	4	5	7	■
K05-065/1 PU	65	75	72	7	8	9.5	■
K05-070 PU	70	78	76	4	5	7	■
K05-070/1	70	80	78	4	4	7	■
K05-070/2 PU	70	80	77	6.3	6.3	8.3	■
K05-075 PU	75	83	81	4	5	7	■
K05-080 PU	80	88	86	4	5	7	■
K05-085 PU	85	93	91	4	5	7	■
K05-090 PU	90	98	96	4	5	7	■
K05-100 PU	100	108	106	4	5	7	■
K05-100/1 PU	100	115	110	9.5	9.5	13	■
K05-110 PU	110	122	119	5.5	7	10	■
K05-115 PU	115	127	124	5.5	7	10	■
K05-120 PU	120	132	129	5.5	7	10	■
K05-125 PU	125	140	135	9.5	12	13	■
K05-125/1 PU	125	137	134	5.5	7	10	■
K05-130 PU	130	142	139	5.5	7	10	■
K05-140 PU	140	152	149	5.5	7	10	■
K05-150 PU	150	162	159	5.5	7	10	■
K05-160 PU	160	172	169	5.5	7	10	■
K05-170 PU	170	182	179	5.5	7	10	■
K05-180 PU	180	192	189	5.5	7	10	■
K05-200 PU	200	212	209	5.5	7	10	■



K11 is a single acting scrapper ensuring that foreign particles do not penetrate into the hydraulic cylinders, avoiding wear and damage to all the internal components including seals.

PRODUCT ADVANTAGES

- Superior scraping effect
- Simple, easy-construction groove
- No twisting in the housing
- Design in a way that the wiping lip contacts with the rod surface to remove heavily deposited mud, ice, etc so that the particles do not enter into the cylinder
- Outside diameter contacts the housing and has a sealing lip to prevent moisture entering the groove.

APPLICATION

Especially used in heavy construction machinery that operate in the open field, telescopic cylinders, cranes, mining equipment and loading platforms.

MATERIAL	CODE
TPE	TP5501

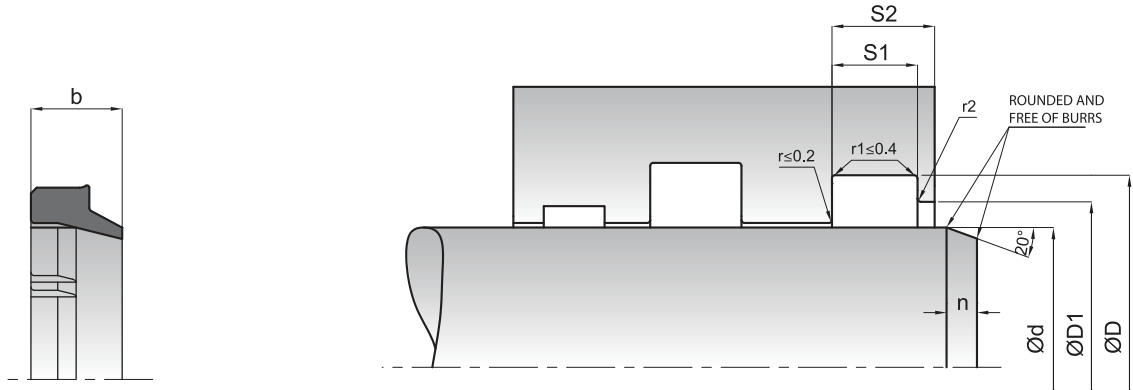
OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-40°C +120°C	+5°C +60°C	-30°C +60°C
SPEED	≤2.0 m/sec	≤2.0 m/sec	≤2.0 m/sec

Note: The above data are maximum values and cannot be used at the same time.

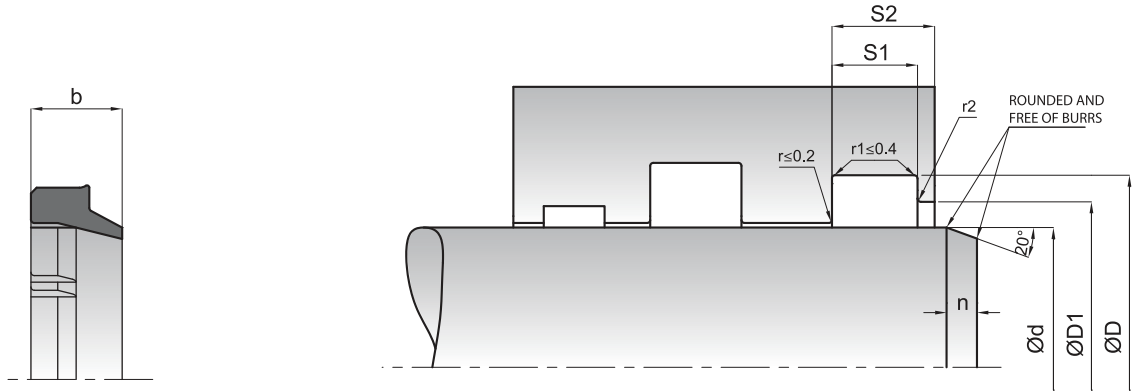
SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	Ød	≤0.4 µm	≤3.2 µm
Groove Base	ØD	≤1.6 µm	≤10 µm
Groove Flanks	S1	≤3.2 µm	≤16 µm

INSTALLATION

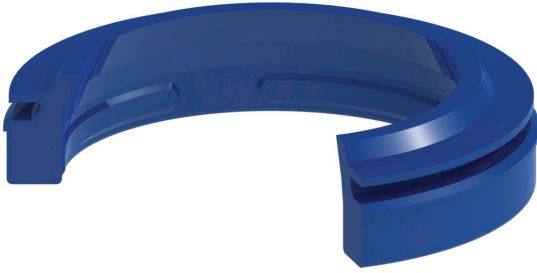
Open housing is recommended but closed grooves can be used for wipers bigger than 40 mm inner diameter. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the wiper must be oiled with system oil.



KASTAŞ NO	d(f8)	D(H11)	D1(H11)	S1(-0/+0.2)	S2	b	r2	
K11-030	30	38	35.5	5	8	8	0.2	■
K11-032	32	40	37.5	5	8	8	0.2	■
K11-035	35	43	40.5	5	8	8	0.2	■
K11-038	38.1	47.54	44.45	4.76	7.15	7.15	0.2	■
K11-040	40	48	45.5	5	8	8	0.2	■
K11-044	44.45	53.97	50.67	4.76	7.15	7.15	0.2	■
K11-045	45	55.6	48	5.3	7	7	0.2	■
K11-045/1	45	53	50.5	5	8	8	0.2	■
K11-048	48	60	55	5	10	10	0.2	■
K11-050	50	60.6	53	5.3	7	7	0.2	■
K11-050/1	50	58.6	53	5.3	7	9	0.2	■
K11-050/2	50	58	55.5	5	8	8	0.2	■
K11-055	55	65.6	58	5.3	7	7	0.4	■
K11-056	56	66	62	6	9	9	0.4	■
K11-060	60	70	66	6	9	9	0.4	■
K11-060/1	60	70.6	63	5.3	7	9	0.4	■
K11-060/3	60	70	66	5.3	7	7	0.4	■
K11-060/4	60	70	67	6.3	10	10	0.4	■
K11-063	63	73.6	66	5	7	7	0.4	■
K11-063/1	63.5	76.12	70.2	6.35	9.52	9.52	0.4	■
K11-063/2	63	73	70	6.3	10	10	0.4	■
K11-065	65	75	72	6.3	10	10	0.4	■
K11-070	70	80	76	6	9	9	0.4	■
K11-070/1	70	80.6	73	5.3	7	7	0.4	■
K11-070/3	70	82.2	76	7.2	12	12	0.3	■
K11-075	75	87.2	81	7.2	12	12	0.4	■
K11-080	80	90	86	6	9	9	0.4	■
K11-080/1	80	92.2	86	7.2	12	12	0.4	■
K11-080/2	80	90	86	6.3	10	10	0.4	■
K11-085	85	98	92	7.5	11.5	11.5	0.4	■
K11-090	90	100	96	6	9	9	0.6	■
K11-090/1	90	102.2	96	7.2	12	12	0.6	■
K11-095	95	107.2	101	7.2	12	12	0.6	■
K11-100	100	112.2	106	7.2	12	12	0.6	■
K11-100/1	100	115	110	9.5	14	14	0.6	■
K11-105	105	120	112	7.2	12	12	0.6	■
K11-110	110	125	120	9.5	14	14	0.6	■
K11-110/1	110	122.2	116	7.2	12	12	0.6	■
K11-114	114.3	133.35	123.45	9.52	14.27	14.27	0.6	■
K11-115	115	127.2	121	7.2	12	12	0.6	■
K11-120	120	132.2	126	7.2	12	12	0.6	■
K11-120/1	120	135	130	9.5	14	14	0.6	□
K11-125	125	140	135	9.5	14	14	0.6	■
K11-125/1	125	140	132.6	10.2	16	16	0.6	■
K11-130	130	142.2	136	7.2	12	12	0.6	□
K11-140/2	140	152.2	146	7.7	12	12	0.6	□
K11-140	140	155	150	9.5	14	14	0.6	■
K11-140/1	140	155	147.5	10.2	16	16	0.6	■
K11-145	145	153.6	148	5.3	7	7	0.4	■



KASTAŞ NO	d(f8)	D(H11)	D1(H11)	S1(-0/+0.2)	S2	b	r2	
K11-150	150	165	158.6	10.2	12	12	0.6	■
K11-150/1	150	166	161	8	12	12	0.6	■
K11-160/1	160	172.2	166	7.7	12	12	0.6	□
K11-160	160	175	167	10.2	16	16	0.6	■
K11-170	170	182.2	176	7.7	12	12	0.6	□
K11-180	180	200	190	10.2	18	18	0.6	■
K11-185/1	185	200	192.6	10.2	16	16	0.6	□
K11-185	185	205	195	10.2	18	18	0.8	□
K11-190	190	205	200	9.5	14.5	14	0.6	■
K11-195	195	210	202.5	10.2	16	16	0.6	■
K11-200	200	220	210	10.2	18	18	0.8	■
K11-210/1	210	225	220	9.5	14	14	0.6	□
K11-210	210	230	220	10.2	18	18	0.8	■
K11-215	215	237	225.4	10	18	18	0.8	■
K11-220/1	220	235	227.6	10.2	16	16	0.6	□
K11-220	220	240	233.5	12.5	18	18	0.8	■
K11-230	230	250	240	10	18	18	0.8	■
K11-235	235	255	245	10.2	18	18	0.8	□
K11-240	240	260	250	10.2	18	18	0.8	■
K11-245	245	265	258.5	12.5	18	18	0.8	■
K11-260/1	260	275	270	9.5	14	14	0.6	□
K11-260	260	280	270.5	10.2	18	18	0.8	■
K11-275	275	295	285	10.2	15	15	0.6	□
K11-280	280	300	290	10.2	15	15	0.6	■
K11-285	285	305	298.5	12.5	18	18	0.8	■
K11-290	290	310	300	10.2	18	18	0.8	■
K11-295	295	315	308.5	12.5	18	18	0.8	□
K11-320	320	340	330	10.2	18	18	0.8	■
K11-330	330	346	340.7	7.5	12	12	0.6	□
K11-340	340	360	350	10.2	18	18	0.8	□
K11-355	355	375	365	10.2	18	18	0.8	□
K11-380	380	400	393.5	12.5	18	18	0.8	□
K11-395	395	415	410	10.2	18	18	0.8	□
K11-400	400	420	410	10.2	18	18	0.8	■
K11-450	450	470	460	10.2	18	18	0.8	■
K11-455	455	475	465	10.2	18	18	0.8	□
K11-470	470	480	475	10.2	18	18	0.8	□



K94 is a single acting wiper ensuring that foreign particles are not introduced into the hydraulic system.

PRODUCT ADVANTAGES

- Very good wiping performance
- Simple, easy-construction groove
- No twisting in the housing
- Specially designed to prevent hydrodynamic pressure build-up
- Specially designed to provide excellent sealing against big particles, humidity and water
- Used in heavy conditions by the good mechanical properties of Polyurethane material

APPLICATION

Mining industry, heavy-duty , concrete pumps, mobile applications, telescopic cylinders.

MATERIAL		CODE
PU	94 SHORE A	PU9401

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-40°C +120°C	+5°C +50°C	-30°C +40°C
SPEED	≤1.0 m/sec	≤1.0 m/sec	≤1.0 m/sec

Note: The above data are maximum values and cannot be used at the same time.

SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	∅d	≤0.4 μm	≤3.2 μm
Groove Base	∅D	≤1.6 μm	≤10 μm
Groove Flanks	S1	≤3.2 μm	≤16 μm

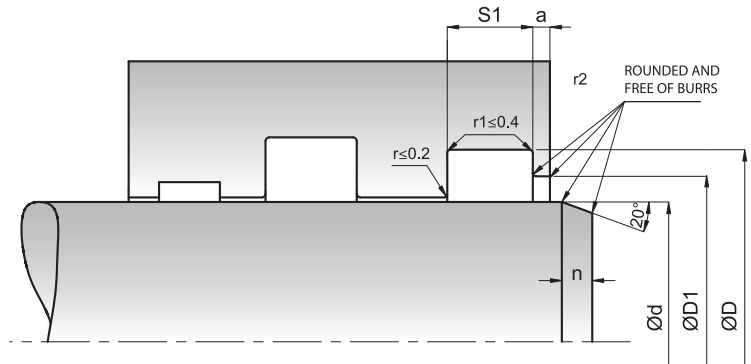
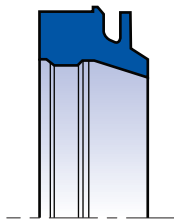
Note: It is recommended to have 50% to 90% of the working surface material contact area value.

INSTALLATION

Easily installed to closed type groove. We recommend using special assembly tool (See section; Hydraulic Sealing Elements General Installation Information). It is very important that the assembly tools must be of soft material and have no sharp edges.

NOTES

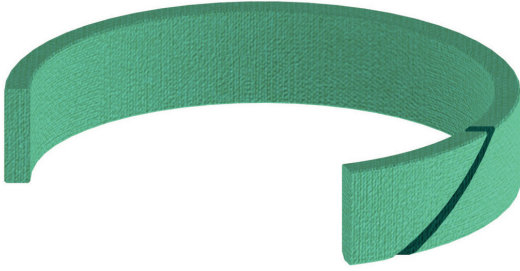
Groove has to be designed with suitable form according to K94.



KASTAŞ NO	d(f8)	D(H11)	D1(H11)	S1(-0/+0.2)Z	a	
K94-50	50	58	55	5	1.5	■
K94-60	60	70	67	6.3	1.5	■
K94-70	70	82,6	78,4	8	2	■
K94-80	80	90	87	6.7	1.8	■
K94-80/1	80	90	87	6.3	1.5	■
K94-90	90	102,2	96	7.1	2.8	■
K94-100	100	112,2	106	7.1	2.8	■
K94-110	110	125	120	9.5	2	■
K94-120	120	135	130	9.5	2	■
K94-125	125	140	135	9.5	2	■
K94-130	130	145	140	9.5	2.25	■
K94-140	140	155	150	9.5	2	■
K94-150	150	165	160	9.5	2	□
K94-155	155	170	165	9.5	2.25	□
K94-160	160	175	170	9.5	2	□
K94-170	170	185	180	9.5	2	□
K94-180	180	195	190	9.5	2.25	□
K94-190	190	205	200	9.5	2.25	□
K94-200	200	215	210	9.5	2.25	□

Empty table rows for additional specifications.

Please contact our customer service for the dimensions out of our stock list.



K73 is a piston - rod guide ring designed to be used in heavy duty hydraulic and pneumatic systems.

PRODUCT ADVANTAGES

- High load bearing capacity
- Minimum static and dynamic friction coefficient for a minimum energy loss and operating temperature
- Able to be used behind the sealing element on dry condition
- High dimension stability during the operating temperatures
- Easy assembly
- Wide range of dimensions

APPLICATION

Mobile hydraulics, excavators, mining equipment, marine hydraulics, presses and heavy duty cylinders.

MATERIAL	CODE
POLYESTER RESIN	PR6501

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-40°C +120°C	+5°C +60°C	-40°C +40°C
DYNAMIC CONTACT			
PRESSURE	≤100 N/mm ²	≤100 N/mm ²	≤100 N/mm ²
SPEED	≤1.0 m/sec	≤1.0 m/sec	≤1.0 m/sec

Note: The above data are maximum values and cannot be used at the same time. Surface contact pressure value is given for dynamic application and it is 330 N/mm² for static applications.

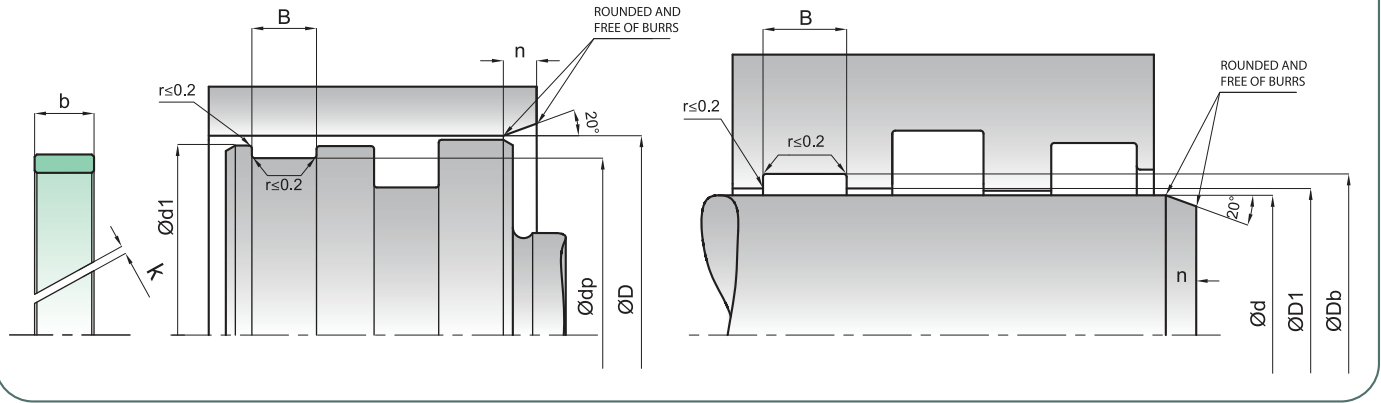
SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	ØD-Ød	≤0.4 µm	≤3.2 µm
Groove Base	ØDb-Ødp	≤1.6 µm	≤10 µm
Groove Flanks	B	≤3.2 µm	≤16 µm

INSTALLATION

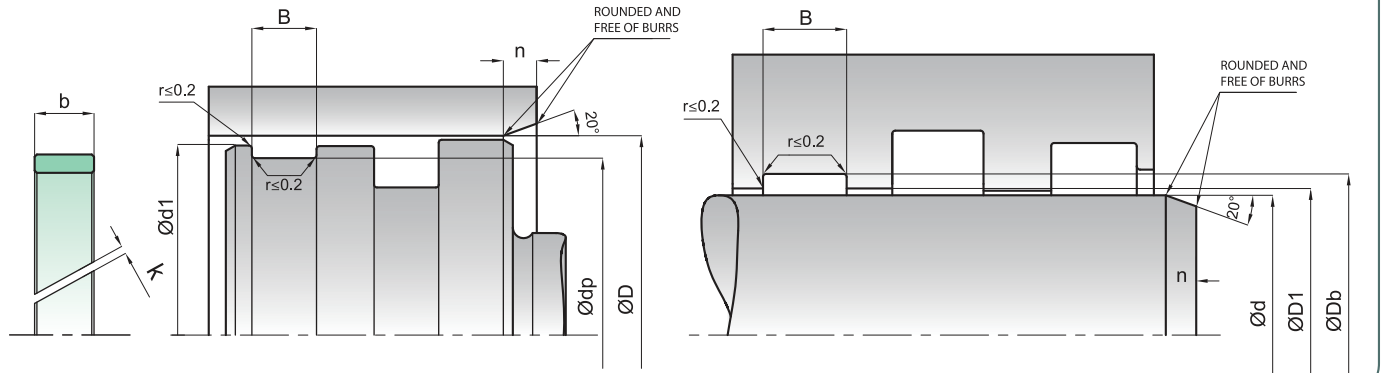
Easily assembled into the housing by hand. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation, the guide ring must be oiled with system oil.

NOTES

To avoid hydrodynamic pressure, k interval is given.



KASTAŞ NO	d(f8)/dp(h8)	Db(H8)/D(H9)	B(-0/+0.2)	b	d1 (h9)	D1 (H9)	k	
K73-030	30	35	9.7	9.5	33.2	31.8	1,5	■
K73-035	35	40	15	14.8	38.2	36.8	1,5	■
K73-035/1	35	40	9.7	9.5	38.2	36.8	1,5	■
K73-036	36	40	10	9.8	39	37	1,5	■
K73-036/1	36	39	5.6	5.4	38	37	1,5	■
K73-040	40	45	8.1	7.9	43.2	41.8	1,5	■
K73-040/1	40	45	9.7	9.5	43.2	41.8	1,5	■
K73-040/2	40	45	15	14.8	43.2	41.8	1,5	■
K73-040/3	40	43	5.6	5.4	42	41	1,5	■
K73-040/4	40	46	24.8	24.3	43.6	42.4	1,5	■
K73-045	45	50	9.7	9.5	48.2	46.8	2	■
K73-045/1	45	50	15	14.8	48.2	46.8	2	■
K73-045/2	45	50	5.6	5.4	48.2	46.8	2	■
K73-050	50	55	9.7	9.5	53.2	51.8	2	■
K73-050/1	50	55	15	14.8	53.2	51.8	2	■
K73-050/2	50	54	10	9.8	53	51	2	■
K73-050/3	50	55	5.6	5.4	53.2	51.8	2	■
K73-055	55	60	15	14.8	58.2	56.8	2,5	■
K73-055/1	55	60	9.7	9.5	58.2	56.8	2,5	■
K73-056	56	62	8	7.8	59.6	58.4	2,5	■
K73-056/1	56	62	12.5	12.3	59.6	58.4	2,5	■
K73-058	58	63	9.7	9.5	61.2	59.8	2,5	■
K73-058/1	58	63	5.6	5.4	61.2	59.8	2,5	■
K73-060	60	65	15	14.8	63.2	61.8	2,5	■
K73-060/1	60	65	9.7	9.5	63.2	61.8	2,5	■
K73-060/2	60	65	20	19.8	63.2	61.8	2,5	■
K73-060/3	60	65	25	24.5	63.2	61.8	2,5	■
K73-060/4	60	65	36	35.5	63.2	61.8	2,5	■
K73-063,5	63.5	66.42	6.2	6	65.42	63	3,5	■
K73-063,5/1	63.5	66.54	6.2	6	65.54	64.5	3,5	■
K73-065	65	70	15	14.8	68.2	66.8	3,5	■
K73-065/1	65	70	9.7	9.5	68.2	66.8	3,5	■
K73-065/2	65	70	5.6	5.4	68.2	66.8	3,5	■
K73-066	66	70	10	9.8	69	67	3,5	■
K73-070	70	75	9.7	9.5	73.2	71.8	3,5	■
K73-070/1	70	75	15	14.8	73.2	71.8	3,5	■
K73-074	74	80	6.5	6.3	77.6	76.4	3,5	■
K73-075	75	80	9.7	9.5	78.2	76.8	3,5	■
K73-075/1	75	80	15	14.8	78.2	76.8	3,5	■
K73-075/2	75	80	5.6	5.4	78.2	76.8	3,5	■
K73-080	80	85	9.7	9.5	83.2	81.8	3,5	■
K73-080/1	80	85	15	14.8	83.2	81.8	3,5	■
K73-080/2	80	85	18	17.8	83.2	81.8	3,5	■
K73-080/3	80	85	25	24.5	83.2	81.8	3,5	■
K73-084	84	90	6.5	6,3	87.6	86.4	3,5	■
K73-085	85	90	9.7	9.5	88.2	86.8	3,5	■
K73-085/1	85	90	15	14.8	88.2	86.8	3,5	■
K73-085/2	85	90	5.6	5.4	88.2	86.8	3,5	■
K73-086	86	90	30	29.5	89	87	3,5	■



KASTAŞ NO	d(f8)/dp(h8)	Db(H8)/D(H9)	B(-0/+0.2)	b	d1 (h9)	D1 (H9)	k	
K73-090	90	95	15	14.8	93.2	91.8	3.5	■
K73-090/1	90	95	9.7	9.5	93.2	91.8	3.5	■
K73-090/2	90	94	32	31.5	93	91	3.5	■
K73-094	94	100	6.5	6.3	97.6	96.4	3.5	■
K73-095	95	100	9.7	9.5	98.2	96.8	3.5	■
K73-095/1	95	100	15	14.8	98.2	96.8	3.5	■
K73-095/2	95	100	5.6	5.4	98.2	96.8	3.5	■
K73-097	97	105	25	24.5	102	100	3.5	■
K73-100	100	105	15	14.8	103.2	101.8	3.5	■
K73-100/1	100	105	9.7	9.5	103.2	101.8	3.5	■
K73-105	105	110	9.7	9.5	108.2	106.8	4.5	■
K73-105/1	105	110	15	14.8	108.2	106.8	4.5	■
K73-105/2	105	110	5.6	5.4	108.2	106.8	4.5	■
K73-109	109	115	6.5	6.3	112.6	111.4	4.5	■
K73-110	110	115	9.7	9.5	113.2	111.8	4.5	■
K73-110/1	110	115	15	14.8	113.2	111.8	4.5	■
K73-113	113	118	15	14.8	116.2	114.8	4.5	■
K73-115	115	120	9.7	9.5	118.2	116.8	4.5	■
K73-115/1	115	120	15	14.8	118.2	116.8	4.5	■
K73-120	120	125	9.7	9.5	123.2	121.8	4.5	■
K73-120/1	120	125	15	14.8	123.2	121.8	4.5	■
K73-122	122	130	15	14.8	127	125	4.5	■
K73-125	125	130	9.7	9.5	128.2	126.8	4.5	■
K73-125/1	125	130	15	14.8	128.2	126.8	4.5	■
K73-125/2	125	133	9.7	9.5	130	128	4.5	■
K73-130	130	135	9.7	9.5	133.2	131.8	4.5	■
K73-130/1	130	135	15	14.8	133.2	131.8	4.5	■
K73-130/2	130	135	25	24.5	133.2	131.8	4.5	■
K73-135	135	140	9.7	9.5	138.2	136.8	4.5	■
K73-135/1	135	140	15	14.8	138.2	136.8	4.5	■
K73-136	136	140	20	19.8	139	137	4.5	■
K73-140	140	145	9.7	9.5	143.2	141.8	4.5	■
K73-140/1	140	145	15	14.8	143.2	141.8	4.5	■
K73-140/2	140	148	15	14.8	145	143	4.5	■
K73-142	142	147	15	14.8	145.2	143.8	4.5	■
K73-145	145	150	9.7	9.5	148.2	146.8	4.5	■
K73-145/1	145	150	15	14.8	148.2	146.8	4.5	■
K73-146	146	154	15	14.8	151	149	4.5	■
K73-150	150	155	15	14.8	153.2	151.8	4.5	■
K73-150/1	150	155	9.7	9.5	153.2	151.8	4.5	■
K73-150/2	150	158	25	24.5	155	153	4.5	■
K73-155	155	160	9.7	9.5	158.2	156.8	6	■
K73-155/1	155	160	15	14.8	158.2	156.8	6	■
K73-160	160	168	25	24.5	165	163	6	■
K73-160/1	160	165	15	14.8	163.2	161.8	6	■
K73-164	164	170	9.5	9.3	167.6	166.4	6	■
K73-165	165	170	9.7	9.5	168.2	166.8	6	■
K73-165/1	165	170	25	24.5	168.2	166.8	6	■
K73-170	170	175	15	14.8	173.2	171.8	6	■



K75 is a piston - rod guide ring designed to be used in heavy duty hydraulic and pneumatic systems.

PRODUCT ADVANTAGES

- High load bearing capacity
- Minimum static and dynamic friction coefficient for a minimum energy loss and operating temperature
- Able to be used behind the sealing element on dry condition
- High dimension stability during the operating temperatures
- Easy assembly
- Wide range of dimensions

APPLICATION

Mobile hydraulics, excavators, mining equipment, marine hydraulics, presses and heavy duty cylinders.

MATERIAL	CODE
PHENOLIC RESIN	PH6501

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-40°C +120°C	+5°C +60°C	-40°C +40°C
DYNAMIC CONTACT			
PRESSURE	≤100 N/mm ²	≤100 N/mm ²	≤100 N/mm ²
SPEED	≤1.0 m/sec	≤1.0 m/sec	≤1.0 m/sec

Note: The above data are maximum values and cannot be used at the same time. Surface contact pressure value is given for dynamic application and it is 330 N/mm² for static applications.

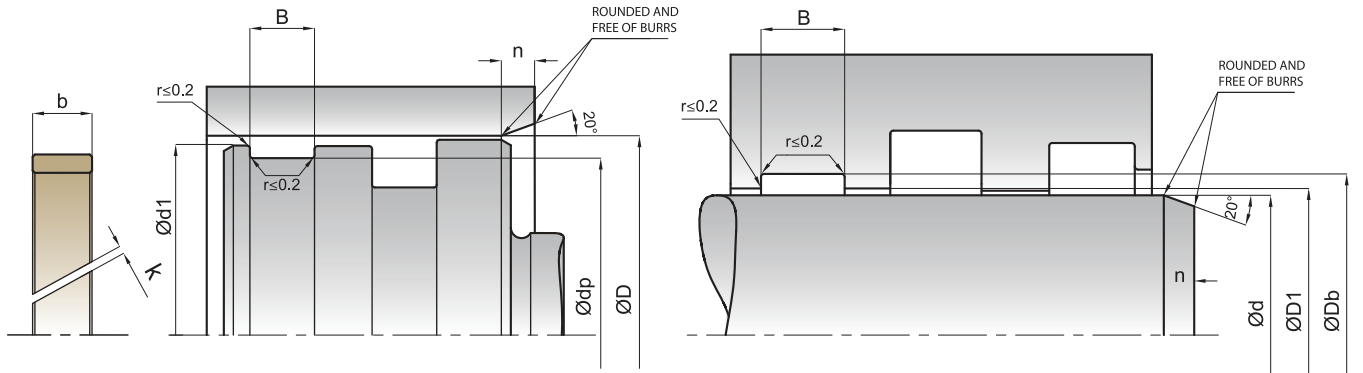
SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	∅D-∅d	≤0.4 μm	≤3.2 μm
Groove Base	∅Db-∅dp	≤1.6 μm	≤10 μm
Groove Flanks	B	≤3.2 μm	≤16 μm

INSTALLATION

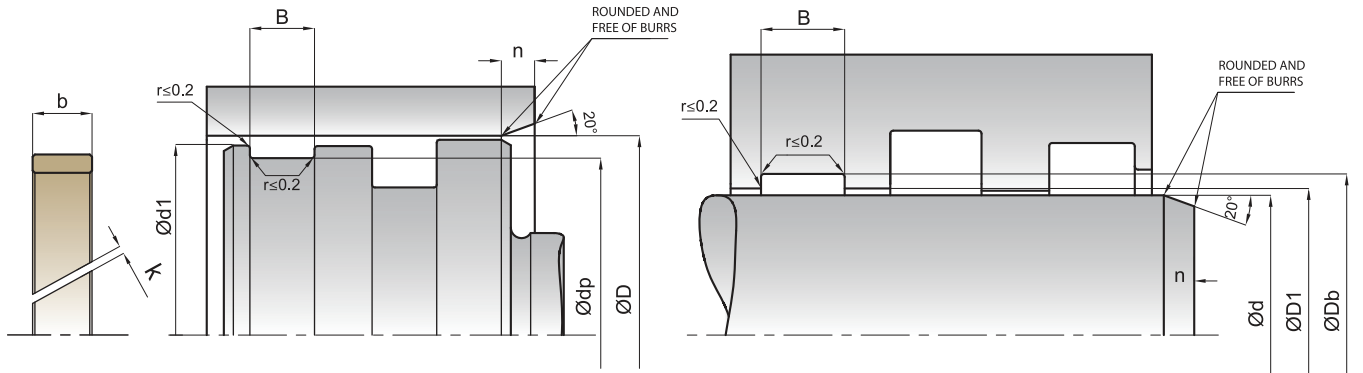
Easily assembled into the housing by hand. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation, the guide ring must be oiled with system oil.

NOTES

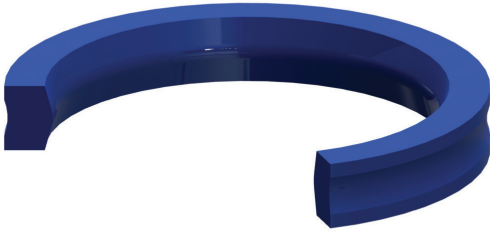
To avoid hydrodynamic pressure, k interval is given.



KASTAŞ NO	d(f8)/dp(h8)	Db(H8)/D(H9)	B(-0/+0.2)	b	d1 (h9)	D1 (H9)	k	
K75-030	30	35	9.7	9.5	33.2	31.8	1	■
K75-035	35	40	15	14.8	38.2	36.8	1	■
K75-036	36	40	10	9.8	39	37	1	■
K75-040/1	40	45	9.7	9.5	43.2	41.8	1.5	■
K75-040/2	40	45	15	14.8	43.2	41.8	1.5	■
K75-045	45	50	9.7	9.5	48.2	46.8	1.5	■
K75-045/1	45	50	15	14.8	48.2	46.8	1.5	■
K75-050	50	55	9.7	9.5	53.2	51.8	2	■
K75-050/1	50	55	15	14.8	53.2	51.8	2	■
K75-050/2	50	54	10	9.8	53	51	2	■
K75-055	55	60	15	14.8	58.2	56.8	2	■
K75-055/1	55	60	9.7	9.5	58.2	56.8	2	■
K75-056	56	62	8	7.8	59.6	58.4	2	■
K75-056/1	56	62	12.5	12.3	59.6	58.4	2	■
K75-056/2	56	62	20	19.8	59.6	58.4	2	■
K75-058	58	63	9.7	9.5	61.2	59.8	2	■
K75-060	60	65	15	14.8	63.2	61.8	2.5	■
K75-060/1	60	65	9.7	9.5	63.2	61.8	2.5	■
K75-060/2	60	65	20	19.8	63.2	61.8	2.5	■
K75-063	63	68	15	14.8	66.2	64.8	2.5	■
K75-063.5/1	63.5	66.54	6.2	6	64.5	65.54	2.5	■
K75-065	65	70	15	14.8	68.2	66.8	2.5	■
K75-065/1	65	70	9.7	9.5	68.2	66.8	2.5	■
K75-070	70	75	9.7	9.5	73.2	71.8	2.5	■
K75-070/1	70	75	15	14.8	73.2	71.8	2.5	■
K75-074	74	80	6.5	6.3	77.6	76.4	2.5	■
K75-075	75	80	9.7	9.5	78.2	76.8	2.5	■
K75-075/1	75	80	15	14.8	78.2	76.8	2.5	■
K75-080	80	85	9.7	9.5	83.2	81.8	2.5	■
K75-080/1	80	85	15	14.8	83.2	81.8	2.5	■
K75-080/2	80	85	20	19.8	83.2	81.8	2.5	■
K75-084	84	90	6.5	6.3	87.6	86.4	2.5	■
K75-085	85	90	9.7	9.5	88.2	86.8	2.5	■
K75-085/1	85	90	15	14.8	88.2	86.8	2.5	■
K75-090	90	95	15	14.8	93.2	91.8	2.5	■
K75-090/1	90	95	9.7	9.5	93.2	91.8	2.5	■
K75-090/2	94	100	6.5	6.3	97.6	96.4	2.5	■
K75-094	95	100	9.7	9.5	98.2	96.8	2.5	■
K75-095	95	100	15	14.8	98.2	96.8	2.5	■
K75-095/1	95	100	15	14.8	98.2	96.8	2.5	■
K75-100	100	105	15	14.8	103.2	101.8	3.5	■
K75-100/1	100	105	9.7	9.5	103.2	101.8	3.5	■
K75-100/2	100	105	20	19.8	103.2	101.8	3.5	■
K75-100/3	100	105	25	24.5	103.2	101.8	3.5	■
K75-105	105	110	9.7	9.5	108.2	106.8	3.5	■
K75-105/1	105	110	15	14.8	108.2	106.8	3.5	■
K75-105/2	105	110	5.6	5.4	108.2	106.8	3.5	■
K75-105/3	105	110	20	19.8	108.2	106.8	3.5	■
K75-106	106.7	115	20.8	20.6	109.9	108.8	3.5	■



KASTAŞ NO	d(f8)/dp(h8)	Db(H8)/D(H9)	B(-0/+0.2)	b	d1 (h9)	D1 (H9)	k	
K75-109	109	115	6.5	6.3	112.6	111.4	3.5	■
K75-110	110	115	9.7	9.5	113.2	111.8	3.5	■
K75-110/1	110	115	15	14.8	113.2	111.8	3.5	■
K75-113	113	118	15	14.8	116.2	114.8	3.5	■
K75-115	115	120	9.7	9.5	118.2	116.8	3.5	■
K75-115/1	115	120	15	14.8	118.2	116.8	3.5	■
K75-115/2	115	120	25	24.5	118.2	116.8	3.5	■
K75-118	118	125	30	29.5	121.2	120.9	3.5	■
K75-120	120	125	9.7	9.5	123.2	121.8	3.5	■
K75-120/1	120	125	15	14.8	123.2	121.8	3.5	■
K75-120/2	120	125	20	19.8	123.2	121.8	3.5	■
K75-125	125	130	9.7	9.5	128.2	126.8	3.5	■
K75-125/1	125	130	15	14.8	128.2	126.8	3.5	■
K75-130	130	135	9.7	9.5	133.2	131.8	3.5	■
K75-130/1	130	135	15	14.8	133.2	131.8	3.5	■
K75-135	135	140	9.7	9.5	138.2	136.8	3.5	■
K75-135/1	135	140	15	14.8	138.2	136.8	3.5	■
K75-140	140	145	9.7	9.5	143.2	141.8	3.5	■
K75-140/1	140	145	15	14.8	143.2	141.8	3.5	■
K75-142	142	147	15	14.8	145.2	143.8	3.5	■
K75-145	145	150	9.7	9.5	148.2	146.8	3.5	■
K75-145/1	145	150	15	14.8	148.2	146.8	3.5	■
K75-145/2	145	150	25	24.5	148.2	146.8	3.5	■
K75-150	150	155	15	14.8	153.2	151.8	3.5	■
K75-150/1	150	155	9.7	9.5	153.2	151.8	3.5	■
K75-155	155	160	9.7	9.5	158.2	156.8	3.5	■
K75-155/1	155	160	15	14.8	158.2	156.8	3.5	■
K75-155/2	155	163	25	24.8	158.2	156.8	3.5	■
K75-155/3	155	160	20	19.8	158.2	156.8	3.5	■
K75-165	165	170	9.7	9.5	168.2	166.8	3.5	■
K75-175	175	180	9.7	9.5	178.2	176.8	3.5	■
K75-175/1	175	180	15	14.8	178.2	176.8	3.5	■
K75-178	178	186	20	19.8	181.2	179.8	3.5	■
K75-178/1	178	186	9.7	9.5	181.2	179.8	3.5	■
K75-180	180	185	15	14.8	183.2	181.8	3.5	■
K75-185	185	190	9.7	9.5	188.2	186.8	3.5	■
K75-185/1	185	190	15	14.8	188.2	186.8	3.5	■
K75-192/1	192	197	15	14.8	195.2	193.8	3.5	■
K75-195	195	200	9.7	9.5	198.2	196.8	3.5	■
K75-195/1	195	200	15	14.8	198.2	196.8	3.5	■
K75-200	200	205	15	14.8	203.2	201.8	4.5	■
K75-212	212	220	25	24.8	215.2	213.8	4.5	■
K75-215	215	220	15	14.8	218.2	216.8	4.5	■
K75-220	220	225	24.5	24	223.2	221.8	4.5	■
K75-220/1	220	228	25	24.5	223.2	221.8	4.5	■
K75-225	225	230	15	14.8	228.2	226.8	4.5	■
K75-240	240	245	15	14.8	243.2	241.8	4.5	■
K75-245	245	250	9.7	9.5	248.2	246.8	4.5	■
K75-245/1	245	250	15	14.8	248.2	246.8	4.5	■



K83 is a double acting cover seal specially designed for static applications.

PRODUCT ADVANTAGES

- High operating pressures
- High reliability
- Interchangeable for O-ring and O-ring with back-up ring
- Easy and secure installation
- No need for additional back-up ring
- High wear resistant

APPLICATION

All the hydraulic applications that O-rings are being used.

MATERIAL		CODE
PU	94 SHORE A	PU9401

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +100°C	+5°C +50°C	-30°C +40°C
PRESSURE	≤600 Bar	≤600 Bar	≤600 Bar

Note: The above data are maximum values and cannot be used at the same time.

SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	Ød	≤0.8 µm	≤3.2 µm
Groove Base	ØD	≤1.6 µm	≤6.3 µm
Groove Flanks	B	≤6.3 µm	≤16 µm

INSTALLATION

Easy installation by hand. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the sealing element must be oiled with system oil.

NOTES

K83 is a double acting cover seal for inner sealing. The difficulties faced during an O-ring assembly such as twisting, ripping was solved with this design. It can be used without a back-up ring at high pressures. When material is concerned, K83 has good wear resistance to extrusion and shows good sealing performance in double acting applications.



K84 is a double acting cover seal specially designed for static applications.

PRODUCT ADVANTAGES

- High operating pressures
- High reliability
- Interchangeable for O-ring and O-ring with back-up ring
- Easy and secure installation
- No need for additional back-up ring
- High wear resistance

APPLICATION

All the hydraulic applications that O-rings are being used.

MATERIAL		CODE
PU	94 SHORE A	PU9401

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +100°C	+5°C +50°C	-30°C +40°C
PRESSURE	≤600 Bar	≤600 Bar	≤600 Bar

Note: The above data are maximum values and cannot be used at the same time.

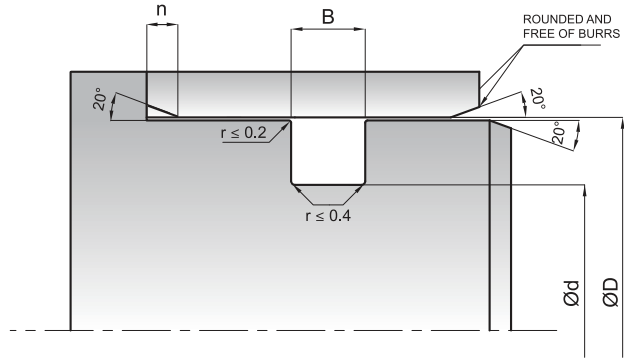
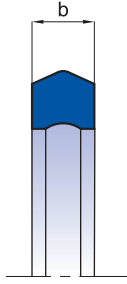
SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	∅D	≤0.8 μm	≤3.2 μm
Groove Base	∅d	≤1.6 μm	≤6.3 μm
Groove Flanks	B	≤6.3 μm	≤16 μm

INSTALLATION

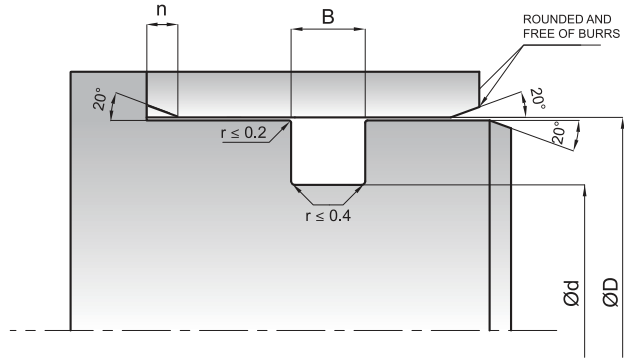
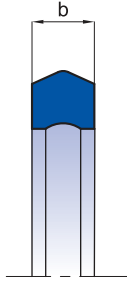
Easy installation by hand. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the sealing element must be oiled with system oil.

NOTES

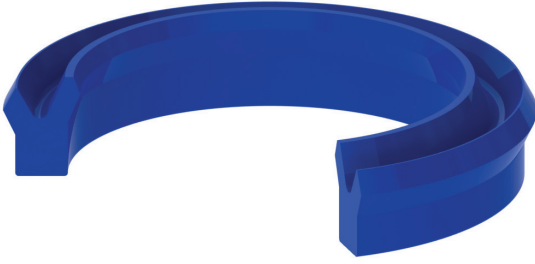
K84 is a double acting cover seal for outer sealing. The difficulties faced during an O-ring assembly such as twisting, ripping was solved with this design. It can be used without a back-up ring at high pressures. When material is concerned, K84 has good wear resistance to extrusion and shows good sealing performance in double acting applications.



KASTAŞ NO	D	d	B	n	
K84-030	30	25.40	3.90	2.50	■
K84-032	32	27.40	3.90	2.50	■
K84-032/1	32	28.00	3.40	2.00	■
K84-033	33	29.20	3.20	2.00	■
K84-040	40	33.50	4.80	3.00	■
K84-040/1	40	32.80	3.40	3.50	■
K84-040/2	40	36.00	3.40	2.00	■
K84-041	41	37.00	3.40	2.00	■
K84-042	42.50	37.50	3.70	2.50	■
K84-045	45	39.50	4.50	3.00	■
K84-050	50	44.40	6.20	3.00	■
K84-050/1	50	44.40	4.80	3.00	■
K84-050/2	50	45.40	3.90	2.50	■
K84-051	51	46.40	3.90	2.50	■
K84-056	56	51.40	3.90	2.50	■
K84-060	60	52.20	5.80	4.00	■
K84-060/1	60	53.70	5.20	3.00	■
K84-061	61	55.50	4.50	3.00	■
K84-063	63	57.40	6.20	3.00	■
K84-063/1	63	57.50	4.50	3.00	■
K84-064	64	58.50	4.50	3.00	■
K84-065	65	57.20	5.80	4.00	■
K84-066	66	60.50	4.50	3.00	■
K84-070	70	64.40	6.20	3.00	■
K84-070/1	70	64.50	4.50	3.00	■
K84-071	71	65.50	4.50	3.00	■
K84-075	75	69.60	6.50	3.00	■
K84-076	76	70.50	4.50	3.00	■
K84-080	80	74.60	6.50	3.00	■
K84-080/1	80	74.50	4.50	3.00	■
K84-081	81	73.20	5.80	4.00	■
K84-081/1	81	75.50	4.50	3.00	■
K84-085	85	80.80	5.00	2.00	■
K84-088	88	83.40	4.00	2.50	■
K84-090	90	80.10	7.80	4.50	■
K84-090/1	90	84.50	4.50	3.00	■
K84-091	91	85.60	4.50	3.00	■
K84-095	96	87.70	5.80	4.00	■
K84-095/1	95	86.40	9.00	4.00	■
K84-095/2	96	87.70	5.00	4.00	■
K84-100	100	90.00	7.80	4.50	■
K84-100/1	100	91.40	9.00	4.00	■
K84-100/2	100	93.70	5.20	3.00	■
K84-100/3	100	90.30	9.30	5.00	■
K84-100/4	100	90.20	9.40	4.50	■
K84-101	101	94.70	5.20	3.00	■
K84-105	105	95.10	7.80	4.50	■
K84-110	110	101.40	9.00	4.00	■
K84-110/1	110	103.70	5.20	3.00	■



KASTAŞ NO	D	d	B	n	
K84-110/2	110	105.20	3.70	2.50	■
K84-115	115	108.80	5.90	3.00	■
K84-116	116	109.70	5.20	3.00	■
K84-120	120	112.00	6.50	4.00	■
K84-121	121	115.50	4.50	3.00	■
K84-125	125	116.40	9.00	4.00	■
K84-125/1	125	118.70	5.20	3.00	■
K84-128	128	122.60	4.50	3.00	■
K84-130	130	123.70	5.20	3.00	■
K84-130/1	130	120.60	7.90	4.50	■
K84-134	134	124.60	7.90	4.50	■
K84-140	140	134.10	5.90	3.00	■
K84-140/1	140	133.70	5.20	3.00	■
K84-150	150	141.90	9.20	4.00	■
K84-150/1	150	143.70	5.20	3.00	■
K84-150/2	150	140.70	9.50	4.50	■
K84-160	160	150.00	8.40	4.50	■
K84-160/1	160	153.70	5.20	3.00	■
K84-162	162	154.00	8.20	4.00	■
K84-165	165	155.00	8.40	4.50	■
K84-170	170	160.00	8.40	4.50	■
K84-175	175	165.00	8.40	4.50	■
K84-180	180	170.00	8.40	4.50	■
K84-180/1	180	171.40	6.90	4.00	■
K84-185	185	175.00	8.40	4.50	■
K84-190	190	180.00	8.40	4.50	■
K84-195	195	185.00	8.40	4.50	■
K84-200	200	191.40	9.00	4.00	■
K84-200/1	200	190.00	8.40	4.50	■
K84-200/2	200	191.40	6.90	4.00	■
K84-200/3	200	191.00	9.30	4.50	■
K84-205	205	195.00	8.40	4.50	■
K84-210	210	200.00	8.40	4.50	■
K84-215	215	205.00	8.40	4.50	■
K84-220	220	210.00	8.40	4.50	■
K84-222	222	214.00	8.00	4.00	■
K84-225	225	215.00	8.40	4.50	■
K84-230	230	220.00	8.40	4.50	■
K84-235	235	225.00	8.40	4.50	■
K84-240	240	231.40	9.00	4.00	■
K84-250	250	238.40	12.30	5.00	■
K84-255	255	240.00	12.90	5.00	■
K84-275	275	263.40	12.30	5.00	■
K84-280	280	271.40	9.00	4.00	■
K84-286	286	263.00	11.00	6.00	■
K84-300	300	283.00	16.30	6.00	■
K84-305	305	290.00	12.90	5.00	■
K84-350	350	333.00	16.30	6.00	■
K84-355	355	340.00	12.90	5.00	■



K86 is a static sealing element designed to replace o-ring+back-up ring combination.

PRODUCT ADVANTAGES

- High operating pressures
- High reliability
- Interchangeable for O-ring and O-ring with back-up ring
- Easy and secure installation
- No need for additional back-up ring
- High wear resistance
- Availability to be used in a wide range of diameters
- Reliable sealing even with ovality of the tube

APPLICATION

All the hydraulic applications that O-rings are being used.

MATERIAL		CODE
PU	92 SHORE A	PU9201

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-45°C +100°C	+5°C +50°C	-30°C +40°C
PRESSURE	≤500 Bar	≤500 Bar	≤500 Bar

Note: The above data are maximum values and cannot be used at the same time.

SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	∅D	≤0.8 μm	≤3.2 μm
Groove Base	∅d	≤1.6 μm	≤6.3 μm
Groove Flanks	B	≤6.3 μm	≤16 μm

INSTALLATION

Easy installation by hand. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the sealing element must be oiled with system oil.

NOTES

The difficulties faced during an O-ring assembly such as twisting, ripping was solved with this design. It can be used without a back-up ring at high pressures. When material is concerned, K86 has good wear resistance to extrusion and shows good sealing performance.

NOTES

Series of horizontal lines for taking notes.

Notes section consisting of multiple horizontal lines for writing.



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