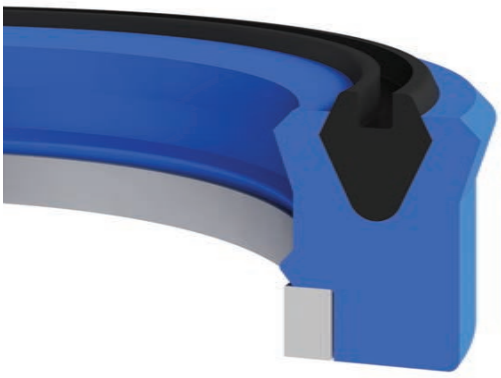
K31
Heavy Duty Rod Seal



K31 is a heavy-duty single-acting rod seal designed for demanding hydraulic applications. It features a specially profiled polyurethane sealing element, an internal elastomer energizer for enhanced preload, and a thermoplastic back-up ring for superior extrusion resistance. This combination ensures reliable performance under high pressure and challenging operating conditions.

Advantages
- High extrusion resistance
- Long service life
- Good sealing effect both at high and low pressure

Application
- Mining industry
- Iron and steel industry
- Scrap metal presses
- Mobile machinery
- Marine hydraulics

Operating Conditions

MOTION:	Linear		
PRESSURE (bar):	630 bar (max)		
SPEED (m/s)	0.5 m/s (max)		
TEMPERATURE (°C):	-30/+100 °C	+5/+50 °C	-30/+40 °C
MEDIA TYPE:	Mineral Oils	HFA/HFB	HFC

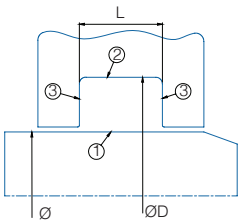
NOTE: The above values (speed, pressure, temperature) are maximum values, all cannot be used at the same time.

Material Information

U-ring	Energizer	Back-up Ring	Remarks
Polyurethane-PU9401	Elastomer-NB7001	Thermoplastic-PM9901	Standard produced material code
Polyurethane-PU9411	Elastomer-NB7001	Thermoplastic-PA9910	Material code used for high temperatures

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 2.10 or you can contact the sales department.

Surface Rougness

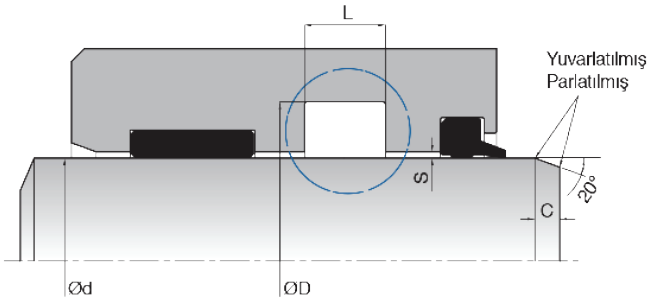


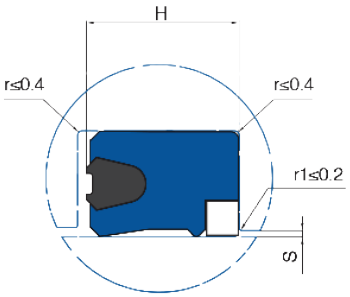
	1 (rod)	2 (groove base)	3 (groove flanks)
Ra	0.1-0.4 μm	0.2-1.6 μm	0.2-3.2 μm
Rmax	< 3.2 μm	< 6.3 μm	< 16 μm
Rmr	When C=0.25xRz on the dynamic work surface and reference line C_{ref}= 5%, the working surface contact area should be approximately between 50% and 70%.		

Installation Information

Easily assembled into closed grooves according to the minimum diameter values that are given in the table 3.2 by the rod installation tools. Open grooves are recommendec for the values that are outside this table. First TPU uring and energizer elastomer should be installed as mounted each other, then the thermoplastik POM should be mounted into the groove at the product. 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. (See the installation instruction at page 51-57)

K31 Heavy Duty Rod Seal





Cross Section (mm)	Max. Permissible Sealing Gap Value "S_{max}" (mm) for K31			
	150 bar	250 bar	400 bar	630 bar
≤5	0.45	0.30	0.25	-
5-7.5	0.50	0.35	0.30	-
7.5-12.5	0.60	0.40	0.35	0.25
>12.5	0.65	0.45	0.40	0.30

These are the recommended Permessible Sealing Gap Value based on a maximum temperature of 60°C. The S_{max} value should be calculated according to the formula on page 64 and it is recommended not to exceed the given S_{max} value.

KASTAŞ NO	d (f8)	D (H10)	L (+0.2/-0)	H	C	KASTAŞ CODE
K31-025	25	35	8.3	7.3	5.5	10016154
K31-030	30	40	11	10	5.5	10016155
K31-030/1	30	40	8.3	7.3	5.5	10016156
K31-031	31.75	38.1	7	6.35	3.5	10016157
K31-031/1	31.75	41.28	7	6.35	5.5	10016158
K31-035	35	50	10.5	9.5	6	10016160
K31-038	38.1	47.63	7	6.35	5.5	10016161
K31-038/1	38.1	50.8	10.5	9.52	5.5	10016162
K31-040	40	55	10.5	9.5	6	10016164
K31-040/1	40	50	8.3	7.3	5.5	10016165
K31-040/2	40	55	12.4	11.4	6	10016166
K31-040/3	40	52	9.6	8.6	5.5	10016167
K31-044	44.45	57.15	10.5	9.52	5.5	10016168
K31-044/1	44.45	53.98	7	6.35	5.5	10016169
K31-044/2	44.45	53.98	10.5	9.52	5.5	10016170
K31-045	45	60	12.4	11.4	6	10016172
K31-050	50	65	12.4	11.4	6	10016176
K31-050/1	50.8	60.32	10.5	9.52	5.5	10016178
K31-050/2	50.8	63.5	10.5	9.52	5.5	10016179
K31-050/3	50	60	8.3	7.3	5.5	10016180
K31-055	55	70	12.4	11.4	6	10016182
K31-055/1	55	68	14	13	5.5	10016183
K31-056	56	71	12.4	11.4	6	10016184
K31-057	57.15	69.85	10.5	9.52	5.5	10016185
K31-057/1	57.15	66.67	10.5	9.52	5.5	10016186
K31-060	60	75	12.4	11.4	6	10016187
K31-060/1	60	73	14	13	5.5	10016188
K31-060/2	60	72	9.6	8.6	5.5	10016189
K31-063	63.5	76.2	10.5	9.52	5.5	10016191
K31-063/1	63	75	9.6	8.6	5.5	10016192
K31-063/2	63	78	12.4	11.4	6	10016193
K31-063/3	63.5	73.02	10.5	9.52	5.5	10016194
K31-065	65	78	11	10	5.5	10016195
K31-065/1	65	80	10	9	6	10016196
K31-069	69.85	82.55	10.5	9.52	5.5	10016197
K31-070	70	85	12.4	11.4	6	10016198
K31-070/1	70	83	11	10	5.5	10016199
K31-070/2	70	85	10	9	6	10016200



KASTAŞ NO	d (f8)	D (H10)	L (+0.2/-0)	H	C	KASTAŞ CODE
K31-070/3	70	80	13	12	5.5	10016201
K31-070/4	70	85	11	10	6	10016202
K31-070/5	70	82	9.6	8.6	5.5	10016203
K31-075	75	88	11	10	5.5	10016206
K31-075/1	75	90	10	9	6	10016207
K31-076	76.2	92.075	14	12.7	6	10016209
K31-076/2	76.2	88.9	10.5	9.52	5.5	10016210
K31-080	80	95	12.4	11.4	6	10016211
K31-080/1	80	93	11	10	5.5	10016212
K31-080/2	80	95	10	9	6	10016213
K31-082	82.55	95.25	10.5	9.52	5.5	10016214
K31-085	85	100	11	10	6	10016215
K31-085/1	85	105	16	15	6.5	10016216
K31-085/2	85	97	9.6	8.6	5.5	10016217
K31-088	88.9	101.6	10.5	9.52	5.5	10016220
K31-088/1	88.9	104.77	14	12.7	6	10016221
K31-090	90	105	12.4	11.4	6	10016222
K31-090/1	90	105	11	10	6	10016223
K31-090/2	90	110	18	17	6.5	10016224
K31-090/3	90	110	15.5	14.5	6.5	10016225
K31-090/4	90	100	13	12	5.5	10016227
K31-090/5	90	105	16	15	6	10016228
K31-090/6	90	105	15.5	14.5	6	10016229
K31-095	95	110	11	10	6	10016231
K31-095/1	95	115	16	15	6.5	10016232
K31-100	100	120	15.5	14.5	6.5	10016233
K31-100/1	100	115	11	10	6	10016234
K31-100/2	100	120	15	14	6.5	10016235
K31-100/4	100	115	16	15	6	10016236
K31-101	101.6	114.3	15.8	14.28	5.5	10016237
K31-101/1	101.6	117.47	15.8	14.27	6	10016238
K31-101/2	101.6	114.3	10.5	9.52	5.5	10016239
K31-105	105	120	13	12	6	10016240
K31-105/1	105	125	15.5	14.5	6.5	10016241
K31-105/2	105	120	15.5	14.5	6	10016242
K31-107	107.95	120.65	15	13.6	5.5	10016244
K31-110	110	130	13	12	6.5	10016245
K31-110/1	110	125	13	12	6	10016246
K31-110/2	110	130	15.5	14.5	6.5	10016247
K31-114	114.3	127	15.8	14.28	5.5	10016250
K31-114/1	114.3	133.35	17.5	15.87	6.5	10016251
K31-115	115	135	15.5	14.5	6.5	10016252
K31-115/1	115	130	16	15	5.5	10016253
K31-120	120	140	13	12	6.5	10016255
K31-120/2	120	140	15.6	14.6	6.5	10016258
K31-125	125	145	15.5	14.5	6.5	10016259
K31-127	127	146.05	17.5	15.88	6.5	10016262
K31-130	130	150	15.5	14.5	6.5	10016263
K31-135	135	155	14.6	13.6	6.5	10016266
K31-139	139.7	152.4	15.8	14.28	5.5	10016269
K31-140	140	160	15.5	14.5	6.5	10016270
K31-145	145	165	16	15	6.5	10016272
K31-150	150	160	15.5	14.5	5.5	10016274
K31-150/1	150	170	15.5	14.5	6.5	10016275
K31-152	152.4	171.45	17.5	15.88	6.5	10016277
K31-160	160	175	15.5	14.5	6	10016279



KASTAŞ NO	d (f8)	D (H10)	L (+0.2/-0)	H	C	KASTAŞ CODE
K31-160/2	160	177	16	15	6	10016280
K31-160/3	160	180	15.6	14.6	6.5	10016281
K31-170	170	185	15.5	14.5	6	10016282
K31-180	180	205	19.2	18.2	8	10016283
K31-180/1	180	195	15.5	14.5	6	10016284
K31-180/2	180	200	15.6	14.6	6.5	10016285
K31-185	185	205	19.5	18.5	6.5	10016286
K31-190	190	205	15.5	14.5	6	10016288
K31-200	200	220	15.6	14.6	6.5	10016289
K31-210	210	230	15.5	14.5	6.5	10016290
K31-210/1	210	235	19	18	8	10016291
K31-220	220	245	20	19	8	10016293
K31-230	230	250	16	15	6.5	10016296
K31-230/1	230	250	15.5	14.5	6.5	10016297
K31-235	235	255	16	15	6.5	10016299
K31-240	240	260	16	15	6.5	10016300
K31-240/1	240	260	15.5	14.5	6.5	10016301
K31-280	280	300	15.5	14.5	6.5	10016307
K31-290	290	315	20	19	8	10016309
K31-295	295	315	17.4	16.4	6.5	10016311
K31-300	300	320	15.5	14.5	6.5	10016312
K31-340	340	365	20	19	8	10016315