K22
Rod Seal



K22 is a single-acting rod seal featuring a precision-cut sealing lip, designed to maintain a thin and stable oil film along the rod surface. This controlled lubrication film reduces friction, minimizes wear, and improves dynamic sealing performance. Its geometry is optimized for reliable operation in light to medium-duty hydraulic systems, ensuring efficient sealing without compromising system responsiveness.

Advantages

- Good sealing effect
- High abrasion resistance
- Simple installation
- Economical solution
- Suitable design for telescopic cylinders

Application

- Agricultural machinery
- Presses
- Construction machinery
- Loading platforms
- Injection moulding machines
- Forklifts
- Standard industrial cylinders

Operating Conditions (PU9201)

MOTION:	Linear		
PRESSURE (bar):	400 bar (max)*		
SPEED (m/s):	0.5 m/s (max)		
TEMPERATURE (°C):	-40/+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.
**250 bar ve üzeri sistemler için destek ringi ile beraber kullanımı tavsiye edilir.*

Operating Conditions (NB9001)

MOTION:	Linear		
PRESSURE (bar):	150 bar (max)*		
SPEED (m/s):	0.5 m/s (max)		
TEMPERATURE (°C):	-30/+105 °C	+5/+60 °C	-30/+60 °C
MEDIA TYPE:	Mineral Oils	HFA/HFB	HFC

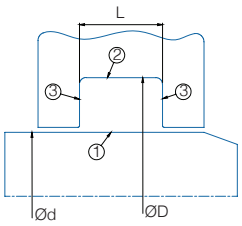
NOTE: The above values (speed, pressure, temperature) are maximum values, all cannot be used at the same time.
**It is recommended to use with back-up ring for systems at pressures 150 bar and above.*

Material Information

U-ring	Remarks
Polyurethane-PU9201	Standard produced material code
Elastomer-NB9001	
Polyurethane-PU9401	It can be produced depending on the demand and working conditions. It is recommended in systems where temperature and pressure are high at the same time.
Elastomer-FK9001	It can be produced from FKM material for use at temperatures above 100 °C.

Note: In the special application conditions (temperature, media, etc.) Can be produced from different materials. You can refer to Table 2.6 and Table 2.10 for details or you can contact our sales department.

Surface Rougness

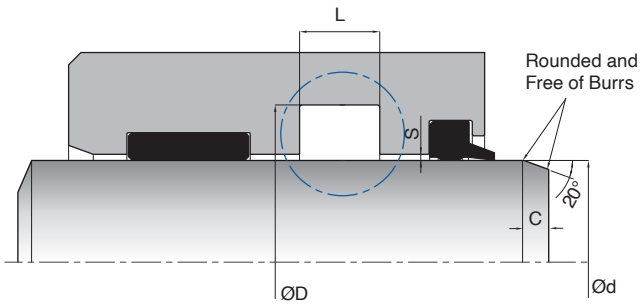


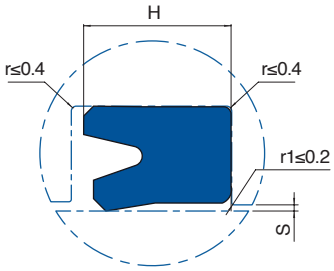
	1 (rod)	2 (groove base)	3 (groove flanks)
Ra	0.1-0.4 µm	0.2-1.6 µm	0.2-3.2 µm
Rmax	< 3.2 µm	< 6.3 µm	< 16 µm
Rmr	When C=0.25xRz on the dynamic work surface and reference line C_{ref} = 5%, the working surface contact area should be approximately between 50% and 70%.		

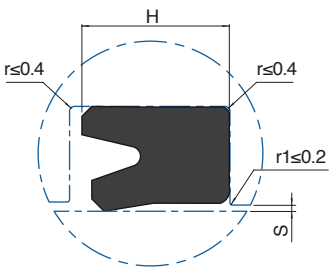
Installation Information

Easily assembled into closed grooves by the rod seal installation tools according to the minimum diameter values that are given in the table 3.2. Open grooves are recommended 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 sealing elements should be oiled with system oil.

K22 Rod Seal







Cross Section (mm)	Max. Permissible Sealing Gap Value "S_{max}" (mm)		
	50 bar	100 bar	150 bar
≤5	0.40	0.20	0.10
>5	0.45	0.25	0.15

Cross Section (mm)	Max. Permissible Sealing Gap Value "S_{max}" (mm)	
	150 bar	250 bar
≤5	0.30	0.20
>5	0.35	0.25

S_{max} avalues are suitable for operating conditions up to 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 NBR	KASTAŞ CODE PU
K22-002/2	2	5.5	3.1	2.6	2.5	10012548	-
K22-003	3	7	3.5	3	2.5	10012552	-
K22-004/1	4	8	3.5	3	2.5	10012563	-
K22-004/3	4	9	4	3.5	3	10012566	-
K22-004/6	4	12	7	6	4.5	10012569	10012570
K22-006	6	13	4	3.5	4	10012577	-
K22-006/1	6	10	3.5	3	2.5	10012578	10012580
K22-006/3	6	12	4.5	4	3.5	10012584	10012586
K22-008	8	14	4.5	4	3.5	10012596	10012599
K22-008/5	8	13	3.5	3	3	10012615	10012617
K22-009/2	9.52	16.5	4.5	3.96	4	10012622	-
K22-010	10	18	6.5	5.5	4.5	10012627	10012633
K22-010/1	10	16	5	4.5	3.5	10012635	10012637
K22-010/2	10	14	4.5	4	2.5	10012640	10012642
K22-010/4	10	14	2.5	2	2.5	10012646	10012650
K22-010/7	10	13.6	2.8	2.3	2.5	10012656	10012657
K22-012/1	12	20	6.5	5.5	4.5	10012665	10012668
K22-012/2	12	17	4.2	3.7	3	10012673	10012675
K22-012/6	12	16	3.5	3	2.5	10012687	10012689
K22-014	14	22	6.5	5.5	4.5	10012706	10012708
K22-014/3	14	20	5	4.5	3.5	10012713	-
K22-015	15	23	7	6	4.5	10012714	10012716
K22-016	16	20.5	6	5	2.5	10012723	10012724
K22-016/2	16	26	8	7	5.5	10012734	10012736
K22-016/3	16	24	6.5	5.5	4.5	10012737	10012740
K22-016/4	16	24	7.5	6.5	4.5	10012742	10012745
K22-016/5	16	23	6.5	5.5	4	10012746	10012748
K22-016/6	16	22	4.5	4	3.5	10012750	-
K22-016/9	16	24	6	5	4.5	10012759	10012762
K22-016/10	16	22	6	5	3.5	10012727	10012729
K22-018	18	24	6	5	3.5	10012769	10012772
K22-018/1	18	25	6	5	4	10012773	10012776
K22-018/2	18	25	6.5	5.5	4	10012777	10012780
K22-018/3	18	28	8	7	5.5	10012781	10012785
K22-018/5	18	25	5	4.5	4	10012787	10012788
K22-018/7	18	26	6.5	5.5	4.5	10012793	-
K22-019	19.05	25.4	5.3	4.76	3.5	10012797	10012798
K22-020	20	30	7	6	5.5	10012799	10012802



KASTAŞ NO	d (f8)	D (H10)	L (+0.2/-0)	H	C	KASTAŞ CODE NBR	KASTAŞ CODE PU
K22-020/3	20	32	8.5	7.5	5.5	10012819	10012820
K22-020/4	20	28	6.5	5.5	4.5	10012821	10012824
K22-020/8	20	30	8	7	5.5	10012835	10012838
K22-020/9	20	30	8.5	7.5	5.5	10012839	10012841
K22-020/11	20	32	8	7	5.5	10012808	-
K22-022	22	32	7	6	5.5	10012845	10012847
K22-022/1	22	30	9	8	4.5	10012848	10012850
K22-022/2	22	30	8	7	4.5	10012851	10012853
K22-022/3	22	30	6.5	5.5	4.5	10012855	10012858
K22-022/6	22	29	6	5	4	10012866	10012868
K22-023	23	31	6.5	5.5	4.5	10012873	10012876
K22-024	24	32	6.5	5.5	4.5	10012879	-
K22-025	25	35	7	6	5.5	10012882	10012885
K22-025/3	25	35	8	7	5.5	10012898	-
K22-025/7	25	32	7	6	4	10012912	10012914
K22-025/10	25	33	6.5	5.5	4.5	10012889	10012891
K22-028	28	38	7	6	5.5	10012923	10012925
K22-028/4	28	36	6.5	5.5	4.5	10012937	10012939
K22-028/6	28	38	8	7	5.5	10012941	10012943
K22-028/8	28	38	9	8	5.5	10012946	10012948
K22-028/9	28	36	6.7	5.7	4.5	10012949	10012950
K22-028/11	28	36	9	8	4.5	10012928	10012929
K22-030	30	40	9	8	5.5	10012952	10012954
K22-030/1	30	40	7	6	5.5	10012955	10012957
K22-030/2	30	40	8	7	5.5	10012961	10012963
K22-030/4	30	38	7	6	4.5	10012968	10012970
K22-030/5	30	38	6.5	5.5	4.5	10012971	10012974
K22-030/8	30	38	9	8	4.5	10012979	10012982
K22-032	32	42	8	7	5.5	10012988	10012990
K22-035	35	45	9	8	5.5	10013010	10013012
K22-035/1	35	45	8	7	5.5	10013013	10013018
K22-035/6	35	43	7	6	4.5	10013030	10013032
K22-035/7	35	43	9	8	4.5	10013033	10013034
K22-036	36	46	9	8	5.5	10013038	10013040
K22-036/2	36	46	11	10	5.5	10013042	10013045
K22-038	38.1	50.8	10.5	9.52	5.5	10013057	10013058
K22-040	40	50	11	10	5.5	10013062	10013064
K22-040/2	40	50	8	7	5.5	10013067	10013071
K22-040/3	40	50	9	8	5.5	10013073	10013075
K22-040/5	40	50	7	6	5.5	10013078	-
K22-040/6	40	48	9	8	4.5	10013080	10013083
K22-040/9	40	48	6.8	5.8	4.5	10013089	10013091
K22-042	42	52	8	7	5.5	10013096	10013098
K22-045	45	55	11	10	5.5	10013105	10013108
K22-045/3	45	55	8	7	5.5	10013113	10013118
K22-050	50	60	11	10	5.5	10013133	10013136
K22-050/3	50	65	11	10	6	-	10013141
K22-050/4	50	60	8	7	5.5	10013142	10013144
K22-050/5	50	60	7	6	5.5	10013150	10013152
K22-050/6	50	62	11	10	5.5	10013153	-
K22-050/9	50	58	9	8	4.5	10013159	10013161
K22-052	52	62	11	10	5.5	10013163	10013165
K22-052/1	52	69	10	9	6	10013166	10013167
K22-055	55	65	11	10	5.5	10013169	10013171
K22-055/3	55	65	8.3	7.3	5.5	10013179	10013181
K22-056	56	68	9.5	8.5	5.5	10013184	10013186

KASTAŞ NO	d (f8)	D (H10)	L (+0.2/-0)	H	C	KASTAŞ CODE NBR	KASTAŞ CODE PU
K22-056/2	56	66	11	10	5.5	10013188	10013190
K22-056/4	56	68	8.5	7.5	5.5	10013195	10013196
K22-060	60	70	11	10	5.5	10013200	10013202
K22-060/3	60	70	9.5	8.5	5.5	10013210	10013212
K22-060/4	60	72	9.5	8.5	5.5	10013213	10013215
K22-060/6	60	70	8	7	5.5	-	10013219
K22-063	63	73	7.5	6.5	5.5	10013224	10013227
K22-063/1	63.5	76.2	10.5	9.52	5.5	-	10013228
K22-063/2	63	75	9.5	8.5	5.5	10013229	10013231
K22-063/4	63	78	11	10	6	-	10013235
K22-065	65	75	11	10	5.5	10013236	10013238
K22-068	68	80	9.5	8.5	5.5	10013241	-
K22-070	70	80	13	12	5.5	10013246	10013248
K22-070/1	70	85	11	10	6	10013249	10013251
K22-070/4	70	82	9.5	8.5	5.5	10013255	-
K22-075	75	85	13	12	5.5	10013263	10013265
K22-080	80	90	13	12	5.5	10013274	10013276
K22-080/2	80	92	9.5	8.5	5.5	10013280	10013283
K22-080/6	80	90	8	7	5.5	-	10013287
K22-085/1	85	95	8	7	5.5	10013299	10013300
K22-090	90	100	13	12	5.5	10013305	10013308
K22-090/1	90	102	9.5	8.5	5.5	10013309	10013312
K22-095	95	105	13	12	5.5	10013316	10013318
K22-100	100	110	15	14	5.5	10013323	10013325
K22-100/2	100	115	13	12	6	-	10013327
K22-100/3	100	115	11	10	6	10013329	-
K22-105	105	120	13	12	6	10013336	10013338
K22-110	110	130	15	14	6.5	10013343	-
K22-110/2	110	125	10	9	6	10013346	-
K22-120	120	135	10.5	9.5	6	10013357	10013359
K22-125/1	125	145	13	12	6.5	-	10013365
K22-130	130	140	14.5	13.5	5.5	-	10013369
K22-130/1	130	150	16	15	6.5	-	10013370
K22-140/1	140	160	15	14	6.5	10013378	10013380
K22-150	150	160	14.5	13.5	5.5	-	10013383
K22-160	160	170	13	12	5.5	10013392	10013394
K22-160/2	160	180	16	15	6.5	-	10013395
K22-160/4	160	180	13	12	6.5	-	10013399
K22-170	170	180	15.5	14.5	5.5	-	10013403
K22-170/1	170	190	16	15	6.5	-	10013404
K22-180/1	180	200	13	12	6.5	-	10013406
K22-180/2	180	195	13.5	12.5	6	-	10013408
K22-185	185	195	13	12	5.5	10013412	10013413
K22-200/1	200	225	16	15	8	-	10013417
K22-200/2	200	220	16	15	6.5	-	10013418
K22-215	215	225	13	12	5.5	10013424	10013425
K22-220	220	240	16	15	6.5	-	10013426
K22-240/1	240	260	16	15	6.5	10013437	10013439
K22-250	250	270	16	15	6.5	-	10013443
K22-280	280	300	16	15	6.5	-	10013448
K22-400	400	430	24	22.8	9.5	-	10013461
K22-450	450	490	22	20	12.5	-	10013464