

K33 is a single acting rod seal designed to have inner lip shorter than the outer lip and additional sealing lip which improves the leakage behavior and, at the same time, prevents the penetration of dirt from the wiper side.

PRODUCT ADVANTAGES
- High wear resistant
- Superior sealing effect with the secondary lip
- Secondary sealing lip provides extra protection against the ingress of dirt particles
- Wide range of dimensions
- Simple groove design
- Easy assembly into closed grooves

APPLICATION
Construction machinery, fork-lift trucks, injection moulding machines, agricultural machinery, loading platforms and standard cylinders.

MATERIAL		CODE
PU	94 SHR 1	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	≤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	≤1.6 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 sealing element must be oiled with system oil.

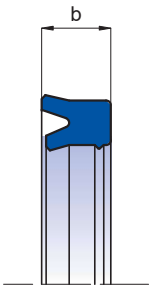
MINUMUM DIAMETER VALUES FOR CLOSED TYPE OF GROOVES							
(D-d)/2 (mm)	4	5	6	7.7	10	12.5	15
d min (mm)	25	30	40	50	80	100	105

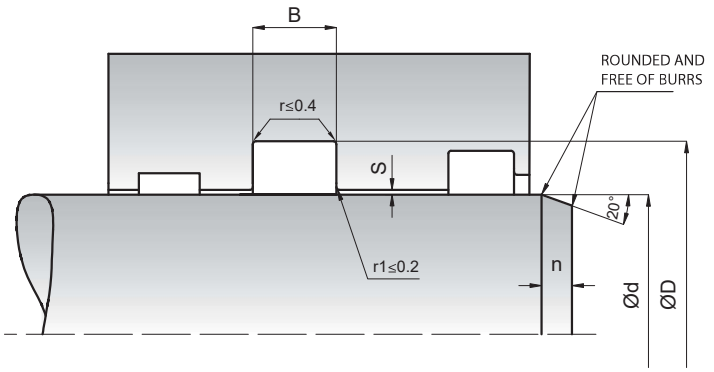
NOTES
The permissible sealing gap values of K33 rod seal is given in the below table.

PERMISSIBLE SEALING GAP			
NBR	**Smax (mm)**		
t=(D-d)/2 (mm)	150 Bar	250 Bar	400 Bar
t≤5	0.30	0.20	0.15
t>5	0.35	0.25	0.20

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.

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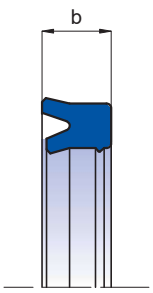


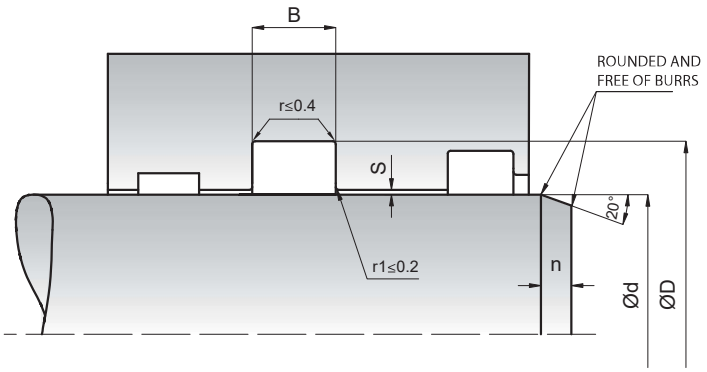


KASTAŞ NO	d (f8)	D (H11)	B (-0/+0.2)	b	n
K33-006 PU	6	9	4	3.5	2
K33-012/1 PU	12	22	8	7	4.5
K33-014 PU	14	24	8.2	7.2	4.5
K33-016 PU	16	22	5	4.5	3
K33-018 PU	18	24	5.9	4.9	3
K33-018/1 PU	18	26	9	8	4
K33-020 PU	20	30	7	6	4.5
K33-020/1 PU	20	30	9	8	4.5
K33-020/2 PU	20	28	7	6	4
K33-020/3 PU	20	30	11	10	4.5
K33-020/4 PU	20	26	6.5	5.5	3
K33-020/5 PU	20	26	6	5	3
K33-020/6 PU	20	28	9	8	4
K33-022 PU	22	30	8	7	4
K33-022/1 PU	22	32	7	6	4.5
K33-022/2 PU	22	32	9	8	4.5
K33-022/3 PU	22	30	9	8	4
K33-022/4 PU	22	32	8	7	4.5
K33-025 PU	25	35	7	6	4.5
K33-025/1 PU	25	40	11	10	5.5
K33-025/2 PU	25	33	7	6	4
K33-025/3 PU	25	35	8	7	4.5
K33-025/7 PU	25	33	6.5	5.5	4
K33-025/9 PU	25	33	7.5	6.5	4
K33-025/5 PU	25	33	7.8	6.8	4
K33-025/6 PU	25	33	8.3	7.3	4
K33-025/4 PU	25	33	9	8	4
K33-025/10 PU	25	35	9	8	4.5
K33-025/11 PU	25	35	11	10	4.5
K33-025/12 PU	25	33	11	10	4
K33-025/8 PU	25.4	31.50	5.75	4.75	3
K33-028 PU	28	38	11	10	4.5
K33-028/2 PU	28	36	6.8	5.8	4
K33-028/1 PU	28	38	8	7	4.5
K33-030 PU	30	40	9	8	4.5
K33-030/1 PU	30	45	11	10	5.5
K33-030/2 PU	30	40	8	7	4.5
K33-030/3 PU	30	40	11	10	4.5
K33-030/4 PU	30	42	11	10	5
K33-030/5 PU	30	43	10	9	5
K33-030/7 PU	30	38	7	6	4
K33-030/6 PU	30	38	8	7	4
K33-031 PU	31.75	38.1	7.35	6.35	3
K33-032 PU	32	40	7	6	4
K33-032/1 PU	32	40	8	7	4
K33-032/2 PU	32	42	11	10	4.5
K33-032/4 PU	32	40	9	8	4
K33-032/5 PU	32	42	7	6	4.5
K33-032/3 PU	32	42	8.3	7.3	4.5

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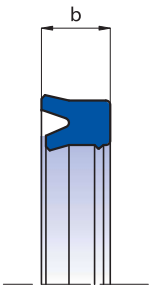
KASTAŞ NO	d (f8)	D (H11)	B (-0/+0.2)	b	n
K33-035 PU	35	45	9	8	4.5
K33-035/1 PU	35	50	11	10	5.5
K33-035/2 PU	35	43	6.7	5.7	4
K33-035/5 PU	35	43	7	6	4
K33-035/4 PU	35	43	8	7	4
K33-035/3 PU	35	45	11	10	4.5
K33-036 PU	36	46	9	8	4.5
K33-036/1 PU	36	51	11	10	5.5
K33-036/2 PU	36	52	11	10	6
K33-036/3 PU	36	46	8.3	7.3	4.5
K33-036/4 PU	36	44	7	6	4
K33-038 PU	38	48	10	9	4.5
K33-038/1 PU	38	50	7	6	5
K33-040 PU	40	50	11	10	4.5
K33-040/1 PU	40	55	11	10	5.5
K33-040/2 PU	40	50	8.3	7.3	4.5
K33-040/3 PU	40	60	12.5	11.5	6
K33-040/4 PU	40	48	6.7	5.7	4
K33-040/5 PU	40	50	10	9	4.5
K33-040/6 PU	40	50	8	7	4.5
K33-040/7 PU	40	55	12.5	11.5	5.5
K33-042 PU	42	50	6.7	5.7	4
K33-045 PU	45	55	11	10	4.5
K33-045/1 PU	45	60	11	10	5.5
K33-045/2 PU	45	55	8	7	4.5
K33-045/3 PU	45	55	8.3	7.3	4.5
K33-045/4 PU	45	60	12.5	11.5	5.5
K33-050 PU	50	60	11	10	4.5
K33-050/1 PU	50	65	11	10	5.5
K33-050/2 PU	50	60	13	12	4.5
K33-050/3 PU	50	60	8.5	7.5	4.5
K33-050/6 PU	50	60	8	7	4.5
K33-050/4 PU	50	60	8.3	7.3	4.5
K33-050/5 PU	50	65	12.5	11.5	5.5
K33-055 PU	55	65	11	10	4.5
K33-055/1 PU	55	63	12.5	11.5	4
K33-055/2 PU	55	70	12.5	11.5	5.5
K33-056 PU	56	66	9	8	4.5
K33-060 PU	60	80	13	12	6
K33-060/3 PU	60	70	11	10	4.5
K33-060/1 PU	60	70	12.5	11.5	4.5
K33-060/2 PU	60	75	13	12	5.5
K33-060/6 PU	60	70	8	7	4.5
K33-060/4 PU	60	70	13	12	4.5
K33-060/5 PU	60	75	11	10	5.5
K33-063 PU	63	83	13	12	6
K33-063/2 PU	63	78	11	10	5.5
K33-063/1 PU	63	78	12.5	11.5	5.5
K33-063/5 PU	63	73	13	12	4.5

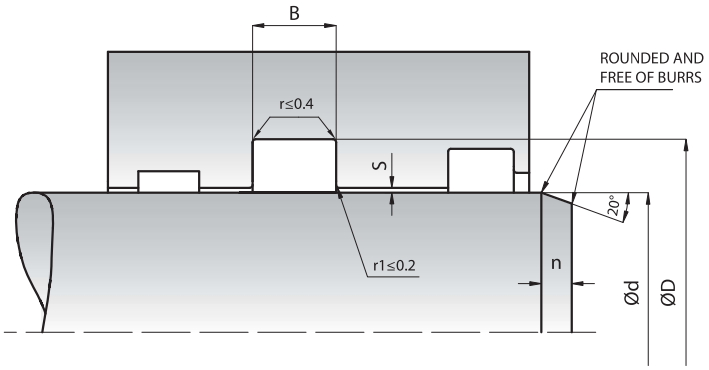
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KASTAŞ NO	d (f8)	D (H11)	B (-0/+0.2)	b	n
K33-063/3 PU	63.5	82.55	16.87	15.87	6
K33-063/4 PU	63.5	73.02	10.52	9.52	4
K33-065 PU	65	75	11	10	4.5
K33-065/1 PU	65	75	12.5	11.5	4.5
K33-065/3 PU	65	75	14	13	4.5
K33-070 PU	70	80	13	12	4.5
K33-070/1 PU	70	78	12.5	11.5	4
K33-070/2 PU	70	80	12.5	11.5	4.5
K33-070/3 PU	70	85	12.5	11.5	5.5
K33-070/4 PU	70	85	13	12	5.5
K33-070/5 PU	70	90	13	12	6
K33-070/6 PU	70	85	14	13	5.5
K33-070/7 PU	70	80	7	6	4.5
K33-075 PU	75	85	13	12	4.5
K33-075/1 PU	75	83	12.5	11.5	4
K33-075/2 PU	75	85	12.5	11.5	4.5
K33-075/3 PU	75	90	13	12	5.5
K33-077 PU	77	87	13	12	4.5
K33-080 PU	80	90	13	12	4.5
K33-080/1 PU	80	88	12.5	11.5	4
K33-080/2 PU	80	95	12.5	11.5	5.5
K33-080/5 PU	80	95	13	12	5.5
K33-080/3 PU	80	100	13	12	6
K33-080/4 PU	80	100	16	15	6
K33-080/7 PU	80	95	11	10	5.5
K33-080/6 PU	80	100	11	10	6
K33-085 PU	85	95	13	12	4.5
K33-085/1 PU	85	93	13	12	4
K33-085/2 PU	85	100	13	12	5.5
K33-085/3 PU	85	105	13	12	6
K33-090 PU	90	100	13	12	4.5
K33-090/1 PU	90	98	12.5	11.5	4
K33-090/2 PU	90	100	11	10	4.5
K33-090/4 PU	90	98	11.9	10.9	4
K33-090/7 PU	90	100	12.5	11.5	4.5
K33-090/5 PU	90	105	13	12	5.5
K33-090/3 PU	90	110	11	10	6
K33-090/6 PU	90	110	14	13	6
K33-090/11 PU	90	105	12.5	11.5	5.5
K33-090/8 PU	90	100	8	7	4.5
K33-090/9 PU	90	110	13	12	6
K33-090/10 PU	90	110	16	15	6
K33-095 PU	95	105	13	12	4.5
K33-095/1 PU	95	103	12.5	11.5	4
K33-095/2 PU	95	110	11	10	5.5
K33-095/3 PU	95	115	13	12	6
K33-100 PU	100	115	13	12	5.5
K33-100/1 PU	100	110	12.5	11.5	4.5
K33-100/2 PU	100	108	12.5	11.5	4
K33-100/3 PU	100	115	12	11	5.5
K33-100/4 PU	100	120	13	12	6
K33-100/5 PU	100	130	13	12	8
K33-100/7 PU	100	120	15	14	6
K33-100/6 PU	100	125	16	15	7
K33-105 PU	105	115	13	12	4.5
K33-105/1 PU	105	120	11	10	5.5
K33-105/2 PU	105	113	12.5	11.5	4
K33-105/3 PU	105	115	12.5	11.5	4.5
K33-106 PU	106	120	9.4	8.4	5.5
K33-110 PU	110	118	12.5	11.5	4
K33-110/1 PU	110	125	13	12	5.5
K33-110/2 PU	110	130	16	15	6
K33-110/3 PU	110	125	12	11	5.5
K33-110/5 PU	110	125	16	15	5.5
K33-110/4 PU	110	130	13	12	6
K33-113 PU	113	128	13	12	5.5

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KASTAŞ NO	d (f8)	D (H11)	B (-0/+0.2)	b	n
K33-115 PU	115	125	13	12	4.5
K33-115/1 PU	115	135	13	12	6
K33-118 PU	118	126	12.5	11.5	4
K33-120/3 PU	120	130	12.5	11.5	4.5
K33-120/1 PU	120	135	16	15	5.5
K33-120/2 PU	120	140	13	12	6
K33-120 PU	120	140	16	15	6
K33-120/5 PU	120	140	15.6	14.6	6
K33-120/4 PU	120	150	16	15	8
K33-123 PU	123	132	13	12	4
K33-125 PU	125	150	15	14	7
K33-125/1 PU	125	145	16	15	6
K33-125/2 PU	125	133	12.5	11.5	4
K33-125/4 PU	125	135	13	12	4.5
K33-125/3 PU	125	145	13	12	6
K33-130 PU	130	145	10	9	5.5
K33-130/1 PU	130	138	12.5	11.5	4
K33-130/2 PU	130	150	16	15	6
K33-135 PU	135	145	13	12	4.5
K33-135/1 PU	135	150	12.5	11.5	5.5
K33-140/3 PU	140	150	12.5	11.5	4.5
K33-140/2 PU	140	160	13	12	6
K33-140/1 PU	140	160	15.5	14.5	6
K33-140 PU	140	160	16	15	6
K33-140/4 PU	140	170	19	18	8
K33-142 PU	142	157	13	12	5.5
K33-143 PU	143	151	12.5	11.5	4
K33-145 PU	145	155	13	12	4.5
K33-150 PU	150	170	15	14	6
K33-150/2 PU	150	170	13	12	6
K33-150/1 PU	150	180	19	18	8
K33-155 PU	155	165	13	12	4.5
K33-155/1 PU	155	163	12.5	11.5	4
K33-160 PU	160	170	13	12	4.5
K33-160/1 PU	160	185	16	15	7
K33-160/3 PU	160	180	16	15	6
K33-160/2 PU	160	170	12.5	11.5	4.5
K33-165/1 PU	165	175	13	12	4.5
K33-165 PU	165.1	177.8	10.52	9.52	5
K33-170 PU	170	200	16	15	8
K33-172 PU	172	187	13	12	5.5
K33-172/1 PU	172	197	16	15	7
K33-175/1 PU	175	185	13	12	4.5
K33-175 PU	175	215	21	20	10
K33-180 PU	180	200	16	15	6
K33-180/1 PU	180	195	12.5	11.5	5.5
K33-185 PU	185	195	13	12	4.5
K33-190 PU	190	210	16	15	6
K33-190/1 PU	190.5	203.2	10.52	9.52	5

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KASTAŞ NO	d (f8)	D (H11)	B (-0/+0.2)	b	n
K33-192 PU	192	212	13	12	6
K33-200 PU	200	212	16	15	5
K33-210 PU	210	230	16	15	6
K33-212 PU	212	222	13	12	4.5
K33-215 PU	215	235	13	12	6
K33-220 PU	220	250	19	18	8
K33-230 PU	230	260	19	18	8
K33-235 PU	235	255	13	12	6
K33-240 PU	240	260	16	15	6
K33-245 PU	245	275	19	18	8
K33-252 PU	252	273	11	10	7
K33-258 PU	258	278	16	15	6
K33-280 PU	280	310	19	18	8
K33-300 PU	300	330	18	17	8

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