NAK V -SEAL

The V-SEAL is mounted directly on the shaft and seals axially against the counterface. V-SEAL is made entirely of rubber and comprises a body and a conical lip joined to the body. The V-SEAL is mounted on and rotates with the shaft. The lip seals against a counterface perpendicular to the shaft. The body holds the lip in position and at the same time seals against the shaft.。

The V-SEAL offers a number of economical advantages.

1. The demand of V-SEAL on the tolerances and surface finish of the sealing surfaces are small.
2. A counterface finished by fine turning and polishing will produce efficient sealing in most case. No special requirements are necessary concerning the machining of the shaft。
3. The V-SEAL does not wear the shaft which is expensive component in the machine。 Grooves worn in the shaft tend to impair the strength of the shaft and are, moreover, difficult to remove. When changing a seal, expensive and time-consuming disassembly can often be avoided。
4. Complicated designs can be avoided because by using the V-SEAL the designer can adapt the seal to the design。

The V-SEAL is manufactured in two different grades of rubber.

1. Nitrile rubber is the standard grade. It has excellent resistance to wear and withstands the majority of media to which a seal is exposed. The temperature range –40℃~+100℃。
2. Fluor rubber (VITON) is used where the operating temperatures are high, and in conjunction with certain aggressive media. Temperature range -20℃ to ~ +240℃ in static applications, -40℃ to ~+200℃ in dynamic application。

* V-SEAL in other grades of rubber made to special order。

NAK V-SEAL LIST

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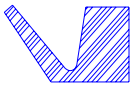
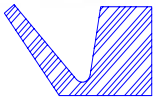
TYPE – VS 

V-SEAL NO.	For shaft diameter ‘d_1	Inside Diameter ‘d	Height Of cross Section c	Dimension A	Free Width B	Max. ‘d_2	Min. ‘d_3	Fitted Width B_1
VS-005	4.5 ~ 5.5	4	2	3.9	5.2	‘d_1+1	‘d_1+6	4.5+/-0.4
VS-006	5.5~6.5	5	2	3.9	5.2	‘d_1+1	‘d_1+6	4.5+/-0.4
VS-007	6.5~8	6	2	3.9	5.2	‘d_1+1	‘d_1+6	4.5+/-0.4
VS-008	8~9.5	7	2	3.9	5.2	‘d_1+1	‘d_1+6	4.5+/-0.4
VS-010	9.5~11.5	9	3	5.6	7.7	‘d_1+2	‘d_1+9	6.7+/-0.6
VS-012	11.5~13.5	10.5	3	5.6	7.7	‘d_1+2	‘d_1+9	6.7+/-0.6
VS-014	13.5~15.5	12.5	3	5.6	7.7	‘d_1+2	‘d_1+9	6.7+/-0.6
VS-016	15.5~17.5	14	3	5.6	7.7	‘d_1+2	‘d_1+9	6.7+/-0.6
VS-018	17.5~19	16	3	5.6	7.7	‘d_1+2	‘d_1+9	6.7+/-0.6
VS-020	19~21	18	4	7.9	10.5	‘d_1+2	‘d_1+12	9.0+/-0.8
VS-022	21~24	20	4	7.9	10.5	‘d_1+2	‘d_1+12	9.0+/-0.8
VS-025	24~27	22	4	7.9	10.5	‘d_1+2	‘d_1+12	9.0+/-0.8
VS-028	27~29	25	4	7.9	10.5	‘d_1+3	‘d_1+12	9.0+/-0.8
VS-030	29~31	27	4	7.9	10.5	‘d_1+3	‘d_1+12	9.0+/-0.8
VS-032	31~33	29	4	7.9	10.5	‘d_1+3	‘d_1+12	9.0+/-0.8
VS-035	33~36	31	4	7.9	10.5	‘d_1+3	‘d_1+12	9.0+/-0.8
VS-038	36~38	34	4	7.9	10.5	‘d_1+3	‘d_1+12	9.0+/-0.8
VS-040	38~43	36	5	9.5	13	‘d_1+3	‘d_1+15	11.0+/-1.0
VS-045	43~48	40	5	9.5	13	‘d_1+3	‘d_1+15	11.0+/-1.0
VS-050	48~53	45	5	9.5	13	‘d_1+3	‘d_1+15	11.0+/-1.0
VS-055	53~58	49	5	9.5	13	‘d_1+3	‘d_1+15	11.0+/-1.0
VS-060	58~63	54	5	9.5	13	‘d_1+3	‘d_1+15	11.0+/-1.0
VS-065	63~68	58	5	9.5	13	‘d_1+3	‘d_1+15	11.0+/-1.0
VS-070	68~73	63	6	11.3	15.5	‘d_1+4	‘d_1+18	13.5+/-1.2
VS-075	73~78	67	6	11.3	15.5	‘d_1+4	‘d_1+18	13.5+/-1.2
VS-080	78~83	72	6	11.3	15.5	‘d_1+4	‘d_1+18	13.5+/-1.2
VS-085	83~88	76	6	11.3	15.5	‘d_1+4	‘d_1+18	13.5+/-1.2
VS-090	88~93	81	6	11.3	15.5	‘d_1+4	‘d_1+18	13.5+/-1.2
VS-095	93~98	85	6	11.3	15.5	‘d_1+4	‘d_1+18	13.5+/-1.2
VS-100	98~105	90	6	11.3	15.5	‘d_1+4	‘d_1+18	13.5+/-1.2
VS-110	105~115	99	7	13.1	18	‘d_1+4	‘d_1+21	15.5+/-1.5
VS-120	115~125	108	7	13.1	18	‘d_1+4	‘d_1+21	15.5+/-1.5

TYPE – VS

V-SEAL NO.	For shaft diameter 'd_1	Inside Diameter 'd	Height Of cross Section c	Dimension A	Free Width B	Max. 'd_2	Min. 'd_3	Fitted Width B_1
VS-130	125 ~135	117	7	13.1	18	'd_1+4	'd_1+21	15.5+/-1.5
VS-140	135~145	126	7	13.1	18	'd_1+4	'd_1+21	15.5+/-1.5
VS-150	145~155	135	7	13.1	18	'd_1+4	'd_1+21	15.5+/-1.5
VS-160	155~165	144	8	15.0	20	'd_1+5	'd_1+24	18.0+/-1.8
VS-170	165~175	153	8	15.0	20	'd_1+5	'd_1+24	18.0+/-1.8
VS-180	175~185	162	8	15.0	20	'd_1+5	'd_1+24	18.0+/-1.8
VS-190	185~195	171	8	15.0	20	'd_1+5	'd_1+24	18.0+/-1.8
VS-199	195~210	180	8	15.0	20	'd_1+5	'd_1+24	18.0+/-1.8

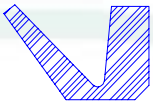
TYPE – VA 

V-SEAL NO.	For shaft diameter ‘d_1	Inside Diameter ‘d	Height Of cross Section c	Dimension A	Free Width B	Max. ‘d_2	Min. ‘d_3	Fitted Width B_1
VA-003	2.7 ~ 3.5	2.5	1.5	2.1	3.0	‘d_1+1	‘d_1+4	2.5+/-0.3
VA-004	3.5~4.5	3.2	2	2.4	3.7	‘d_1+1	‘d_1+6	3.0+/-0.4
VA-005	4.5~5.5	4	2	2.4	3.7	‘d_1+1	‘d_1+6	3.0+/-0.4
VA-006	5.5~6.5	5	2	2.4	3.7	‘d_1+1	‘d_1+6	3.0+/-0.4
VA-007	6.5~8	6	2	2.4	3.7	‘d_1+1	‘d_1+6	3.0+/-0.4
VA-008	8~9.5	7	2	2.4	3.7	‘d_1+1	‘d_1+6	3.0+/-0.4
VA-010	9.5~11.5	9	3	3.4	5.5	‘d_1+2	‘d_1+9	4.5+/-0.6
VA-012	11.5~12.5	10.5	3	3.4	5.5	‘d_1+2	‘d_1+9	4.5+/-0.6
VA-014	13.5~15.5	12.50	3	3.4	5.5	‘d_1+2	‘d_1+9	4.5+/-0.6
VA-016	15.5~17.5	14	3	3.4	5.5	‘d_1+2	‘d_1+9	4.5+/-0.6
VA-018	17.5~19	16	3	3.4	5.5	‘d_1+2	‘d_1+9	4.5+/-0.6
VA-020	19~21	18	4	4.7	7.5	‘d_1+2	‘d_1+12	6.0+/-0.8
VA-022	21~24	20	4	4.7	7.5	‘d_1+2	‘d_1+12	6.0+/-0.8
VA-025	24~27	22	4	4.7	7.5	‘d_1+2	‘d_1+12	6.0+/-0.8
VA-028	27~29	25	4	4.7	7.5	‘d_1+3	‘d_1+12	6.0+/-0.8
VA-030	29~31	27	4	4.7	7.5	‘d_1+3	‘d_1+12	6.0+/-0.8
VA-032	31~33	29	4	4.7	7.5	‘d_1+3	‘d_1+12	6.0+/-0.8
VA-035	33~36	31	4	4.7	7.5	‘d_1+3	‘d_1+12	6.0+/-0.8
VA-038	36~38	34	4	4.7	7.5	‘d_1+3	‘d_1+12	6.0+/-0.8
VA-040	38~43	36	5	5.5	9.0	‘d_1+3	‘d_1+15	7.0+/-1.0
VA-045	43~48	40	5	5.5	9.0	‘d_1+3	‘d_1+15	7.0+/-1.0
VA-050	48~53	45	5	5.5	9.0	‘d_1+3	‘d_1+15	7.0+/-1.0
VA-055	53~58	49	5	5.5	9.0	‘d_1+3	‘d_1+15	7.0+/-1.0
VA-060	58~63	54	5	5.5	9.0	‘d_1+3	‘d_1+15	7.0+/-1.0
VA-065	63~68	58	5	5.5	9.0	‘d_1+3	‘d_1+15	7.0+/-1.0
VA-070	68~73	63	6	6.8	11.0	‘d_1+4	‘d_1+18	9.0+/-1.2
VA-075	73~78	67	6	6.8	11.0	‘d_1+4	‘d_1+18	9.0+/-1.2
VA-080	78~83	72	6	6.8	11.0	‘d_1+4	‘d_1+18	9.0+/-1.2
VA-085	83~88	76	6	6.8	11.0	‘d_1+4	‘d_1+18	9.0+/-1.2
VA-090	88~93	81	6	6.8	11.0	‘d_1+4	‘d_1+18	9.0+/-1.2
VA-095	93~98	85	6	6.8	11.0	‘d_1+4	‘d_1+18	9.0+/-1.2

TYPE – VA

V-SEAL NO.	For shaft diameter ‘d_1	Inside Diameter ‘d	Height Of cross Section c	Dimension A	Free Width B	Max. ‘d_2	Min. ‘d_3	Fitted Width B_1
VA-100	98~105	90	6	6.8	11.0	‘d_1+4	‘d_1+18	9.0+/-1.2
VA-110	105 ~115	99	7	7.9	12.8	‘d_1+4	‘d_1+21	10.5+/-1.5
VA-120	115~125	108	7	7.9	12.8	‘d_1+4	‘d_1+21	10.5+/-1.5
VA-130	125 ~135	117	7	7.9	12.8	‘d_1+4	‘d+21	10.5+/-1.5
VA-140	135~145	126	7	7.9	12.8	‘d_1+4	‘d_1+21	10.5+/-1.5
VA-150	145~155	135	7	7.9	12.8	‘d_1+4	‘d_1+21	10.5+/-1.5
VA-160	155~165	144	8	9	14.5	‘d_1+5	‘d_1+24	12+/-1.8
VA-170	165~175	153	8	9	14.5	‘d_1+5	‘d_1+24	12+/-1.8
VA-180	175~185	162	8	9	14.5	‘d_1+5	‘d_1+24	12+/-1.8
VA-190	185~195	171	8	9	14.5	‘d_1+5	‘d_1+24	12+/-1.8
VA-199	195~210	180	8	9	14.5	‘d_1+5	‘d_1+24	12+/-1.8
VA-200	190~210	180	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-220	210~235	198	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-250	235~265	225	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-275	265~290	247	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-300	290~310	270	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-325	310~335	292	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-350	335~365	315	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-375	365~390	337	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-400	390~430	360	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-450	430~480	405	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-500	480~530	450	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-550	530~580	495	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-600	580~630	540	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-650	630~665	600	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-700	665~705	630	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0
VA-725	705~745	670	15	14.3	25	‘d_1+10	‘d_1+45	20+/-4.0

TYPE – VL



V-SEAL NO.	For shaft diameter 'd_1	Inside Diameter 'd	Height Of cross Section c	Dimension A	Free Width B	Max. 'd_2	Min. 'd_3	Fitted Width B_1
VL-110	105~115	99	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-120	115 ~125	108	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-130	125~135	117	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-140	135~145	126	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-150	145 ~155	135	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-160	155~165	144	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-170	165 ~175	153	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-180	175~185	162	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-190	185~195	171	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-200	195~210	182	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-220	210~233	198	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-250	233~260	225	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-275	260~285	247	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-300	285~310	270	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-325	310~335	292	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-350	335~365	315	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-375	365~385	337	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-400	385~410	360	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-425	410~440	382	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-450	440~475	405	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-500	475~510	450	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-525	510~540	472	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-550	540~575	495	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5
VL-600	575~625	540	6.5	6	10.5	'd_1+5	'd_1+20	8+/-1.5