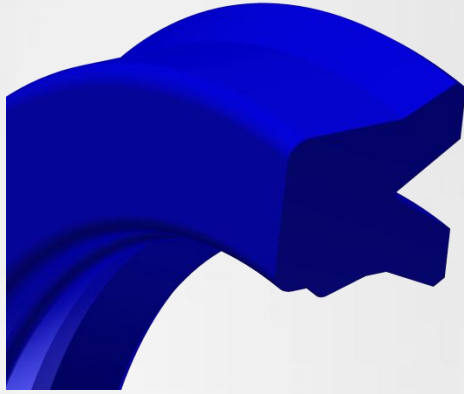


K616
Premium Pro
Rod & Piston Seal
Single -Acting



APPLICATION

Aerospace
Automotive
Construction and Mining
Logistics
Manufacturing and Machine Tools
Material Handling
Oil and Gas
Printing
Processing Equipment



INTRODUCTION

K616 is a double lip rod seals. We called it version *Premium Pro* because it is the best material over the world.

They can use in *extremely strict application* such as *Aerospace, Oil and Gas, Hammer, Quarry.*

It keeps the most important roles of hydraulic cylinders. K616 is a best of range *high pressure and temperature performance*. KOLBEN UPA1003® is *superior excellent* material that used to *draconic* application. This is one of *best material* over the world.

KOLBEN UPA1003® are designed and synthesised to provide *superior mechanical performance at elevated temperatures* with the same batch to batch consistency and ease of downstream processing

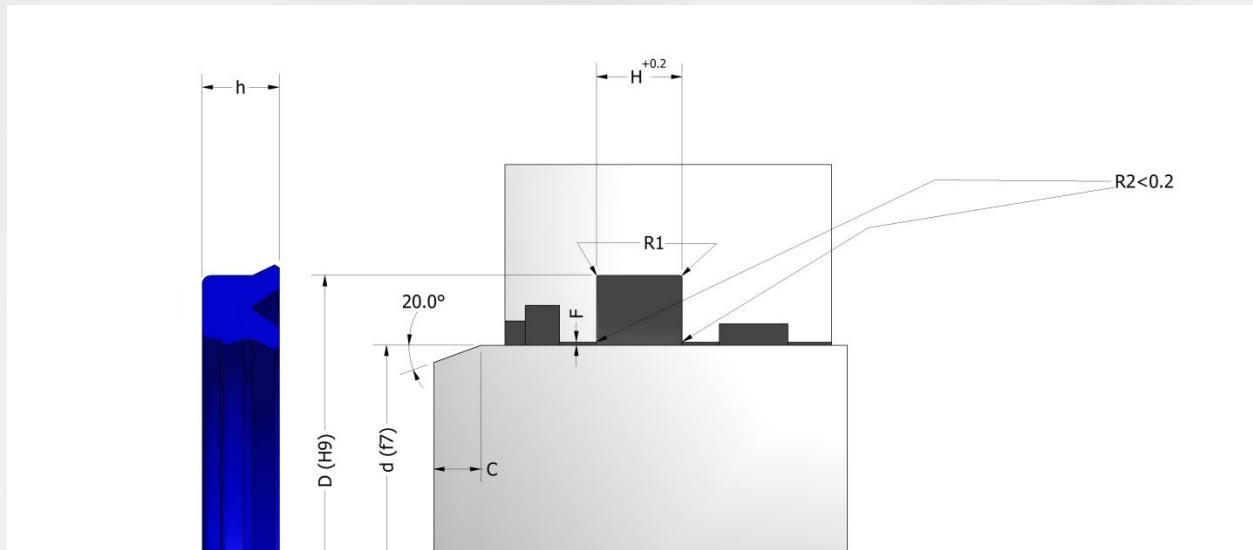
MATERIAL

KOLBEN UPA1003®

FEATURES

Super excellent wear & abrasion resistance.
Easy installation.
Low compression
Low load at high speed, low noise
Super excellent resistance to extrusion and wear.
Extreme high extrusion resistance
Enhanced sealing performance in non- pressurized condition.





Material	Application fluid	Temperature °C	Speed	Pressure	Max. Gap F
KOLBEN UPA1003®	Hydraulic oil 68	-50 to +160	≤ 1,0m/s	300 Bar	F ≤ 0,6 mm
	Grease			350 Bar	F ≤ 0,5 mm
	Oil Brake			500 Bar	F ≤ 0,4 mm
	Food				
	Perfume				
	Medical				

Article No.	Rod Diameter	Groove Diameter	Seal Width	Groove Width		
	d (f7)	D (H9)	h	H +0.2	C	R1
16100001	4	10	4	4.5	4	0.4
16100002	4	12	6	7	4	0.4
16100003	8	16	5.7	6.3	4	0.4
16100004	8	16	8	9	4	0.4
16100005	8	22	10	11	4	0.4
16100006	8	24	8	9	4	0.4
16100007	10	14	2.2	3	4	0.4
16100008	10	16	5	6	4	0.4

16100009	10	18	5	6	4	0.4
16100010	10	18	5.7	6.3	4	0.4
16100011	10	20	7.3	8	4	0.4
16100012	10	20	8.2	9	4.5	0.4
16100013	12	17	4	5	4	0.4
16100014	12	18	5	6	4	0.4
16100015	12	19	5	6	4	0.4
16100016	12	20	5	6	4	0.4
16100017	12	20	5.7	6.3	4	0.4
16100018	12	22	7.3	8	4	0.4
16100019	12	22	8	9	4	0.4
16100020	14	22	6	6.3	4.5	0.4
16100021	14	24	7.3	8	4.5	0.4
16100022	14	24	8.2	9	4.5	0.4
16100023	15	22	6	7	4.5	0.4
16100024	15	25	8	9	4.5	0.4
16100025	16	22	5	6	4	0.4
16100026	16	24	5	6	4	0.4
16100027	16	24	5.7	6.3	4.5	0.4
16100028	16	26	7.3	8	4.5	0.4
16100029	16	26	8.2	9	4.5	0.4
16100030	18	25	5	6	4	0.4
16100032	18	26	5	6	4	0.4
16100033	18	26	6	7	4	0.4
16100031	18	26	8	9	4	0.4
16100034	18	28	8	9	4.5	0.4
16100035	20	26	5	6	4	0.4
16100036	20	28	5	6	4	0.4
16100037	20	28	6	7	4	0.4
16100038	20	30	10	11	4.5	0.4
16100039	20	30	5	6	4	0.4
16100040	20	30	6	7	4	0.4
16100041	22	30	5	6	4	0.4
16100042	22	30	6	7	4	0.4
16100043	22	30	7.3	8	4.5	0.4
16100044	22	32	7.3	8	4.5	0.4
16100045	22	38	6	7	4.5	0.4
16100046	22.4	30	5	6	4	0.4

16100047	25	31	5	6	4	0.4
16100048	25	33	6	7	4	0.4
16100049	25	35	5	6	4	0.4
16100050	25	35	6	7	4	0.4
16100051	25	35	8	9	5	0.4
16100052	25	35	10	11	5	0.4
16100053	25	33	6	7	4.5	0.4
16100054	25	38	6	7	4.5	0.4
16100055	25	38	8	9	5	0.4
16100056	25	38	10	11	5	0.4
16100057	26	36	7	8	4.5	0.4
16100058	26	38	8	9	4.5	0.4
16100059	27	33	5	6	4.5	0.4
16100060	28	35.5	5	6	4.5	0.4
16100061	28	36	10	11	5	0.4
16100062	28	38	6	7	4.5	0.4
16100063	28	38	7	8	5	0.4
16100064	28	38	8	9	5	0.4
16100065	28	40	10	11	5	0.4
16100066	28	43	11.4	12.5	5	0.4
16100067	30	37	8	9	5	0.4
16100068	30	38	5	6	4.5	0.4
16100069	30	38	6	7	4.5	0.4
16100070	30	38	8	9	4.5	0.4
16100071	30	38	10	11	5	0.4
16100072	30	42	11	12	5	0.4
16100073	30	45	10	11	5	0.4
16100074	31.5	41.5	6	7	5	0.4
16100075	31.75	41.28	7.92	9	5	0.4
16100076	32	40	6	7	4.5	0.4
16100077	32	42	8	9	5	0.4
16100078	32	42	10	11	5	0.4
16100079	32	44	8.2	9	5	0.4
16100080	32	45	10	11	5	0.4
16100081	32	47	10	11	5	0.4
16100082	32	48	10	11	5	0.4
16100083	34	44	6.4	7	4.5	0.4
16100084	35	43	6	7	4.5	0.4

16100085	35	43	7	8	4.5	0.4
16100086	35	45	7	8	4.5	0.4
16100087	35	45	10	11	4.5	0.4
16100088	35	50	10	11	4.5	0.4
16100089	36	44	6.4	7	4.5	0.4
16100090	36	44	8.2	9	4.5	0.4
16100091	36	46	7.3	8	4.5	0.4
16100092	38	48	8	9	5	0.4
16100093	38	48	10	11	5	0.4
16100094	38.1	44.45	6.35	7	4.5	0.4
16100095	38.1	50.8	9.53	10	5	0.4
16100096	40	48	5.7	6.3	4.5	0.4
16100097	40	48	8	9	4.5	0.4
16100098	40	50	9	10	5	0.4
16100099	40	52	11	12	4.5	0.4
16100100	40	53	8	9	5	0.4
16100101	42	50	6	7	4.5	0.4
16100102	45	53	10	11	5	0.4
16100103	45	53	12	13	5	0.4
16100104	45	55	4	5	4.5	0.4
16100105	45	55	10	11	5	0.4
16100106	45	56	7	8	4.5	0.4
16100107	48	63	10	11	5	0.4
16100108	45	60	10	11	5	0.4
16100109	50	58	8	9	5	0.4
16100110	50	58	10	11	5	0.4
16100111	50	60	10	11	5	0.4
16100112	50	63	7	8	5	0.4
16100113	50	63	8	9	5	0.4
16100114	50	68	8	9	5	0.4
16100115	52	62	7.3	8	5	0.4
16100116	52	62	10	11	5	0.4
16100117	53	63	6	7	5	0.4
16100118	55	70	6	7	5	0.4
16100119	55	63	10	11	5	0.4
16100120	55	68	10	11	5	0.4
16100121	55	72	12	13	5	0.4
16100122	56	66	6	7	5	0.4

16100123	56	71	12	13	5	0.4
16100124	57.15	69.85	8.66	9	5	0.4
16100125	60	70	10	11	5	0.4
16100126	60	70	12	13	5	0.4
16100127	60	75	6	7	5	0.4
16100128	60	72	10	11	5	0.4
16100129	60	75	12	13	5	0.4
16100130	60	75	15	16	5	0.4
16100131	60	80	12	13	5	0.4
16100132	63	73	6	7	5	0.4
16100133	63	78	8	9	5	0.4
16100134	63	78	10	11	5.5	0.4
16100135	63	78	11.4	12.5	5.5	0.4
16100136	63.5	76.2	7.21	8.3	5.5	0.4
16100137	63.5	79.38	12.7	13.5	5.5	0.4
16100138	65	75	6	7	4.5	0.4
16100139	65	75	8	9	5	0.4
16100140	65	80	6	7	4.5	0.4
16100141	65	80	10	11	5.5	0.4
16100142	65	85	15	16	5.5	0.4
16100143	70	80	7	8	5.5	0.4
16100144	70	80	8	9	5.5	0.4
16100145	70	80	12	13	5.5	0.4
16100146	70	82	10	11	5.5	0.4
16100147	70	85	6	7	4.5	0.4
16100148	70	80	12	13	5.5	0.4
16100149	70	85	11.4	12.5	5.5	0.4
16100150	75	85	6	7	5	0.4
16100151	75	90	6	7	5	0.4
16100152	75	95	10	11	5.5	0.4
16100153	80	90	6	7	5	0.4
16100154	80	90	8	9	5	0.4
16100155	80	90	12	13	5.5	0.4
16100156	75	95	12	13	5.5	0.4
16100157	80	90	8	9	5.5	0.4
16100158	80	95	6	7	5	0.4
16100159	80	90	8	9	5.5	0.4
16100160	80	90	10	11	5.5	0.4

16100161	80	95	12	13	5.5	0.4
16100162	80	100	14.6	16	6	0.6
16100163	85	100	6	7	6	0.6
16100164	85	100	12	13	6	0.6
16100165	90	100	6	7	6	0.6
16100166	90	100	8	9	6	0.6
16100167	90	100	10	11	6	0.6
16100168	90	100	12	13	6	0.6
16100169	90	102	8.7	9.6	6	0.6
16100170	90	105	6	7	6	0.6
16100171	90	115	12	13	6	0.6
16100172	95	110	6	7	6	0.6
16100173	100	110	10	11	6	0.6
16100174	100	110	12	13	6	0.6
16100175	100	115	6	7	6	0.6
16100176	110	120	6	7	6	0.6
16100177	110	120	10	11	6	0.6
16100178	110	125	12	13	6	0.6
16100179	115	125	12	13	6	0.6
16100180	130	150	15	16	6	0.6
16100181	140	155	9	10	6	0.6
16100183	140	155	11.4	12.5	6	0.6
16100182	150	160	10	11	6	0.6
16100184	160	175	14.6	16	5.5	0.4