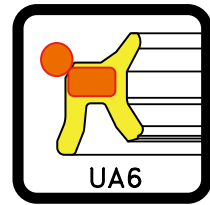


\* 1 Mpa = 10 Bar    1 Bar = 14.5 psi    1 Mpa = 145 psi

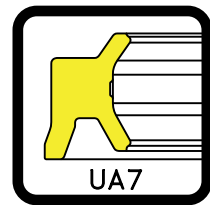


## Pneumatic Combination Wiper/Rod Seal

This pneumatic rod seal/wiper Set profile is fitted into housings with a circlip recess according DIN 7993 (type B). The seal/wiper element is mounted and retained by the circlip. Care should be taken that neither scraper nor sealing lips are damaged by sharp edges. Exchanging the rod seal/wiper Set profile without removing the piston rod is possible if a recess is provide.

Material : FKM  
Working Pressure : ≤ 1.6 Mpa  
Working Temperature : -10°C ~ +150°C  
Surface Speed : ≤ 1.0 m/s  
Application : Pneumatic

( PAGE 21 )

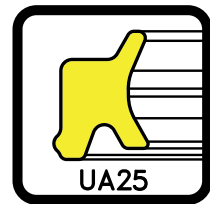


## Pneumatic Combination Wiper/Rod Seal

This seal is used for preventing entry of dust, and protecting the whole equipment. The double-lip design of TPU material could provide the double-sealing function, and keep the lubrication film under stable. The proportion is small, and easily to be dis/assemble.

Material : ESTER TPU  
Working Pressure : ≤ 1.6 Mpa  
Working Temperature : -40°C ~ +80°C  
Surface Speed : ≤ 1.0 m/s  
Application : Pneumatic

( PAGE 22 )

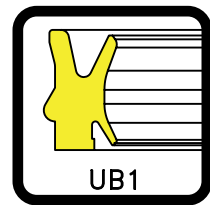


## Double Lip Rod Wiper

This seal is used for preventing entry of dust, and protecting the whole cylinder. It could provide the double-sealing function, and keep the lubrication film under stable.

Material : NBR  
Working Temperature : -35°C ~ +80°C  
Working Pressure : ≤ 1.6 Mpa  
Surface Speed : ≤ 1.0 m/s  
Application : Pneumatic

( PAGE 23 )

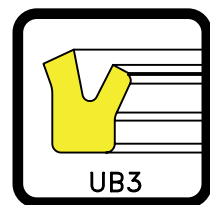


## Pneumatic Combination Wiper/Rod Seal

The profile is assembled into a housing designed with a circlip groove as DIN 7993 (type B). It is retained by the rounded outside diameter which makes it easy to snap into the groove. Remove all sharp corners to avoid damaging the lips of the scraper and the seal during assembly.

Material : ESTER TPU  
Working Pressure : ≤ 1.6 Mpa  
Working Temperature : -35°C ~ +80°C  
Surface Speed : ≤ 1.0 m/s  
Application : Pneumatic

( PAGE 24 )

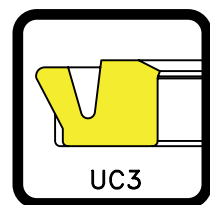


## Asymmetrical Pneumatic Rod Seal

Laying stress on wear proof. Exclusively for small diameter cylinders. Compared with O-Rings, superior durability and characteristics of friction.

Material : NBR  
Working Temperature : -35°C ~ +80°C  
Material : FKM  
Working Temperature : -10°C ~ +150°C  
Working Pressure : ≤ 1.0 Mpa  
Surface Speed : ≤ 1.0 m/s  
Application : Pneumatic

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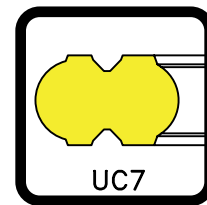


## Pneumatic U-Cup Piston Seal

The seal is a compact u-cup with asymmetrical profile and special pneumatic sealing edge on the dynamic sealing lip. The asymmetric profile with the longer and thicker static sealing lip guarantees a secure seat in the groove base. The special pneumatic sealing edge provides a very good seal with low friction and maintains an effective lubrication film.

Material : NBR  
Working Temperature : -20°C ~ +80°C  
Material : FKM  
Working Temperature : -20°C ~ +200°C  
Working Pressure : ≤ 1.6 Mpa  
Surface Speed : ≤ 1.0 m/s  
Application : Pneumatic

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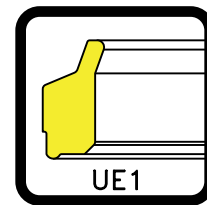


## Low Friction Pneumatic Piston Seal

Compact type of both sides pressure. Exclusively for pistons. Compared with O-Rings, superior characteristics of friction and cross section design so that they can restrain from causing rolling and twisting.

Material : NBR  
Working Temperature : -35°C ~ +80°C  
Material : FKM  
Working Temperature : -20°C ~ +200°C  
Working Pressure : ≤ 1.0 Mpa  
Surface Speed : ≤ 1.0 m/s  
Application : Pneumatic

( PAGE 27 )



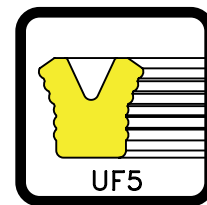
## Pneumatic Damper Seal

These pneumatic cushioning seals profile PP are easily snapped into the groove, which should be free of all contaminants before installation.

Care should be taken that the ealing lips are not damaged by sharp edges during installation. Initial lubrication is essential for a long service life.

Material : NBR  
Working Temperature : -35°C ~ +80°C  
Material : FKM  
Working Temperature : -20°C ~ +200°C  
Working Pressure : ≤ 1.0 Mpa  
Surface Speed : ≤ 1.0 m/s  
Application : Pneumatic

( PAGE 28-29 )

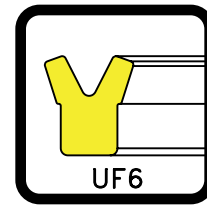


## Low Friction Pneumatic Symmetrical Piston/Rod U-Cup Seal

Packings for both pistons and rods of pneumatic cylinders. Avoid using this packing for lubricative cylinder because it is used exclusively for non-lubrication.

Material : NBR  
Working Temperature : -35°C ~ +80°C  
Material : FKM  
Working Temperature : -20°C ~ +200°C  
Working Pressure : ≤ 1.0 Mpa  
Surface Speed : ≤ 1.0 m/s  
Application : Pneumatic

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## Low Friction Pneumatic Symmetrical Piston/Rod U-Cup Seal

Packings for both pistons and rods of pneumatic cylinders. Avoid using this packing for lubricative cylinder because it is used exclusively for non-lubrication.

Material : NBR  
Working Temperature : -35°C ~ +80°C  
Material : FKM  
Working Temperature : -10°C ~ +150°C  
Working Pressure : ≤ 0.8 Mpa  
Surface Speed : ≤ 1.0 m/s  
Application : Pneumatic

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# Material Application List

●:Best ▲:Suitable X:Not Recommended -:No Data

Material	NBR							
	N7026AA	N7028AA	N7539AA	N7626AA	N8039AA	N8590AA	N8594AA	N9026AA
Shore A	70	70	75	75	80	85	85	90
Environment Temp. °C	-55~100	-30~120	-35~80	-55~100	-40~100	-40~100	-35~80	-55~100
+200°C								
+100°C								
0°C								
-50°C								
Tensile Strength PSI (Mpa)	2453 (16.92)	3066 (21.1)	3306 (22.8)	2563 (17.68)	2934 (20.23)	3032 (20.8)	3008 (20.7)	2693 (18.6)
Elongation%	327	363	320	246	285	166	130	159
100% Modulus psi (Mpa)	619 (4.27)	487 (3.4)	834 (5.8)	998 (6.88)	801 (5.52)	1968 (13.6)	2584 (17.8)	1945 (13.4)
Comon Hydraulic oil	▲	●	●	▲	●	●	●	▲
Low-Temp Hydraulic Oil	●	●	●	●	●	●	▲	●
Coolant(Water + GLYCOL)	▲	▲	▲	▲	▲	▲	▲	▲
Engine oil	●	●	●	●	●	●	●	●
Lubricant	●	●	●	●	●	●	●	●
Silicone Lubricant	●	●	●	●	●	●	●	●
Silicone oil	●	●	●	●	●	●	●	●
Chlorine Cutting Fluid	X	X	X	X	X	X	X	X
Sulfurized Cutting Fluid	●	●	●	●	●	●	●	●
Water Soluble Cutting Fluid	●	●	●	●	●	●	●	●
Fuel	▲	●	▲	▲	▲	▲	●	▲
Water	▲	▲	▲	▲	▲	▲	▲	●
O <sub>3</sub>	X	X	X	X	X	X	X	X
Function	Good Resistance of Extreme-Low-Temp, Oil and Abrasion	Good Compression Set, Good Resistance of Abrasion and oil , Suit to X-ing	Special Compound, Self-Lubrication, low friction,Good Resistance of Oil, Suit to Dynamic Parts UB3,UB5	Good Resistance of Extreme-Low-Temp, Oil and Abrasion	Special Compound, Self-Lubrication, low friction,Good Resistance of Oil, Suit to Dynamic Parts UB3,UB5	Good Resistance of Low-Temp and stike, Cushion Only	High-Tempt, Good Resistance of Oil and Abrasion , CUSION and UC6 Only	Good Resistance of Extreme-Low-Temp, Oil and Abrasion

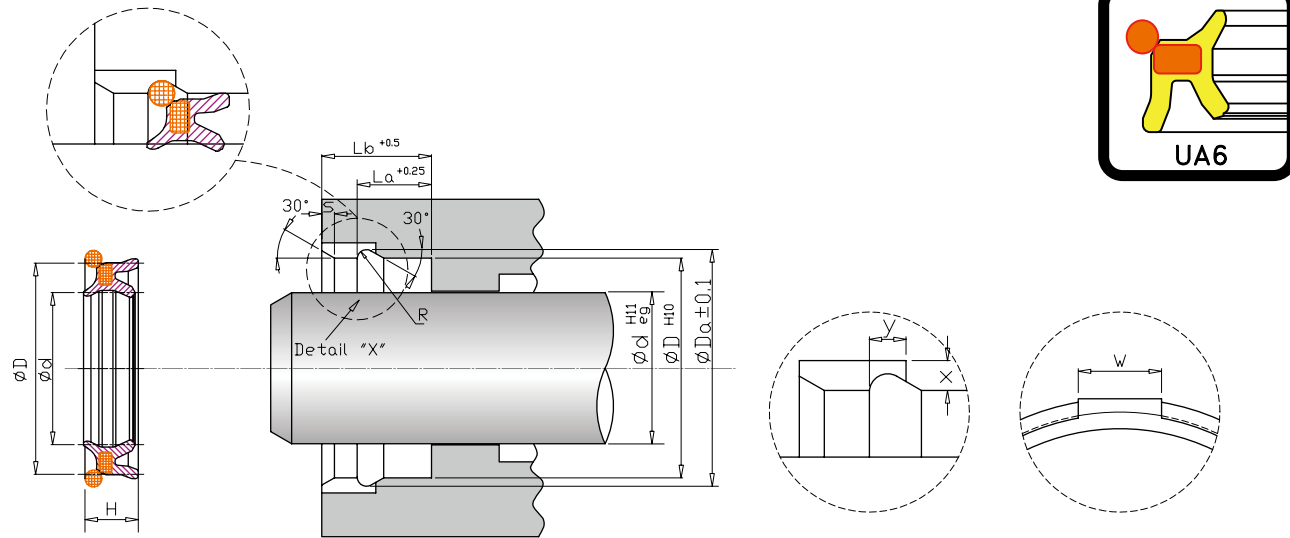
NBR	HNBR	FKM						TPU Thermoplastic Urethane	
		N9076AA	H7000AA	H9018AA	V7559AA	V7029AA	V7514AA	V8031AE	V9059AA
90	70	90	75	70	75	80	90	90	95
-50~100	-45~135	-40~135	-25~200	-10~150	-20~200	-10~150	-10~150	-40~80	-35~80
2480 (17.1)	3729 (25.7)	3513 (24.23)	2428 (16.6)	2044 (14.1)	2214 (15.3)	2282 (15.74)	2422 (16.7)	6625 (45)	7252 (50)
151	274	148	185	231	241	154	139	460	515
1664 (11.5)	780 (5.4)	2688 (18.54)	1310 (9.0)	939 (6.48)	740 (5.1)	1540 (10.62)	1812 (12.5)	1036 (7.1)	2216 (15.2)
●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●
▲	●	▲	▲	▲	▲	▲	▲	X	X
●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	-	-
●	●	●	●	●	●	●	●	●	●
X	X	X	●	●	●	●	●	X	X
●	●	●	●	●	●	●	●	-	-
●	●	●	▲	▲	▲	▲	▲	-	-
●	●	●	●	●	●	●	●	●	●
▲	●	●	●	●	●	●	●	▲	▲
X	●	●	●	●	●	●	●	-	-
Good Compression Set, High Hardness, Good Resistance of Abrasion. Good Resistance of Low-Temp	Good Resistance of High-Temp, Oil and Water	Self-Lubrication, low friction,Good Resistance of High-Temp, Oil and Water	Good Resistance of Extreme-High-Temp and Oil, Good Resistance of Abrasion	Good Resistance of Extreme-High-Temp, Tearing and Oil, Suit to X-ring	Good Resistance of Extreme-High-Temp and Oil,Good Resistance of Abrasion	Good Resistance of Extreme-High-Temp and Oil, UA6 Only	Good Resistance of Extreme-High-Temp, Oil and Abrasion.Suit to Dynamic Parts	Extremely High Elongation, Excellent Resistance of Abrasion. Good Resistance of Water	Extremely High Elongation, Excellent Resistance of Abrasion. Good Resistance of Water, Extremely High Hardness

# UA6 Series

Pneumatic Combination Rod Seal

# UA7 Series

Pneumatic Combination Rod Seal

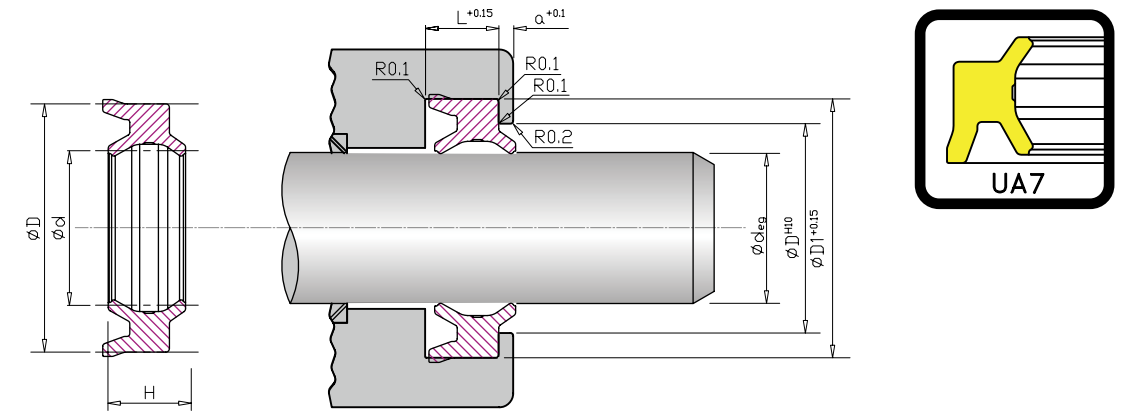


FKM/ FPM 80 PHYSICAL PROPERTIES			
Working Pressure: ≤ 1.6 Mpa	Hardness	80 Shore A	DIN53505
Working Temperature: -10 °C ~ +150°C		80 Shore A	ASTM D2240
Surface Speed: ≤ 1.0 m/s	Tensile Strength	15.74 Mpa	DIN53504
		2282 psi	ASTM D-412
Compression Set	8.1%	DIN53517	
24 hrs @ 175 °C	8.1%	ASTM D-395	
	Elongation	154 %	DIN53504
		154 %	ASTM D-412
	Standard Compound	V8031AE	
	Color	Green ●	

■ We have this tool size ★ All the tools for UA6 are completed.

CODE	d (mm)	D (mm)	H (mm)	Da	La	Lb	R	x	y	w	s
UA61220	12	20	8.5	22.0	8.8	13.0	1.1	1.8	2.2	4.0	1.5
UA61222	12	22	8.5	24.0	8.8	13.0	1.1	1.8	2.2	4.0	1.5
UA61626	16	26	8.5	28.0	8.8	13.0	1.1	1.8	2.2	5.0	1.5
UA61826	18	26	8.5	28.0	8.8	13.0	1.1	1.8	2.2	5.0	1.5
UA61828	18	28	8.5	30.0	8.8	13.0	1.1	1.8	2.2	5.0	1.5
UA62030	20	30	8.5	32.0	8.8	13.0	1.1	1.8	2.2	5.0	1.5
UA62232	22	32	8.5	34.5	9.4	14.0	1.4	2.0	2.8	7.5	2.0
UA62535	25	35	8.5	37.5	9.4	14.0	1.4	2.0	2.8	7.5	2.0
UA63242	32	42	8.5	44.5	9.4	14.0	1.4	2.0	2.8	7.5	2.0
UA64050	40	50	8.5	52.5	9.4	14.0	1.4	2.0	2.8	7.5	2.0
UA65060	50	60	8.5	63.2	10.4	15.0	1.8	2.5	3.6	10.0	2.0
UA66375	63	75	10.0	78.2	11.4	16.0	1.8	2.5	3.6	10.0	2.0

\*Includes the Retaining Ring  
Material: SUS 304



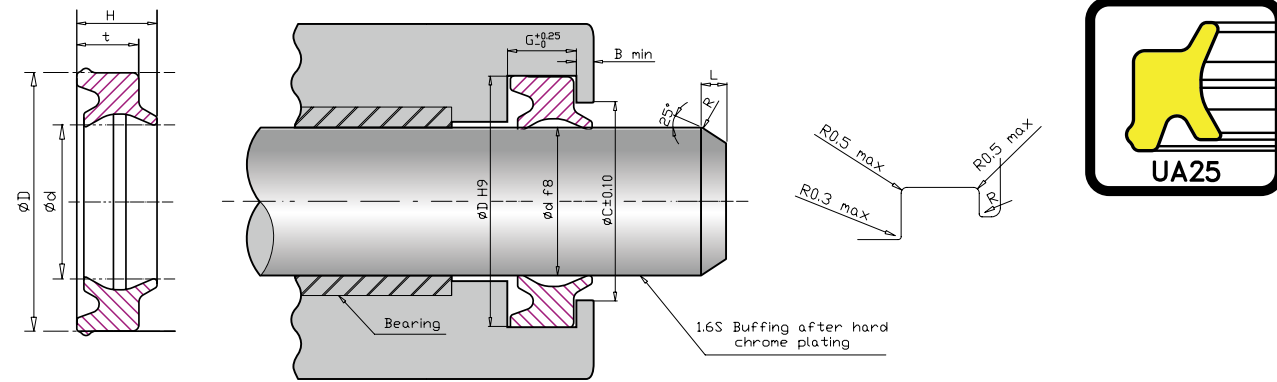
POLYCAPROLACTONE TPU 90 PHYSICAL PROPERTIES			
Working Pressure: ≤ 1.6 Mpa	Hardness	90 Shore A	DIN53505
Working Temperature: -40°C ~ +80°C		90 Shore A	ASTM D2240
Surface Speed: ≤ 1.0 m/s	Tensile Strength	45 Mpa	DIN53504
		6625 psi	ASTM D-412
Compression Set	19%	DIN53517	
24 hrs @ 70 °C	19%	ASTM D-395	
	Elongation	460 %	DIN53504
		460 %	ASTM D-412
Specific gravity	1.15 g/cm <sup>3</sup>	DIN53479	
	1.15 g/cm <sup>3</sup>	ASTM D-972	
	Tear Strength	156 N/mm	DIN53515
		850 pli	ASTM D-624
	Standard Compound	KC9010AC	
	Color	Brown ●	

■ We have this tool size

CODE	d (mm)	D (mm)	H (mm)	a	D1	L
UA70003	3	5.6	2.8	0.6	4.6	2.7
UA70004	4	7.0	2.8	0.8	5.6	2.7
UA70005	5	8.0	2.8	0.8	7.1	2.7
UA70006	6	9.0	2.8	1.0	8.1	2.7
UA70008	8	11.5	3.2	1.0	10.1	3.0
UA70010	10	14.0	3.7	1.0	12.1	3.4
UA70012	12	16.5	4.0	1.2	14.1	3.7
UA70014	14	18.5	4.0	1.2	16.1	3.7
UA70016	16	20.5	4.0	1.2	18.1	3.7
UA70018	18	22.5	4.0	1.2	20.1	3.7
UA70020	20	25.0	4.6	1.2	23.1	4.15
UA70022	22	27.0	4.6	1.2	23.9	4.15
UA70025	25	30.0	4.6	1.2	26.9	4.15
UA70030	30	35.5	5.0	1.2	32.1	4.55
UA70032	32	37.5	5.0	1.2	34.1	4.55
UA70035	35	40.5	5.0	1.2	37.1	4.55
UA70040	40	46.0	5.5	1.4	42.2	4.9
UA70045	45	51.0	5.5	1.4	47.2	4.9
UA70050	50	56.0	5.5	1.4	52.2	4.9
UA70063	63	69.5	6.0	1.4	65.4	5.4

# UA25 Series

Double Lip Rod Wiper



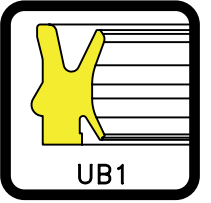
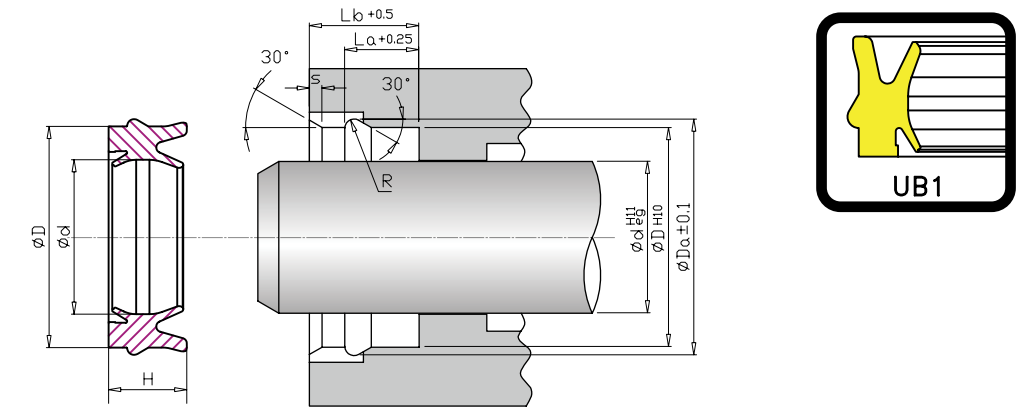
NBR 80 PHYSICAL PROPERTIES			
Working Pressure: ≤ 1.6 Mpa	Hardness	80 Shore A	DIN53505
Working Temperature: -35 °C ~ +80°C		80 Shore A	ASTM D2240
Surface Speed: ≤ 1.0 m/s	Tensile Strength	20.23 Mpa	DIN53504
		2934 psi	ASTM D-412
Compression Set 24 hrs @ 100 °C	Elongation	8% 285 %	DIN53517 ASTM D-412
	Standard Compound	N8039AA	
	Color	Black ●	

■ We have this tool size ★ All the tools for UA25 are completed.

CODE	d (mm)	D (mm)	H (mm)	t (mm)
UA25001	6.00	10.00	4.40	3.00
UA25002	8.00	12.00	4.90	3.50
UA25003	10.00	14.00	4.90	3.50
UA25004	12.00	16.00	4.90	3.50
UA25005	14.00	18.00	4.90	3.50
UA25006	16.00	24.00	7.50	5.50
UA25007	20.00	28.00	7.50	5.50
UA25008	25.00	33.00	7.50	5.50
UA25009	30.00	40.00	8.50	6.50
UA25010	32.00	42.00	8.50	6.50
UA25011	35.00	45.00	8.50	6.50
UA25012	36.00	46.00	8.50	6.50
UA25013	40.00	50.00	8.50	6.50
UA25014	45.00	55.00	8.50	6.50

# UB1 Series

Pneumatic Combination Rod Seal



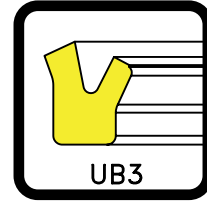
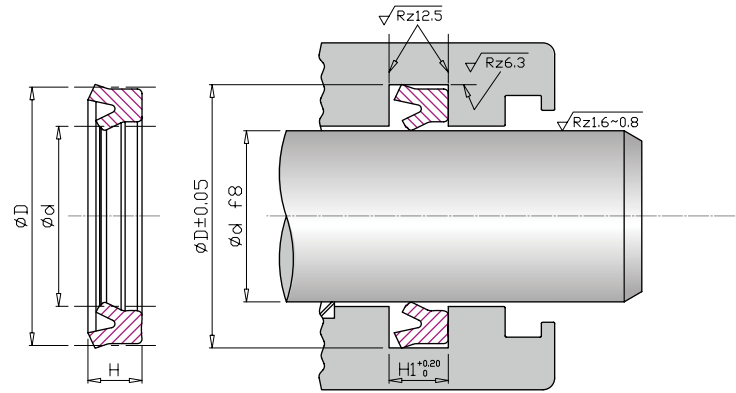
ESTER TPU 95 PHYSICAL PROPERTIES			
Working Pressure: ≤ 1.6 Mpa	Hardness	95 Shore A	DIN53505
Working Temperature: -35°C ~ +80°C		95 Shore A	ASTM D2240
Surface Speed: ≤ 1.0 m/s	Tensile Strength	50 Mpa	DIN53504
		7252 psi	ASTM D-412
Abrasion Resistance	35mm <sup>3</sup>	DIN53516	
Compression Set 24 hrs @ 70 °C	27.5%	DIN53517 ASTM D-395	
Specific gravity	1.18 g/cm <sup>3</sup>	DIN53479 ASTM D-972	
	Elongation	515 %	DIN53504
	Tear Strength	140 N/mm	DIN53515
		799 pli	ASTM D-624
	Standard Compound	KC9502AN / KC9502AG	
	Color	Gray ● / Green ●	

■ We have this tool size ★ All the tools for UB1 are completed.

CODE	d (mm)	D (mm)	H (mm)	Da	La	Lb	R	s
UB11219	12	19	10.0	21.0	7.7	12	1.0	1.5
UB11220	12	20	10.7	22.0	8.8	13	1.1	1.5
UB11222	12	22	10.7	24.0	8.8	13	1.1	1.5
UB11424	14	24	10.7	26.0	8.8	13	1.1	1.5
UB11626	16	26	10.7	28.0	8.8	13	1.1	1.5
UB11826	18	26	10.7	28.0	8.8	13	1.1	1.5
UB11828	18	28	10.7	30.0	8.8	13	1.1	1.5
UB12030	20	30	10.7	32.0	8.8	13	1.1	1.5
UB12232	22	32	11.2	34.5	9.4	14	1.4	2.0
UB12535	25	35	11.2	37.5	9.4	14	1.4	2.0
UB13040	30	40	11.2	42.5	9.4	14	1.4	2.0
UB13242	32	42	11.2	44.5	9.4	14	1.4	2.0
UB14050	40	50	11.2	52.2	9.4	14	1.4	2.0
UB14555	45	55	12.2	58.2	10.4	15	1.8	2.0
UB15060	50	60	12.2	63.2	10.4	15	1.8	2.0
UB16375	63	75	13.0	78.2	11.4	16	1.8	2.0

# UB3 Series

Asymmetrical Pneumatic Rod Seal



FKM/FPM 75 PHYSICAL PROPERTIES			
Working Pressure: $\leq 1.0$ Mpa			
Working Temperature: $-10^{\circ}\text{C} \sim +150^{\circ}\text{C}$			
Surface Speed: $\leq 1.0$ m/s			
Hardness	75 Shore A	DIN53505	
Tensile Strength	15.3 Mpa	DIN53504	
	2217 psi	ASTM D-412	
Elongation	214 %	DIN53504	
Compression Set	8.6 %	DIN53517	
24hrs @ $175^{\circ}\text{C}$	8.6 %	ASTM D-395	

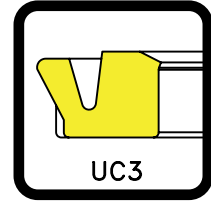
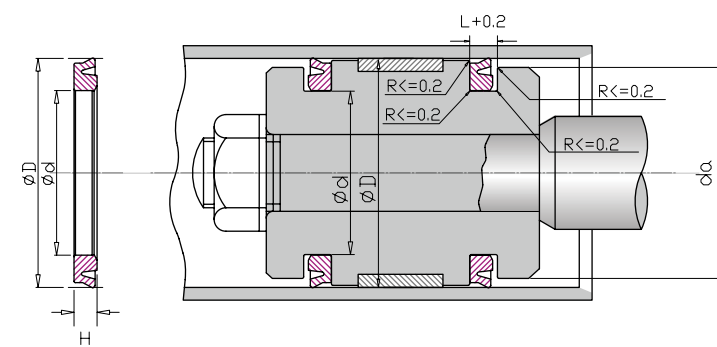
NBR 75 PHYSICAL PROPERTIES			
Working Pressure: $\leq 1.0$ Mpa			
Working Temperature: $-35^{\circ}\text{C} \sim +80^{\circ}\text{C}$			
Surface Speed: $\leq 1.0$ m/s			
Hardness	75 Shore A	DIN53505	
Tensile Strength	22.8 Mpa	DIN53504	
	3306 psi	ASTM D-412	
Elongation	320 %	DIN53504	
Compression Set	10.9 %	DIN53517	
24hrs @ $100^{\circ}\text{C}$	10.9 %	ASTM D-395	
Standard Compound	N7539AA		
Color	Black ●		

We have this tool size

CODE	d (mm)	D (mm)	H	H1
UB30307	3	7	2.9	3.2
UB30408	4	8	2.9	3.2
UB30509	5	9	2.9	3.2
UB30610	6	10	3.5	4.0
UB30812	8	12	3.5	4.0
UB31014	10	14	3.5	4.0
UB31217	12	17	4.0	4.5
UB31419	14	19	4.0	4.5
UB31622	16	22	5.0	5.7

# UC3 Series

Pneumatic U-Cup Piston Seal



FKM/FPM 75 PHYSICAL PROPERTIES			
Working Pressure: $\leq 1.6$ Mpa			
Working Temperature: $-20^{\circ}\text{C} \sim +200^{\circ}\text{C}$			
Surface Speed: $\leq 1.0$ m/s			
Hardness	75 Shore A	DIN53505	
Tensile Strength	15.3 Mpa	DIN53504	
	2214 psi	ASTM D-412	
Elongation	241 %	DIN53504	
Compression Set	9 %	DIN53517	
22hrs @ $200^{\circ}\text{C}$	9 %	ASTM D-395	
Standard Compound	V7514AA		
Color	Black ●		

NBR 75 / 85 PHYSICAL PROPERTIES			
Working Pressure: $\leq 1.0$ Mpa / $\leq 1.6$ Mpa			
Working Temperature: $-35^{\circ}\text{C} \sim +80^{\circ}\text{C}$			
Surface Speed: $\leq 1.0$ m/s			
Hardness	75 / 85 Shore A	DIN53505	
Tensile Strength	22.8 / 20.7 Mpa	DIN53504	
	3306 / 3008 psi	ASTM D-412	
Elongation	320 / 130 %	DIN53504	
Compression Set	10.9 / 4.9 %	DIN53517	
24hrs @ $100^{\circ}\text{C}$	10.9 / 4.9 %	ASTM D-395	
Standard Compound	N7539AA / N8594AA		
Color	Black ●		

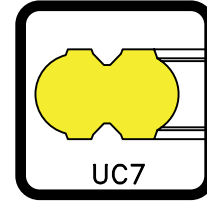
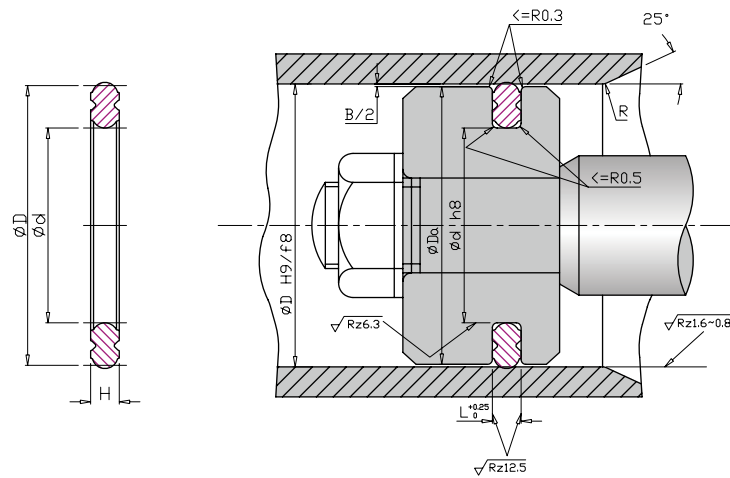
We have this tool size

CODE	d (mm)	D (mm)	H (mm)	L	da
UC30001	1.50	4	1.50	2.00	3.6
UC30002	2.50	5	1.50	2.00	4.6
UC30003	3.00	6	2.00	2.50	5.6
UC30004	4.00	8	2.55	3.00	7.6
UC30005	4.80	8	2.30	2.70	7.6
UC30006	5.45	8	2.30	2.80	7.6
UC30007	3.00	10	3.50	4.00	9.6
UC30008	6.00	10	2.55	3.00	9.6
UC30009	6.45	10	2.55	3.00	9.6
UC30010	7.00	12	2.55	3.00	11.6
UC30011	8.00	13	2.55	3.00	12.6
UC30012	8.00	14	2.55	3.00	13.6
UC30013	9.00	15	2.55	3.00	14.6
UC30014	10.00	16	2.55	3.00	15.6
UC30015	11.00	16	2.55	3.00	15.6
UC30016	12.00	18	2.55	3.00	17.6
UC30017	14.00	20	2.55	3.00	19.6
UC30018	15.00	21	2.55	3.00	20.4
UC30019	16.00	22	2.55	3.00	21.4
UC30020	18.00	24	3.25	3.50	23.4
UC30021	19.00	25	3.25	3.50	24.4
UC30022	22.00	28	3.25	3.50	27.4
UC30023	22.00	30	3.25	3.50	29.4

CODE	d (mm)	D (mm)	H (mm)	L	da
UC30025	24.00	32	3.25	3.50	31.4
UC30026	27.00	35	3.25	3.50	34.4
UC30027	28.00	36	3.25	3.50	35.4
UC30028	29.00	37	3.25	3.50	36.4
UC30029	30.00	38	3.25	3.50	37.4
UC30030	32.00	40	3.25	3.50	39.4
UC30031	34.00	42	3.25	3.50	41.4
UC30032	37.00	45	3.25	3.50	44.4
UC30033	42.00	50	3.25	3.50	49.4
UC30034	42.00	52	4.25	4.50	51.4
UC30036	48.00	58	4.25	4.50	57.4
UC30037	53.00	63	4.25	4.50	62.4
UC30038	70.00	80	4.25	4.50	79.4
UC30039	80.00	90	4.25	4.50	89.4
UC30040	90.00	100	4.25	4.50	99.4
UC30041	105.00	125	8.25	8.50	123.8
UC30042	130.00	150	8.25	8.50	148.8
UC30043	140.00	160	8.25	8.50	158.8
UC30044	180.00	200	8.25	8.50	198.8

# UC7 Series

Low Friction Pneumatic Piston Seal



FKM/FPM 75 PHYSICAL PROPERTIES			
Working Pressure: ≤ 1.0 Mpa			
Working Temperature: -20°C ~ +200°C			
Surface Speed: ≤ 1.0 m/s			
Hardness	75 Shore A	DIN53505	
Tensile Strength	15.3 Mpa	DIN53504	
	2214 psi	ASTM D-412	
Elongation	241 %	DIN53504	
Compression Set	9 %	DIN53517	
22hrs @ 200°C	9 %	ASTM D-395	
Standard Compound	V7514AA		
Color	Black ●		

NBR 75 PHYSICAL PROPERTIES			
Working Pressure: ≤ 1.0 Mpa			
Working Temperature: -35°C ~ +80°C			
Surface Speed: ≤ 1.0 m/s			
Hardness	75 Shore A	DIN53505	
Tensile Strength	22.8 Mpa	DIN53504	
	3306 psi	ASTM D-412	
Elongation	320 %	DIN53504	
Compression Set	10.9 %	DIN53517	
24hrs @ 100°C	10.9 %	ASTM D-395	
Standard Compound	N7539AA		
Color	Black ●		

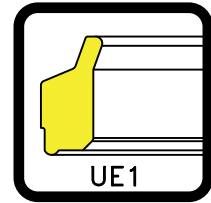
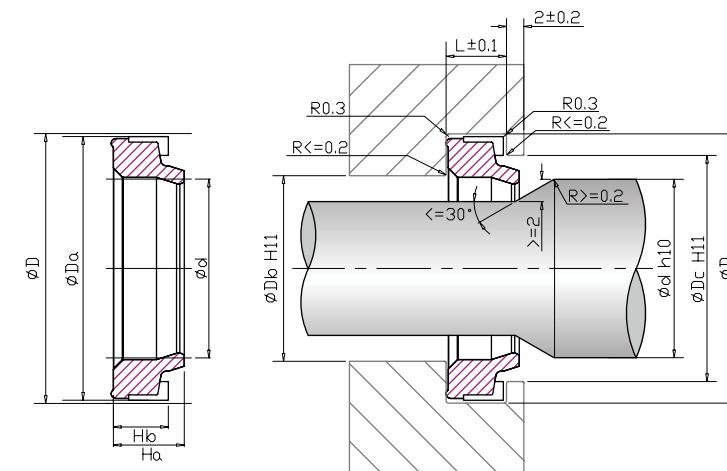
■ We have this tool size ★ All the tools for UC7 are completed.

CODE	d (mm)	D (mm)	H (mm)	L	Da
UC70001	5.4	10	1.60	1.8	9.7
UC70002	7.4	12	1.60	1.8	11.7
UC70003	10.4	15	1.60	1.8	14.7
UC70004	11.4	16	1.60	1.8	15.7
UC70005	14.0	20	2.24	2.4	19.5
UC70006	17.0	25	3.00	3.2	24.5
UC70007	22.0	30	3.00	3.2	29.5
UC70008	24.0	32	3.00	3.2	31.5
UC70009	30.0	38	3.00	3.2	37.5
UC70010	32.0	40	3.00	3.2	39.5
UC70011	36.0	44	3.00	3.2	43.5
UC70012	40.0	50	3.80	4.0	49.5
UC70013	46.0	56	3.80	4.0	55.5
UC70014	50.0	60	3.80	4.0	59.5
UC70015	53.0	63	3.80	4.0	62.4
UC70016	55.0	70	5.60	6.0	69.4
UC70017	60.0	75	5.60	6.0	74.4
UC70018	65.0	80	5.60	6.0	79.4
UC70019	70.0	85	5.60	6.0	84.4
UC70020	75.0	90	5.60	6.0	89.4

CODE	d (mm)	D (mm)	H (mm)	L	Da
UC70021	80.0	95	5.60	6.0	94.4
UC70022	85.0	100	5.60	6.0	99.4
UC70023	95.0	110	5.60	6.0	109.3
UC70024	105.0	120	5.60	6.0	119.3
UC70025	110.0	125	5.60	6.0	124.3
UC70026	125.0	140	5.60	6.0	139.3
UC70027	135.0	150	5.60	6.0	149.3
UC70028	140.0	160	7.60	8.0	159.3
UC70029	155.0	175	7.60	8.0	174.4
UC70030	160.0	180	7.60	8.0	179.3
UC70031	180.0	200	7.60	8.0	199.0
UC70032	230.0	250	7.60	8.0	249.0
UC70033	280.0	300	7.60	8.0	299.0

# UE1 Series

Pneumatic Damper Seal



FKM/FPM 90 PHYSICAL PROPERTIES			
Working Pressure: ≤ 1.0 Mpa			
Working Temperature: -20°C ~ +200°C			
Surface Speed: ≤ 1.0 m/s			
Hardness	90 Shore A	DIN53505	
Tensile Strength	16.7 Mpa	DIN53504	
	2422 psi	ASTM D-412	
Elongation	139 %	DIN53504	
Compression Set	16.7 %	DIN53517	
70hrs @ 175°C	16.7 %	ASTM D-395	
Standard Compound	V9059AA		
Color	Black ●		

NBR 85 PHYSICAL PROPERTIES			
Working Pressure: ≤ 1.0 Mpa			
Working Temperature: -35°C ~ +80°C			
Surface Speed: ≤ 1.0 m/s			
Hardness	85 Shore A	DIN53505	
Tensile Strength	20.7 Mpa	DIN53504	
	3008 psi	ASTM D-412	
Elongation	130 %	DIN53504	
Compression Set	4.9 %	DIN53517	
24hrs @ 100°C	4.9 %	ASTM D-395	
Standard Compound	N8594AA		
Color	Black ●		

■ We have this tool size ★ All the tools for UE1 are completed.

CODE	d (mm)	D (mm)	Ha	Hb	Da	Db	Dc	L
UE10001	4.5	8.0	3.5	2.6	7.7	5.0	6.5	3.1
UE10002	5.0	9.0	4.1	3.2	8.7	5.5	7.0	3.7
UE10003	6.0	10.0	4.1	3.2	9.7	6.5	8.0	3.7
UE10004	8.0	11.6	3.5	2.8	11.3	8.5	10.0	3.3
UE10005	9.5	15.0	4.6	3.7	14.7	10.0	12.0	4.5
UE10006	10.0	18.0	7.8	6.3	17.0	10.5	13.0	7.0
UE10007	12.0	18.0	5.0	4.1	17.8	13.0	15.5	4.8
UE10008	12.0	20.0	7.8	6.3	19.1	13.0	17.0	7.0
UE10009	14.0	22.0	5.5	4.5	21.1	15.0	18.5	5.2
UE10010	14.0	22.0	7.8	6.3	21.5	15.0	19.0	7.0
UE10011	16.0	22.0	5.5	4.5	21.5	17.0	19.5	5.2
UE10012	16.0	24.0	7.8	6.3	23.1	17.0	21.0	7.0
UE10013	18.0	26.0	7.8	6.3	25.1	19.0	23.0	7.0
UE10014	20.0	28.0	7.8	6.3	27.1	21.0	24.0	7.0
UE10015	22.0	30.0	7.8	6.3	29.1	23.0	26.0	7.0
UE10016	25.0	33.0	7.9	6.3	32.1	26.0	29.0	7.0
UE10017	28.0	36.0	7.8	6.3	35.1	29.0	32.0	7.0
UE10018	30.0	40.0	7.8	6.2	39.1	31.5	35.0	7.0

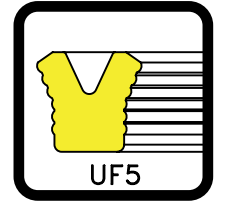
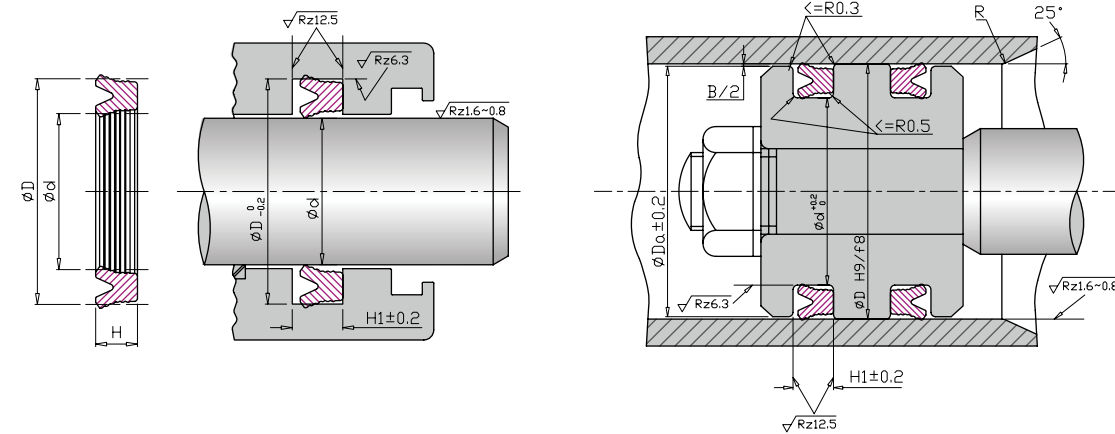
# UE1 Series

Pneumatic Damper Seal

CODE	d (mm)	D (mm)	Ha	Hb	Da	Db	Dc	L
UE10019	32.0	42.0	7.8	6.2	41.1	33.5	37.0	7.0
UE10020	36.0	46.0	7.8	6.2	45.1	37.5	41.0	7.0
UE10021	40.0	50.0	7.8	6.2	49.1	41.5	45.0	7.0
UE10022	50.0	60.0	7.8	6.2	59.0	51.5	55.0	7.0
UE10023	50.0	67.0	11.0	11.0	66.2	53.0	58.0	12.5
UE10024	57.0	74.0	11.0	11.0	73.2	60.0	65.0	12.5
UE10025	70.0	87.0	11.0	11.0	86.3	73.0	78.0	12.5
UE10026	78.0	95.0	11.0	11.0	94.3	81.0	86.0	12.5

# UF5 Series

Low Friction Pneumatic Symmetrical Piston/  
Rod U-Cup Seal



FKM/FPM 75 PHYSICAL PROPERTIES			
Working Pressure: ≤ 1.0 Mpa			
Working Temperature: -25°C ~ +200°C			
Surface Speed: ≤ 1.0 m/s			
Hardness	75	Shore A	DIN53505
Tensile Strength	16.6	Mpa	DIN53504
	2428	psi	ASTM D-412
Elongation	185	%	DIN53504
Compression Set	9.5	%	DIN53517
24hrs @ 200°C	9.5	%	ASTM D-395
Standard Compound	V7559AA		
Color	Black ●		

NBR 75 PHYSICAL PROPERTIES			
Working Pressure: ≤ 1.0 Mpa			
Working Temperature: -35°C ~ +80°C			
Surface Speed: ≤ 1.0 m/s			
Hardness	75	Shore A	DIN53505
Tensile Strength	22.8	Mpa	DIN53504
	3306	psi	ASTM D-412
Elongation	320	%	DIN53504
Compression Set	10.9	%	DIN53517
24hrs @ 100°C	10.9	%	ASTM D-395
Standard Compound	N7539AA		
Color	Black ●		

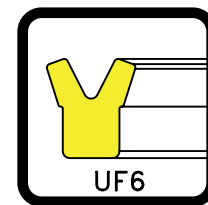
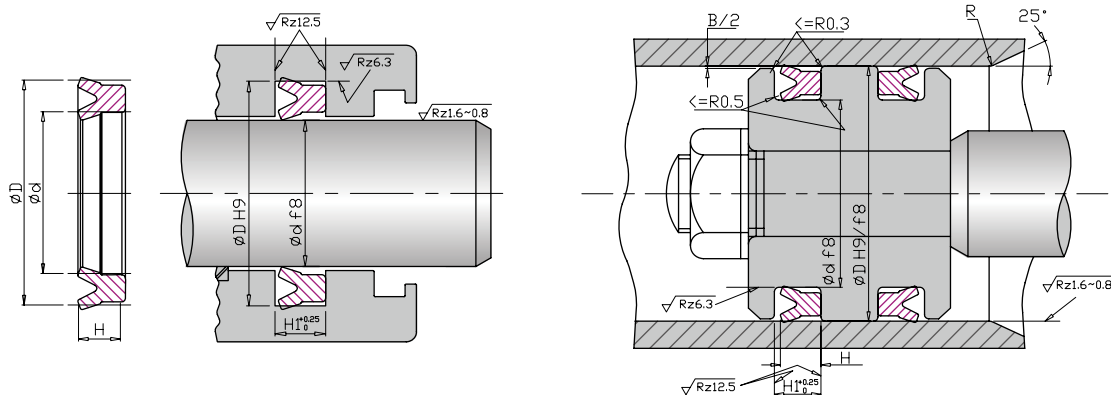
We have this tool size

CODE	d (mm)	D (mm)	H (mm)	L	da
UF50001	10.0	18.0	5.0	5.7	17.1
UF50002	12.0	20.0	5.0	5.7	19.0
UF50003	14.0	22.0	5.0	5.7	21.1
UF50004	16.0	24.0	5.0	5.7	23.1
UF50005	17.0	25.0	5.0	5.7	24.1
UF50006	18.0	26.0	5.0	5.7	25.1
UF50007	20.0	28.0	5.0	5.7	27.1
UF50008	22.4	30.0	5.0	5.7	29.1
UF50009	25.0	33.0	5.0	5.7	32.1
UF50010	27.0	35.0	5.0	5.7	34.1
UF50011	28.0	36.0	5.0	5.7	35.1
UF50012	30.0	40.0	6.0	7.0	39.0
UF50013	31.5	41.5	6.0	7.0	40.5
UF50014	32.0	42.0	6.0	7.0	41.0
UF50015	35.0	45.0	6.0	7.0	44.0
UF50016	35.5	45.5	6.0	7.0	44.5
UF50017	36.0	46.0	6.0	7.0	45.0
UF50018	40.0	50.0	6.0	7.0	49.0
UF50019	45.0	55.0	6.0	7.0	54.0
UF50020	50.0	60.0	6.0	7.0	59.0
UF50021	53.0	63.0	6.0	7.0	62.0
UF50022	55.0	65.0	6.0	7.0	64.0
UF50023	60.0	70.0	6.0	7.0	69.0
UF50024	63.0	73.0	6.0	7.0	72.0

CODE	d (mm)	D (mm)	H (mm)	L	da
UF50025	65.0	75.0	6.0	7.0	74.0
UF50026	70.0	80.0	6.0	7.0	79.0
UF50027	75.0	85.0	6.0	7.0	84.0
UF50028	80.0	90.0	6.0	7.0	89.0
UF50029	85.0	100.0	9.0	10.0	98.5
UF50030	95.0	110.0	9.0	10.0	108.5
UF50031	100.0	115.0	9.0	10.0	113.5
UF50032	105.0	120.0	9.0	10.0	118.5
UF50033	110.0	125.0	9.0	10.0	123.5
UF50034	115.0	130.0	9.0	10.0	128.5
UF50035	125.0	140.0	9.0	10.0	138.5
UF50036	135.0	150.0	9.0	10.0	148.5
UF50037	145.0	160.0	9.0	10.0	158.5
UF50038	160.0	175.0	9.0	10.0	173.5
UF50039	165.0	180.0	9.0	10.0	178.5
UF50040	175.0	190.0	9.0	10.0	188.5
UF50041	180.0	200.0	12.0	13.0	198.0
UF50042	185.0	205.0	12.0	13.0	203.0
UF50043	200.0	220.0	12.0	13.0	218.0
UF50044	215.0	235.0	12.0	13.0	233.0
UF50045	230.0	250.0	12.0	13.0	248.0
UF50046	240.0	260.0	12.0	13.0	258.0

# UF6 Series

Low Friction Pneumatic Symmetrical Piston/  
Rod U-Cup Seal



FKM/FPM 70 PHYSICAL PROPERTIES			
Working Pressure: $\leq 0.8$ Mpa			
Working Temperature: $-10^\circ\text{C} \sim +150^\circ\text{C}$			
Surface Speed: $\leq 1.0$ m/s			
Hardness	70	Shore A	DIN53505
Tensile Strength	14.1	Mpa	DIN53504
	2044	psi	ASTM D-412
Elongation	231	%	DIN53504
Compression Set	8.1	%	DIN53517
24hrs @ $175^\circ\text{C}$	8.1	%	ASTM D-395
Standard Compound	V7029AA		
Color	Black ●		

NBR 75 PHYSICAL PROPERTIES			
Working Pressure: $\leq 0.8$ Mpa			
Working Temperature: $-35^\circ\text{C} \sim +80^\circ\text{C}$			
Surface Speed: $\leq 1.0$ m/s			
Hardness	75	Shore A	DIN53505
Tensile Strength	22.8	Mpa	DIN53504
	3306	psi	ASTM D-412
Elongation	320	%	DIN53504
Compression Set	10.9	%	DIN53517
24hrs @ $100^\circ\text{C}$	10.9	%	ASTM D-395
Standard Compound	N7539AA		
Color	Black ●		

■ We have this tool size ★ All the tools for UF6 are completed.

CODE	d (mm)	D (mm)	H	H1
UF60001	3.0	6.0	2.1	2.5
UF60002	4.0	7.0	2.1	2.5
UF60003	5.0	8.0	2.1	2.5
UF60004	6.0	9.0	2.1	2.5
UF60005	7.0	10.0	2.1	2.5
UF60006	8.0	11.0	2.1	2.5
UF60007	9.0	12.0	2.1	2.5
UF60008	10.0	13.0	2.1	2.5
UF60009	10.0	14.0	2.8	3.2
UF60010	11.0	15.0	2.8	3.2
UF60011	11.2	15.2	2.8	3.2
UF60012	12.0	16.0	2.8	3.2
UF60013	12.5	16.5	2.8	3.2
UF60014	14.0	18.0	2.8	3.2
UF60015	15.0	19.0	2.8	3.2
UF60016	16.0	20.0	2.8	3.2
UF60017	18.0	22.0	2.8	3.2
UF60018	20.0	24.0	2.8	3.2
UF60019	21.0	25.0	2.8	3.2
UF60020	22.0	26.0	2.8	3.2
UF60021	24.0	30.0	4.2	4.7
UF60022	34.0	40.0	4.2	4.7