



DETROIT SEALING COMPONENTS

Sealing Solutions for **Hydraulic and Pneumatic**



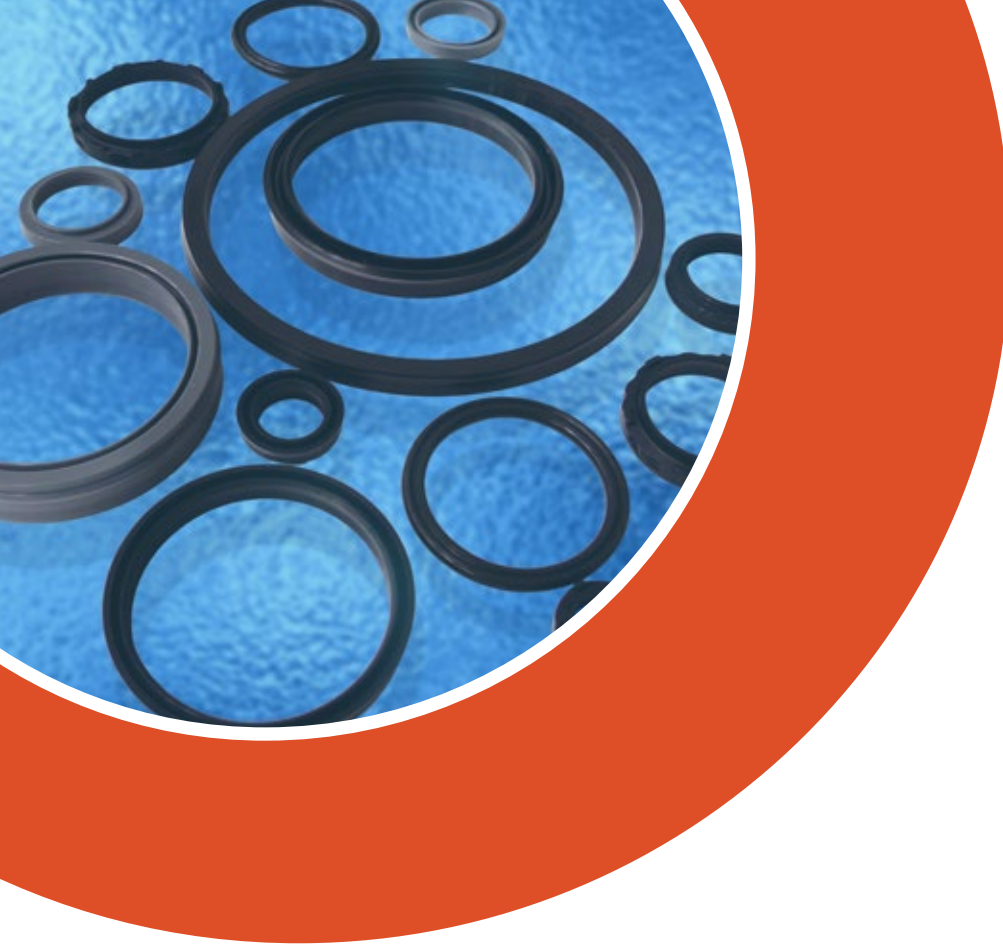


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Hydraulic Seals

* 1 MPa = 10 Bar 1 Bar = 14.5 psi 1 MPa = 145 psi



NBR	FKM
-25°C to 100°C -13°F to 212°F	-20°C to 225°C -4°F to 437°F
Surface Speed: ≤ 1.0 m/s	

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ESTER TPU
-35°C to 80°C -31°C to 176°C
Surface Speed: ≤ 1.0 m/s

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Double Lip Rod Wiper Seal

This component serves as a protective barrier to block dust from entering the system, thereby preserving the sealing integrity of the primary packing. It features an all-rubber dual-lip design that prevents oil from being scraped off and is specifically shaped to be installed into an integrated groove.

TPU Double Lip Rod Wiper Seal

This seal prevents dust entry and protects equipment by maintaining the packing's sealing performance. Designed for integrated grooves, this double-lip, all-rubber wiper seal effectively prevents oil from being scraped away.



NBR	FKM
-25°C to 100°C -13°F to 212°F	-20°C to 225°C -4°F to 437°F
Working Pressure: ≤ 14 MPa	
Surface Speed: ≤ 1.0 m/s	

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NBR	FKM
-25°C to 100°C -13°F to 212°F	-20°C to 225°C -4°F to 437°F
Working Pressure: ≤ 14 MPa	
Surface Speed: ≤ 1.0 m/s	

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Piston Packing

This specialized single-ring packing features seal lips designed to handle pressure from both sides, delivering performance equivalent to standard U-packings. Its optimized design allows for a more compact piston assembly and can be used in conjunction with PWA bearing or back-up rings for added support.

Symmetrical Piston & Rod U-Cup Seal

This versatile seal is suitable for both rod and piston applications and features a small cross-section that facilitates assembly into integrated grooves.

Hydraulic Seals



ESTER TPU
-35°C to 80°C -31°C to 176°C
Working Pressure: ≤ 0.8 m/s
Surface Speed: ≤ 35 MPa

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TPU Symmetrical Piston & Rod U-Cup Seal

This TPU seal is designed for rod and piston use, featuring a large cross-section for versatile applications. The TPU material ensures excellent wear resistance and reliable sealing capabilities.

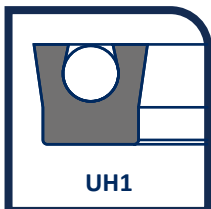


ESTER TPU
-35°C to 80°C -31°C to 176°C
Working Pressure: ≤ 21 MPa
Surface Speed: ≤ 0.8 m/s

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TPU Symmetrical Piston & Rod U-Cup Seal

This packing is utilized for both piston and rod seals and is designed with a compact cross section for installation in integrated grooves. The refined design specifically resists damage caused by back pressure.

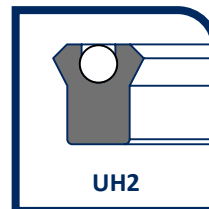


ESTER TPU
-35°C to 80°C -31°F to 176°F
Working Pressure: ≤ 35 MPa
Surface Speed: ≤ 0.8 m/s

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Symmetrical Energized Piston & Rod U-Cup Seal

The lips of this seal are energized by an O-Ring to ensure uniform and positive contact, which results in exceptional sealing even at low pressures. The seal depth matches the radial width, making it an ideal choice for interchanging with existing O-Rings or hydraulic packings.



ESTER TPU
-35°C to 80°C -31°F to 176°F
Working Pressure: ≤ 35 MPa
Surface Speed: ≤ 0.8 m/s

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Symmetrical Energized Piston & Rod U-Cup Seal

Designed with a back-beveled sealing lip, this profile provides an optimized fluid film and higher unit loading at the contact surface. Its depth is generally 1.5 times the radial width to ensure stability in rugged environments, and it is most often preferred for rod seal applications.

Pneumatic Seals

* 1 MPa = 10 Bar 1 Bar = 14.5 psi 1 MPa = 145 psi



FKM
-20°C to 225°C -4°F to 437°F
Working Pressure: ≤ 1.6 MPa
Surface Speed: ≤ 1.0 m/s

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ESTER TPU
-40°C to 80°C -40°F to 176°F
Working Pressure: ≤ 1.6 MPa
Surface Speed: ≤ 1.0 m/s

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Rod Wiper Seal

This pneumatic rod seal and wiper set is designed to be fitted into housings with a circlip recess according to DIN 7993 (type B). The element is secured by a circlip, and if a recess is sufficiently provided, the seal can be replaced without the need to remove the piston rod. Careful installation is required to prevent damage to sealing and scraper lip from contact with sharp edges.

TPU Rod Wiper Seal

This seal is intended to protect equipment by preventing the entry of dust and contaminants. The double-lip TPU design provides a dual sealing function that keeps the lubrication film stable, while its smaller cross section makes it easy to assemble and disassemble.



NBR
-25°C to 100°C -13°F to 212°F
Working Pressure: ≤ 1.6 MPa
Surface Speed: ≤ 1.0 m/s

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ESTER TPU
-35°C to 80°C -31°F to 176°F
Working Pressure: ≤ 1.6 MPa
Surface Speed: ≤ 1.0 m/s

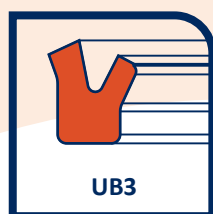
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Double Lip Rod Wiper

This profile is used to block dust and contaminants from entering the cylinder. Its double-sealing mechanism is designed to regulate the lubricating film during movement.

Rod Wiper Seal

This profile is designed for housing grooves with a circlip design as per DIN 7993 (type B). It features a rounded outside diameter that allows it to be easily snapped into the groove and retained securely. Careful assembly and removal of sharp corners of the hardware is recommended.



NBR	FKM
-25°C to 100°C -13°F to 212°F	-20°C to 225°C -4°F to 437°F
Working Pressure: ≤ 1.0 MPa	
Surface Speed: ≤ 1.0 m/s	

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NBR	FKM
-25°C to 100°C -13°F to 212°F	-20°C to 225°C -4°F to 437°F
Working Pressure: ≤ 1.6 MPa	
Surface Speed: ≤ 1.0 m/s	

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Asymmetrical Pneumatic Rod Seal

Exclusively designed for cylinders with small diameters, this seal is highly wear resistant. It offers superior durability and better friction characteristics compared to standard O-Rings.

Pneumatic U-Cup Piston Seal

This compact, asymmetrical U-cup features a specialized pneumatic sealing edge on the dynamic lip to promote an optimal lubrication film, providing excellent sealing with minimal friction. The longer and thicker static sealing section ensures the seal remains securely seated against the base of the groove.

Pneumatic Seals

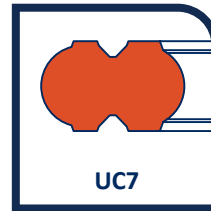


NBR	FKM
-25°C to 100°C -13°F to 212°F	-20°C to 225°C -4°F to 437°F
Working Pressure: ≤ 1.2 MPa	
Surface Speed: ≤ 1.0 m/s	

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Low Friction Compact Piston Seal

This compact, double-acting design is used exclusively for pistons in pneumatic cylinders and valves where it handles pressure from both sides. It is engineered to maintain an effective lubrication film while providing very low dynamic friction.



NBR	FKM
-25°C to 100°C -13°F to 212°F	-20°C to 225°C -4°F to 437°F
Working Pressure: ≤ 1.0 MPa	
Surface Speed: ≤ 1.0 m/s	

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Low Friction Pneumatic Piston Seal

Intended exclusively for pistons, this compact dual-pressure seal offers better friction characteristics than O-Rings. Its specific cross-section design is intended to prevent the seal from rolling or twisting within the groove.



NBR	FKM
-25°C to 100°C -13°F to 212°F	-20°C to 225°C -4°F to 437°F
Working Pressure: ≤ 1.0 MPa	
Surface Speed: ≤ 1.0 m/s	

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Pneumatic Damper Seal

These cushioning seals are designed to be easily snapped into a groove to provide damping at the end of a stroke. Initial lubrication is required for a long service life, and care must be taken during installation to avoid damaging the lips on sharp edges.



NBR	FKM
-25°C to 100°C -13°F to 212°F	-20°C to 225°C -4°F to 437°F
Working Pressure: ≤ 1.0 MPa	
Surface Speed: ≤ 1.0 m/s	

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Low Friction Pneumatic Symmetrical Piston Rod U-Cup Seal

This packing is designed for both pistons and rods in pneumatic cylinders, and should be used exclusively in non-lubricated environments.



NBR	FKM
-25°C to 100°C -13°F to 212°F	-20°C to 225°C -4°F to 437°F
Working Pressure: ≤ 0.8 MPa	
Surface Speed: ≤ 1.0 m/s	

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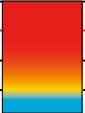
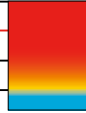
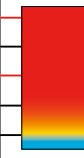
Low Friction Pneumatic Symmetrical Piston & Rod U-Cup Seal

This packing is designed for both pistons and rods in pneumatic cylinders and should be used exclusively in non-lubricated environments.

Material Application List

Material	NBR							HNBR	
	N7026AA	N7028AA	N7539AA	N7626AA	N8039AA	N8594AA	N9076AA	H7000AA	H8018AE
Shore A	70	70	75	75	80	85	90	70	80
Environment Temp. °C	-60 to 100	-25 to 100	-25 to 100	-55 to 100	-25 to 100	-25 to 100	-55 to 100	-40 to 150	-30 to 150
	-76 to 212	-13 to 212	-13 to 212	-67 to 212	-13 to 212	-13 to 212	-67 to 212	-40 to 302	-22 to 302
392°F / 200°C									
212°F / 100°C									
0°C									
-58°F / -50°C									
Tensile Strength, psi (MPa)	2453 (16.92)	3066 (21.1)	3306 (22.8)	2563 (17.68)	2934 (20.23)	3008 (20.7)	2480 (17.1)	3729 (25.7)	2805 (19.34)
Elongation, %	327	363	320	246	285	130	151	274	280
100% Modulus, psi (MPa)	619 (4.27)	487 (3.4)	834 (5.8)	998 (6.88)	801 (5.52)	2584 (17.8)	1664 (11.5)	780 (5.4)	1228 (8.47)
Common 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	X
Sulfurized Cutting Fluid	●	●	●	●	●	●	●	●	●
Water Soluble Cutting Fluid	●	●	●	●	●	●	●	●	●
Fuel	▲	●	▲	▲	▲	●	●	●	●
Water	▲	▲	▲	▲	▲	▲	▲	●	●
O ₃	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-Ring	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	High-Temp, Good Resistance of Oil and Abrasion	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

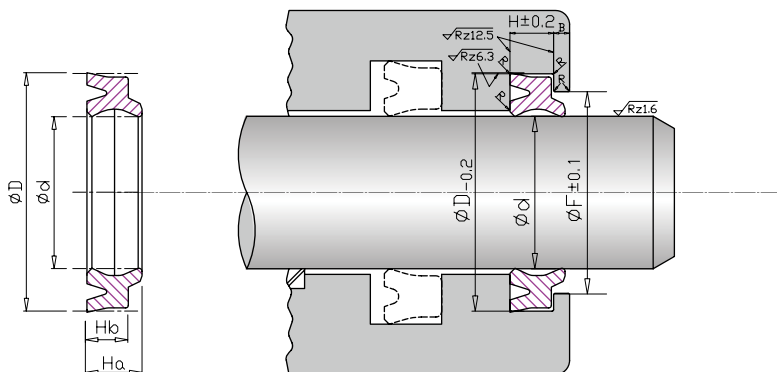
●: Best ▲: Suitable X: Not Recommended —: No Data

HNBR		FKM					TPU Thermoplastic Urethane		Material
H8032AA	H9018AA	V7559AA	V7029AA	V7514AA	V8031AE	V9059AA	KC9010AC	KC9502AA (AG/AW/BL)	
80	90	75	70	75	80	90	90	95	Shore A
-35 to 150	-30 to 150	-20 to 225	-20 to 225	-20 to 225	-20 to 225	-20 to 225	-40 to 80	-35 to 80	Environment Temp. °C °F
-22 to 302	-22 to 302	-4 to 437	-4 to 437	-4 to 437	-4 to 437	-4 to 437	-40 to 176	-31 to 176	
									
4703 (32.43)	3513 (24.23)	2428 (16.6)	2044 (14.1)	2214 (15.3)	2282 (15.74)	2422 (16.7)	6625 (45)	7252 (50)	Tensile Strength, psi (MPa)
291	148	185	231	241	154	139	460	515	Elongation, %
1217 (8.39)	2688 (18.54)	1310 (9.0)	939 (6.48)	740 (5.1)	1540 (10.62)	1812 (12.5)	1036 (7.1)	2216 (15.2)	100% Modulus, psi (MPa)
●	●	●	●	●	●	●	●	●	Common Hydraulic oil
●	●	●	●	●	●	●	●	●	Low-Temp Hydraulic Oil
▲	▲	▲	▲	▲	▲	▲	X	X	Coolant (Water GLYCOL)
●	●	●	●	●	●	●	●	●	Engine oil
●	●	●	●	●	●	●	—	—	Lubricant
●	●	●	●	●	●	●	●	●	Silicone Lubricant
●	●	●	●	●	●	●	●	●	Silicone oil
X	X	●	●	●	●	●	X	X	Chlorine Cutting Fluid
●	●	●	●	●	●	●	—	—	Sulfurized Cutting Fluid
●	●	▲	▲	▲	▲	▲	—	—	Water Soluble Cutting Fluid
●	●	●	●	●	●	●	●	●	Fuel
●	●	●	●	●	●	●	▲	▲	Water
●	●	●	●	●	●	●	—	—	O ₃
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	Function

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

UA2 Series

Double Lip Rod Wiper Seal



FKM/ FPM 90 PHYSICAL PROPERTIES

Working Temperature: -20°C to 225°C

-4°F to 437°F

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 70 h @ 175°C	16.7 %	DIN53517
	16.7 %	ASTM D-395

Standard Compound V9059AA

Color Black ●

NBR 85 PHYSICAL PROPERTIES

Working Temperature: -25°C to 100°C

-13°F to 212°F

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 24 h @ 100°C	4.9 %	DIN53517
	4.9 %	ASTM D-395

Standard Compound N8594AA

Color Black ●

CODE	d (mm)	D (mm)	Ha	Hb	F	H
UA20001	12.0	20.0	6.0	4.5	16.3	5.0
UA20002	12.5	20.5	6.0	4.5	16.8	5.0
UA20003	14.0	22.0	6.0	4.5	18.3	5.0
UA20004	16.0	24.0	6.0	4.5	20.3	5.0
UA20005	18.0	26.0	6.0	4.5	22.3	5.0
UA20006	20.0	28.0	6.0	4.5	24.3	5.0
UA20007	22.0	30.0	6.0	4.5	26.3	5.0
UA20008	22.4	30.4	6.0	4.5	26.7	5.0
UA20009	25.0	33.0	6.0	4.5	29.3	5.0
UA20010	28.0	36.0	6.0	4.5	32.3	5.0
UA20011	30.0	38.0	6.5	5.0	34.0	6.0
UA20012	31.5	39.5	6.5	5.0	35.5	6.0
UA20013	32.0	40.0	6.5	5.0	36.0	6.0
UA20014	35.0	43.0	6.5	5.0	39.0	6.0
UA20015	35.5	43.5	6.5	5.0	39.5	6.0

CODE	d (mm)	D (mm)	Ha	Hb	F	H
UA20016	36.0	44.0	6.5	5.0	40.0	6.0
UA20017	40.0	48.0	6.5	5.0	44.0	6.0
UA20018	45.0	53.0	6.5	5.0	49.0	6.0
UA20019	50.0	58.0	6.5	5.0	54.0	6.0
UA20020	53.0	61.0	6.5	5.0	57.0	6.0
UA20021	55.0	63.0	6.5	5.0	59.0	6.0
UA20022	56.0	64.0	6.5	5.0	60.0	6.0
UA20023	60.0	68.0	6.5	5.0	64.0	6.0
UA20024	63.0	71.0	6.5	5.0	67.0	6.0
UA20025	65.0	73.0	6.5	5.0	69.0	6.0
UA20026	67.0	75.0	6.5	5.0	71.0	6.0
UA20027	70.0	80.0	8.0	6.0	75.0	7.0
UA20028	71.0	81.0	8.0	6.0	76.0	7.0
UA20029	75.0	85.0	8.0	6.0	80.0	7.0
UA20030	80.0	90.0	8.0	6.0	85.0	7.0

UA2 Series

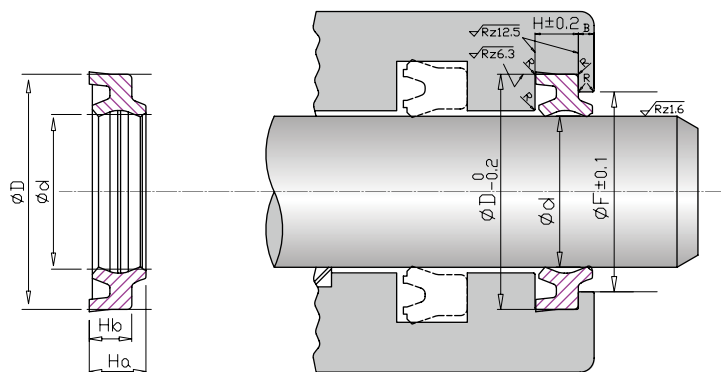
Double Lip Rod Wiper Seal

Hydraulic

CODE	d (mm)	D (mm)	Ha	Hb	F	H
UA20031	85.0	95.0	8.0	6.0	90.0	7.0
UA20032	90.0	100.0	8.0	6.0	95.0	7.0
UA20033	95.0	105.0	8.0	6.0	100.0	7.0
UA20034	100.0	110.0	8.0	6.0	105.0	7.0
UA20035	105.0	115.0	8.0	6.0	110.0	7.0
UA20036	106.0	115.0	8.0	6.0	111.0	7.0
UA20037	110.0	120.0	8.0	6.0	115.0	7.0
UA20038	112.0	122.0	8.0	6.0	117.0	7.0
UA20039	115.0	125.0	8.0	6.0	120.0	7.0
UA20040	118.0	128.0	8.0	6.0	123.0	7.0
UA20041	120.0	133.0	9.5	7.0	127.0	8.0
UA20042	125.0	138.0	9.5	7.0	132.0	8.0
UA20043	132.0	145.0	9.5	7.0	139.0	8.0
UA20044	140.0	153.0	9.5	7.0	147.0	8.0
UA20045	145.0	158.0	9.5	7.0	152.0	8.0
UA20046	150.0	163.0	9.5	7.0	157.0	8.0
UA20047	155.0	168.0	9.5	7.0	162.0	8.0
UA20048	160.0	173.0	9.5	7.0	167.0	8.0
UA20049	160.0	174.0	9.5	7.0	167.0	8.0
UA20050	165.0	178.0	9.5	7.0	172.0	8.0
UA20051	170.0	183.0	9.5	7.0	177.0	8.0
UA20053	175.0	188.0	9.5	7.0	182.0	8.0
UA20054	180.0	193.0	9.5	7.0	187.0	8.0
UA20055	180.0	194.0	9.5	7.0	187.0	8.0
UA20056	190.0	203.0	9.5	7.0	197.0	8.0
UA20057	200.0	213.0	9.5	7.0	207.0	8.0
UA20058	205.0	218.0	9.5	7.0	212.0	8.0
UA20059	210.0	223.0	9.5	7.0	217.0	8.0
UA20060	224.0	237.0	9.5	7.0	231.0	8.0

UA4 Series

TPU Double Lip Rod Wiper Seal



ESTER TPU 95 PHYSICAL PROPERTIES

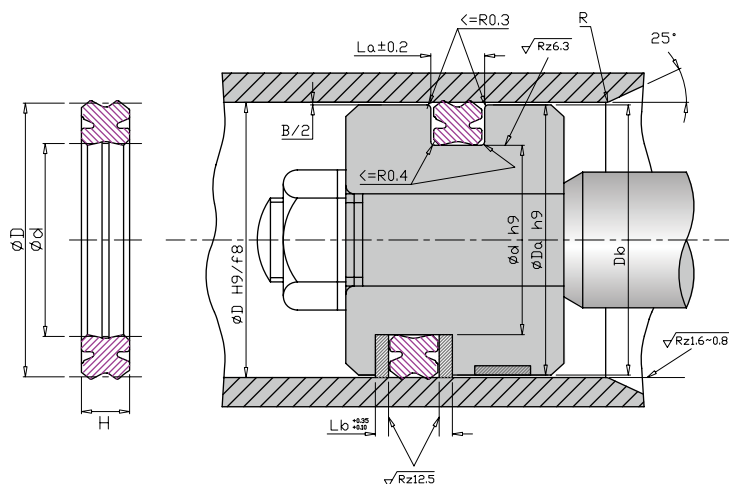
Working Temperature: -35°C to 80°C -31°F to 176°F			Hardness	95 Shore A	DIN53505
Surface Speed: ≤ 1.0 m/s				95 Shore A	ASTM D2240
Media: Mineral Oil			Tensile Strength	50 MPa	DIN53504
Abrasion Resistance				7252 psi	ASTM D-412
Compression Set			Elongation	515 %	DIN53504
24 h @ 100 °C				515 %	ASTM D-412
Specific gravity			Tear Strength	140 N/mm	DIN53515
1.18 g/cm ³				799 pli	ASTM D-624
1.18 g/cm ³			Standard Compound	KC9502AN / KC9502BL	
			Color	Gray  / Dark Blue 	

CODE	d (mm)	D (mm)	Ha	Hb	F
UA40001	18.0	26.0	6.0	4.5	22.3
UA40002	20.0	28.0	6.0	4.5	24.3
UA40003	22.0	30.0	6.0	4.5	26.3
UA40004	22.4	30.4	6.0	4.5	26.7
UA40005	25.0	33.0	6.0	4.5	29.3
UA40006	26.0	34.0	6.0	4.5	30.3
UA40007	28.0	36.0	6.0	4.5	32.3
UA40008	30.0	38.0	6.5	5.0	34.0
UA40009	31.5	39.5	6.5	5.0	35.5
UA40010	32.0	40.0	6.5	5.0	36.0
UA40011	34.0	42.0	6.5	5.0	38.0
UA40012	35.0	43.0	6.5	5.0	39.0
UA40013	35.5	43.5	6.5	5.0	39.5
UA40014	38.0	46.0	6.5	5.0	42.0
UA40015	40.0	48.0	6.5	5.0	44.0
UA40016	45.0	53.0	6.5	5.0	49.0
UA40017	48.0	56.0	6.5	5.0	52.0
UA40018	50.0	58.0	6.5	5.0	54.0
UA40019	55.0	63.0	6.5	5.0	59.0
UA40020	56.0	64.0	6.5	5.0	60.0
UA40021	58.0	66.0	6.5	5.0	62.0
UA40022	60.0	68.0	6.5	5.0	64.0
UA40023	63.0	71.0	6.5	5.0	67.0
UA40024	65.0	73.0	6.5	5.0	69.0

CODE	d (mm)	D (mm)	Ha	Hb	F
UA40025	70.0	80.0	8.0	6.0	75.0
UA40026	71.0	81.0	8.0	6.0	76.0
UA40027	75.0	85.0	8.0	6.0	80.0
UA40028	80.0	90.0	8.0	6.0	85.0
UA40029	85.0	95.0	8.0	6.0	90.0
UA40030	90.0	100.0	8.0	6.0	95.0
UA40031	95.0	105.0	8.0	6.0	100.0
UA40032	100.0	110.0	8.0	6.0	105.0
UA40033	105.0	115.0	8.0	6.0	110.0
UA40034	112.0	122.0	8.0	6.0	117.0
UA40035	125.0	138.0	9.5	7.0	132.0
UA40036	140.0	153.0	9.5	7.0	147.0
UA40037	150.0	163.0	9.5	7.0	157.0
UA40038	180.0	193.0	9.5	7.0	187.0
UA40039	185.0	198.0	9.5	7.0	192.0
UA40040	200.0	213.0	9.5	7.0	207.0
UA40041	210.0	223.0	9.5	7.0	217.0
UA40042	250.0	265.0	11.5	9.0	258.0
UA40043	36.0	44.0	6.5	5.0	40.0
UA40046	16.0	24.0	6.0	4.5	20.3

UC6 Series

Packing for Piston



FKM/ FPM 90 PHYSICAL PROPERTIES

Working Pressure: ≤ 14 MPaWorking Temperature: -20°C to 225°C
 -4°F to 437°F 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
70 h @ 175°C	16.7	%	ASTM D-395

Standard Compound V9059AA

Color Black ●

NBR 85 PHYSICAL PROPERTIES

Working Pressure: ≤ 14 MPaWorking Temperature: -25°C to 100°C
 -13°F to 212°F Surface Speed: ≤ 1.0 m/s

Hardness	88	Shore A	DIN53505
Tensile Strength	20.7	MPa	DIN53504
	3008	psi	ASTM D-412
Elongation	130	%	DIN53504
Compression Set	4.9	%	DIN53517
24 h @ 100°C	4.9	%	ASTM D-395

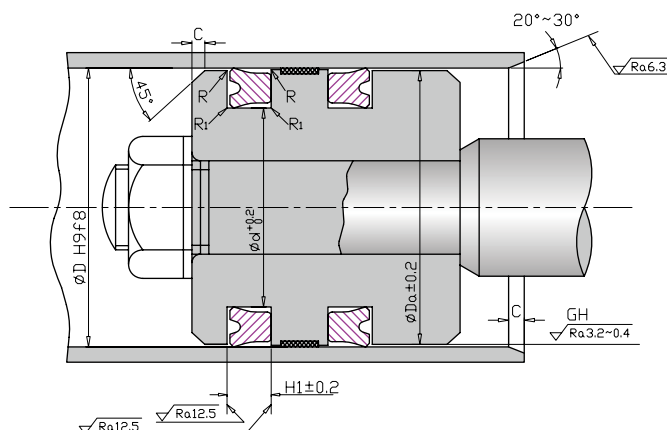
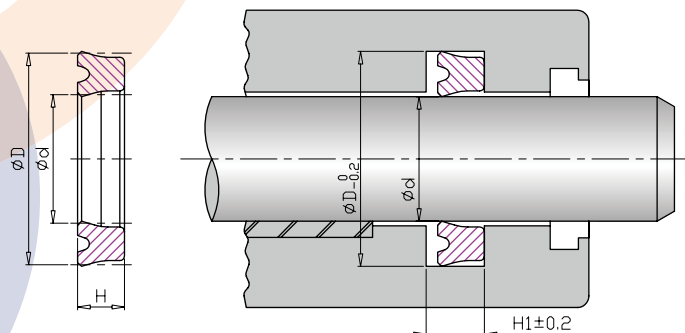
Standard Compound N8594AA

Color Black ●

CODE	D (mm)	d (mm)	H (mm)	La	Lb	Da	Db
UC60001	40.0	30.0	6.5	7.0	11.0	39.5	38.5
UC60002	45.0	35.0	6.5	7.0	11.0	44.5	43.5
UC60003	50.0	40.0	6.5	7.0	11.0	49.5	48.5
UC60004	55.0	45.0	6.5	7.0	11.0	54.4	53.0
UC60005	60.0	50.0	6.5	7.0	11.0	59.4	58.0
UC60006	63.0	53.0	6.5	7.0	11.0	62.4	61.0
UC60007	65.0	55.0	6.5	7.0	12.0	64.4	63.0
UC60008	70.0	60.0	6.5	7.0	12.0	69.4	68.0
UC60009	75.0	65.0	6.5	7.0	12.0	74.4	73.0
UC60010	80.0	67.0	8.0	8.5	13.5	79.4	78.0
UC60011	85.0	72.0	8.0	8.5	13.5	84.4	83.0
UC60012	90.0	77.0	8.0	8.5	13.5	89.4	88.0
UC60013	100.0	85.0	9.0	10.0	16.0	99.4	98.0

UF1 Series

Symmetrical Piston & Rod U-Cup Seal



FKM/ FPM 90 PHYSICAL PROPERTIES

Working Pressure: ≤ 14 MPaWorking Temperature: -20°C to 225°C -4°F to 437°F 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
	70 h @ 175°C	16.7 %	ASTM D-395
Standard Compound	V9059AA		
Color	Black ●		

NBR 85 PHYSICAL PROPERTIES

Working Pressure: ≤ 14 MPaWorking Temperature: -25°C to 100°C -13°F to 212°F 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
	24 h @ 100°C	4.9 %	ASTM D-395
Standard Compound	N8594AA		
Color	Black ●		

CODE	d (mm)	D (mm)	H	H1	Da
UF10012	12.0	20.0	5.0	5.7	19.0
UF10014	14.0	22.0	5.0	5.7	21.0
UF10016	16.0	24.0	5.0	5.7	23.0
UF10018	18.0	26.0	5.0	5.7	25.0
UF10020	20.0	28.0	5.0	5.7	27.0
UF10022	22.0	30.0	5.0	5.7	29.0
UF122.4	22.4	30.0	5.0	5.7	29.0
UF123.5	23.5	31.5	5.0	5.7	30.5
UF10024	24.0	32.0	5.0	5.7	31.0
UF10025	25.0	33.0	5.0	5.7	32.0
UF10027	27.0	35.0	5.0	5.7	34.0
UF10A28	28.0	35.5	5.0	5.7	34.5
UF10B28	28.0	36.0	5.0	5.7	35.0
UF10030	30.0	40.0	6.0	7.0	39.0
UF131.5	31.5	41.5	6.0	7.0	40.5

CODE	d (mm)	D (mm)	H	H1	Da
UF10032	32.0	42.0	6.0	7.0	41.0
UF10035	35.0	45.0	6.0	7.0	44.0
UF135A5	35.5	45.0	6.0	7.0	44.0
UF135B5	35.5	45.5	6.0	7.0	44.5
UF10036	36.0	46.0	6.0	7.0	45.0
UF10040	40.0	50.0	6.0	7.0	49.0
UF10A45	45.0	55.0	6.0	7.0	54.0
UF10B45	45.0	56.0	7.0	8.0	55.0
UF10050	50.0	60.0	6.0	7.0	59.0
UF10053	53.0	63.0	6.0	7.0	62.0
UF10055	55.0	65.0	6.0	7.0	64.0
UF10056	56.0	66.0	6.0	7.0	65.0
UF10058	58.0	68.0	6.0	7.0	67.0
UF10A60	60.0	70.0	6.0	7.0	69.0
UF10B60	60.0	71.0	7.0	8.0	70.0

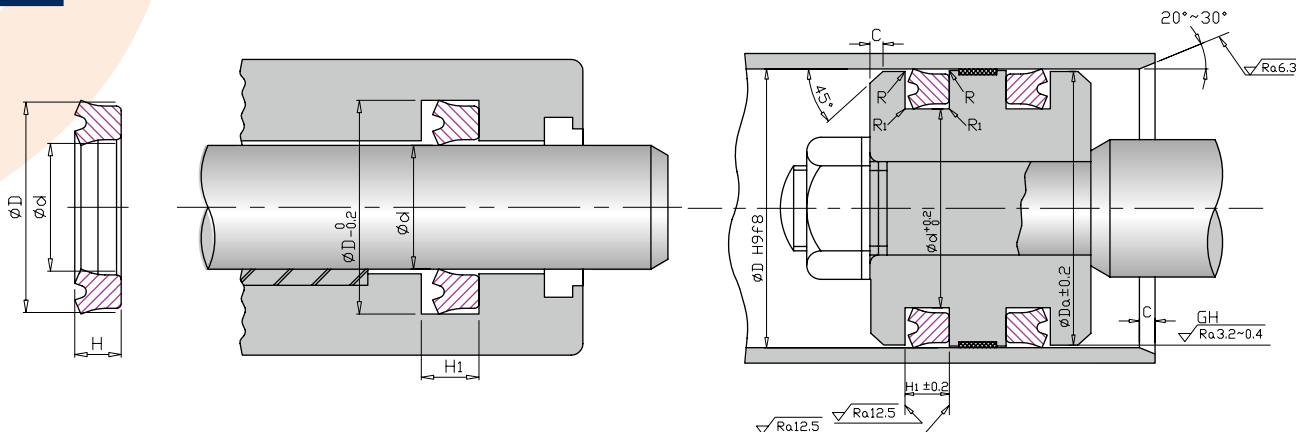
UF1 Series

Symmetrical Piston & Rod U-Cup Seal

CODE	d (mm)	D (mm)	H	H1	Da
UF10061	61.0	71.0	6.0	7.0	70.0
UF10063	63.0	73.0	6.0	7.0	72.0
UF10065	65.0	75.0	6.0	7.0	74.0
UF10067	67.0	77.0	6.0	7.0	76.0
UF10070	70.0	80.0	6.0	7.0	79.0
UF10071	71.0	80.0	6.0	7.0	79.0
UF10075	75.0	85.0	6.0	7.0	84.0
UF10080	80.0	90.0	6.0	7.0	89.0
UF10A85	85.0	95.0	6.0	7.0	94.0
UF10B85	85.0	100.0	9.0	10.0	98.0
UF10090	90.0	105.0	9.0	10.0	103.0
UF10095	95.0	110.0	9.0	10.0	108.0
UF10100	100.0	115.0	9.0	10.0	113.0
UF10106	106.0	120.0	8.5	9.5	118.0
UF10110	110.0	125.0	9.0	10.0	123.0
UF1B112	112.0	125.0	9.0	10.0	123.0
UF10125	125.0	140.0	9.0	10.0	138.0
UF10130	130.0	145.0	9.0	10.0	143.0
UF10136	136.0	150.0	8.5	9.5	148.0
UF10140	140.0	155.00	9.00	10.0	153.0
UF10145	145.0	160.0	9.0	10.0	158.0
UF10150	150.0	165.0	9.0	10.0	163.0
UF10160	160.0	175.0	9.0	10.0	173.0
UF10165	165.0	180.0	9.0	10.0	178.0
UF10180	180.0	200.0	12.0	13.0	198.0
UF10204	204.0	224.00	12.00	13.0	222.0
UF10230	230.0	250.0	12.0	13.0	248.0
UF10250	250.0	270.0	12.0	13.0	268.0
UF10295	295.0	315.0	14.0	15.0	313.0
UF10335	335.0	355.0	14.0	15.0	353.0
UF10400	400.0	420.0	14.0	15.0	418.0

UF2 Series

TPU Symmetrical Piston & Rod U-Cup Seal



ESTER TPU 95 PHYSICAL PROPERTIES

Working Pressure: ≤ 35 MPa					
Working Temperature: -35°C to 80°C -31°F to 176°F			Hardness	95 Shore A	DIN53505
				95 Shore A	ASTM D2240
Surface Speed: ≤ 0.8 m/s			Tensile Strength	50 MPa	DIN53504
Media: Mineral Oil				7252 psi	ASTM D-412
Abrasion Resistance 35mm ³ DIN53516			Elongation	515 %	DIN53504
				515 %	ASTM D-412
Compression Set	30%	DIN53517	Tear Strength	140 N/mm	DIN53515
24 h @ 100 °C	30%	ASTM D-395		799 pli	ASTM D-624
Specific gravity	1.18 g/cm ³	DIN53479	Standard Compound KC9502AN / KC9502BL		
	1.18 g/cm ³	ASTM D-972	Color Gray  / Dark Blue 		

CODE	d (mm)	D (mm)	H	H1	Da
UF20001	6.3	16.3	8.0	9.0	15.3
UF20002	7.1	17.1	8.0	9.0	16.1
UF20003	8.0	18.0	8.0	9.0	17.0
UF20004	9.0	19.0	8.0	9.0	18.0
UF20005	10.0	20.0	8.0	9.0	19.0
UF20006	11.2	21.2	8.0	9.0	20.2
UF20007	12.0	25.0	8.0	9.0	24.0
UF20008	12.5	22.5	8.0	9.0	21.5
UF20009	14.0	24.0	8.0	9.0	23.0
UF20010	15.0	25.0	8.0	9.0	24.0
UF20011	16.0	26.0	8.0	9.0	25.0
UF20012	16.0	32.0	10.0	11.0	31.0
UF20013	18.0	28.0	8.0	9.0	27.0
UF20014	18.0	31.0	10.0	11.0	30.0
UF20015	20.0	30.0	8.0	9.0	29.0
UF20016	20.0	33.0	10.0	11.0	32.0

CODE	d (mm)	D (mm)	H	H1	Da
UF20017	20.0	35.0	10.0	11.0	34.0
UF20018	21.5	31.5	8.0	9.0	30.5
UF20019	22.0	32.0	8.0	9.0	31.0
UF20020	22.0	35.0	10.0	11.0	34.0
UF20021	22.4	30.0	5.0	5.7	29.0
UF20022	22.4	32.4	8.0	9.0	31.4
UF20023	25.0	35.0	8.0	9.0	34.0
UF20024	25.0	38.0	8.0	9.0	37.0
UF20025	25.0	40.0	10.0	11.0	39.0
UF20026	25.0	45.0	12.0	13.0	44.0
UF20027	25.5	35.5	8.0	9.0	34.5
UF20028	28.0	35.5	5.0	5.7	34.5
UF20029	28.0	40.0	10.0	11.0	39.0
UF20030	28.0	43.0	10.0	11.0	42.0
UF20031	30.0	45.0	10.0	11.0	44.0
UF20032	30.0	46.0	10.0	11.0	45.0

UF2 Series

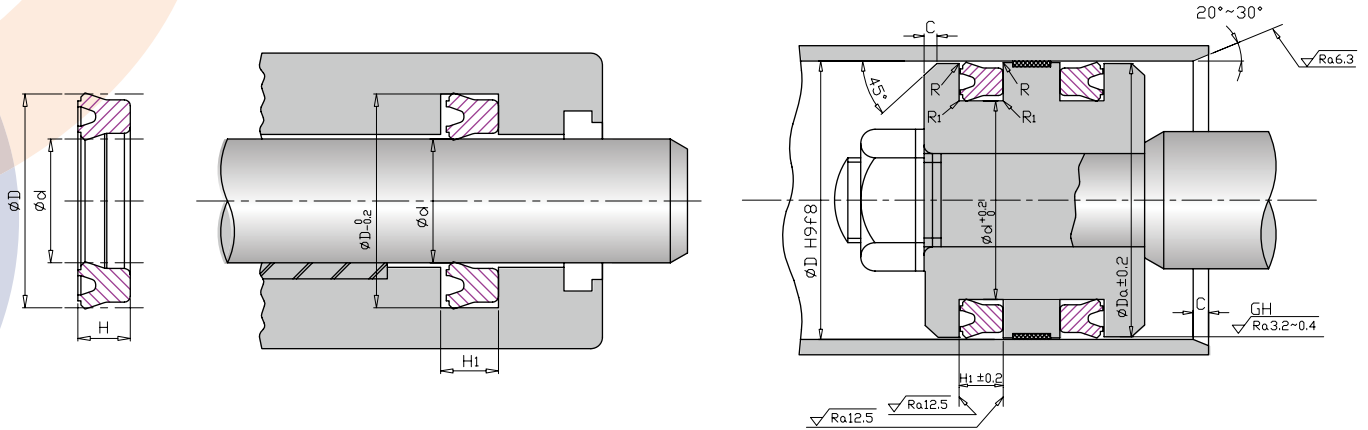
TPU Symmetrical Piston & Rod U-Cup Seal

CODE	d (mm)	D (mm)	H	H1	Da
UF20033	31.5	46.5	10.0	11.0	45.5
UF20034	32.0	46.0	10.0	11.0	45.0
UF20035	35.0	50.0	10.0	11.0	49.0
UF20036	35.5	45.0	6.0	7.0	44.0
UF20037	35.5	50.5	10.0	11.0	49.5
UF20038	38.0	52.0	10.0	11.0	51.0
UF20039	40.0	55.0	10.0	11.0	54.0
UF20040	40.0	56.0	10.0	11.0	55.0
UF20041	40.0	60.0	12.0	13.0	59.0
UF20042	41.0	56.0	10.0	11.0	55.0
UF20043	45.0	56.0	7.0	8.0	55.0
UF20044	45.0	60.0	10.0	11.0	59.0
UF20045	45.0	61.0	10.0	11.0	60.0
UF20046	46.0	60.0	10.0	11.0	59.0
UF20047	48.0	63.0	10.0	11.0	62.0
UF20048	50.0	65.0	10.0	11.0	64.0
UF20049	50.0	66.0	12.0	13.0	65.0
UF20050	50.0	70.0	12.0	13.0	69.0
UF20051	51.0	71.0	12.0	13.0	70.0
UF20052	53.0	73.0	12.0	13.0	72.0
UF20053	55.0	71.0	12.0	13.0	70.0
UF20054	55.0	75.0	12.0	13.0	74.0
UF20055	55.0	80.0	15.0	16.0	79.0
UF20056	56.0	72.0	12.0	13.0	71.0
UF20057	56.0	76.0	12.0	13.0	75.0
UF20058	58.0	78.0	12.0	13.0	77.0
UF20059	60.0	71.0	7.0	8.0	70.0
UF20060	60.0	80.0	12.0	13.0	79.0
UF20061	62.0	82.0	12.0	13.0	81.0
UF20062	63.0	83.0	12.0	13.0	82.0
UF20063	65.0	85.0	12.0	13.0	84.0
UF20064	67.0	87.0	12.0	13.0	86.0
UF20065	70.0	90.0	12.0	13.0	89.0
UF20066	71.0	80.0	6.0	7.0	79.0
UF20067	71.0	91.0	12.0	13.0	90.0
UF20068	75.0	95.0	12.0	13.0	94.0
UF20069	80.0	100.0	12.0	13.0	99.0
UF20070	80.0	100.0	15.0	16.0	98.0
UF20071	85.0	100.0	9.0	10.0	99.0
UF20072	85.0	105.0	12.0	13.0	103.0
UF20073	90.0	110.0	12.0	13.0	108.0
UF20074	92.0	112.0	12.0	13.0	110.0
UF20075	95.0	115.0	12.0	13.0	113.0
UF20076	95.0	120.0	15.0	16.0	118.0
UF20077	98.0	112.0	9.0	10.0	110.0
UF20078	100.0	120.0	12.0	13.0	118.0
UF20079	100.0	125.0	15.0	17.0	123.0

CODE	d (mm)	D (mm)	H	H1	Da
UF20080	102.0	114.0	11.0	12.0	112.0
UF20081	105.0	125.0	15.0	17.0	123.0
UF20082	106.0	120.0	8.5	9.5	118.0
UF20083	106.0	126.0	15.0	17.0	124.0
UF20084	110.0	130.0	15.0	17.0	128.0
UF20085	112.0	132.0	15.0	17.0	130.0
UF20086	115.0	135.0	15.0	17.0	133.0
UF20087	118.0	132.0	9.0	10.0	130.0
UF20088	118.0	138.0	15.0	17.0	136.0
UF20089	120.0	140.0	15.0	17.0	138.0
UF20090	125.0	145.0	15.0	17.0	143.0
UF20091	130.0	150.0	15.0	17.0	148.0
UF20092	132.0	152.0	15.0	17.0	150.0
UF20093	135.0	155.0	15.0	17.0	153.0
UF20094	136.0	150.0	9.0	10.0	148.0
UF20095	140.0	160.0	15.0	17.0	158.0
UF20096	140.0	165.0	15.0	17.0	163.0
UF20097	145.0	165.0	15.0	17.0	158.0
UF20098	150.0	170.0	15.0	17.0	168.0
UF20099	150.0	175.0	15.0	17.0	173.0
UF20100	155.0	180.0	15.0	17.0	178.0
UF20101	160.0	185.0	15.0	17.0	183.0
UF20102	165.0	190.0	15.0	17.0	188.0
UF20103	170.0	195.0	15.0	17.0	193.0
UF20104	175.0	200.0	15.0	17.0	198.0
UF20105	180.0	205.0	15.0	17.0	203.0
UF20106	185.0	210.0	15.0	17.0	208.0
UF20107	190.0	215.0	15.0	17.0	213.0
UF20108	199.0	224.0	15.0	17.0	222.0
UF20109	200.0	225.0	15.0	17.0	223.0
UF20110	200.0	225.0	18.0	20.0	223.0

UF4 Series

TPU Symmetrical Piston & Rod U-Cup Seal



ESTER TPU 95 PHYSICAL PROPERTIES

Working Pressure: ≤ 21 MPa						
Working Temperature: -35°C to 80°C -31°F to 176°F			Hardness	95	Shore A	DIN53505
				95	Shore A	ASTM D2240
Surface Speed: ≤ 0.8 m/s			Tensile Strength	50	MPa	DIN53504
Media: Mineral Oil				7252	psi	ASTM D-412
Abrasion Resistance	35mm ³	DIN53516	Elongation	515	%	DIN53504
				515	%	ASTM D-412
Compression Set	30%	DIN53517	Tear Strength	140	N/mm	DIN53515
24 h @ 100 °C	30%	ASTM D-395		799	pli	ASTM D-624
Specific gravity	1.18 g/cm ³	DIN53479	Standard Compound		KC9502AN / KC9502BL	
	1.18 g/cm ³	ASTM D-972	Color		Gray  / Dark Blue 	

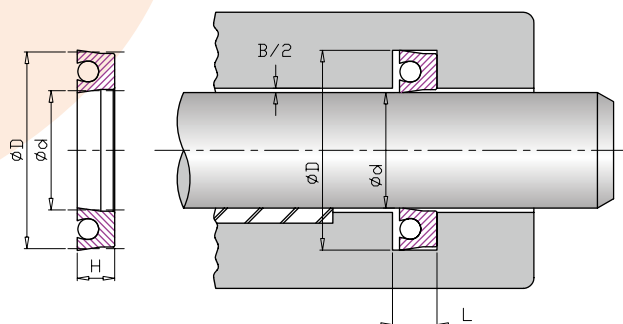
CODE	d (mm)	D (mm)	H	H1	Da
UF40001	10.0	18.0	5.0	5.7	17.0
UF40002	12.0	20.0	5.0	5.7	19.0
UF40003	12.5	20.0	5.0	5.7	19.0
UF40004	14.0	22.0	5.0	5.7	21.0
UF40005	16.0	24.0	5.0	5.7	23.0
UF40006	17.0	25.0	5.0	5.7	24.0
UF40007	18.0	26.0	5.0	5.7	25.0
UF40008	20.0	28.0	5.0	5.7	27.0
UF40009	20.0	30.0	6.0	7.0	29.0
UF40010	22.0	30.0	5.0	5.7	29.0
UF40011	22.4	30.0	5.0	5.7	29.0
UF40012	23.5	31.5	5.0	5.7	30.5
UF40013	24.0	32.0	5.0	5.7	31.0
UF40014	25.0	33.0	5.0	5.7	32.0
UF40015	25.0	35.0	5.0	7.0	34.0

CODE	d (mm)	D (mm)	H	H1	Da
UF40016	26.0	34.0	5.0	5.7	33.0
UF40017	27.0	35.0	5.0	5.7	34.0
UF40018	28.0	35.5	5.0	5.7	34.5
UF40019	28.0	36.0	5.0	5.7	35.0
UF40020	30.0	38.0	5.0	5.7	37.0
UF40021	30.0	40.0	6.0	7.0	39.0
Uf40022	31.5	41.5	6.0	7.0	40.5
UF40023	32.0	42.0	6.0	7.0	41.0
UF40024	33.0	43.0	6.0	7.0	42.0
UF40025	34.0	44.0	6.0	7.0	43.0
UF40026	35.0	45.0	6.0	7.0	44.0
UF40027	35.5	45.0	6.0	7.0	44.0
UF40028	35.5	45.5	6.0	7.0	44.5
UF40029	36.0	46.0	6.0	7.0	45.0
UF40030	38.0	48.0	6.0	7.0	47.0

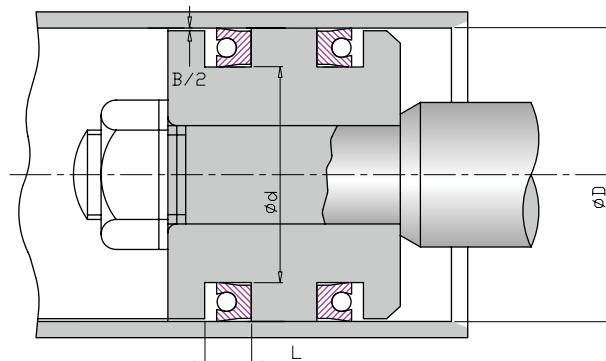
CODE	d (mm)	D (mm)	H	H1	Da
UF40031	40.0	50.0	6.0	7.0	49.0
UF40032	45.0	55.0	6.0	7.0	54.0
UF40033	45.0	56.0	7.0	8.0	55.0
UF40034	46.0	56.0	6.0	7.0	55.0
UF40035	50.0	60.0	6.0	7.0	59.0
UF40036	53.0	63.0	6.0	7.0	62.0
UF40037	55.0	65.0	6.0	7.0	64.0
UF40038	56.0	66.0	6.0	7.0	65.0
UF40039	58.0	68.0	6.0	7.0	67.0
UF40040	60.0	70.0	6.0	7.0	69.0
UF40041	60.0	71.0	7.0	8.0	70.0
UF40042	61.0	71.0	6.0	7.0	70.0
UF40043	63.0	73.0	6.0	7.0	72.0
UF40044	65.0	75.0	6.0	7.0	74.0
UF40045	67.0	77.0	6.0	7.0	76.0
UF40046	70.0	80.0	6.0	7.0	79.0
UF40047	71.0	80.0	6.0	7.0	79.0
UF40048	75.0	85.0	6.0	7.0	84.0
UF40049	80.0	90.0	6.0	7.0	89.0
UF40050	80.0	95.0	9.0	10.0	94.0
UF40051	85.0	95.0	6.0	7.0	94.0
UF40052	85.0	100.0	9.0	10.0	99.0
UF40053	86.0	100.0	8.5	9.5	99.0
UF40054	89.0	104.0	9.0	10.0	103.0
UF40055	90.0	100.0	6.0	7.0	99.0
UF40056	90.0	105.0	9.0	10.0	104.0
UF40057	95.0	110.0	9.0	10.0	109.0
UF40058	96.0	111.0	9.0	10.0	110.0
UF40059	98.0	112.0	8.5	9.5	111.0
UF40060	100.0	115.0	9.0	10.0	113.0
UF40061	105.0	120.0	9.0	10.0	118.0
UF40062	106.0	120.0	8.5	9.5	118.0
UF40063	110.0	125.0	9.0	10.0	123.0
UF40064	112.0	125.0	9.0	10.0	123.0
UF40065	115.0	130.0	9.0	10.0	128.0
UF40066	118.0	132.0	8.5	9.5	130.0
UF40067	125.0	140.0	9.0	10.0	138.0
UF40068	132.0	145.0	8.5	9.5	143.0
UF40069	136.0	150.0	8.5	9.5	148.0
UF40070	145.0	160.0	9.0	10.0	158.0

UH1 Series

Symmetrical Piston & Rod U-Cup Seal
(U-Cup Seal with NBR70 Shore A O-Ring)



*L=H10%



ESTER TPU 95 PHYSICAL PROPERTIES

Working Pressure: ≤ 35 MPa			Hardness		
Working Temperature: -35°C to 80°C -31°F to 176°F			95	Shore A	DIN53515
Surface Speed: ≤ 0.8 m/s			95	Shore A	ASTM D2240
Media: Mineral Oil			Tensile Strength		
			50	MPa	DIN53504
			7252	psi	ASTM D-412
			Elongation		
			515	%	DIN53504
			515	%	ASTM D-412
			Tear Strength		
			140	N/mm	DIN53504
			799	pli	ASTM D-624
			Standard Compound		
			KC9502AA		
			Color		
			Black ●		

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH10001	1/16	5/16	1/8	1.59	7.94	3.18
UH10002	3/32	11/32	1/8	2.38	8.73	3.18
UH10003	1/8	3/8	1/8	3.18	9.53	3.18
UH10004	3/16	7/16	1/8	4.76	11.11	3.18
UH10005	1/4	1/2	1/8	6.35	12.70	3.18
UH10006	5/16	9/16	1/8	7.94	14.29	3.18
UH10007	23/64	39/64	1/8	9.13	15.48	3.18
UH10008	3/8	5/8	1/8	9.53	15.88	3.18
UH10009	7/16	11/16	1/8	11.11	17.46	3.18
UH10010	1/2	3/4	1/8	12.70	19.05	3.18
UH10011	17/32	25/32	1/8	13.49	19.84	3.18
UH10012	9/16	13/16	1/8	14.29	20.64	3.18
UH10013	5/8	7/8	1/8	15.88	22.23	3.18
UH10014	11/16	15/16	1/8	17.46	23.81	3.18
UH10015	3/4	1	1/8	19.05	25.40	3.18
UH10016	13/16	1 1/16	1/8	20.64	26.99	3.18
UH10017	7/8	1 1/8	1/8	22.23	28.58	3.18
UH10018	29/32	1 5/32	1/8	23.02	29.37	3.18

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH10019	15/16	1 3/16	1/8	23.81	30.16	3.18
UH10020	1	1 1/4	1/8	25.40	31.75	3.18
UH10021	1 1/16	1 5/16	1/8	26.99	33.34	3.18
UH10022	1 1/8	1 3/8	1/8	28.58	34.93	3.18
UH10023	1 3/16	1 7/16	1/8	30.16	36.51	3.18
UH10024	1 1/4	1 1/2	1/8	31.75	38.10	3.18
UH10025	1 5/16	1 9/16	1/8	33.34	39.69	3.18
UH10026	1 3/8	1 5/8	1/8	34.93	41.28	3.18
UH10027	1 7/16	1 11/16	1/8	36.51	42.86	3.18
UH10028	1 1/2	1 3/4	1/8	38.10	44.45	3.18
UH10029	1 9/16	1 13/16	1/8	39.69	46.04	3.18
UH10030	1 5/8	1 7/8	1/8	41.28	47.63	3.18
UH10031	1 11/16	1 15/16	1/8	42.86	49.21	3.18
UH10032	1 3/4	2	1/8	44.45	50.80	3.18
UH10033	1 7/8	2 1/8	1/8	47.63	53.98	3.18
UH10034	2	2 1/4	1/8	50.80	57.15	3.18
UH10035	2 1/8	2 3/8	1/8	53.98	60.33	3.18
UH10036	2 1/4	2 1/2	1/8	57.15	63.50	3.18

UH1 Series

Symmetrical Piston & Rod U-Cup Seal
(U-Cup Seal with NBR70 Shore A O-Ring)

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH10037	2 3/8	2 5/8	1/8	60.33	66.68	3.18
UH10038	2 1/2	2 3/4	1/8	63.50	69.85	3.18
UH10039	2 5/8	2 7/8	1/8	66.68	73.03	3.18
UH10040	2 3/4	3	1/8	69.85	76.20	3.18
UH10041	2 7/8	3 1/8	1/8	73.03	79.38	3.18
UH10042	3	3 1/4	1/8	76.20	82.55	3.18
UH10043	3 1/4	3 1/2	1/8	82.55	88.90	3.18
UH10044	3 3/8	3 5/8	1/8	85.73	92.08	3.18
UH10045	3 1/2	3 3/4	1/8	88.90	95.25	3.18
UH10046	4	4 1/4	1/8	101.60	107.95	3.18
UH10047	4 1/4	4 1/2	1/8	107.95	114.30	3.18
UH10048	4 3/8	4 5/8	1/8	111.13	117.48	3.18
UH10049	4 1/2	4 3/4	1/8	114.30	120.65	3.18
UH10050	4 3/4	5	1/8	120.65	127.00	3.18
UH10051	5	5 1/4	1/8	127.00	133.35	3.18
UH10052	5 3/4	6	1/8	146.05	152.40	3.18
UH10053	7/16	3/4	5/32	11.11	19.05	3.97
UH10054	3/4	1 1/16	5/32	19.05	26.99	3.97
UH10055	15/16	1 1/4	5/32	23.81	31.75	3.97
UH10056	1	1 5/16	5/32	25.40	33.34	3.97
UH10057	1 1/16	1 3/8	5/32	26.99	34.93	3.97
UH10058	1 3/16	1 1/2	5/32	30.16	38.10	3.97
UH10059	1 1/4	1 9/16	5/32	31.75	39.69	3.97
UH10060	1 3/8	1 11/16	5/32	34.93	42.86	3.97
UH10061	2 1/16	2 3/8	5/32	52.39	60.33	3.97
UH10062	9/16	29/32	11/64	14.29	23.02	4.37
UH10063	3/16	9/16	3/16	4.76	14.29	4.76
UH10064	1/4	5/8	3/16	6.35	15.88	4.76
UH10065	5/16	11/16	3/16	7.94	17.46	4.76
UH10066	3/8	3/4	3/16	9.53	19.05	4.76
UH10067	7/16	13/16	3/16	11.11	20.64	4.76
UH10068	1/2	7/8	3/16	12.70	22.23	4.76
UH10069	9/16	15/16	3/16	14.29	23.81	4.76
UH10070	5/8	1	3/16	15.88	25.40	4.76
UH10071	21/32	1 1/32	3/16	16.67	26.19	4.76
UH10072	11/16	1 1/16	3/16	17.46	26.99	4.76
UH10073	3/4	1 1/8	3/16	19.05	28.58	4.76
UH10074	13/16	1 3/16	3/16	20.64	30.16	4.76
UH10075	7/8	1 1/4	3/16	22.23	31.75	4.76
UH10076	15/16	1 5/16	3/16	23.81	33.34	4.76
UH10077	1	1 3/8	3/16	25.40	34.93	4.76
UH10078	1 1/16	1 7/16	3/16	26.99	36.51	4.76
UH10079	1 1/8	1 1/2	3/16	28.58	38.10	4.76
UH10080	1 3/16	1 9/16	3/16	30.16	39.69	4.76
UH10081	1 1/4	1 5/8	3/16	31.75	41.28	4.76
UH10082	1 5/16	1 11/16	3/16	33.34	42.86	4.76
UH10083	1 3/8	1 3/4	3/16	34.93	44.45	4.76

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH10084	1 7/16	1 13/16	3/16	36.51	46.04	4.76
UH10085	1 1/2	1 7/8	3/16	38.10	47.63	4.76
UH10086	1 9/16	1 15/16	3/16	39.69	49.21	4.76
UH10087	1 5/8	2	3/16	41.28	50.80	4.76
UH10088	1 11/16	2 1/16	3/16	42.86	52.39	4.76
UH10089	1 3/4	2 1/8	3/16	44.45	53.98	4.76
UH10090	1 13/16	2 3/16	3/16	46.04	55.56	4.76
UH10091	1 7/8	2 1/4	3/16	47.63	57.15	4.76
UH10092	1 15/16	2 5/16	3/16	49.21	58.74	4.76
UH10093	2	2 3/8	3/16	50.80	60.33	4.76
UH10094	2 1/16	2 7/16	3/16	52.39	61.91	4.76
UH10095	2 1/8	2 1/2	3/16	53.98	63.50	4.76
UH10096	2 1/4	2 5/8	3/16	57.15	66.68	4.76
UH10097	2 3/8	2 3/4	3/16	60.33	69.85	4.76
UH10098	2 1/2	2 7/8	3/16	63.50	73.03	4.76
UH10099	2 5/8	3	3/16	66.68	76.20	4.76
UH10100	2 3/4	3 1/8	3/16	69.85	79.38	4.76
UH10101	2 7/8	3 1/4	3/16	73.03	82.55	4.76
UH10102	3	3 3/8	3/16	76.20	85.73	4.76
UH10103	3 1/8	3 1/2	3/16	79.38	88.90	4.76
UH10104	3 1/4	3 5/8	3/16	82.55	92.08	4.76
UH10105	3 3/8	3 3/4	3/16	85.73	95.25	4.76
UH10106	3 1/2	3 7/8	3/16	88.90	98.43	4.76
UH10107	3 5/8	4	3/16	92.08	101.60	4.76
UH10108	3 3/4	4 1/8	3/16	95.25	104.78	4.76
UH10109	3 7/8	4 1/4	3/16	98.43	107.95	4.76
UH10110	4	4 3/8	3/16	101.60	111.13	4.76
UH10111	4 1/8	4 1/2	3/16	104.78	114.30	4.76
UH10112	4 1/4	4 5/8	3/16	107.95	117.48	4.76
UH10113	4 3/8	4 3/4	3/16	111.13	120.65	4.76
UH10114	4 1/2	4 7/8	3/16	114.30	123.83	4.76
UH10115	4 3/4	5 1/8	3/16	120.65	130.18	4.76
UH10116	4 7/8	5 1/4	3/16	123.83	133.35	4.76
UH10117	5 11/16	6 1/16	3/16	144.46	153.99	4.76
UH10118	5 7/8	6 1/4	3/16	149.23	158.75	4.76
UH10119	6	6 3/8	3/16	152.40	161.93	4.76
UH10120	6 5/16	6 11/16	3/16	160.34	169.86	4.76
UH10121	5/16	3/4	7/32	7.94	19.05	5.56
UH10122	7/16	7/8	7/32	11.11	22.23	5.56
UH10123	9/16	1	7/32	14.29	25.40	5.56
UH10124	3/4	1 3/16	7/32	19.05	30.16	5.56
UH10125	15/16	1 3/8	7/32	23.81	34.93	5.56
UH10126	1 3/4	2 3/16	7/32	44.45	55.56	5.56
UH10127	2 1/16	2 1/2	7/32	52.39	63.50	5.56
UH10128	2 1/2	2 5/16	7/32	63.50	58.74	5.56
UH10129	2 9/16	3	7/32	65.09	76.20	5.56
UH10130	2 13/16	3 1/4	7/32	71.44	82.55	5.56

UH1 Series

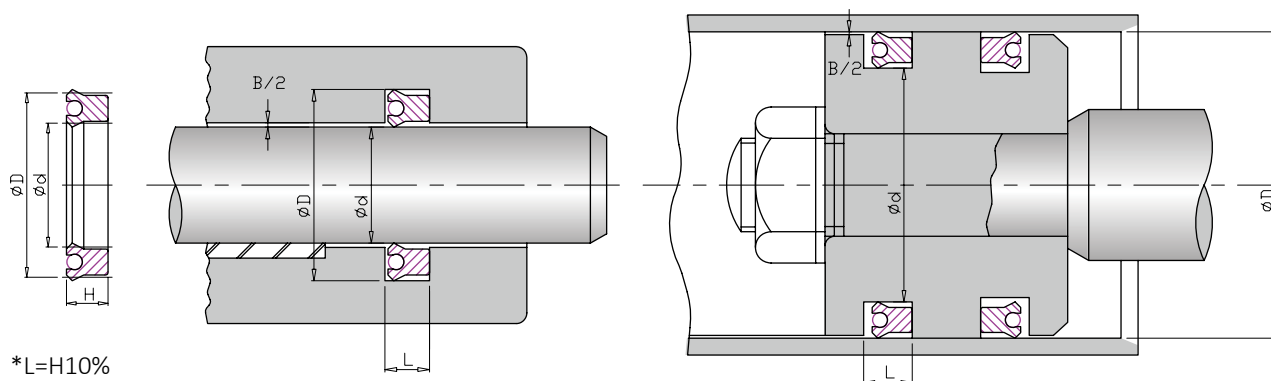
Symmetrical Piston & Rod U-Cup Seal
(U-Cup Seal with NBR70 Shore A O-Ring)

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH10131	3	3 7/16	7/32	76.20	87.31	5.56
UH10132	1/4	3/4	1/4	6.35	19.05	6.35
UH10133	5/16	13/16	1/4	7.94	20.64	6.35
UH10136	1/2	1	1/4	12.70	25.40	6.35
UH10138	5/8	1 1/8	1/4	15.88	28.58	6.35
UH10139	11/16	1 3/16	1/4	17.45	30.16	6.35
UH10140	3/4	1 1/4	1/4	19.05	31.75	6.35
UH10142	7/8	1 3/8	1/4	22.23	34.93	6.35
UH10144	1	1 1/2	1/4	25.40	38.10	6.35
UH10147	1 1/8	1 5/8	1/4	28.58	41.28	6.35
UH10149	1 1/4	1 3/4	1/4	31.75	44.45	6.35
UH10151	1 3/8	1 7/8	1/4	34.93	47.63	6.35
UH10153	1 1/2	2	1/4	38.10	50.80	6.35
UH10155	1 3/4	2 1/4	1/4	44.45	57.15	6.35
UH10156	1 7/8	2 3/8	1/4	47.63	60.33	6.35
UH10157	2	2 1/2	1/4	50.80	63.50	6.35
UH10159	2 1/4	2 3/4	1/4	57.15	69.85	6.35
UH10160	2 3/8	2 7/8	1/4	60.33	73.03	6.35
UH10161	2 1/2	3	1/4	63.50	76.20	6.35
UH10163	2 3/4	3 1/4	1/4	69.85	82.55	6.35
UH10165	3	3 1/2	1/4	76.20	88.90	6.35
UH10166	3 1/8	3 5/8	1/4	79.38	92.08	6.35
UH10167	3 1/4	3 3/4	1/4	82.55	95.25	6.35
UH10169	3 1/2	4	1/4	88.90	101.60	6.35
UH10171	3 3/4	4 1/4	1/4	95.25	107.95	6.35
UH10174	4	4 1/2	1/4	101.60	114.30	6.35
UH10176	4 1/4	4 3/4	1/4	107.95	120.65	6.35
UH10178	4 1/2	5	1/4	114.30	127.00	6.35
UH10180	4 3/4	5 1/4	1/4	120.65	133.35	6.35
UH10181	4 7/8	5 3/8	1/4	123.83	136.53	6.35
UH10182	5	5 1/2	1/4	127.00	139.70	6.35
UH10186	5 1/2	6	1/4	139.70	152.40	6.35
UH10188	5 3/4	6 1/4	1/4	146.05	158.75	6.35
UH10189	5 7/8	6 3/8	1/4	149.23	161.93	6.35
UH10190	6	6 1/2	1/4	152.40	165.10	6.35
UH10192	6 1/2	7	1/4	165.10	177.80	6.35
UH10193	6 3/4	7 1/4	1/4	171.45	184.15	6.35
UH10196	7 1/4	7 3/4	1/4	184.15	196.85	6.35
UH10197	7 1/2	8	1/4	190.50	203.20	6.35
UH10198	7 3/4	8 1/4	1/4	196.85	209.55	6.35
UH10200	8	8 1/2	1/4	203.20	215.90	6.35
UH10201	8 1/2	9	1/4	215.90	228.60	6.35
UH10203	9	9 1/2	1/4	228.60	241.30	6.35
UH10204	9 1/4	9 3/4	1/4	234.95	247.65	6.35
UH10205	9 1/2	10	1/4	241.30	254.00	6.35
UH10206	9 3/4	10 1/4	1/4	247.65	260.35	6.35
UH10214	12	12 1/2	1/4	304.80	317.50	6.35
UH10215	12 1/2	13	1/4	317.50	330.20	6.35

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH10236	1	1 5/8	5/16	25.40	41.28	7.94
UH10238	1 1/8	1 3/4	5/16	28.58	44.45	7.94
UH10240	1 1/4	1 7/8	5/16	31.75	47.63	7.94
UH10243	1 1/2	2 1/8	5/16	38.10	53.98	7.94
UH10251	2 1/4	2 7/8	5/16	57.15	73.03	7.94
UH10253	2 3/8	3	5/16	60.33	76.20	7.94
UH10254	2 1/2	3 1/8	5/16	63.50	79.38	7.94
UH10258	2 7/8	3 1/2	5/16	73.03	88.90	7.92
UH10263	3 1/2	4 1/8	5/16	88.90	104.78	7.94
UH10265	3 3/4	4 3/8	5/16	95.25	111.13	7.94
UH10268	4 1/8	4 3/4	5/16	104.78	120.65	7.94
UH10271	4 1/2	5 1/8	5/16	114.30	130.18	7.94
UH10283	6 3/8	7	5/16	161.93	177.80	7.94
UH10289	7 3/8	8	5/16	187.33	203.20	7.94
UH10314	1	1 3/4	3/8	25.40	44.45	9.53
UH10316	1 1/4	2	3/8	31.75	50.80	9.53
UH10320	1 1/2	2 1/4	3/8	38.10	57.15	9.53
UH10322	1 5/8	2 3/8	3/8	41.28	60.33	9.53
UH10327	2 1/8	2 7/8	3/8	53.98	73.03	9.53
UH10334	2 3/4	3 1/2	3/8	69.85	88.90	9.53
UH10339	3 1/4	4	3/8	82.55	101.60	9.53
UH10342	3 5/8	4 3/8	3/8	92.08	111.13	9.53
UH10343	3 3/4	4 1/2	3/8	95.25	114.30	9.53
UH10348	4 1/4	5	3/8	107.95	127.00	9.53
UH10350	4 1/2	5 1/4	3/8	114.30	133.35	9.53
UH10353	4 7/8	5 5/8	3/8	123.83	142.88	9.53
UH10360	5 3/4	6 1/2	3/8	146.05	165.10	9.53
UH10367	7 1/4	8	3/8	184.15	203.20	9.53
UH10368	7 1/2	8 1/4	3/8	190.50	209.55	9.53
UH10377	9 1/4	10	3/8	234.95	254.00	9.53
UH10382	10 1/4	11	3/8	260.35	279.40	9.53
UH10385	11 1/4	12	3/8	285.75	304.80	9.53
UH10393	13 1/4	14	3/8	336.55	355.60	9.53
UH10438	2	3	1/2	50.80	76.20	12.70
UH10444	3	4	1/2	76.20	101.60	12.70
UH10463	6	7	1/2	152.40	177.80	12.70
UH10477	9	10	1/2	228.60	254.00	12.70
UH10481	10 1/2	11 1/2	1/2	266.70	292.10	12.70
UH10534	5 3/4	7	5/8	146.05	177.80	15.88
UH10539	6 3/4	8	5/8	171.45	203.20	15.88
UH10584	10 1/2	12	3/4	266.70	304.80	19.05
UH10622	10	12	1	254.00	304.80	25.40

UH2 Series

Symmetrical Piston & Rod U-Cup Seal
(U-Cup Seal with NBR70 Shore A O-Ring)



*L=H10%

ESTER TPU 95 PHYSICAL PROPERTIES

Working Pressure: ≤ 35 MPa			Hardness		95 Shore A	DIN53515
Working Temperature: -35°C to 80°C -31°F to 176°F					95 Shore A	ASTM D2240
Surface Speed: ≤ 0.8 m/s			Tensile Strength		50 MPa	DIN53504
Media: Mineral Oil					7252 psi	ASTM D-412
Abrasion Resistance			Elongation		515 %	DIN53504
35mm ³					515 %	ASTM D-412
DIN53516			Tear Strength		140 N/mm	DIN53504
Compression Set					799 pli	ASTM D-624
30%			Standard Compound		KC9502AA	
24 h @ 100 °C			Color		Black ●	
30%						
ASTM D-395						
Specific gravity						
1.18 g/cm ³						
DIN53479						
1.18 g/cm ³						
ASTM D-972						

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH20001	1/8	3/8	1/4	3.18	9.53	6.35
UH20002	3/16	7/16	1/4	4.76	11.11	6.35
UH20003	1/4	1/2	1/4	6.35	12.70	6.35
UH20004	5/16	9/16	1/4	7.94	14.29	6.35
UH20005	3/8	5/8	1/4	9.53	15.88	6.35
UH20006	7/16	11/16	1/4	11.11	17.46	6.35
UH20007	1/2	3/4	1/8	12.70	19.05	3.18
UH20008	1/2	3/4	1/4	12.70	19.05	6.35
UH20009	9/16	13/16	1/4	14.29	20.64	6.35
UH20010	5/8	7/8	3/16	15.88	22.23	4.76
UH20011	5/8	7/8	1/4	15.88	22.23	6.35
UH20012	11/16	15/16	1/4	17.46	23.81	6.35
UH20013	3/4	1	1/8	19.05	25.40	3.18
UH20014	3/4	1	3/16	19.05	25.40	4.76
UH20015	3/4	1	1/4	19.05	25.40	6.35
UH20016	13/16	1 1/16	1/8	20.64	26.99	3.18
UH20017	13/16	1 1/16	1/4	20.64	26.99	6.35
UH20018	7/8	1 1/8	1/4	22.23	28.58	6.35

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH20019	15/16	1 3/16	1/4	23.81	30.16	6.35
UH20020	1	1 1/4	1/8	25.40	31.75	3.18
UH20021	1	1 1/4	3/16	25.40	31.75	4.76
UH20022	1	1 1/4	1/4	25.40	31.75	6.35
UH20023	1 1/16	1 5/16	1/4	26.99	33.34	6.35
UH20024	1 1/8	1 3/8	1/4	28.58	34.93	6.35
UH20025	1 3/16	1 7/16	1/4	30.16	36.51	6.35
UH20026	1 1/4	1 1/2	3/16	31.75	38.10	4.76
UH20027	1 1/4	1 1/2	1/4	31.75	38.10	6.35
UH20028	1 5/16	1 9/16	3/16	33.34	39.69	4.76
UH20029	1 3/8	1 5/8	1/4	34.93	41.28	6.35
UH20030	1 3/8	1 5/8	5/16	34.93	41.28	7.94
UH20031	1 7/16	1 11/16	1/4	36.51	42.86	6.35
UH20032	1 1/2	1 3/4	1/4	38.10	44.45	6.35
UH20033	1 3/4	2	1/4	44.45	50.80	6.35
UH20034	1 7/8	2 1/8	1/8	47.63	53.98	3.18
UH20035	1 7/8	2 1/8	1/4	47.63	53.98	6.35
UH20036	2	2 1/4	1/4	50.80	57.15	6.35

UH2 Series

Symmetrical Piston & Rod U-Cup Seal
(U-Cup Seal with NBR70 Shore A O-Ring)

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH20037	2 1/8	2 3/8	1/4	53.98	60.33	6.35
UH20038	2 1/4	2 1/2	1/4	57.15	63.50	6.35
UH20039	2 1/2	2 3/4	1/4	63.50	69.85	6.35
UH20040	2 3/4	3	1/4	69.85	76.20	6.35
UH20041	1/4	5/8	5/16	6.35	15.88	7.94
UH20042	5/16	11/16	5/16	7.94	17.46	7.94
UH20043	3/8	3/4	5/16	9.53	19.05	7.94
UH20044	7/16	13/16	5/16	11.11	20.64	7.94
UH20045	1/2	7/8	5/16	12.70	22.23	7.94
UH20046	9/16	15/16	5/16	14.29	23.81	7.94
UH20047	5/8	1	5/16	15.88	25.40	7.94
UH20048	11/16	1 1/16	5/16	17.46	26.99	7.94
UH20049	3/4	1 1/8	5/16	19.05	28.58	7.94
UH20051	13/16	1 3/16	5/16	20.64	30.16	7.94
UH20052	7/8	1 1/4	5/16	22.23	31.75	7.94
UH20053	15/16	1 5/16	5/16	23.81	33.34	7.94
UH20054	1	1 3/8	5/16	25.40	34.93	7.94
UH20055	1 1/16	1 7/16	5/16	26.99	36.51	7.94
UH20056	1 1/8	1 1/2	3/16	28.58	38.10	4.76
UH20057	1 1/8	1 1/2	5/16	28.58	38.10	7.94
UH20058	1 1/8	1 1/2	3/8	28.58	38.10	9.53
UH20059	1 3/16	1 9/16	5/16	30.16	39.69	7.94
UH20060	1 1/4	1 5/8	1/4	31.75	41.28	6.35
UH20061	1 1/4	1 5/8	5/16	31.75	41.28	7.94
UH20062	1 1/4	1 5/8	3/8	31.75	41.28	9.53
UH20063	1 5/16	1 11/16	5/16	33.34	42.86	7.94
UH20064	1 3/8	1 3/4	1/4	34.93	44.45	6.35
UH20065	1 3/8	1 3/4	5/16	34.93	44.45	7.94
UH20066	1 3/8	1 3/4	3/8	34.93	44.45	9.53
UH20067	1 7/16	1 13/16	5/16	36.51	46.04	7.94
UH20068	1 1/2	1 7/8	3/16	38.10	47.63	4.76
UH20069	1 1/2	1 7/8	1/4	38.10	47.63	6.35
UH20071	1 1/2	1 7/8	5/16	38.10	47.63	7.94
UH20072	1 1/2	1 7/8	3/8	38.10	47.63	9.53
UH20073	1 5/8	2	5/16	41.28	50.80	7.94
UH20074	1 5/8	2	3/8	41.28	50.80	9.53
UH20075	1 3/4	2 1/8	5/16	44.45	53.98	7.94
UH20076	1 3/4	2 1/8	3/8	44.45	53.98	9.53
UH20077	1 7/8	2 1/4	3/8	47.63	57.15	9.53
UH20078	2	2 3/8	5/16	50.80	60.33	7.94
UH20079	2	2 3/8	3/8	50.80	60.33	9.53
UH20080	2 1/8	2 1/2	3/16	53.98	63.50	4.76
UH20081	2 1/8	2 1/2	1/4	53.98	63.50	6.35
UH20082	2 1/8	2 1/2	3/8	53.98	63.50	9.53

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH20083	2 1/4	2 5/8	5/16	57.15	66.68	7.94
UH20084	2 1/4	2 5/8	3/8	57.15	66.68	9.53
UH20085	2 3/8	2 3/4	3/8	60.33	69.85	9.53
UH20087	2 1/2	2 7/8	1/4	63.50	73.03	6.35
UH20088	2 1/2	2 7/8	3/8	63.50	73.03	9.53
UH20089	2 5/8	3	9/32	66.68	76.20	7.14
UH20090	2 5/8	3	3/8	66.68	76.20	9.53
UH20091	2 3/4	3 1/8	3/16	69.85	79.38	4.76
UH20093	2 7/8	3 1/4	9/32	73.03	82.55	7.14
UH20095	3	3 3/8	1/4	76.20	85.73	6.35
UH20096	3	3 3/8	3/8	76.20	85.73	9.53
UH20097	3 1/8	3 1/2	3/8	79.38	88.90	9.53
UH20099	3 3/8	3 3/4	3/16	85.73	95.25	4.76
UH20101	3 1/2	3 7/8	3/8	88.90	98.43	9.53
UH20102	3 5/8	4	3/8	92.08	101.60	9.53
UH20105	4	4 3/8	3/16	101.60	111.13	4.76
UH20106	4	4 3/8	3/8	101.60	111.13	9.53
UH20109	4 3/8	4 3/4	3/8	111.13	120.65	9.53
UH20114	5 1/2	5 7/8	3/8	139.70	149.23	9.53
UH20118	7/16	15/16	3/8	11.13	23.83	9.53
UH20120	1/2	1	3/8	12.70	25.40	9.53
UH20124	3/4	1 1/4	3/8	19.05	31.75	9.53
UH20127	1	1 1/2	3/8	25.40	38.10	9.53
UH20129	1 1/4	1 3/4	3/8	31.75	44.45	9.53
UH20131	1 3/8	1 7/8	3/8	34.93	47.63	9.53
UH20135	1 1/2	2	3/8	38.10	50.80	9.53
UH20138	1 3/4	2 1/4	3/8	44.45	57.15	9.53
UH20141	2	2 1/2	1/4	50.80	63.50	6.35
UH20142	2	2 1/2	3/8	50.80	63.50	9.53
UH20144	2 1/8	2 5/8	3/8	53.98	66.68	9.53
UH20145	2 1/4	2 3/4	3/8	57.15	69.85	9.53
UH20146	2 3/8	2 7/8	3/8	60.33	73.03	9.53
UH20148	2 1/2	3	3/8	63.50	76.20	9.53
UH20150	2 5/8	3 1/8	3/8	66.68	79.38	9.53
UH20151	2 3/4	3 1/4	3/8	69.85	82.55	9.53
UH20152	2 7/8	3 3/8	3/8	73.03	85.73	9.53
UH20154	3	3 1/2	3/8	76.20	88.90	9.53
UH20156	3 1/4	3 3/4	3/8	82.55	95.25	9.53
UH20158	3 1/2	4	3/8	88.90	101.60	9.53
UH20160	3 3/4	4 1/4	3/8	95.25	107.95	9.53
UH20163	4	4 1/2	3/8	101.60	114.30	9.53
UH20164	4	4 1/2	1/2	101.60	114.30	12.70
UH20165	4	4 1/2	9/16	101.60	114.30	14.29
UH20166	4 1/16	4 9/16	3/8	103.17	115.87	9.53

UH2 Series

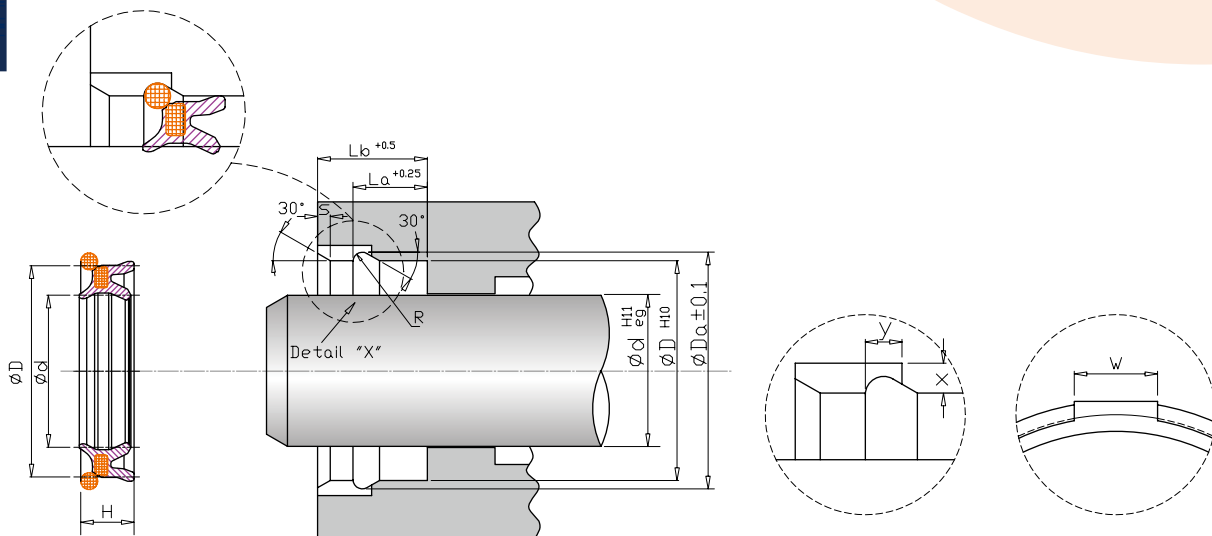
Symmetrical Piston & Rod U-Cup Seal
(U-Cup Seal with NBR70 Shore A O-Ring)

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH20174	4 1/2	5	3/8	114.30	127.00	9.53
UH20175	4 1/2	5	9/16	114.30	127.00	14.29
UH20177	4 5/8	5 1/8	9/16	117.48	130.18	14.29
UH20178	4 3/4	5 1/4	3/8	120.65	133.35	9.53
UH20179	4 3/4	5 1/4	9/16	120.65	133.35	14.29
UH20181	4 7/8	5 3/8	9/16	123.83	136.53	14.29
UH20182	5	5 1/2	3/8	127.00	139.70	9.53
UH20183	5	5 1/2	9/16	127.00	139.70	14.29
UH20187	5 1/2	6	3/8	139.70	152.40	9.53
UH20188	5 1/2	6	9/16	139.70	152.40	14.29
UH20189	5 5/8	6 1/8	9/16	142.88	155.58	14.27
UH20190	5 3/4	6 1/4	9/16	146.05	158.75	14.29
UH20191	6	6 1/2	3/8	152.40	165.10	9.53
UH20195	6 1/2	7	3/8	165.10	177.80	9.53
UH20197	6 3/4	7 1/4	3/8	171.45	184.15	9.53
UH20198	6 3/4	7 1/4	9/16	171.45	184.15	14.29
UH20201	7 1/4	7 3/4	9/16	184.15	196.85	14.27
UH20205	8	8 1/2	9/16	203.20	215.90	14.27
UH20210	8 1/2	9	9/16	215.90	228.60	14.27
UH20232	1	1 5/8	1/2	25.40	41.28	12.70
UH20240	1 1/2	2 1/8	1/2	38.10	53.98	12.70
UH20244	1 3/4	2 3/8	1/2	44.45	60.33	12.70
UH20247	2	2 5/8	1/2	50.80	66.68	12.70
UH20250	2 1/4	2 7/8	1/2	57.15	73.03	12.70
UH20251	2 3/8	3	1/2	60.33	76.20	12.70
UH20252	2 1/2	3 1/8	1/2	63.50	79.38	12.70
UH20253	2 5/8	3 1/4	1/2	66.68	82.55	12.70
UH20256	3	3 5/8	1/2	76.20	92.08	12.70
UH20258	3 3/8	4	1/2	85.73	101.60	12.70
UH20259	3 1/2	4 1/8	1/2	88.90	104.78	12.70
UH20266	4 1/4	4 7/8	9/16	107.95	123.83	14.29
UH20271	4 3/4	5 3/8	5/8	120.65	136.53	15.88
UH20272	5	5 5/8	5/8	127.00	142.88	15.88
UH20273	5 1/8	5 3/4	5/8	130.18	146.05	15.88
UH20274	5 1/4	5 7/8	5/8	133.35	149.23	15.88
UH20298	2 1/4	3	5/8	57.15	76.20	15.88
UH20300	2 1/2	3 1/4	1/2	63.50	82.55	12.70
UH20301	2 1/2	3 1/4	5/8	63.50	82.55	15.88
UH20303	2 3/4	3 1/2	5/8	69.85	88.90	15.88
UH20304	2 7/8	3 5/8	5/8	73.03	92.08	15.88
UH20306	3	3 3/4	5/8	76.20	95.25	15.88
UH20309	3 1/4	4	5/8	82.55	101.60	15.88
UH20311	3 1/2	4 1/4	5/8	88.90	107.95	15.88
UH20313	3 3/4	4 1/2	5/8	95.25	114.30	15.88

CODE	d (inch)	D (inch)	H (inch)	d (mm)	D (mm)	H (mm)
UH20315	4	4 3/4	1/2	101.60	120.65	12.70
UH20316	4	4 3/4	5/8	101.60	120.65	15.88
UH20318	4 1/4	5	5/8	107.95	127.00	15.88
UH20322	4 3/4	5 1/2	5/8	120.65	139.70	15.88
UH20323	4 7/8	5 5/8	5/8	123.83	142.88	15.88
UH20325	5	5 3/4	5/8	127.00	146.05	15.88
UH20327	5 1/4	6	5/8	133.35	152.40	15.88
UH20329	5 1/2	6 1/4	5/8	139.70	158.75	15.88
UH20331	5 3/4	6 1/2	5/8	146.05	165.10	15.88
UH20342	7	7 3/4	5/8	177.80	196.85	15.88
UH20343	7 1/4	8	5/8	184.15	203.20	15.88
UH20355	9	9 3/4	5/8	228.60	247.65	15.88
UH20357	9 1/2	10 1/4	5/8	241.30	260.35	15.88
UH20359	10 1/4	11	1/2	260.35	279.40	12.70
UH20361	10 1/2	11 1/4	5/8	266.70	285.75	15.88
UH20401	5 1/2	6 1/2	3/4	139.70	165.10	19.05
UH20407	7	8	3/4	177.80	203.20	19.05
UH20418	10 1/2	11 1/2	3/4	266.70	292.10	19.05

UA6 Series

Rod Wiper Seal

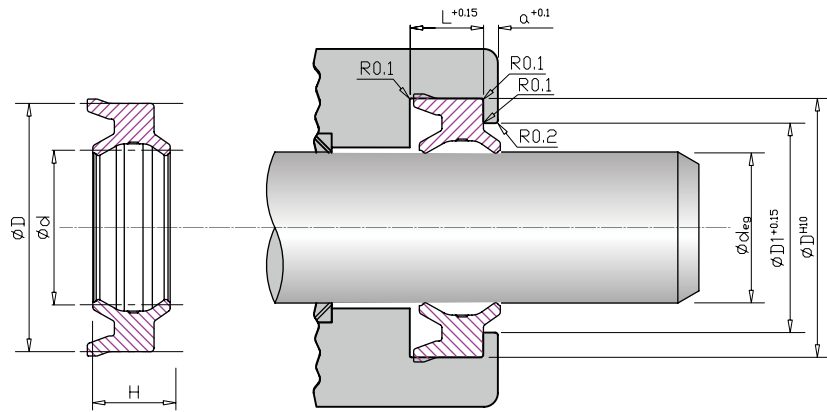


FKM/ FPM 80 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.6 MPa			Hardness	80	Shore A	DIN53505
Working Temperature: -20°C to 225°C -4°F to 437°F				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	Elongation	154	%	DIN53504
24 h @ 175 °C	8.1%	ASTM D-395		154	%	ASTM D-412
			Standard Compound		V8031AE	
			Color		Green 	

CODE	d (mm)	D (mm)	H (mm)	Da	La	Lb	R	x	y	w	s
UA61220	12.0	20.0	8.50	22.0	8.8	13.0	1.1	1.8	2.2	4.0	1.5
UA61222	12.0	22.0	8.50	24.0	8.8	13.0	1.1	1.8	2.2	4.0	1.5
UA61626	16.0	26.0	8.50	28.0	8.8	13.0	1.1	1.8	2.2	5.0	1.5
UA61826	18.0	26.0	8.50	28.0	8.8	13.0	1.1	1.8	2.2	5.0	1.5
UA61828	18.0	28.0	8.50	30.0	8.8	13.0	1.1	1.8	2.2	5.0	1.5
UA62030	20.0	30.0	8.50	32.0	8.8	13.0	1.1	1.8	2.2	5.0	1.5
UA62232	22.0	32.0	8.50	34.5	9.4	14.0	1.4	2.0	2.8	7.5	2.0
UA62535	25.0	35.0	8.50	37.5	9.4	14.0	1.4	2.0	2.8	7.5	2.0
UA63242	32.0	42.0	8.50	44.5	9.4	14.0	1.4	2.0	2.8	7.5	2.0
UA64050	40.0	50.0	8.50	52.5	9.4	14.0	1.4	2.0	2.8	7.5	2.0
UA65060	50.0	60.0	8.50	63.2	10.4	15.0	1.8	2.5	3.6	10.0	2.0
UA66375	63.0	75.0	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



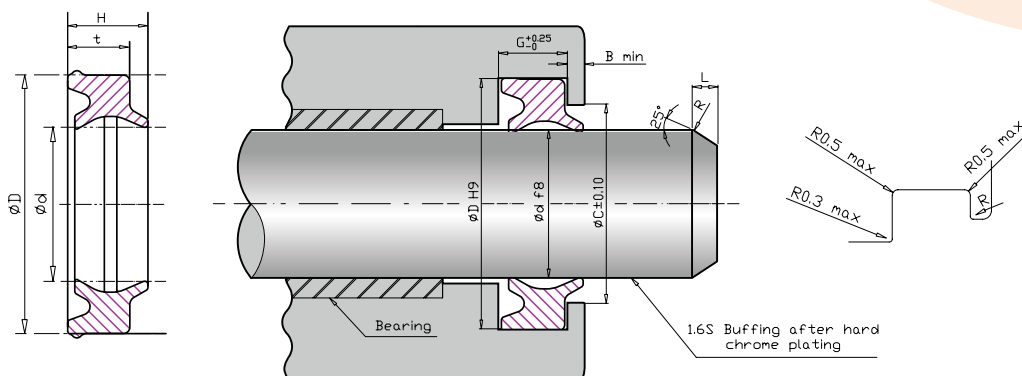
POLYCAPROLACTONE TPU 90 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.6 MPa					
Working Temperature: -40°C to 80°C -40°F to 176°F			Hardness	90 Shore A	DIN53505
				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	Elongation	460 %	DIN53504
24 h @ 70°C	19%	ASTM D-395		460 %	ASTM D-412
Specific gravity	1.15 g/cm ³	DIN53479	Tear Strength	156 N/mm	DIN53515
	1.15 g/cm ³	ASTM D-972		850 pli	ASTM D-624
			Standard Compound	KC9010AC	
			Color	Brown ●	

CODE	d (mm)	D (mm)	H (mm)	a	D1	L
UA70003	3.0	5.6	2.8	0.6	4.6	2.7
UA70004	4.0	7.0	2.8	0.8	5.6	2.7
UA70005	5.0	8.0	2.8	0.8	7.1	2.7
UA70006	6.0	9.0	2.8	1.0	8.1	2.7
UA70008	8.0	11.5	3.2	1.0	10.1	3.0
UA70010	10.0	14.0	3.7	1.0	12.1	3.4
UA70012	12.0	16.5	4.0	1.2	14.1	3.7
UA70014	14.0	18.5	4.0	1.2	16.1	3.7
UA70016	16.0	20.5	4.0	1.2	18.1	3.7
UA70018	18.0	22.5	4.0	1.2	20.1	3.7
UA70020	20.0	25.0	4.6	1.2	23.1	4.15
UA70022	22.0	27.0	4.6	1.2	23.9	4.15
UA70025	25.0	30.0	4.6	1.2	26.9	4.15
UA70030	30.0	35.5	5.0	1.2	32.1	4.55
UA70032	32.0	37.5	5.0	1.2	34.1	4.55
UA70035	35.0	40.5	5.0	1.2	37.1	4.55
UA70040	40.0	46.0	5.5	1.4	42.2	4.9
UA70045	45.0	51.0	5.5	1.4	47.2	4.9
UA70050	50.0	56.0	5.5	1.4	52.2	4.9
UA70063	63.0	69.5	6.0	1.4	65.4	5.4

UA25 Series

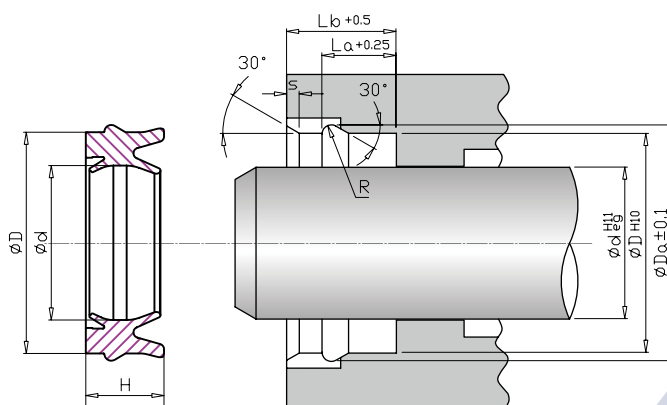
Double Lip Rod Wiper Seal



NBR 80 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.6 MPa			
Working Temperature: -25°C to 100°C -13°F to 212°F			
Surface Speed: ≤ 1.0 m/s			
Compression Set		8%	DIN53517
24 h @ 100°C		8%	ASTM D-395
Hardness		80 Shore A	DIN53505
		80 Shore A	ASTM D2240
Tensile Strength		20.23 MPa	DIN53504
		2934 psi	ASTM D-412
Elongation		285 %	DIN53504
		285 %	ASTM D-412
Standard Compound		N8039AA	
Color		Black ●	

CODE	d (mm)	D (mm)	H	t
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



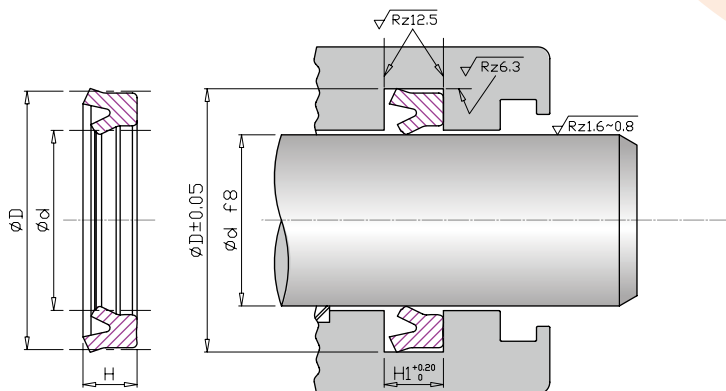
ESTER TPU 95 PHYSICAL PROPERTIES

ESTER TPU 95 PHYSICAL PROPERTIES				
Working Pressure: ≤ 1.6 MPa				
Working Temperature: -35°C to 80°C -35°F to 176°F			Hardness	95 Shore A DIN53505
				95 Shore A ASTM D2240
Surface Speed: ≤ 1.0 m/s			Tensile Strength	50 MPa DIN53504
				7252 psi ASTM D-412
Abrasion Resistance	35mm ³	DIN53516	Elongation	515 % DIN53504
Compression Set	27.5%	DIN53517		515 % ASTM D-412
24 h @ 70 °C	27.5%	ASTM D-395	Tear Strength	140 N/mm DIN53515
Specific gravity	1.18 g/cm ³	DIN53479		799 pli ASTM D-624
	1.18 g/cm ³	ASTM D-972	Standard Compound	KC9502AN / KC9502AG
			Color	Gray  / Green 

CODE	d (mm)	D (mm)	H (mm)	Da	La	Lb	R	s
UB11219	12.0	19.0	10.0	21.0	7.7	12	1.0	1.5
UB11220	12.0	20.0	10.7	22.0	8.8	13	1.1	1.5
UB11222	12.0	22.0	10.7	24.0	8.8	13	1.1	1.5
UB11424	14.0	24.0	10.7	26.0	8.8	13	1.1	1.5
UB11626	16.0	26.0	10.7	28.0	8.8	13	1.1	1.5
UB11826	18.0	26.0	10.7	28.0	8.8	13	1.1	1.5
UB11828	18.0	28.0	10.7	30.0	8.8	13	1.1	1.5
UB12030	20.0	30.0	10.7	32.0	8.8	13	1.1	1.5
UB12232	22.0	32.0	11.2	34.5	9.4	14	1.4	2.0
UB12535	25.0	35.0	11.2	37.5	9.4	14	1.4	2.0
UB13040	30.0	40.0	11.2	42.5	9.4	14	1.4	2.0
UB13242	32.0	42.0	11.2	44.5	9.4	14	1.4	2.0
UB14050	40.0	50.0	11.2	52.5	9.4	14	1.4	2.0
UB14555	45.0	55.0	12.2	58.2	10.4	15	1.8	2.0
UB15060	50.0	60.0	12.2	63.2	10.4	15	1.8	2.0
UB16375	63.0	75.0	13.0	78.2	11.4	16	1.8	2.0

UB3 Series

Asymmetrical Pneumatic Rod Seal



FKM/FPM 75 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.0 MPa

Working Temperature: -20°C to 225°C
 -4°F to 437°F

Surface Speed: ≤ 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
24 h @ 175°C	8.6	%	ASTM D-395

NBR 75 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.0 MPa

Working Temperature: -25°C to 100°C
 -13°F to 212°F

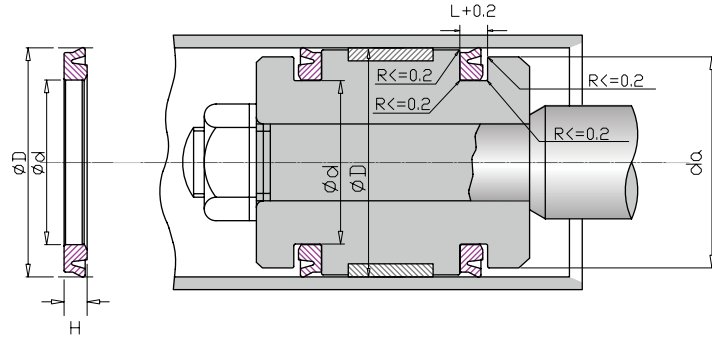
Surface Speed: ≤ 1.0 m/s

Hardness	75	Shore A	DIN53505
Tensile Strength	22.8	MPa	DIN53504
	3306	psi	ASTM D-412
Elongation	320	%	DIN53504
Compression Set	10.9	%	DIN53517
24 h @ 100°C	10.9	%	ASTM D-395

Standard Compound N7539AA

Color Black ●

CODE	d (mm)	D (mm)	H	H1
UB30307	3.0	7.0	2.9	3.2
UB30408	4.0	8.0	2.9	3.2
UB30509	5.0	9.0	2.9	3.2
UB30610	6.0	10.0	3.5	4.0
UB30812	8.0	12.0	3.5	4.0
UB31014	10.0	14.0	3.5	4.0
UB31217	12.0	17.0	4.0	4.5
UB31419	14.0	19.0	4.0	4.5
UB31622	16.0	22.0	5.0	5.7



FKM/FPM 75 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.6 MPa

Working Temperature: -20°C to 225°C

-4°F to 437°F

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
22 h @ 200°C	9	%	ASTM D-395
Standard Compound	V7514AA		
Color	Black ●		

NBR 75/85 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.0 Mpa / ≤ 1.6 Mpa

Working Temperature: -25°C to 100°C

-13°F to 212°F

Surface Speed: ≤ 1.0 m/s

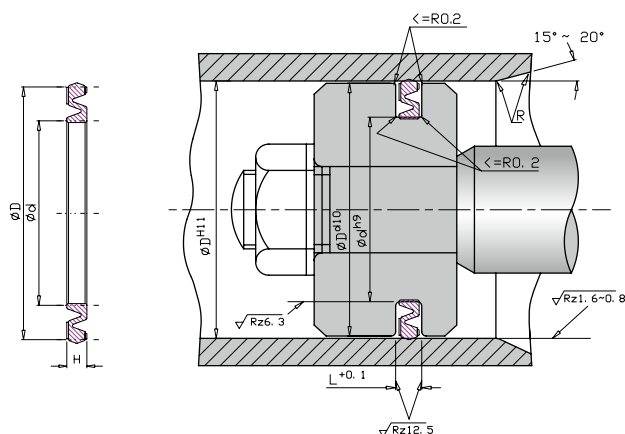
Hardness	75 / 85	Shore A	DIN53505
Tensile Strength	22.8 / 20.7	Mpa	DIN53504
	3306 / 3008	psi	ASTM D-412
Elongation	320 / 130	%	DIN53504
Compression Set	10.9 / 4.9	%	DIN53517
24hrs @ 100°C	10.9 / 4.9	%	ASTM D-395
Standard Compound	N7539AA / N8594AA		
Color	Black ●		

CODE	D (mm)	d (mm)	H (mm)	L	da
UC30001	4.0	1.50	1.50	2.00	3.6
UC30002	5.0	2.50	1.50	2.00	4.6
UC30003	6.0	3.00	2.00	2.50	5.6
UC30004	8.0	4.00	2.55	3.00	7.6
UC30005	8.0	4.80	2.30	2.70	7.6
UC30006	8.0	5.45	2.30	2.80	7.6
UC30007	10.0	3.00	3.50	4.00	9.6
UC30008	10.0	6.00	2.55	3.00	9.6
UC30009	10.0	6.45	2.55	3.00	9.6
UC30010	12.0	7.00	2.55	3.00	11.6
UC30011	13.0	8.00	2.55	3.00	12.6
UC30012	14.0	8.00	2.55	3.00	13.6
UC30013	15.0	9.00	2.55	3.00	14.6
UC30014	16.0	10.00	2.55	3.00	15.6
UC30015	16.0	11.00	2.55	3.00	15.6
UC30016	18.0	12.00	2.55	3.00	17.6
UC30017	20.0	14.00	2.55	3.00	19.6
UC30018	21.0	15.00	2.55	3.00	20.4
UC30019	22.0	16.00	2.55	3.00	21.4
UC30020	24.0	18.00	3.25	3.50	23.4
UC30021	25.0	19.00	3.25	3.50	24.4
UC30022	28.0	22.00	3.25	3.50	27.4
UC30023	30.0	22.00	3.25	3.50	29.4
UC30025	32.0	24.00	3.25	3.50	31.4

CODE	D (mm)	d (mm)	H (mm)	L	da
UC30026	35.0	27.00	3.25	3.50	34.4
UC30027	36.0	28.00	3.25	3.50	35.4
UC30028	37.0	29.00	3.25	3.50	36.4
UC30029	38.0	30.00	3.25	3.50	37.4
UC30030	40.0	32.00	3.25	3.50	39.4
UC30031	42.0	34.00	3.25	3.50	41.4
UC30032	45.0	37.00	3.25	3.50	44.4
UC30033	50.0	42.00	3.25	3.50	49.4
UC30034	52.0	42.00	4.25	4.50	51.4
UC30036	58.0	48.00	4.25	4.50	57.4
UC30037	63.0	53.00	4.25	4.50	62.4
UC30038	80.0	70.00	4.25	4.50	79.4
UC30039	90.0	80.00	4.25	4.50	89.4
UC30040	100.0	90.00	4.25	4.50	99.4
UC30041	125.0	105.00	8.25	8.50	123.8
UC30042	150.0	130.00	8.25	8.50	148.8
UC30043	160.0	140.00	8.25	8.50	158.8
UC30044	200.0	180.00	8.25	8.50	198.8

UC36 Series

Low Friction Compact Piston Seal



FKM/FPM 75 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.2 MPa

Working Temperature: -20°C to 225°C
 -4°F to 437°F

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
22 h @ 200°C	9	%	ASTM D-395
Standard Compound	V7514AA		
Color	Black ●		

NBR 75 PHYSICAL PROPERTIES

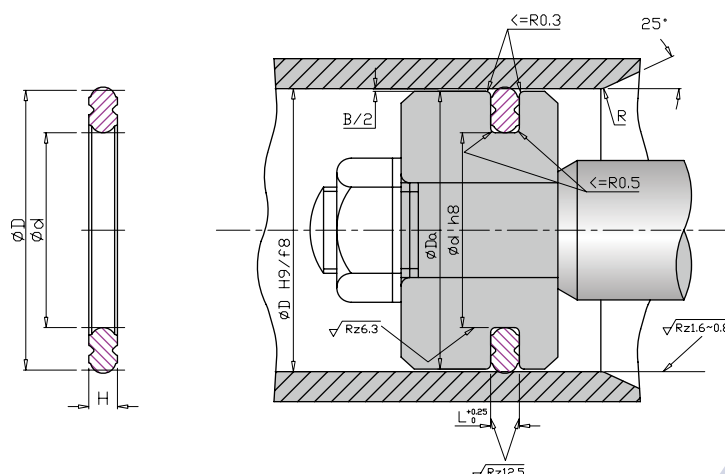
Working Pressure: ≤ 1.0 MPa

Working Temperature: -25°C to 100°C
 -13°F to 212°F

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
24 h @ 100°C	10.9	%	ASTM D-395
Standard Compound	N7539AA		
Color	Black ●		

CODE	D (mm)	d (mm)	L	H
UC36001	12.0	7.0	2.5	2.2
UC36002	16.0	9.0	2.5	2.4
UC36003	20.0	13.0	2.5	2.3
UC36004	25.0	18.0	2.5	2.4
UC36005	30.0	21.0	3.0	2.9
UC36006	32.0	23.0	3.0	2.9
UC36007	35.0	26.0	3.0	2.9
UC36008	40.0	31.0	3.0	2.9
UC36009	42.0	35.0	2.5	2.4
UC36010	45.0	36.0	3.0	2.8
UC36011	50.0	41.0	3.0	2.9
UC36012	60.0	48.0	4.0	3.9
UC36013	63.0	51.0	4.0	3.9
UC36014	70.0	58.0	4.0	3.9
UC36015	80.0	68.0	4.0	3.9
UC36016	100.0	88.0	4.0	3.9
UC36017	125.0	110.0	5.0	4.9
UC36018	90.0	78.0	3.9	3.8



FKM/FPM 75 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.0 MPa

Working Temperature: -20°C to 225°C
 -4°F to 437°F

Surface Speed: ≤ 1.0 m/s

Hardness	75	Shore A	DIN53505
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Tensile Strength	15.3	MPa	DIN53504
	2214	psi	ASTM D-412

Elongation	241	%	DIN53504
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Compression Set	9	%	DIN53517
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22 h @ 200°C	9	%	ASTM D-395
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Standard Compound	V7514AA
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Color	Black ●
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NBR 75 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.0 MPa

Working Temperature: -25°C to 100°C
 -13°F to 212°F

Surface Speed: ≤ 1.0 m/s

Hardness	75	Shore A	DIN53505
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Tensile Strength	22.8	MPa	DIN53504
	3306	psi	ASTM D-412

Elongation	320	%	DIN53504
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Compression Set	10.9	%	DIN53517
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24 h @ 100°C	10.9	%	ASTM D-395
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Standard Compound	N7539AA
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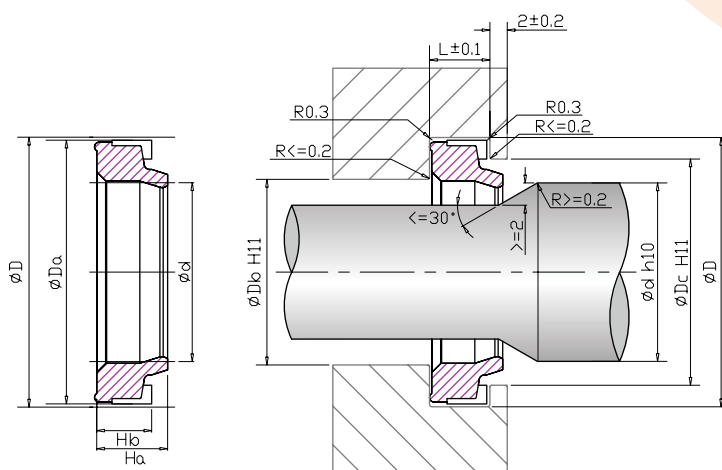
Color	Black ●
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CODE	D (mm)	d (mm)	H (mm)	L	Da
UC70001	10.0	5.4	1.60	1.8	9.7
UC70002	12.0	7.4	1.60	1.8	11.7
UC70003	15.0	10.4	1.60	1.8	14.7
UC70004	16.0	11.4	1.60	1.8	15.7
UC70005	20.0	14.0	2.24	2.4	19.5
UC70006	25.0	17.0	3.00	3.2	24.5
UC70007	30.0	22.0	3.00	3.2	29.5
UC70008	32.0	24.0	3.00	3.2	31.5
UC70009	38.0	30.0	3.00	3.2	37.5
UC70010	40.0	32.0	3.00	3.2	39.5
UC70011	44.0	36.0	3.00	3.2	43.5
UC70012	50.0	40.0	3.80	4.0	49.5
UC70013	56.0	46.0	3.80	4.0	55.5
UC70014	60.0	50.0	3.80	4.0	59.5
UC70015	63.0	53.0	3.80	4.0	62.4
UC70016	70.0	55.0	5.60	6.0	69.4
UC70017	75.0	60.0	5.60	6.0	74.4
UC70018	80.0	65.0	5.60	6.0	79.4
UC70019	85.0	70.0	5.60	6.0	84.4

CODE	D (mm)	d (mm)	H (mm)	L	Da
UC70020	90.0	75.0	5.60	6.0	89.4
UC70021	95.0	80.0	5.60	6.0	94.4
UC70022	100.0	85.0	5.60	6.0	99.4
UC70023	110.0	95.0	5.60	6.0	109.3
UC70024	120.0	105.0	5.60	6.0	119.3
UC70025	125.0	110.0	5.60	6.0	124.3
UC70026	140.0	125.0	5.60	6.0	139.3
UC70027	150.0	135.0	5.60	6.0	149.3
UC70028	160.0	140.0	7.60	8.0	159.3
UC70029	175.0	155.0	7.60	8.0	174.4
UC70030	180.0	160.0	7.60	8.0	179.3
UC70031	200.0	180.0	7.60	8.0	199.0
UC70032	250.0	230.0	7.60	8.0	249.0
UC70033	300.0	280.0	7.60	8.0	299.0

UE1 Series

Pneumatic Damper Seal



FKM/FPM 90 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.0 MPaWorking Temperature: -20°C to 225°C
 -4°F to 437°F 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
70 h @ 175°C	16.7 %	ASTM D-395
Standard Compound	V9059AA	
Color	Black ●	

NBR 85 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.0 MPaWorking Temperature: -25°C to 100°C
 -13°F to 212°F 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
24 h @ 100°C	4.9 %	ASTM D-395
Standard Compound	N8594AA	
Color	Black ●	

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

UE1 Series

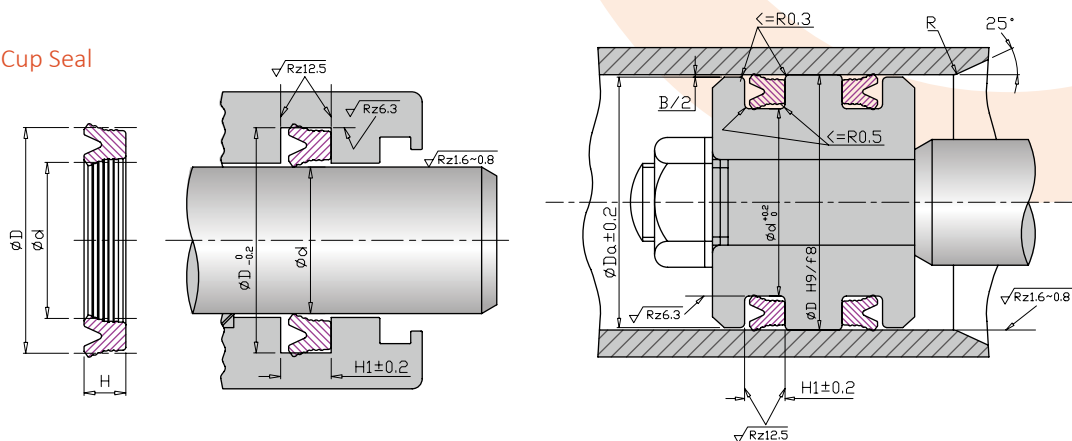
Pneumatic Damper Seal

Pneumatic

CODE	d (mm)	D (mm)	Ha	Hb	Da	Db	Dc	L
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
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: -20°C to 225°C
 -4°F to 437°F

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
24 h @ 200°C	9.5 %	ASTM D-395
Standard Compound	V7559AA	
Color	Black ●	

NBR 75 PHYSICAL PROPERTIES

Working Pressure: ≤ 1.0 Mpa

Working Temperature: -25°C to 100°C
 -13°F to 212°F

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 ●	

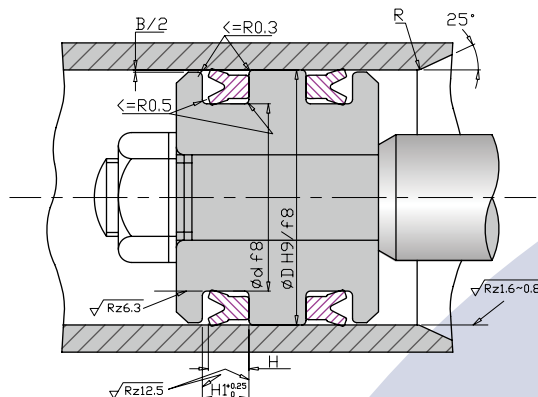
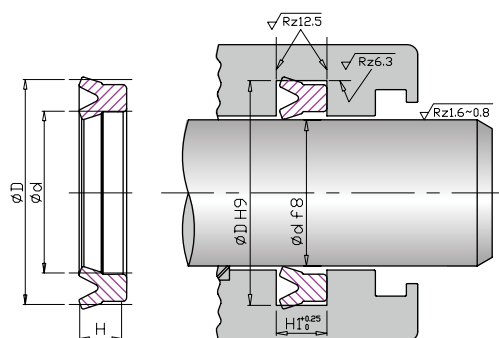
CODE	d (mm)	D (mm)	H (mm)	H1	da
UF50001	10.0	18.0	5.0	5.7	17.1
UF50002	12.0	20.0	5.0	5.7	19.0
UF50003	14.0	22.0	5.0	5.7	21.1
UF50004	16.0	24.0	5.0	5.7	23.1
UF50005	17.0	25.0	5.0	5.7	24.1
UF50006	18.0	26.0	5.0	5.7	25.1
UF50007	20.0	28.0	5.0	5.7	27.1
UF50008	22.4	30.0	5.0	5.7	29.1
UF50009	25.0	33.0	5.0	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)	H1	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
UF50047	24.0	32.0	5.0	5.7	31.1

UF6 Series

Low Friction Pneumatic
Symmetrical Piston & Rod U-Cup Seal

Pneumatic



FKM/FPM 70 PHYSICAL PROPERTIES

Working Pressure: ≤ 0.8 MPa

Working Temperature: -20°C to 225°C
 -4°F to 437°F

Surface Speed: ≤ 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
24 h @ 175°C	8.1	%	ASTM D-395
Standard Compound	V7029AA		
Color	Black ●		

NBR 75 PHYSICAL PROPERTIES

Working Pressure: ≤ 0.8 MPa

Working Temperature: -25°C to 100°C
 -13°F to 212°F

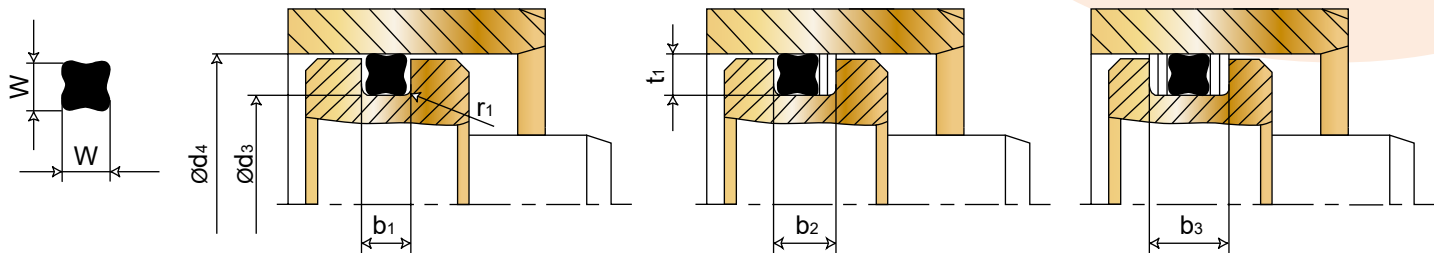
Surface Speed: ≤ 1.0 m/s

Hardness	75	Shore A	DIN53505
Tensile Strength	22.8	MPa	DIN53504
	3306	psi	ASTM D-412
Elongation	320	%	DIN53504
Compression Set	10.9	%	DIN53517
24 h @ 100°C	10.9	%	ASTM D-395
Standard Compound	N7539AA		
Color	Black ●		

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

X-Ring for Radial Dynamic Application

Piston Seal



X-Ring Size (mm)					Groove Dimensions (mm)						Radius
CODE	ID	±	W	±	Bore	Groove Ø	Groove depth	Groove Width			
					d ₄ H8	d ₃ h9	t ₁ 0.05	b ₁ 0.2	b ₂ 0.2	b ₃ 0.2	
X0005	2.57	0.13	1.78	0.08	6.00	3.00	1.50	2.0	3.4	4.8	0.2
X0008	4.47				8.00	5.00					
X0010	6.07				10.00	7.00					
X1021	8.20				12.00	9.00					
X0013	10.82				14.00	11.00					
X1065	10.20	0.13	2.62	0.08	15.00	10.40	2.30	3.0	4.4	5.8	0.3
X0111	10.77				16.00	11.40					
X0112	12.37				18.00	13.40					
X1067	14.70				20.00	15.40					
X1025	16.20				22.00	17.40					
X1061	18.20	0.25	3.53	0.10	25.00	18.60	3.20	4.0	5.4	6.8	0.4
X0212	21.82				28.00	21.60					
X0213	23.39				30.00	23.60					
X0214	24.99				32.00	25.60					
X0216	28.17	0.30			35.00	28.60					
X0219	32.92				40.00	33.60					
X0220	34.52				42.00	35.60					
X0222	37.69				45.00	38.60					

X-Ring for Radial Dynamic Application

Piston Seal

X0325	37.47	0.38	5.33	0.13	48.00	38.20	4.90	6.0	7.7	9.4	0.4
X1016	39.20				50.00	40.20					
X0326	40.64				52.00	42.20					
X0327	43.82				55.00	45.20					
X0329	50.17	0.46			60.00	50.20					
X0330	53.34				63.00	53.20					
X0330	53.34				65.00	55.20					
X0332	59.69				70.00	60.20					
X0333	62.87	0.51			75.00	65.20					
X0335	69.22				80.00	70.20					
X0337	75.57				85.00	75.20					
X0338	78.74	0.61			90.00	80.20					
X0340	85.09				95.00	85.20					
X0342	91.44	0.71			100.00	90.20					
X0343	94.62				105.00	95.20					
X0345	100.97				110.00	100.20					
X0346	104.14				115.00	105.20					
X0348	110.49	0.76			120.00	110.20					
X0349	113.67				125.00	115.20					
X0351	120.02				130.00	120.20					
X0427	120.02	0.84	6.99	0.15	135.00	122.20	6.40	8.0	10.5	13.0	0.6
X0429	126.37	0.94			140.00	127.20					
X0432	135.89	0.94			150.00	137.20					
X0435	145.42	0.94			160.00	147.20					
X0438	158.12	1.02			170.00	157.20					
X0439	164.47	1.02			180.00	167.20					
X0441	177.17	1.02			190.00	177.20					
X0442	183.52	1.14			200.00	187.20					
X0444	196.22	1.14			210.00	197.20					
X0445	202.57	1.14			220.00	207.20					
X0446	215.27	1.40			230.00	217.20					
X0447	227.97	1.40			240.00	227.20					
X0447	227.97	1.40			250.00	237.20					
X0450	266.07	1.52			280.00	267.20					
X0451	278.77	1.52			300.00	287.20					
X0453	304.17	1.52			320.00	307.20					
X0455	329.57	1.52			350.00	337.20					
X0459	380.37	1.78			400.00	387.20					
X0461	405.26	1.91			420.00	407.20					
X0463	430.66	2.03			450.00	437.20					
X0465	456.06	2.16	480.00	467.20							
X0467	481.46	2.29	500.00	487.20							



DETROIT SEALING COMPONENTS



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