

Elastomers

Buna

Color: Black

Temperature Min: -40°F

Temperature Max: 250°F

Buna (aka NBR, Nitrile) is the *standard* in hydraulic and pneumatic sealing elastomers. Its oil resistant nature makes it the top choice of materials being used with petroleum based hydraulic fluids. Nitrile has a good abrasion resistance, high tensile strength and resistance to compression set.

Viton®

Color: Brown & Black

Temperature Min: -15°F

Temperature Max: 400°F

Viton (aka Fluorocarbon) seals are widely used in applications dealing with extreme temperature and/or extreme chemicals. Its compatibility to nearly all chemicals (exception - Skydrol, certain esters and ethers) make it a popular elastomer in chemical processing, paper and pulp mills, and various other chemical applications.

Silicone

Color: Red

Temperature Min: -65°F

Temperature Max: 450°F

Silicone compounds are generally not recommended for dynamic sealing applications due to poor tensile strength and abrasion resistance. Silicone does exhibit excellent resistance to extreme temperature and is an acceptable FDA material. Typical use for silicone is in dry heat applications and food processing applications.

EPR

Color: Black

Temperature Min: -65°F

Temperature Max: 300°F

EPR (aka EPDM, Ethylene Propylene) is used in applications that deal with ester based fluids, acids, weak alkalies, and automotive brake fluid. EPR is also an acceptable FDA material.

Neoprene

Color: Black

Temperature Min: -65°F

Temperature Max: 300°F

Neoprene is resistant to ammonia, freon, oxygen, ozone and many other fluids. An excellent material for use in pump and refrigeration applications.

Teflon®

Color: White

Temperature Min: -200°F

Temperature Max: 500°F

Teflon (aka PTFE, TFE) can be used in applications with extreme temperatures, extreme pressures and extreme chemicals. Since Teflon has a tendency to cold flow and has no memory, it is often filled with other materials (glass, bronze, and nickel) before it is used to make piston seals, rod seals and wipers.

Polyurethane

Color: Varies

Temperature Min: -50°F

Temperature Max: 200°F

Polyurethane (aka Hythane, Garthane) makes an excellent choice for hydraulic systems due to its good temperature range and high abrasion resistance. Urethanes are highly resistant to petroleum oils, hydrocarbon fuels, oxygen, ozone and weathering.

Polymyte

Color: Orange

Temperature Min: -65°F

Temperature Max: 275°F

Polymyte is an elastoplastic material with exceptionally high tear strength. Its high durometer makes it suitable for applications where extrusion is a problem. Polymyte can be used with petroleum based fluids, water based fluids, phosphate ester fluids, some chlorinated fluids and many solvents.

Note: Viton and Teflon are registered trademarks of duPont de Nemours and Company

Cylinder Packing



88-F/M V-Pkg Adaptors

Max Pressure: n/a

88-F female (top) adaptor provides support and determines the quality and wear pattern of the set. 88-M male (bottom) adaptor provides the base for the set.

Materials Available: Buna/Fabric, Nylon, Teflon, and Viton/Fabric



88-V V-Pkg Vees

Max Pressure: varies

88-V, V-packing center rings can be used as rod or piston seals. Combined with 88-F/M, the center rings make sets that can be used in varying pressure applications.

Materials Available: Buna/Fabric, Buna, Hythane, Viton/Fabric, and Viton



VC Split V-Coil

Max Pressure: varies

Type VC, V-coil, performs in similar applications as the 88-F/M/V, but the ability to split large V-packing sets allows us to cut sets up to 100in inside diameter. Available in 1/4 to 1-1/8in cross section.

Materials Available: Buna/Fabric



WP W-Packing

Max Pressure: varies

Type WP, W-packing or Uneepac is a stackable lip style packing. Unlike V-packing, W-packing does not require compression to seal. A great choice for applications with nonadjustable housing.

Materials Available: Buna/Fabric, and Buna



WP-DBU Deep Base

Max Pressure: 1500 psi

Type WP-DBU, deep base W-packing, can be used in similar applications as standard W-packing. Single seals can be used or they can be stacked into sets.

Materials Available: 77 or 90 durometer Buna



PC Piston Cup

Max Pressure: 3000 psi

PC style piston cups are single lip, single acting piston seals. They come with a solid (blank) center. Center holes are cut to customer dimension, with or without bolt holes. Piston cups can be placed back to back to form a double acting seal.

Materials Available: Buna/Fabric, Buna, and Leather



FLG Flange

Max Pressure: 1500 psi

Type FLG flanges (hat packing) are used as single lip rod seals. Flange seals are generally used in older cylinder designs as the primary rod seal with low to medium pressure applications.

Materials Available: Buna/Fabric, Buna, and Leather



W2 Wear Ring

Max Pressure: n/a

Standard wear rings, type W2, are nylon bearings used to prevent rod scoring due to metal to metal contact between the piston head and the cylinder wall. W2 style wear rings are 1/8in thick with heights varying from 1/4in to 1-1/2in.

Materials Available: Nylon, and Micarta



WS Wear Strip

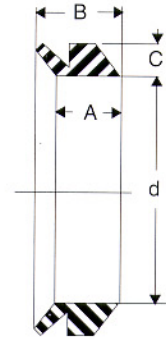
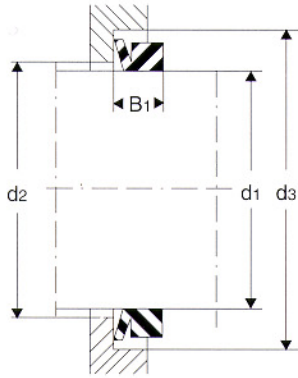
Max Pressure: n/a

WS wear strip material is designed to be used where a wear ring with a non-standard OD is required. Wear strip can be cut to customer dimensions. Available in 1/16, 3/32 and 1/8in thicknesses and 1/4, 3/8, 1/2, 5/8, 3/4 and 1in heights.

Materials Available: Nylon, and Bronze filled Teflon



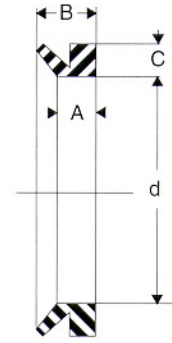
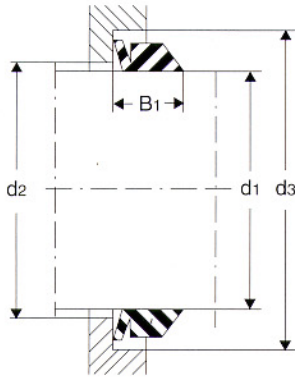
V-RING A



N°	d_1 mm	d mm	C	A	B	B_1 mm	t	d_2	d_3
V- 3A	2.7- 3.5	2.5	1.5	2.1	3	2.5	± 0.3	d_1+1	d_1+4
V- 4A	3.5- 4.5	3.2	2	2.4	3.7	3	± 0.4	"	d_1+6
V- 5A	4.5- 5.5	4	"	"	"	"	"	"	"
V- 6A	5.5- 6.5	5	"	"	"	"	"	"	"
V- 7A	6.5- 8	6	"	"	"	"	"	"	"
V- 8A	8 - 9.5	7	2	2.4	3.7	3	± 0.4	d_1+1	d_1+6
V- 10A	9.5- 11.5	9	3	3.4	5.5	4.5	± 0.6	d_1+2	d_1+9
V- 12A	11.5- 13.5	10.5	"	"	"	"	"	"	"
V- 14A	13.5- 15.5	12.5	"	"	"	"	"	"	"
V- 16A	15.5- 17.5	14	"	"	"	"	"	"	"
V- 18A	17.5- 19.5	16	3	3.4	5.5	4.5	± 0.6	"	d_1+9
V- 20A	19 - 21	18	4	4.7	7.5	6.0	± 0.8	"	d_1+12
V- 22A	21 - 24	20	"	"	"	"	"	"	"
V- 25A	24 - 27	22	"	"	"	"	"	d_1+2	"
V- 28A	27 - 29	25	"	"	"	"	"	d_1+3	"
V- 30A	29 - 31	27	"	"	"	"	"	"	"
V- 32A	31 - 33	29	"	"	"	"	"	"	"
V- 35A	33 - 36	31	"	"	"	"	"	"	"
V- 38A	36 - 38	34	4	4.7	7.5	6.0	± 0.8	"	d_1+12
V- 40A	38 - 43	36	5	5.5	9.0	7.0	± 1.0	d_1+3	d_1+15
V- 45A	43 - 48	40	"	"	"	"	"	"	"
V- 50A	48 - 53	45	"	"	"	"	"	"	"
V- 55A	53 - 58	49	"	"	"	"	"	"	"
V- 60A	58 - 63	54	"	"	"	"	"	"	"
V- 65A	63 - 68	58	5	5.5	9.0	7.0	± 1.0	d_1+3	d_1+15
V- 70A	68 - 73	63	6	6.8	11.0	9.0	± 1.2	d_1+4	d_1+18
V- 75A	73 - 78	67	"	"	"	"	"	"	"
V- 80A	78 - 83	72	"	"	"	"	"	"	"
V- 85A	83 - 88	76	"	"	"	"	"	"	"
V- 90A	88 - 93	81	"	"	"	"	"	"	"
V- 95A	93 - 98	85	"	"	"	"	"	"	"
V-100A	98 - 105	90	6	6.8	11.0	9.0	± 1.2	d_1+4	d_1+18
V-110A	105 - 115	99	7	7.9	12.8	10.5	± 1.5	d_1+4	d_1+21
V-120A	115 - 125	108	"	"	"	"	"	"	"
V-130A	125 - 135	117	"	"	"	"	"	"	"
V-140A	135 - 145	126	"	"	"	"	"	"	"
V-150A	145 - 155	135	7	7.9	12.8	10.5	± 1.5	d_1+4	d_1+21
V-160A	155 - 165	144	8	9.0	14.5	12.0	± 1.8	d_1+5	d_1+24
V-170A	165 - 175	153	"	"	"	"	"	"	"
V-180A	175 - 185	162	"	"	"	"	"	"	"
V-190A	185 - 195	171	8	9.0	14.5	12.0	± 1.8	d_1+5	d_1+24
V-200A	190 - 210	180	15	14.3	25	20.0	$\phi 4$	d_1+10	d_1+45



V-RING S



N°	d1 mm	dmm	C	A	B	B1 mm	t	d2	d3
V- 5S	4.5- 5.5	4	2	3.9	5.2	4.5	± 0.4	d ₁ +1	d ₁ +6
V- 6S	5.5- 6.5	5	"	"	"	"	"	"	"
V- 7S	6.5- 8	6	"	"	"	"	"	"	"
V- 8S	8 - 9.5	7	2	3.9	5.2	4.5	± 0.4	d ₁ +1	d ₁ +6
V- 10S	9.5- 11.5	9	3	5.6	7.7	6.7	± 0.6	d ₁ +2	d ₁ +9
V- 12S	11.5- 13.5	10.5	"	"	"	"	"	"	"
V- 14S	13.5- 15.5	12.5	"	"	"	"	"	"	"
V- 16S	15.5- 17.5	14	"	"	"	"	"	"	"
V- 18S	17.5- 19.5	16	3	5.6	7.7	6.7	± 0.6	"	d ₁ +9
V- 20S	19 - 21	18	4	7.7	10.5	9.0	± 0.8	"	d ₁ +12
V- 22S	21 - 24	20	"	"	"	"	"	"	"
V- 25S	24 - 27	22	"	"	"	"	"	d ₁ +2	"
V- 28S	27 - 29	25	"	"	"	"	"	d ₁ +3	"
V- 30S	29 - 31	27	"	"	"	"	"	"	"
V- 32S	31 - 33	29	"	"	"	"	"	"	"
V- 35S	33 - 36	31	"	"	"	"	"	"	"
V- 38S	36 - 38	34	4	7.7	10.5	9.0	± 0.8	"	d ₁ +12
V- 40S	38 - 43	36	5	9.5	13.0	11.0	± 1.0	d ₁ +3	d ₁ +15
V- 45S	43 - 48	40	"	"	"	"	"	"	"
V- 50S	48 - 53	45	"	"	"	"	"	"	"
V- 55S	53 - 58	49	"	"	"	"	"	"	"
V- 60S	58 - 63	54	"	"	"	"	"	"	"
V- 65S	63 - 68	58	5	9.5	13.0	11.0	± 1.0	d ₁ +3	d ₁ +15
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V-120S	115 - 125	108	"	"	"	"	"	"	"
V-130S	125 - 135	117	"	"	"	"	"	"	"
V-140S	135 - 145	126	"	"	"	"	"	"	"
V-150S	145 - 155	135	7	13.1	18.0	15.5	± 1.5	d ₁ +4	d ₁ +21
V-160S	155 - 165	144	8	15.0	20.5	18.0	± 1.8	d ₁ +5	d ₁ +24
V-170S	165 - 175	153	"	"	"	"	"	"	"
V-180S	175 - 185	162	"	"	"	"	"	"	"
V-190S	185 - 195	171	"	"	"	"	"	"	"
V-199S	195 - 210	180	8	15.0	20.5	18.0	± 1.8	d ₁ +5	d ₁ +24

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