



ELASTOMER SELECTION



Elastomer	Natural Rubber	Styrene Butadiene Rubber	Ethylene Propylene	Chloro-Butyl Rubber	Nitrile Rubber	Chloro-prene Rubber	Fluoro-Carbon Rubber	Chloro-Sulfonated Polyethylene
Designation Tradename	NR	SBR	EPDM Nordel***	IIR	NBR Buna-N***	CR Neoprene	FPM Viton***	CSM
Property								
Temperature of application: - Maximum degree F - Continuous Operating Temp. - Minimum degree F	180 150-160 -65	225 160-210 -50	250 ** 230-240 -60	280 240-250 -60	250 215-220 -40	225 215-220 -40	250 * 230-240 -5	260 240-250 -40
Elasticity	5	5	3..4	2	3..4	3..4	2	3..4
Resistance - Weather & Ozone - Acids - Alkaline - Oils, aliphatic - Oils, aromatic - Water - Wear - Flame - Electrical	1..2 2..3 2..3 1 1 5 4..5 1 4	1..2 2..3 2..3 1 1 3..4 4 4 4	5 3..4 3..4 1 1 5 3 1 4	4 4 4 1 1 3..4 2..3 1 4..5	1..2 3 2..3 4 3 5 3..4 1..2 1..2	3..4 3 3 2..3 1..2 3 3..4 3..4 3	5 3..4 1..3 4 4 4 3 4 3	5 4 4 2..3 1 3..4 3 3 3..4
Gas Impermeability	3	2..3	2..3	5	2..3	2..3	4	4
5 = Excellent, 4 = Very Good, 3 = Good, 2 = Fair, 1 = Not Recommended								

* FPM HT available for 350 degrees F

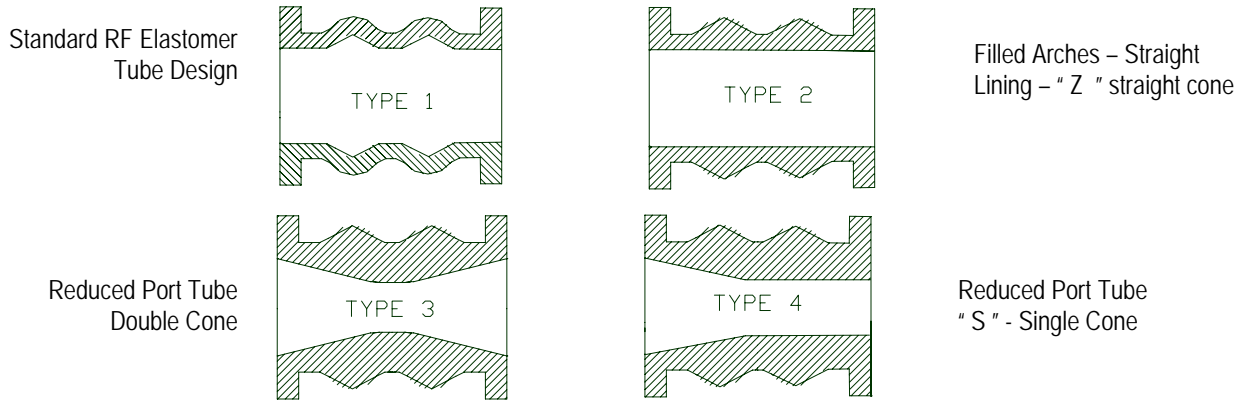
** EPDM HT available for temperature up to 350 degr. max/300 degrees F operating

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NOTE: Food Grade elastomers are available in Neoprene (CRFB), Natural Rubber (NRFB) and EPDM (EPMDBF).



ELASTOMER TUBE PROFILE SELECTION



Elastomer tube designs or profiles are manufactured in (4) basic configurations, depending on process conditions and trim requirements. Reinforcing cords in all types follow the folds, so flex whether operating in modulating or operating open/close. Selection is based upon mode of operation and flow control requirements.

Type 1 ON/OFF Standard “dual fold” profile allows elastomer tube to flex, not stretch, when closing is the most widely used RF VALVE® tube profile for on/off and modulating services. Best use is when valve cycles frequently and velocity ≤ 15 ft./sec. The elastomer is NOT stretched and stressed during actuation as do conventional pinch valves sleeves. Due to this non-stretch design, elastomer tubes can last up to 2-4 times longer than conventional “straight sleeves” that stretch to close, or hardened metal/alloy valves in abrasive, corrosive, or scaling type services. Folds mechanically resist collapse under vacuum conditions and assist valve to open with loss of air.

Type 2 ON/OFF OR CONTROL Dual fold profile, straight lining; used in high pressure and throttling applications offering additional wear rubber (filled arches) for highly abrasive services.

Type 3 CONTROL “Double Cone” reduced port profile allows elastomer tube profile to be matched to special customer needs and throttling specifications. This design also permits bi-directional flow control when required.

Type 4 CONTROL “Single Cone” reduced port, unidirectional profile is the most widely used design for modulating providing highly accurate control by sizing trim ID to match flows requirements. One of the major causes of early wear with any control valve is incorrect sizing for a given flow. Accurate flow and piping data allows tube trim to be “tailored” to process requirements. Thicker layers of elastomer minimize impact of high velocity, abrasive wear and cavitation.