

Elastomer bellows — Key product parameters

Parameter	Typical values / notes
Bellows type / construction	Molded elastomer (rubber) bellows — non-pusher or unitized designs; rotating or stationary bellows versions. Common single-coil/single-spring and unitized single-spring versions.
Elastomer materials	Typical bellows elastomers: NBR (Buna-N), EPDM, FKM (Viton); material choice determines chemical & temperature limits.
Face materials (primary / mating)	Typical face pairings used with elastomer bellows: Carbon (graphite) vs SiC, Carbon vs Ceramic, Tungsten carbide vs Carbon — chosen per fluid / abrasion / temp.
Pressure rating (working)	Typical working pressures: many elastomer-bellows seals are rated up to 5 - 10 bar ($\approx 75 - 150$ psi) in catalogue ranges; some engineered versions list up to ~ 10 bar for robust designs. Exact allowable pressure depends on seal series and size.
Temperature range	Typical elastomer bellows service range: roughly $-20^{\circ}\text{C} \cdots +150^{\circ}\text{C}$ for common elastomers; specific compounds (e.g., FKM) or special constructions may extend upper limit to $\sim 160 - 200^{\circ}\text{C}$ in selected datasheets. Verify per elastomer selection.
Peripheral speed / sliding velocity	Catalogue guidance examples: up to $\sim 12 - 20$ m/s for many elastomer bellows series; actual allowable speed depends on shaft diameter, face material and lubrication.
Typical gland/installation features	Unitized/compact housings for short gland lengths; bellows provide self-alignment and remove need for dynamic secondary elastomeric O-rings on the rotating element (reduces fretting).
Typical strengths / advantages	Simple, low-cost, single moving part; tolerant of some contamination; good for water, wastewater, HVAC, general chemical services at moderate pressure/temperature.
Typical weaknesses / limits	Elastomer bellows are less suitable for sustained high temperatures, very high pressures or aggressive solvents that attack the chosen elastomer; metal bellows or mechanical designs needed for higher extremes.