

Key product parameters

Parameter	Typical / published values & notes
Type / principle	Bellows-type (metal bellows or elastomeric bellows) — bellows provides axial load and secondary sealing; no dynamic rotary O-ring.
Common bellows materials	Elastomeric bellows: NBR, EPDM, FKM (depends on series). Metal bellows: Alloy 276 (Incoloy/C-276), Inconel, stainless options — material chosen per fluid/temperature.
Typical working pressure (catalogue examples)	Elastomer bellows (catalogue example P0204U): up to 10 bar (150 psi). Metal bellows catalogues usually list medium pressures — typical published limits for bellows seals in many datasheets up to $\approx 20 - 25$ bar for some designs but most standard bellows are used at lower/medium pressures.
Temperature range (examples)	Elastomer bellows: commonly $-40\text{ }^{\circ}\text{C} \cdots +160\text{ }^{\circ}\text{C}$ (up to $\sim 200\text{ }^{\circ}\text{C}$ for selected elastomers/FKM) (see P0204U listing). Metal bellows: wider ranges, e.g. $-75\text{ }^{\circ}\text{C} \cdots +425\text{ }^{\circ}\text{C}$ shown in manufacturer limit tables. Exact limits depend on bellows material and face materials.
Sliding speed / peripheral velocity	Many bellows/non-pusher catalogue examples publish velocity guidance $\approx 12 - 25$ m/s. Always confirm with specific series TDS.
Face material pairings	Typical face combinations used with non-pusher (bellows) seals: Carbon vs SiC, SiC vs SiC, Tungsten carbide vs Carbon — selected by fluid, solids content, temperature and abrasion.
Secondary seals	Elastomeric bellows provide the secondary seal; for metal bellows the bellows itself forms the secondary barrier so there is no sliding secondary O-ring on the rotary ring.
Balance characteristics	Bellows seals are commonly offered balanced or unbalanced; balance and hydraulic design determine usable pressure — many bellows seals are shown as hydraulically balanced in product literature.
Typical advantages (vendor claims)	No rotary sliding O-ring \rightarrow less shaft fretting/hang-up; good for high temperature and chemically aggressive services (if correct bellows alloy chosen); compact designs for short gland lengths.
Typical limitations	Bellows geometry and thickness limit maximum allowable pressure; elastomer bellows limited by elastomer compatibility & temperature. For very high pressures or abrasive slurry services a pusher or engineered design may be preferred.