Product parameters — Pneumatic guide ring

Parameter	Typical value / notes
Primary function	Guide piston/rod in pneumatic (and hydraulic) cylinders; absorb radial/side loads and prevent metal-to-metal contact.
Common materials / constructions	PTFE (virgin or filled), POM (acetal), polyamide (PA/nylon), phenolic resin with fabric insert (phenolic-fabric laminate), polymer composites (e.g., iglidur types), PTFE+bronze filler variants.
Manufacturing types	Endless (molded/bonded) rings, slotted/split rings (for closed grooves), guide tapes/strips (for long grooves) — selection depends on installation space.
Temperature capability (typical ranges)	Wide range depending on material: examples from −55° C up to +225° C (catalog examples show -55…+225° C for some compounds); engineering tables list compound limits (e.g., many PA/POM types up to ~100 – 150° C; some PTFE-based up to ~175 – 205° C depending on filler).
Recommended operating speed	Typical pneumatic guide rings: up to ~3 m/s in many catalog listings; some engineered compounds list dynamic capability up to ~4.6 m/s for specific materials in engineering charts — choose compound by S-T-A-M-P (Speed, Temperature, Application, Media, Pressure, Size).
Mechanical / compressive data	Example from a piston-guide catalog: compression strength / mechanical design data are provided by vendors (Parker example gives compression strength ≈ 2.5 N/mm² for a specific series). Use vendor datasheet for exact compound values.
Typical failure modes / selection cautions	Excessive radial load, insufficient groove clearance (risk of extrusion), wrong compound vs. temperature/speed/chemicals. Follow vendor groove-and-clearance guidelines.
Buyer / procurement items buyers expect	PDF datasheet, CAD models, material certificates (e.g., FDA or REACH when required), temperature/speed tables, interchange code (if OEM/FA standard), MOQ & lead time.