Product parameters

Parameter	Typical specification / notes
Component name / synonyms	Stationary seal ring / stationary seat / stator — the non-rotating sealing face that mates with the rotating ring in a mechanical seal.
Common construction / types	Machined solid rings (massive faces), brazed or bonded constructions, composite/armoured seats (e.g., ACR). Materials are selected for face stability and heat dissipation.
Typical face materials	Silicon carbide (SiC) (sintered / reaction bonded), carbon/graphite, tungsten carbide (TC), ceramic (alumina).
Secondary seals (seat O-rings / gaskets)	Elastomers: NBR, EPDM, FKM (Viton), FFKM, PTFE jackets where required. Choice depends on temperature and chemical compatibility.
Temperature guidance	Material-dependent: carbon/graphite & mechanical assemblies typically −20° C up to ≈+180…+200° C with suitable elastomers; SiC / TC faces used for higher temperatures and abrasive/erosive service. Always verify per manufacturer datasheet.
Pressure capability	Varies by design: many standard stationary seats used in pump seals are used up to roughly 10 – 25 bar in typical catalog listings; heavy-duty/API-type designs and cartridge seats can be specified for higher pressures (consult API-682 guidance and vendor data).
Speed / surface film note	Stationary ring does not rotate, but face pairings require correct surface finish and film formation on rotating face. Manufacturer speed limits are applied to the rotating face / face pair — verify specific pair limits.
Typical tolerances & fit	Seat bore/OD and face run-out requirements are set by seal design — many suppliers supply seat types to match pump housings or use adaptors/cartridges for correct fit. Standards and vendor PDFs list recommended machining tolerances.
Standards & procurement note	For critical rotating-equipment (refining / petrochemical), use API-682 / API-610 compliant seal systems; stationary seat selection and support plans (API plans 52/53 etc.) must be reviewed with vendor.