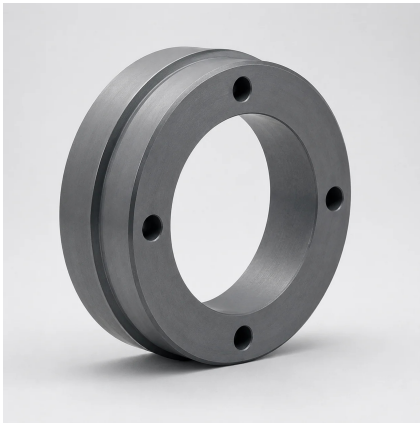




Silicon Carbide Mechanical Seal Rings

Product ID / SKU: FWM/SC-MSR-001

Material: Silicon Carbide

Product type: Mechanical Seal Ring

Silicon carbide rings form wear-resistant sealing faces for industrial pumps, helping control shaft leakage and conduct heat away from the contact surface.

Representative silicon carbide mechanical seal ring geometry and precision-finished surfaces.

Dense SiC Typical Properties

Property	SSiC - sintered	SiSiC / RBSiC - reaction bonded	Condition
Density (g/cm ³)	≥3.12	≥3.03	-
Apparent porosity (%)	<0.2	<0.2	-
Vickers hardness (HV0.5)	2100	2000	0.5 kgf test force
Young's modulus (GPa)	400	350	-
Fracture toughness (MPa·m ^{1/2})	4-5	2.5-3.5	-
Flexural strength (MPa)	≥400	≥350	25°C
Compressive strength (MPa)	≥2200	≥2000	25°C
Thermal conductivity (W/(m·K))	≥110	≥90	25°C
Mean linear thermal expansion coefficient (10 ⁻⁶ /K)	4.0	4.0	25-1000°C
Typical maximum material temperature (°C)	1650	1300	-