Gipfel Engineering

ISO 9001-2015 CERTIFIED COMPANY

Heavy Duty Slurry Mechanical Seal (Rotary Spring Configuration)

TYPE : HS870-T1



Face Materials :

- Silicon Carbide / Tungsten Carbide

Secondary Seals :

- Viton (FKM) / EPDM / EPR / Aflas / PTFE / TTV / Kalrez (FFKM)

Hardware :

- SS 304 / SS 316 / Hastelloy-B & C / Alloy-20 / Duplex SS / High Chrome Iron / Titanium

Operating Limits :

Size : 20.0 mm to 300.0 mm / 0.750" to 12.000"
Solids : 60% Maximum solids by weight
Speed : 2900 RPM
Pressure : 25 bars (363 psi)
Particle Size : 10,000 Micron Maximum
Temperature : -40°C to +220°C (-40°F to +428°F)
Particle Hardness : 9 Mohs Maximum

Application		
Plants & Industries	**Mining, Refining & Processing**	**Others**
• Power Plant • Potash Plant • Pigment Plant • Solvent Plant • Phosphate Plant • Steel Making Plant • Synthetic Rutile Plant • Tar Sand Extraction Plant • Waste Water Treatment Plant • Dyeing Industry • Mining Industry • Fertilizer Industry • Chemical Industry • Pulp & Paper Industry • Food & Sugar Industry • Pharmaceutical Industry • Oil & Petrochemical Industry	• Gold Mining • Hard Rock Mining • Mineral Sand Ore Mining • Zinc Refining • Nickel Refining • Copper Refining • Alumina Refining • Coal Processing • Iron Ore Processing • Uranium Processing • Wet Cement Processing	• Corn Slurry • Crystallization • Tailings Disposal • Building Service • Hazardous Liquid • Vacuum Distillation • Bauxite & Iron Ore Slurry • Flue Gas Desulphurization (FGD) • Mixer & Other Rotary Equipment Etc. • Off-Shore Production (Sand / Gravel Oil Extraction)

Meet: Gala No. 7, KMC Compound, Behind Hotel Metro Palace, Behram Baug Road, Jogeshwari (West), Mumbai - 400 102. Maharashtra, India.
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Technical Features :

Durability & Reliability :

- **Vibration & Shock Resistant:** Engineered to withstand pump vibrations and process pulsations without compromising sealing performance in slurry service.
- **Robust Seal Faces:** Utilizes hard face materials such as **silicon carbide** or **tungsten carbide**, ensuring superior abrasion resistance and durability under high solids loading.
- **Heavy-Duty Housing Materials:** Constructed from corrosion- and erosion-resistant materials such as **stainless steel, Hastelloy,** or **alloy-coated steel** to handle chemically aggressive and abrasive slurries.
- **Wide Elastomer Compatibility:** Seal elastomers available in materials like Viton, EPDM, and FFKM to match process fluid compatibility for thermal and chemical resistance.

Performance & Efficiency :

- **Application Versatility:** Compatible with vertical and horizontal pumps, agitators, and other rotating equipment operating in severe slurry services.
- **Hydraulically Balanced Design:** Reduces seal face load, friction, and heat generation, which significantly prolongs seal and equipment life even under fluctuating pressure conditions.
- **Springs Isolated:** Springs are located in a non-wetted area, preventing exposure to abrasive particles; improves seal longevity and eliminates clogging issues common in slurry applications.
- **Multiple Spring Type:** Provides even face load distribution for consistent sealing pressure, compensates for shaft misalignment and face wear, and ensures reliable performance under dynamic operating conditions.
- **Double Seal:** Offers superior containment and reliability for abrasive and hazardous slurry environments; provides added protection through a pressurized barrier fluid, ensuring enhanced sealing performance and environmental control.
- **Rotary Spring Configuration:** Springs rotate with the shaft, maintaining uniform face pressure even under vibration and axial movement. Ideal for applications where space, shaft dynamics, or layout constraints favor a rotating spring system.

Installation & Maintenance :

- **Metric and Inch Sizes Available:** Provides broad compatibility with international equipment standards; simplifies inventory management and supports global deployment.
- **Quick Installation & Easy Removal:** Cartridge-style assembly allows fast and error-free installation or replacement; reduces downtime and simplifies maintenance in high-demand operations.
- **Modular Cartridge Construction:** Pre-assembled, pressure-tested cartridge unit simplifies installation, maintains factory-set tolerances, and enables quick maintenance with minimal downtime
- **Independent of Direction of Rotation:** Seal design functions effectively regardless of shaft rotation direction, offering versatility across various rotating equipment and simplifying inventory requirements.
- **Factory Assembled & Tested:** Pre-assembled under controlled conditions with verified alignment and tolerances; ensures readiness for installation and reduces the risk of installation errors in the field.

Environmental & Safety :

- **Flush, Quench & Barrier Fluid Options:** Designed to integrate with industry-standard API plans (e.g., Plan 32, 54). These features support cooling, particle removal, and environmental containment for improved reliability and seal face protection.
- **With Connection of Flushing & Quenching:** Equipped with ports for optional flush, quench, and drain lines; helps manage slurry buildup, control temperature, prevent crystallization, and improve seal reliability in aggressive process environments.

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