Gipfel Engineering

ISO 9001-2015 CERTIFIED COMPANY

Medium Duty Slurry Mechanical Seal (Rotary Spring Configuration)

TYPE : MS840



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 / Titanium

Operating Limits :

Size : 20.0 mm to 300.0 mm / 0.750" to 12.000"
Solids : 20% Maximum solids by weight
Speed : 2900 RPM
Pressure : 15 Bars (218 psi)
Particle Size : 6000 Micron Maximum
Temperature : -40°C to +220°C (-40°F to +428°F)
Particle Hardness : 7 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 :

- **Hard Face Combinations:** Offers high resistance to abrasion and chemical attack, extending operational life in harsh slurry environments.
- **Vibration & Shock Resistant :** Engineered to withstand pump vibrations and process pulsations without compromising sealing performance in slurry service.
- **Robust Metal Construction :** Wetted components available in materials such as Alloy 20, Hastelloy, or hard-coated steel, designed to withstand corrosive and erosive media.
- **Wide Elastomer Compatibility :** Seal elastomers available in materials like Viton, EPDM, and FFKM to match process fluid compatibility for thermal and chemical resistance.
- **API Piping Plan Compatibility (Plan 32, 53A/B, etc.) :** Supports industry-standard piping plans for effective external flushing, barrier fluid pressurization, and thermal control.

Performance & Efficiency :

- **Isolated Springs:** Springs are located outside the process fluid (non-wetted area), preventing clogging from slurry particles. This enhances seal reliability and extends service life.
- **Stationary Spring Configuration:** Springs remain static and are isolated from shaft movement, significantly reducing mechanical wear. Their position outside the process fluid avoids contamination and clogging by solids.
- **Single Seal:** Suitable for most medium-duty slurry applications, offering a cost-effective and easy-to-maintain solution. For extremely hazardous or high-pressure environments, a dual seal configuration may be recommended.
- **Hydraulically Balanced Design:** Reduces closing force on the seal faces to minimize friction, heat generation, and wear. Ideal for medium-pressure and abrasive slurry applications with fluctuating operating conditions, enhancing seal stability and face life.
- **Multiple Spring Design:** Provides uniform face loading, improving seal face stability under fluctuating pressure and temperature conditions. This design compensates for axial misalignment and seal face wear, reducing localized stress and increasing Mean Time Between Failures (MTBF).

Installation & Maintenance :

- **Metric and Inch Sizes Available:** Offers global compatibility with equipment standards, improving flexibility across regional and international markets.
- **Independent of Direction of Rotation:** Enables use in equipment with unknown or reversing shaft rotation, reducing inventory variety and simplifying selection.
- **Factory Assembled & Tested:** Ensures quality, reliability, and readiness for direct installation. Each unit is precision-assembled and tested to maintain consistent factory-set tolerances.
- **Quick Installation & Easy Removal:** Cartridge design allows fast, error-free installation and removal. This significantly reduces maintenance time and plant downtime, especially in high-utilization operations.
- **Cartridge Construction:** A pre-assembled, factory-tested unit that ensures accurate concentricity and alignment — critical for abrasive applications. Eliminates field measurements or axial adjustments, minimizing installation errors and ensuring consistent sealing performance.

Installation & Maintenance :

- **Flushing, Quenching, and Draining Connections :**
- **Flushing :** Clears abrasive particles from the seal chamber to prevent face damage.
- **Quenching :** Controls temperature and prevents atmospheric crystallization or caking.
- **Draining :** Allows safe and clean fluid evacuation during maintenance, reducing contamination and downtime.

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