

# Heavy Duty Slurry Mechanical Seal (Stationary Spring Configuration)

## TYPE : HS860

### Face Materials :

- Silicon Carbide / Tungsten Carbide

### Secondary Seals :

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

### Hardware :

- 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 +428°F)
- Particle Hardness :** 9 Mohs Maximum



Application		
Plants & Industries	Mining, Refining & Processing	Others
<ul style="list-style-type: none"> <li>• Power Plant</li> <li>• Potash Plant</li> <li>• Pigment Plant</li> <li>• Solvent Plant</li> <li>• Phosphate Plant</li> <li>• Steel Making Plant</li> <li>• Synthetic Rutile Plant</li> <li>• Tar Sand Extraction Plant</li> <li>• Waste Water Treatment Plant</li> <li>• Dyeing Industry</li> <li>• Mining Industry</li> <li>• Fertilizer Industry</li> <li>• Chemical Industry</li> <li>• Pulp &amp; Paper Industry</li> <li>• Food &amp; Sugar Industry</li> <li>• Pharmaceutical Industry</li> <li>• Oil &amp; Petrochemical Industry</li> </ul>	<ul style="list-style-type: none"> <li>• Gold Mining</li> <li>• Hard Rock Mining</li> <li>• Mineral Sand Ore Mining</li> <li>• Zinc Refining</li> <li>• Nickel Refining</li> <li>• Copper Refining</li> <li>• Alumina Refining</li> <li>• Coal Processing</li> <li>• Iron Ore Processing</li> <li>• Uranium Processing</li> <li>• Wet Cement Processing</li> </ul>	<ul style="list-style-type: none"> <li>• Corn Slurry</li> <li>• Crystallization</li> <li>• Tailings Disposal</li> <li>• Building Service</li> <li>• Hazardous Liquid</li> <li>• Vacuum Distillation</li> <li>• Bauxite &amp; Iron Ore Slurry</li> <li>• Flue Gas Desulphurization (FGD)</li> <li>• Mixer &amp; Other Rotary Equipment Etc.</li> <li>• Off-Shore Production (Sand / Gravel Oil Extraction)</li> </ul>

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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.
- **Stationary Spring Configuration:** Springs are positioned outside the product (non-wetted) and remain static, eliminating clogging from solids and improving seal face stability. This design ensures consistent axial force distribution and extends Mean Time Between Failures (MTBF).

### ➤ 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.