



Flow Solutions Division

The Standardized

SLM Series Seals

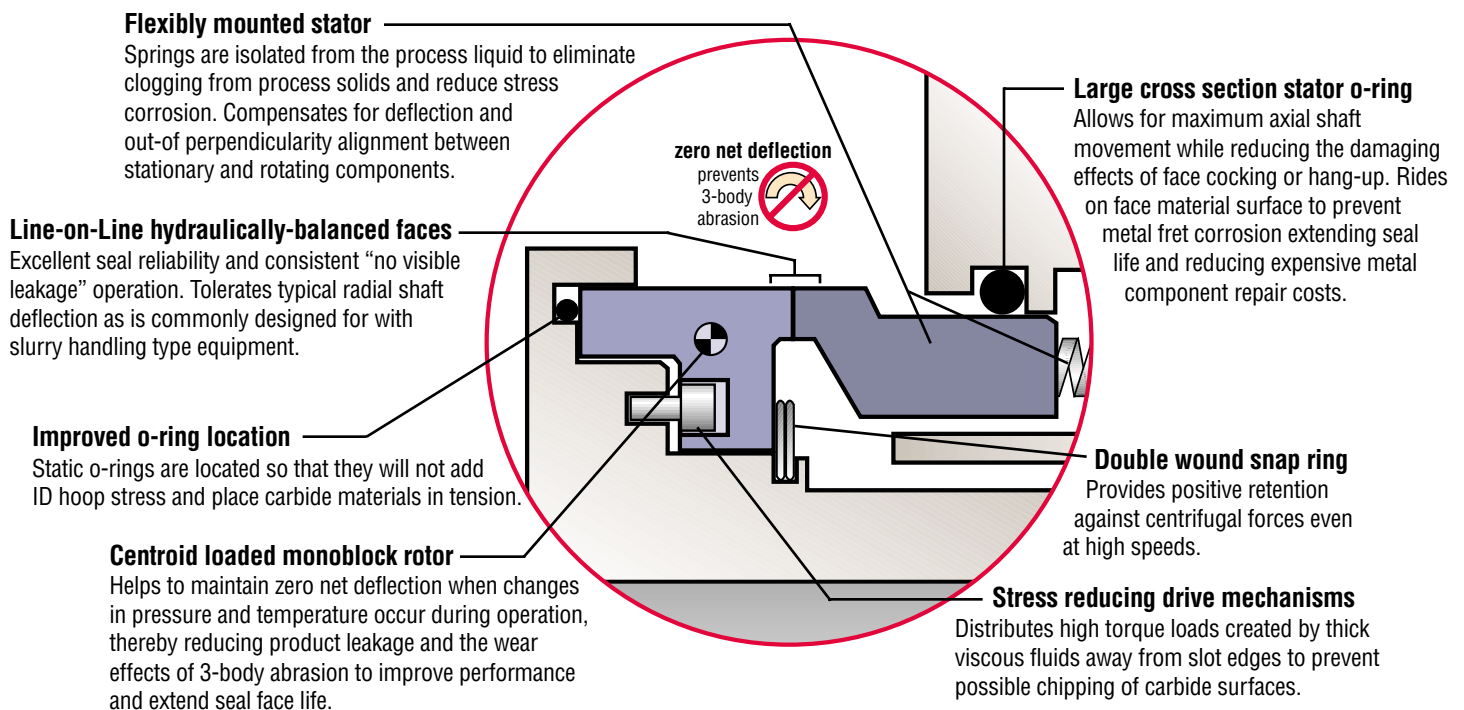


Engineered specifically for standard slurry service applications, typical with mineral and ore processing.

The standardized **SLM Series** - the new millenium cartridge

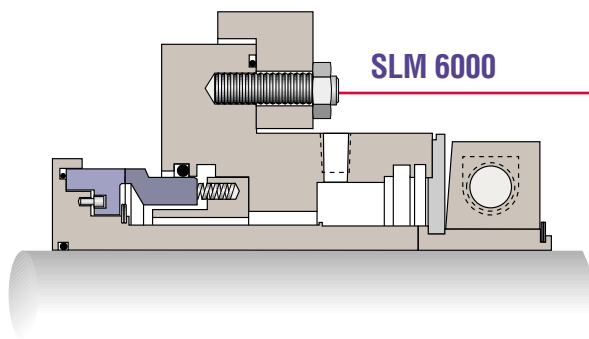
A family of self contained cartridge seals designed for reliable operation in the majority of slurry services. Engineered primarily to be applied with no outside flush liquid to eliminate product dilution, increase plant efficiency, and reduce operating expenses.

- **No process bypass or external flush liquid needed.** Eliminates product dilution for better chemical stability. Increases product pumpage throughput to raise production. Reduces operating expense of complicated packing or seal water support systems.
- **Cartridge seal configuration for easy installation and operation.** No special tooling needed for installation into equipment. Allows equipment impeller-to-casing clearance adjustments to maintain efficiency without making modifications to the seal setting.



- **Limited group size seal components covering the broadest range of shaft diameters.**
Fits most pump models that minimizes spare seal inventory requirements to reduce capital costs.
- **Abrasion-resistant and corrosion-resistant wetted metal surfaces.** Provides seal life consistent with rotating equipment wear components and materials of supply.
- **Clamp collar drive.** Maximum axial holding force accomadates coated, hardened or overlaid shaft/sleeve. Does not gall or raise a metal burr common with cup point set screw drives.
- **Standardized modular designs for replacing seal wear parts.** Exchange the entire cartridge or replace individual seal-wear parts during routine equipment maintenance. Minimizes repair time and reduces added inventory expenses.
- **Standard assemblies designed for installation from equipment's wet or dry side.** Allows cartridge removal and re-installation to occur consistent with specific equipment designs and industry maintenance practices required when replacing wear components. Reduces assembly complexity and any associated down time.

slurry seal family - the **most advanced** Slurry Sealing Technology available today



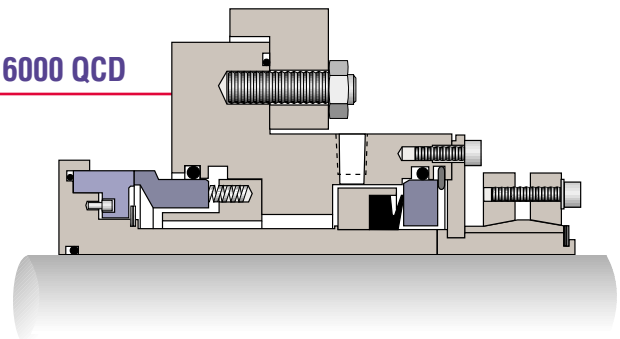
SLM 6000

Simple, single, balanced, multi-spring, pusher, cartridge seal specifically designed to operate without a process bypass or external flush liquid in the majority of common slurry services associated with the mineral and ore processing industry.

Primary seal is the same as the SLM 6000 with the addition of a Quench Containment Device (QCD). The QCD feature allows for the use of a low-pressure fluid (water) quench to be applied to the atmospheric side of the seal faces. Addition of a fluid quench has proven to enhance seal operation characteristics in hot and scaling slurry services.

For more information on the QCD auxiliary, see Flowserve Data Sheet FSD146

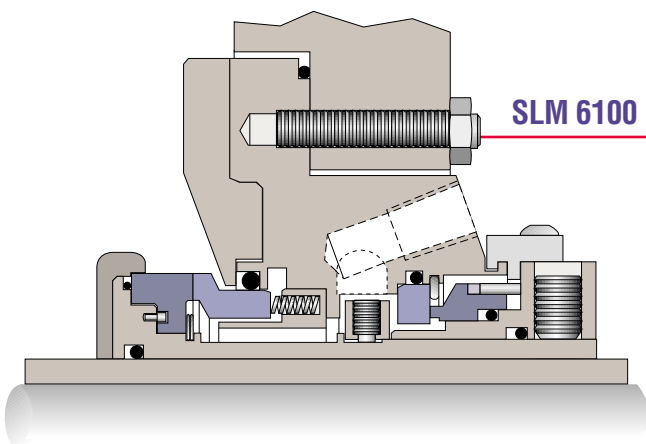
SLM 6000 QCD



SLM 6000 SLD

Same as the SLM 6000 QCD with the addition of a Synthetic Lubrication Device (SLD). Injection of DuraClear synthetic or semi synthetic grease applied to the atmospheric side of the seal faces has been demonstrated to help seal performance during periods of starved suction or when equipment is operated dry.

For more information on the SLD auxiliary, see Flowserve Data Sheet FSD148 and for more information on DuraClear synthetic lubricants, see Data Sheet FSD123.

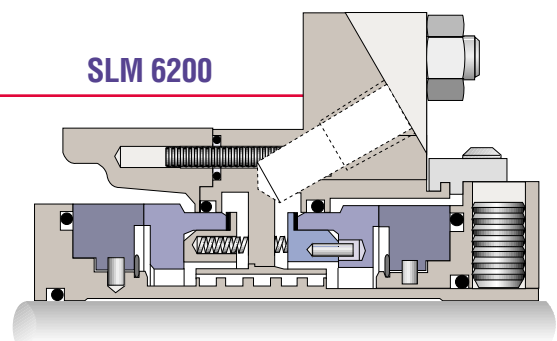


SLM 6100

Primary seal faces are the same as the single SLM 6000 but are placed in a tandem arrangement along with a low pressure secondary seal having carbon vs. silicon carbide faces. The secondary seal is engineered to last longer than a QCD when a fluid quench is applied. It can also allow operation of a closed loop fluid system when the secondary seal is fitted with a quench circulating device.

Dual, balanced, multi-spring pusher, cartridge seal, specifically engineered to operate in slurry services where corrosive, toxic or volatile liquids are being handled. Uses a pressurized barrier fluid to prevent process liquid from reaching the atmosphere when a single seal is not acceptable to provide proper environmental or operational safety. As with the single SLM 6000 version, no process bypass or external flush liquid is required when installing into an open taper bore seal chamber to reduce product dilution effects.

For more information on the patented Erosion Protection Device (EPD) auxiliary depicted, see Flowserve Data Sheet FSD163



SLM 6200

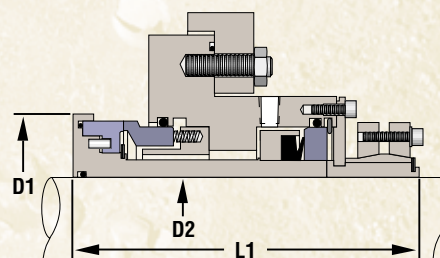
Operating Parameters

Maximum Seal Chamber Pressure	250 psig (17 barg)
Process Temperature Range (with water quench)	0 to 175 °F (-18 to 79 °C) 32 to 275 °F (0 to 135 °C)
Maximum Slurry Particle MOHS Hardness	MOHS 9 (scale 1 to 10)
Maximum Slurry % Solids by Weight	40 %
Maximum Particle Size	6000 Micron
Maximum Surface Speed	4500 fpm (23 m/s)

Materials of Construction

Wetted Metal Parts	CD4MCuN , Alloy C-276 , High Chrome Iron (standard) (other materials available upon request)
Seal Faces	Sintered Silicon Carbide (standard) Reaction Bonded Silicon Carbide (optional) Tungsten Carbide (optional)
Springs	Alloy C-276
Elastomers	EPDM, Fluoroelastomer, TFE-propylene (standard) (other materials available upon request)

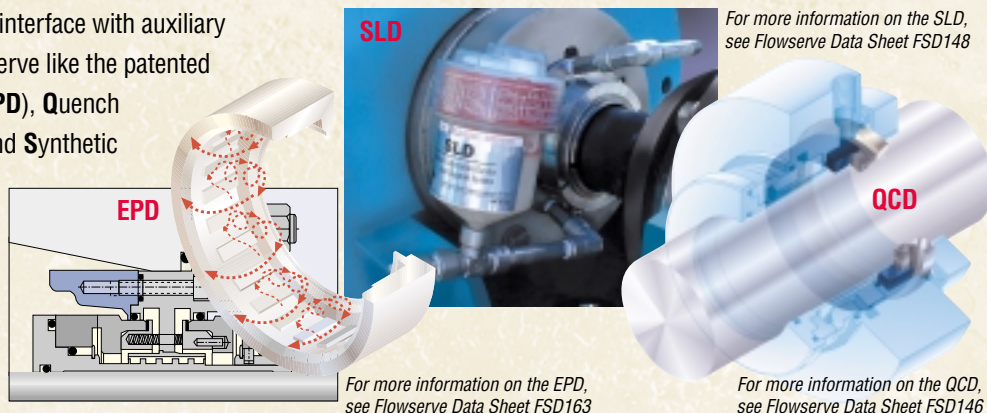
Dimensional Data (inches)



SLM Size	L1	D1	D2 Max
2.000	4.702	3.500	1.939
2.125	4.644	3.625	2.063
2.375	4.824	3.875	2.313
2.625	4.991	4.125	2.532
3.250	4.948	4.950	3.097
4.125	5.270	6.070	4.096
5.375	5.894	7.320	5.314
7.375	7.463	9.562	7.282
9.250	8.537	12.210	9.061

Auxiliary devices Increase Mean Time Between Planned Maintenance (MTBPM)

The SLM Series seals readily interface with auxiliary features available from Flowserve like the patented **Erosion Protection Device (EPD)**, **Quench Containment Device (QCD)** and **Synthetic Lubrication Device (SLD)**. These auxiliary products enhance seal performance in severe services and during off-design point operation events.



For more information on the EPD,
 see Flowserve Data Sheet FSD163

For more information on the QCD,
 see Flowserve Data Sheet FSD146

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