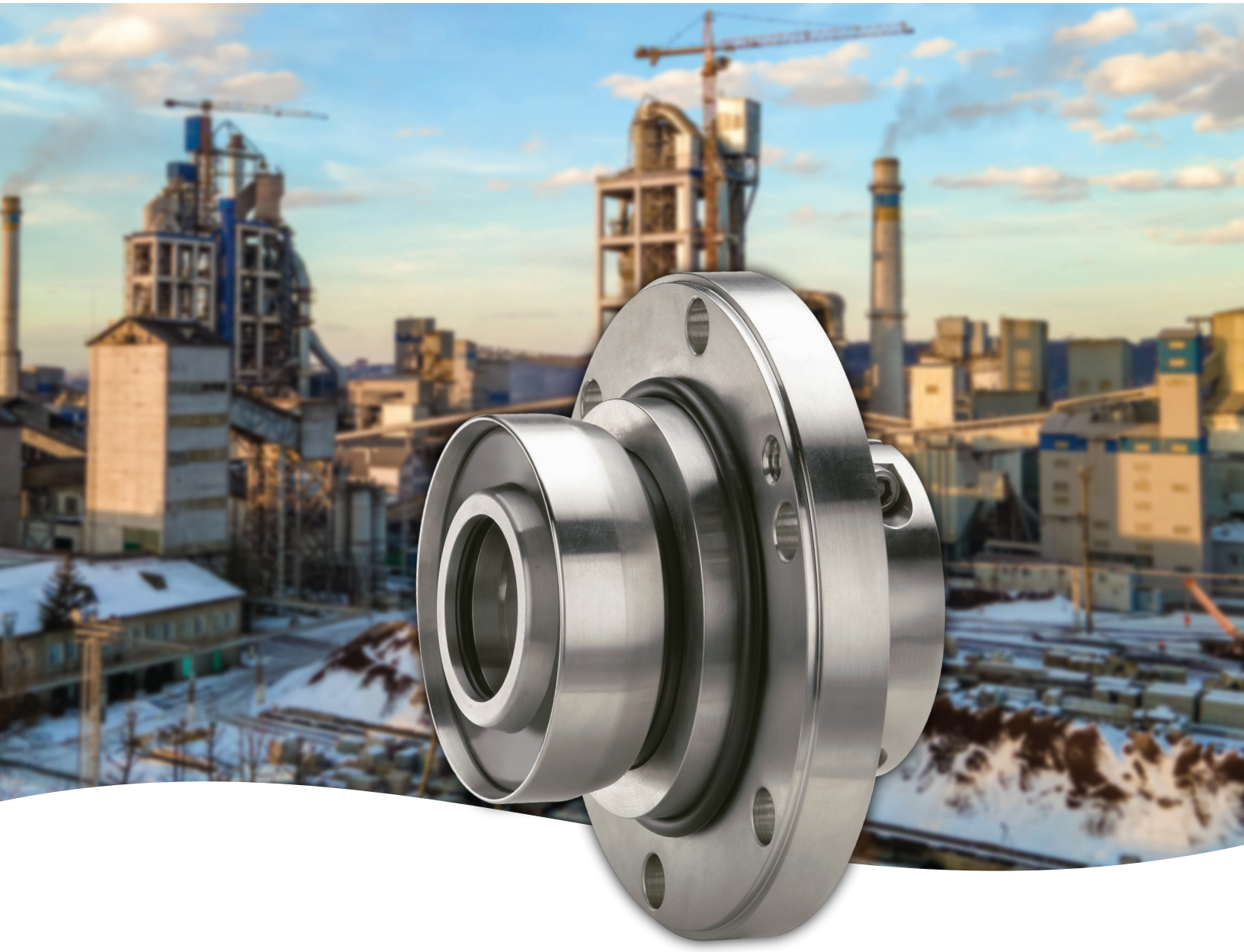
FLOWSERVE

SLC Series
Heavy Duty Slurry Seals

Built for the harshest slurry pump services found in mining, mineral and ore processing, and flue gas desulfurization



Experience In Motion

The premier seal for tough slurry applications



The SLC succeeds in these challenging slurry operations

Coal Processing/Washing
Thickener Underflow, Thickener Overflow

Uranium Processing
Pregnant Feed, Tailings, Cyclone Feed, Pyrolusite Distribution, Underflow Thickener Feed

Copper Refining
Concentrator Slimes Thickener Tailings

Nickel Refining
Slurry Transfer, Thickener Overflow, Thickener Underflow, Acid Slurry, Mill Hydrocyclone Feed, Tailings Transfer, Spray Dryer Transfer Pumps

The SLC Series is designed with a unique non-clogging cone spring that increases seal reliability and enables flushless operation for low operating costs.

Alumina Refining
Digester Feed, Caustic Cleaning Preparation, Bauxite Grinding Pumps, Desilicator Discharge Pump, Seed Filtrate Pump, Coarse Seed Filter Feed Pumps, Seed Charge

Hard Rock Mining
Ground Dewatering

Tar Sands Extraction
Froth, Pad Pumps, Tailings Transfer

Mineral Sands
Ore Mining
Slimes Pump, Concentrator Feed, Tailings/Tailings Booster pumps, Mineral sand slurry, Mineral sand concentrate

Synthetic Rutile Plant
Slurry Transfer Pumps, Acidic Slurry Transfer Pumps

Pigment Plant
Finished Slurry pump, Neutralisation feed pump, Chlorine Compressors (GARO)

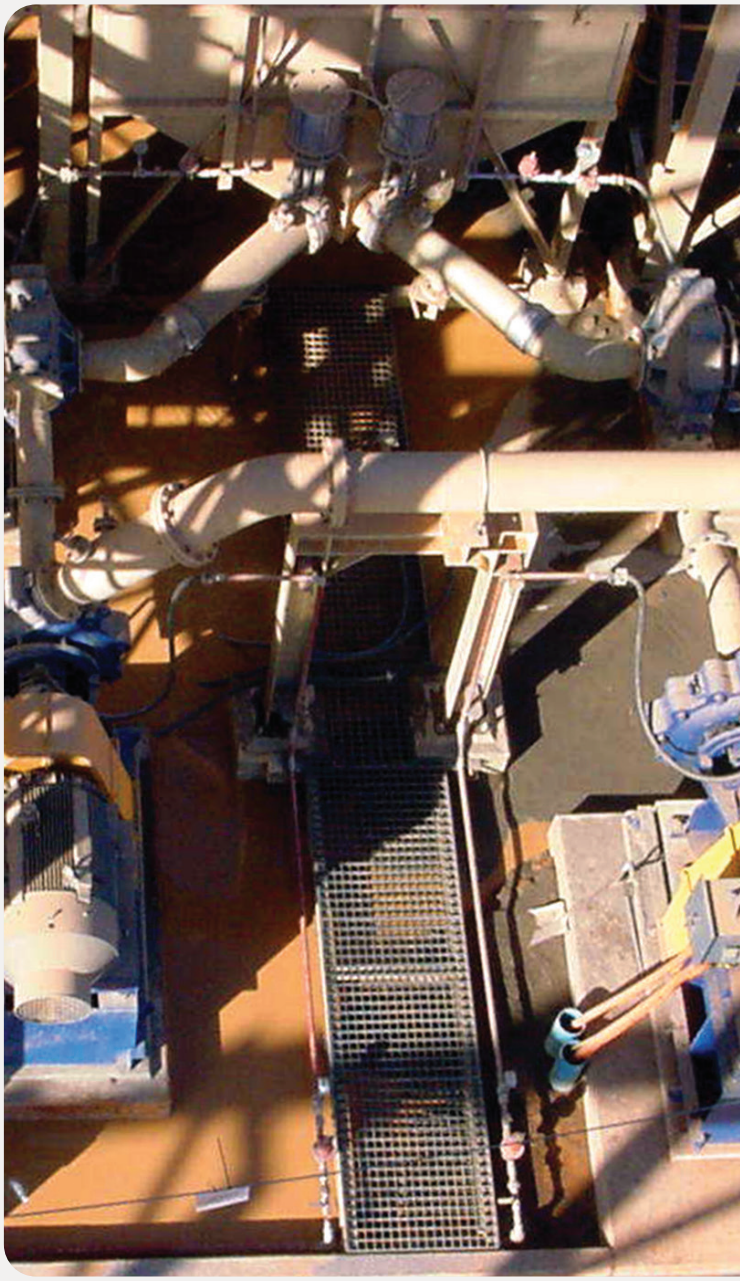
Flue Gas Desulphurization (FGD)
Limestone Slurry, Calcium Sulfate Slurry, Gypsum Slurry, Filtrate Return

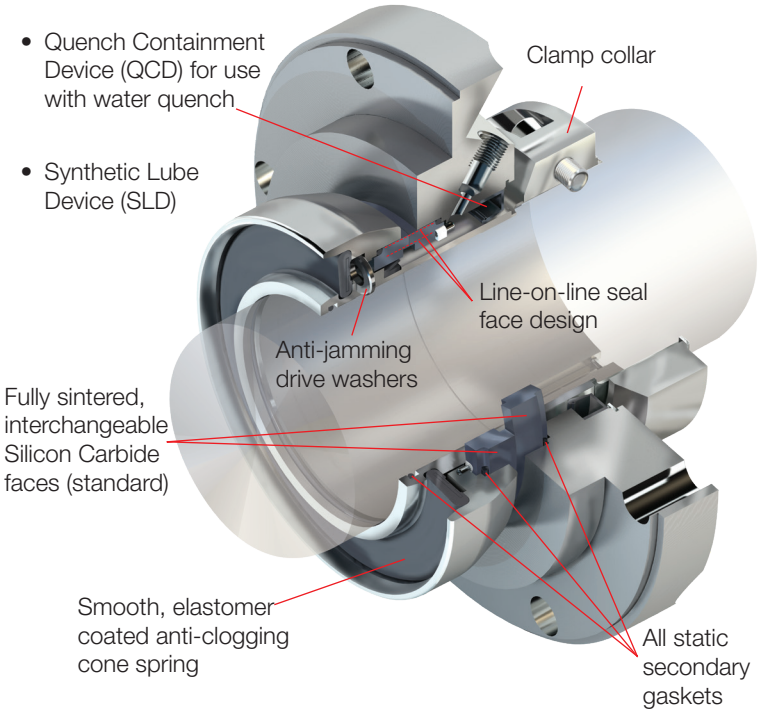
Gold Mining
Carbon In Leach Tails, Decant Water, Saline Water, Concentrate Transfer, Cyanide Transfer, Conditioning Tank feed, Tails Thickener feed

Potash Plant
Circulation Pumps

The SLC advantage

- Abrasion-resistant and corrosion-resistant metal components and silicon carbide seal faces extend seal life beyond slurry pump components to maximize equipment uptime.
- Robust construction handles slurry particle hardness up to MOH 9 and slurry concentration up to 60% solids by weight for reliability in the toughest services.
- Clean, open design operates without flush water to help reduce product dilution and save significant water-related operational costs.
- Encapsulated cone spring increases reliability by providing consistent spring loading and hydraulic balancing to the seal faces without clogging or wearing.
- Consistent, correct installation is achieved by the cartridge design from the pump equipment's wet or dry end with no special tools or seal-related bearing housing adjustments.
- Six group sizes meet the requirements of most slurry pump equipment giving maximum flexibility with minimum inventory.
- Available outboard lip seal and Plan 62 grease or water quench provide lubrication to the seal faces during dry running pump cycles.



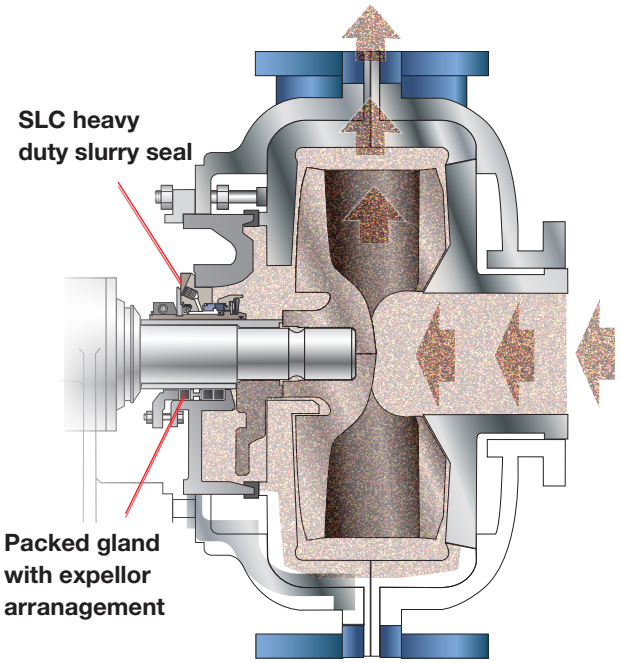


Operating Parameters

Pressure	Up to 20.7 bar (300 psig)
Temperature	Up to 77°C (170°F) without quench Up to 110°C (230°F) with quench For higher temperature applications contact your local Flowserve representative
Maximum slurry concentration	60% solids by wieght
Maximum particle hardness	9 MOH
Surface speed	Up to 15 m/s (3000 fpm)
Shaft sizes	35 to 220 mm (1.375 to 8.661 inches)

Out-performs packing in slurry pumps

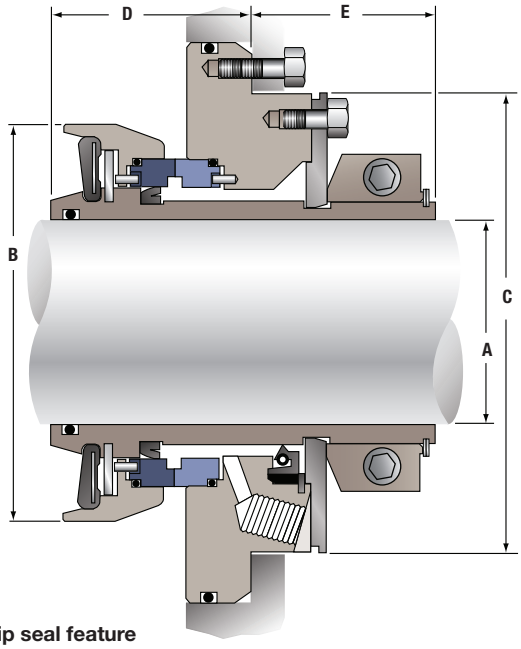
The SLC reduces maintenance and resource costs while improving pump reliability.



Materials of Construction

Wetted metal components	Hardened, high chrome iron (standard) CD-4MCuN or other alloys (optional)
Seal faces	Silicon Carbide (standard) Tungsten Carbide (optional)
Elastomers	Aflas[1] (standard) EPDM, Viton[2] (optional)

1 Registered trademark of Asahi Glass Co., Ltd.
2 Registered trademark of E.I.DuPont



Bottom view shows lip seal feature

SLC Dimensional Data in inches

Group	A	B	C	D	E	D	E
				wet end		dry end	
1	1.375 - 2.125	3.91	5.03	2.45	2.06	2.18	2.21
2	2.125 - 3.125	5.35	6.19	2.47	2.28	2.29	2.31
3	3.125 - 4.125	6.69	7.34	2.65	2.36	2.58	2.42
4	4.125 - 5.438	7.96	9.04	2.67	3.06	2.72	2.65
5	5.438 - 7.125	10.15	11.06	3.09	3.29	3.05	2.62
6	7.125 - 8.661	12.33	12.98	3.63	3.91	3.63	3.91

SLC Dimensional Data in millimeters

Group	A	B	C	D	E	D	E
				wet end		dry end	
1	35 - 54	99.7	127.8	62.2	52.4	55.5	56.2
2	54 - 82	136.0	156.5	62.7	57.9	58.1	58.6
3	82 - 106	170.0	186.4	67.3	59.9	65.5	61.6
4	106 - 138	202.1	229.6	67.8	77.7	69.2	67.4
5	138 - 181	257.9	280.9	78.5	83.6	77.4	66.5
6	181 - 220	313.2	329.6	92.4	99.3	92.1	99.3

Note: For sizes and conditions not listed, contact your local Flowserve representative.

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