



## ***SLC Series Heavy duty slurry seals***

Proven performance in mineral and  
ore processing applications



***Experience In Motion***

*SLC Series seals are heavy duty single cartridge seals built for the harshest slurry pump services found in mining, mineral and ore processing, and flue gas desulfurization. The SLC Series is designed with a unique non-clogging cone spring that increases seal reliability and enables flushless operation for low operating costs.*



## **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

#### **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**

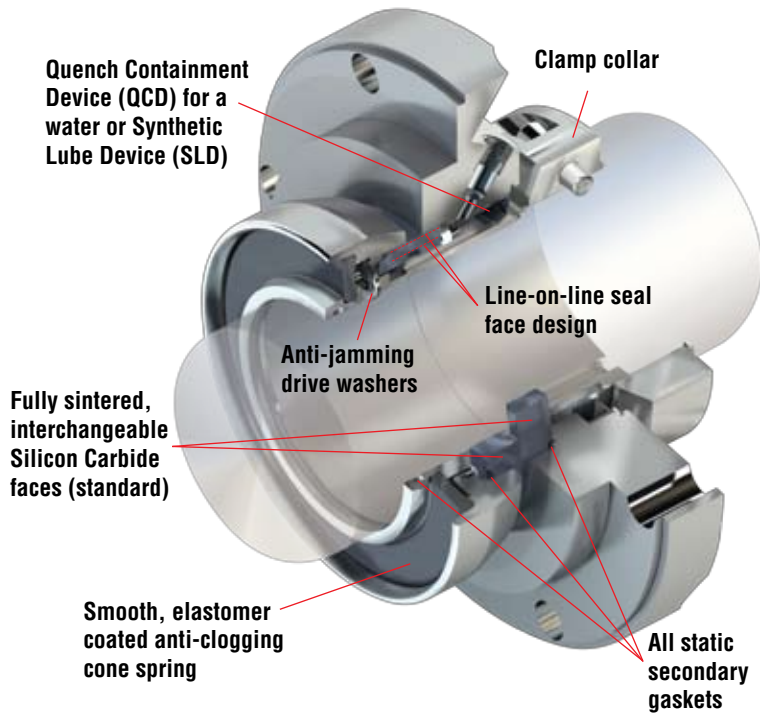
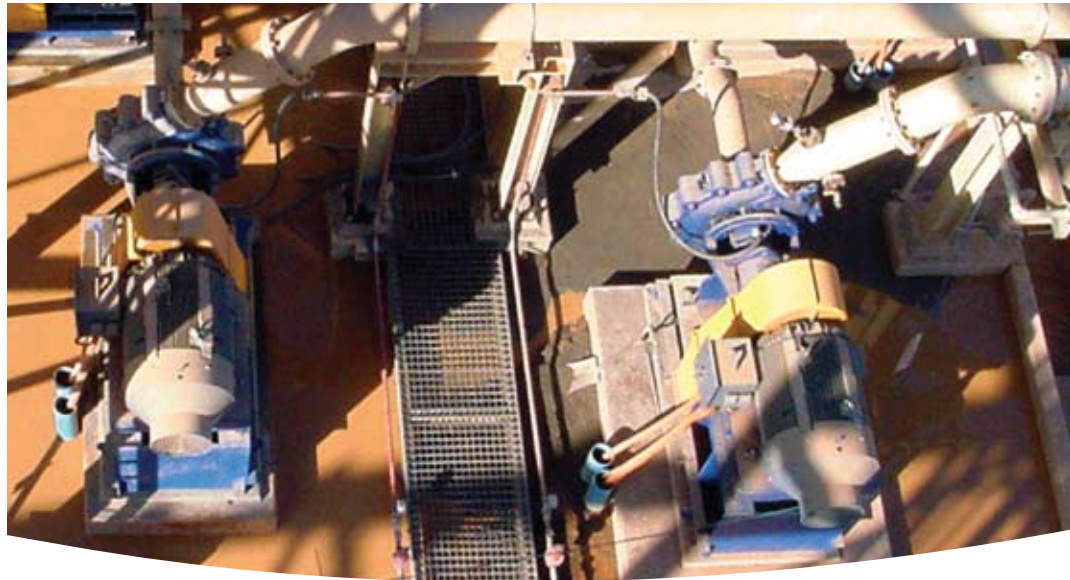
Carbon In Leach Tails, Decant Water, Saline Water, Concentrate Transfer, Cyanide Transfer, Conditioning Tank feed, Tails Thickener feed

#### **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.

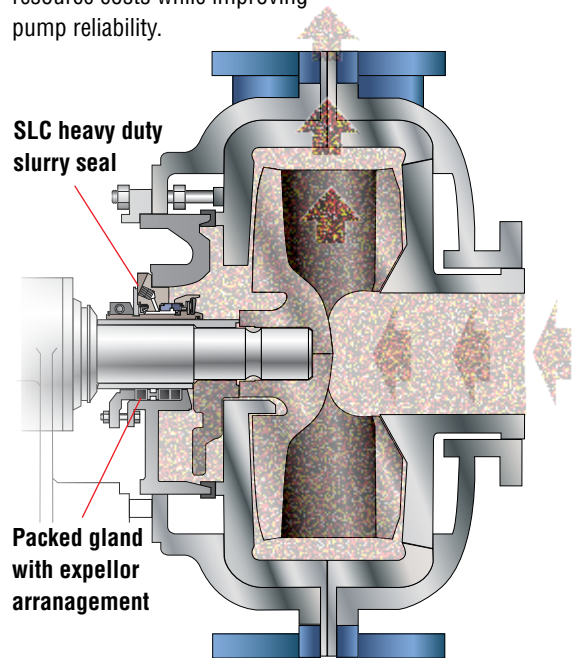


### Operating Parameters

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

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

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

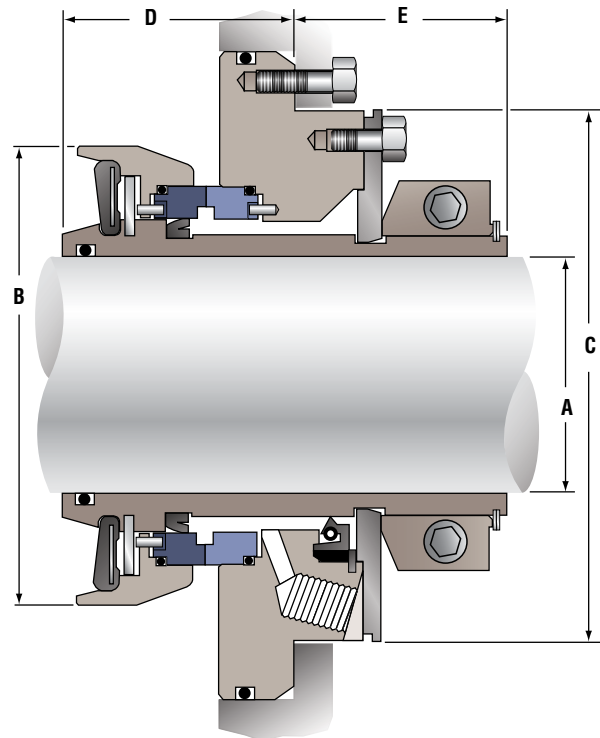


**SLC Dimensional Data** in millimeters

Group	A	B	C	wet end		dry end	
				D	E	D	E
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

**SLC Dimensional Data** in inches

Group	A	B	C	wet end		dry end	
				D	E	D	E
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



Bottom view shows lip seal feature

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

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**To find your local Flowserve representative**  
and find out more about Flowserve Corporation,  
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