

### Carbon-free sealing for sustainable batch purity

The LMX cartridge lip seal is engineered for pharmaceutical manufacturing and a broad range of specialty chemical processes, eliminating the risk of carbon contamination in applications where batch purity is essential.

Its carbon-free design allows manufacturers to maintain strict quality requirements for every production run and avoid costly scrap. The proprietary float design allows the LMX to maintain a consistent seal, even with significant shaft movement, ensuring maximum seal life.

The LMX is also designed to operate with minimal heat generation, maximizing seal life and eliminating the need for a barrier gas system, reducing overall operational complexity.

#### Features & Benefits

**Carbon-free Design:** Eliminate the risk of carbon contamination and the potential for scrap

**Optimized Seal Life:** Handle extreme shaft movement while running cool, all without the need for a bearing

**Minimized Downtime:** Repairs are fast and simple with available repair kits and supported by local Flowserve QRC's

**Complexity Reduction:** No barrier gas required, which reduces operational complexity and lowers utility costs

**Quick & Easy Installation:** Fits through Lightnin Series 10 gearboxes without any disassembly

**Keep it Clean:** Can be designed to be SIP/CIP compatible

#### Target Applications

- Contract manufacturing (CDMOs)
- Active Pharmaceutical Ingredients manufacturing
- R&D manufacturing
- Biotech manufacturing



#### Operating Parameters

Speed:	Up to 100 RPM
Vessel Pressure:	Vacuum to 100 psi (7 bar)
Vessel Temperature:	Up to 250°F (121°C)
Maximum Runout:	0.120" TIR (3 mm)
Shaft Size:	2.000" to 5.500" (50.8 mm to 139.7 mm)
Maximum Leakage:	1.0 SCFH per inch of shaft diameter

#### Materials of Construction

Lips:	Mineral-filled PTFE
Sleeve & Baseplate:	Ceramic
Elastomers:	FFKM (USP Cl. VI)
Metals:	316 stainless steel