



# Pharmaceutical Ready ST Seal

## Designed for Bottom Entry Bio-Processing Applications

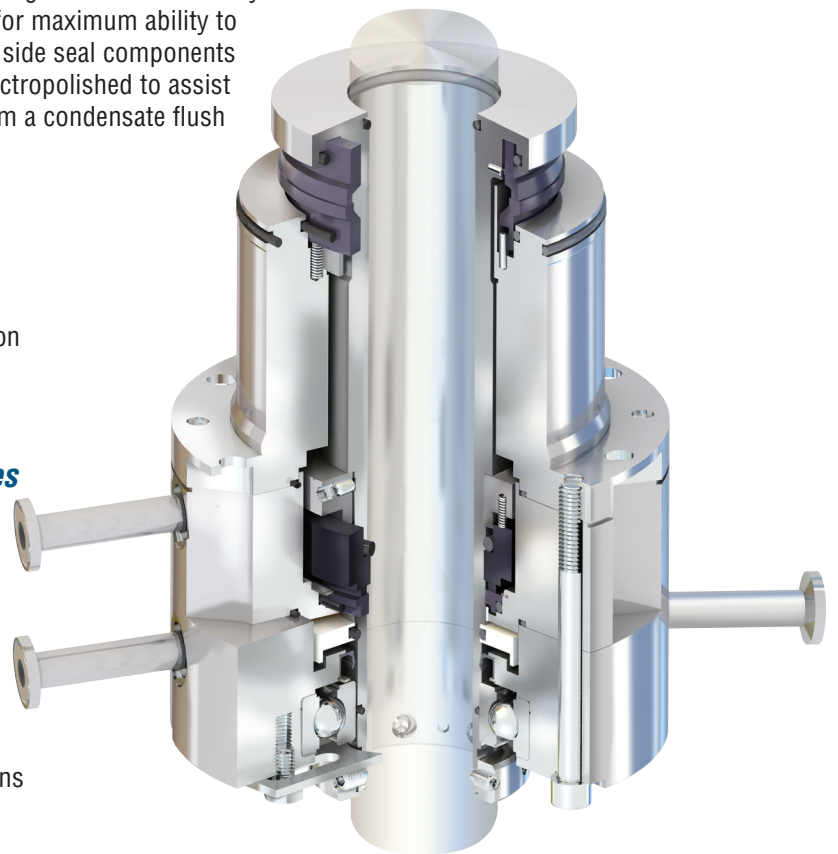
The Pharmaceutical ST seal is a double, dual pressurized, sterilizable cartridge bottom entry mixer seal. That is assembled with FDA compliant materials and USP Class VI polymers. The ST seal is specifically designed for bottom entry fermentation applications by allowing for maximum ability to drain, clean, and sterilize. The product side seal components are sloped to minimize pooling and electropolished to assist with CIP. Barrier fluid lubrication is from a condensate flush through the seal at 10 GPH or less.

### Mixer Seal Design Features

- Cartridge design
- Custom designed for each application
- Optional bearing in seal cartridge

### Special Pharmaceutical Features

- Sloped non-pooling product-side design
- FDA and USP recognized materials
- No contact with animal derivatives
- Designed for SIP/CIP
- Welded connections to eliminate process contact threaded connections
- Electropolish finish standard



### Standard Operating Parameters

Shaft Size	Maximum Speed (RPM)	Maximum Barrier Pressure	Maximum Temperature*
25.4 - 108 mm	4 m/s	3.4 bar	135°C
(1.000 - 4.250 inch)	13 fps	50 psig	250°F

\*Temperature varies by process cycle

Passivated surfaces and cryogenic designs upon request

Consult your local Flowserve representative for specific applications

**Bio-Pharmaceutical Ready ST Features Designed for Bottom Entry Applications**

All FDA recognized materials

15 Ra electro-polished surface finish on all product side wetted metal parts

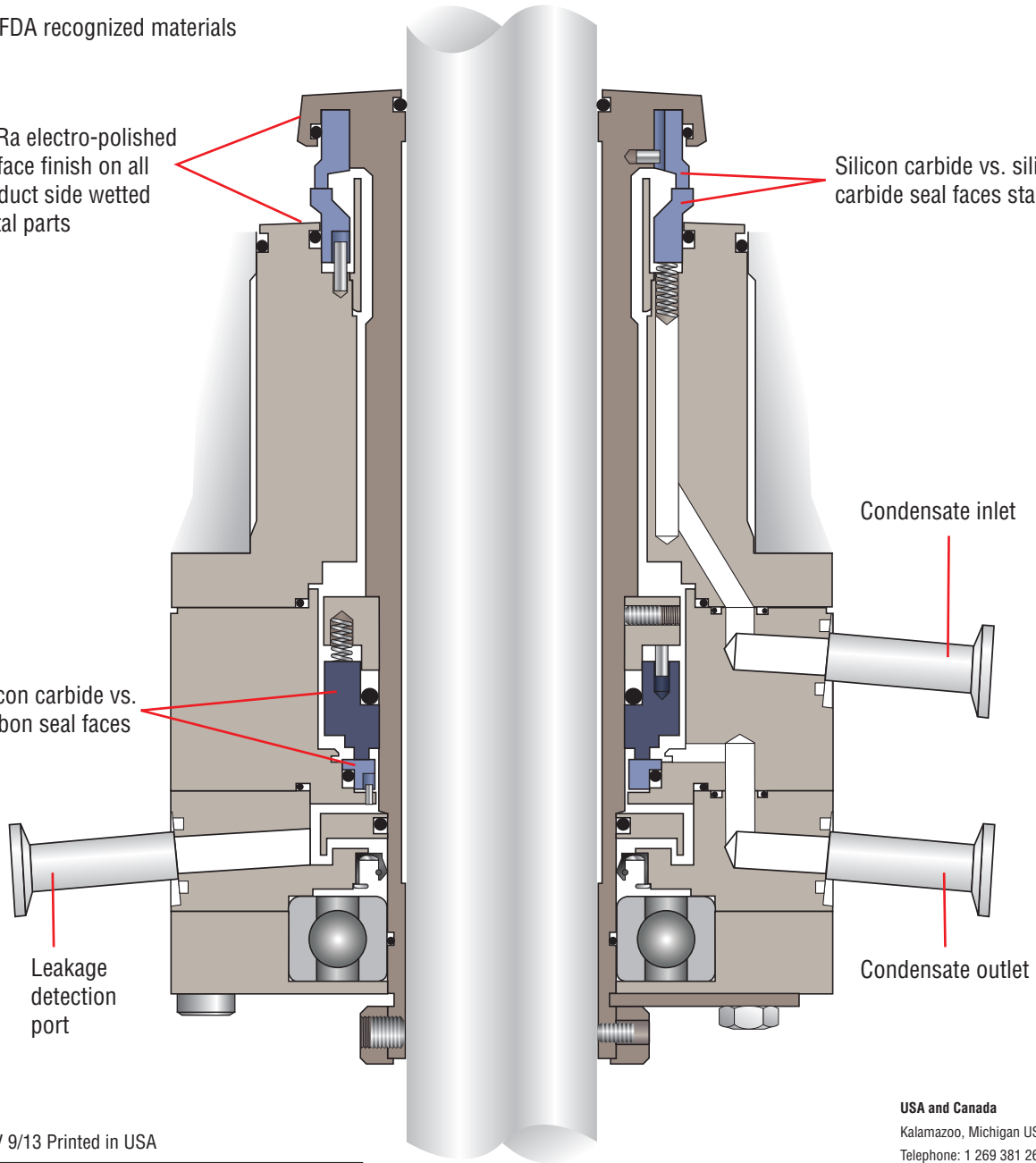
Silicon carbide vs. silicon carbide seal faces standard

Silicon carbide vs. Carbon seal faces

Condensate inlet

Leakage detection port

Condensate outlet



FTA147eng REV 9/13 Printed in USA

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