April 1, 2022

# Certificate of Conformance LtorQ XOMOX Sleeved Plug Valve EPA Method 21 Fugitive Emissions Statement

Crane ChemPharma Flow Solutions hereby certifies that the LtorQ Tufline brand valves comply with the United States Federal and Environmental Protection Agency (EPA) Method 21 procedures for testing and measurement. Testing and monitoring conducted by Richard E. Walker Jr. (ASNT NDT Level III) from February thru March 2022 in our New Product Development R&D Lab at our Cincinnati, Ohio location.

Results of testing conducted on ASME Class 150 Tufline brand valve with the following seal combination are in accordance with EPA Method 21, confirmed that the weighted average external stem seal leakage over 50,000 cycles, utilizing methane gas as the test media, was measured and the results are noted as follows:

Tufline Valve	Tufline Valve	Sleeve / Seat	Stem Seal	Average	Number of
Style	Type	Material	Material	Leakage Rate	Cycles
Sleeved Plug	LtorQ	PFA	PTFE	40 ppm max.	50,000 Cycles

Richard E. Walker Jr. NPD Lab Technician Sudhir Kulkarni Director of Engineering Brad Schroeder

Quality Assurance Manager



February 28, 2022

# **Certificate of Conformance**

## LtorQ XOMOX Sleeved Plug Valve

ISO 15848-1: 2017 Fugitive Emissions Statement

Crane ChemPharma Flow Solutions hereby certifies that the LtorQ Tufline brand valves comply with the International Organization for Standardization) (ISO) 15848-1 procedures for testing and measurement. Testing and monitoring conducted by Richard E. Walker Jr. (ASNT NDT Level III) from January thru February 2022 in our New Product Development R&D Lab at our Cincinnati, Ohio location.

### Stem Seal

- Tightness class: BH ( $\leq 1.00 \times 10^{-4} \text{ mg/(m x s)}$ )
- Endurance class:CO3
- Temperature Class: RT to 200°C
- Test Pressure: 19.7 Bar at RT to 13.4 Bar at 200°C
- Adjustments: SSA 0

### Sealing of the Valve Body:

•  $\leq 50 \text{ ppmv} (\leq 1.78 \times 10^{-6} \text{ mbar}(1 \times 8 \times \text{mm}))$ 

### **Product Description:**

Sleeved plug valve 2-way valve.

Size: DN 15 to DN 150 PN 16 - NPS 1/2 to NPS 6 Class 150

Sealing system: LtorQ

Type designations including but not limited to: L067, L127

### Note:

All valve types listed above include valves categorized both by PN/Class and by JIS.

Richard E. Walker Jr. NPD Lab Technician Sudhir Kulkarni Director of Engineering Brad Schroeder

Quality Assurance Manager