FLOWSERVE

CATALOG

Flowserve SIHI® Vacuum Pump Product Portfolio

North American Version



Experience In Motion

Advanced vacuum and compression solutions that run up to 50% faster

Flowserve SIHI vacuum and compression solutions significantly enhance productivity and efficiency across a wide variety of applications. By reducing load lock cycle times by up to 50%, the SIHI product range enables faster operations for coaters while optimizing energy consumption in processes like sterilization.

More than a century of process expertise

With a history of innovation dating back to 1920, SIHI is one of the world's leading brands of liquid and vacuum pumps, compressors and engineered systems, trusted by all segments of the process industry. The SIHI brand's chemical, industrial, energy and environmental divisions combine extensive application knowledge with respected and established product lines.

Proven solutions help you operate with confidence

SIHI solutions prioritize uncompromising reliability and efficiency while ensuring compliance with industry standards. Whether you need to process chemicals, create vacuum, generate energy, recover volatile organic compound (VOC) emissions, or simply investigate lifecycle cost (LCC) reduction, the SIHI team has a reliable solution.

In addition, SIHI field and afternarket service fully supports you for the lifetime of your application.

Precision-engineered systems, tailored to your specifications

From individual vacuum pumps to complete engineering solutions, Flowserve offers a robust and comprehensive range that includes liquid ring pumps, compressors and dry vacuum systems.

Pre-engineered modular systems can help your operation get up and running quickly with the flexibility to expand at your own pace. Custom designs are also available.

Ideal for:

- Pharmaceuticals
- Semiconductor manufacturing
- Food and beverage
- Chemical processing
- Machinery manufacturing
- Heavy machinery applications
- Energy generation
- Municipal water
- General industry and more

Sections

1	SIHI Dry screw vacuum pumps	3
2	Dry screw SIHI Boost series	5
3	Liquid ring pumps and compressors	8
4	Pre-engineered liquid ring vacuum systems	14
5	RedRaven IoT and QRC network	15

SIHI Dry screw vacuum pumps

A completely dry-running vertical twin-screw machine with no mechanical shaft seals. Designed for chemical, pharmaceutical and industrial applications requiring uncontaminated vacuum, free from oil or service liquids.

All pumps and systems are modular and can be combined in several different executions.

Dry screw working principle

SIHI Dry technology is a dry running, twin screw vacuum principle delivering deep vacuum performance with high reliability and efficiency. Operating without sealing or lubricating fluids, it eliminates oil contamination, fluid handling and disposal, enabling clean, stable processes. Each rotor is driven by an individual variable-frequency motor and electronically synchronized, removing gearboxes and mechanical contact while allowing larger clearances for improved tolerance to liquid and particulate carryover. A vertical, top-down flow path uses gravity to manage carryover in a compact, self-draining design. Integrated monitoring of torque, temperature and speed enables continuous diagnostics and automatic adaptation, resulting in fast pump-down, quiet operation, energy-efficient control and zero scheduled maintenance.

Operational benefits

- **Seal-less:** No mechanical shaft seals means reliable operation without process vapor emission risks.
- **Highly reliable operation:** No gearbox and balanced twin-screw geometry permit a smooth, quiet, oil-free, clean and maintenance-free environment.
- **Improved uptime:** IoT-ready diagnosis is available to plug-and-play with most DCS systems.
- **High tolerance to carryover:** Internal speed overload protection is coupled to wide clearances in which to safeguard against the deposition which results from dried process liquid ingress.



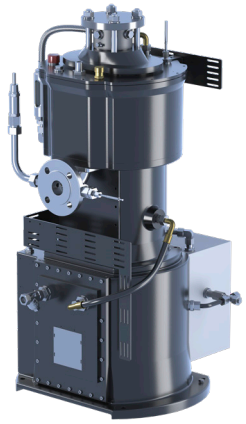
SIHI Dry



GD S

Single-stage, dry-screw vacuum pump

Model	Capacity	Typical Process Pressure	Final Pressure	Power Consumption Max. @ 400/460 VAC ~3	Power Consumption Final Pressure @ 400/460 VAC ~3
GD S450	450 m^3/h @ 1 mbar (a) and 20°C (265 CFM @ 0.75 Torr (a) and 68°F)	0.1 to 100 mbar (a) (0.075 to 75 Torr (a))	< 0.005 mbar (a) (< 3.75 mTorr (a))	12/12 kW (16.1/16.1 bhp)	< 4/4 kW (< 5.4/5.4 bhp)
GD S451	400 m^3/h @ 10 mbar (a) and 20°C (235 CFM @ 7.5 Torr (a) and 68°F)	1 to 100 mbar (a) (0.75 to 75 Torr (a))	< 0.5 mbar (a) (< 0.38 Torr (a))		< 6/6 kW (< 8/8 bhp)
GD S650	700 m^3/h @ 1 mbar (a) and 20°C (412 CFM @ 0.75 Torr (a) and 68°F)	0.1 to 100 mbar (a) (0.075 to 75 Torr (a))	< 0.001 mbar (a) (< 0.75 mTorr (a))		< 6/6 kW (< 8/8 bhp)



PD M

Explosion-proof, single-stage, dry-screw vacuum pump

Model	Capacity	Typical Process Pressure	Final Pressure	Power Consumption Max. @ 400/460 VAC ~3	Power Consumption Final Pressure @ 400/460 VAC ~3
PD M100	100 m^3/h @ 10 mbar (a) and 20°C (58.9 CFM @ 7.5 Torr (a) and 68°F)	10 mbar (a) (< 7.5 Torr (a))	< 1 mbar (a) (< 0.75 Torr (a))	7.5/7.5 kW (10.1/10.1 bhp)	< 3.5/3.5 kW (< 4.7/4.7 bhp)
PD M160	160 m^3/h @ 10 mbar (a) and 20°C (94.2 CFM @ 7.5 Torr (a) and 68°F)				< 3.5/3.5 kW (< 4.7/4.7 bhp)
PD M250	240 m^3/h @ 1 mbar (a) and 20°C (141.3 CFM @ 0.75 Torr (a) and 68°F)	1 mbar (a) (< 0.75 Torr (a))	< 1 mbar (a) (< 0.75 Torr (a))	4.5/4.5 kW (6/6 bhp)	< 2.7/2.7 kW (< 3.6/3.6 bhp)
PD M400	400 m^3/h @ 1 mbar (a) and 20°C (235.4 CFM @ 0.75 Torr (a) and 68°F)				< 2.9/2.9 kW (< 3.9/3.9 bhp)



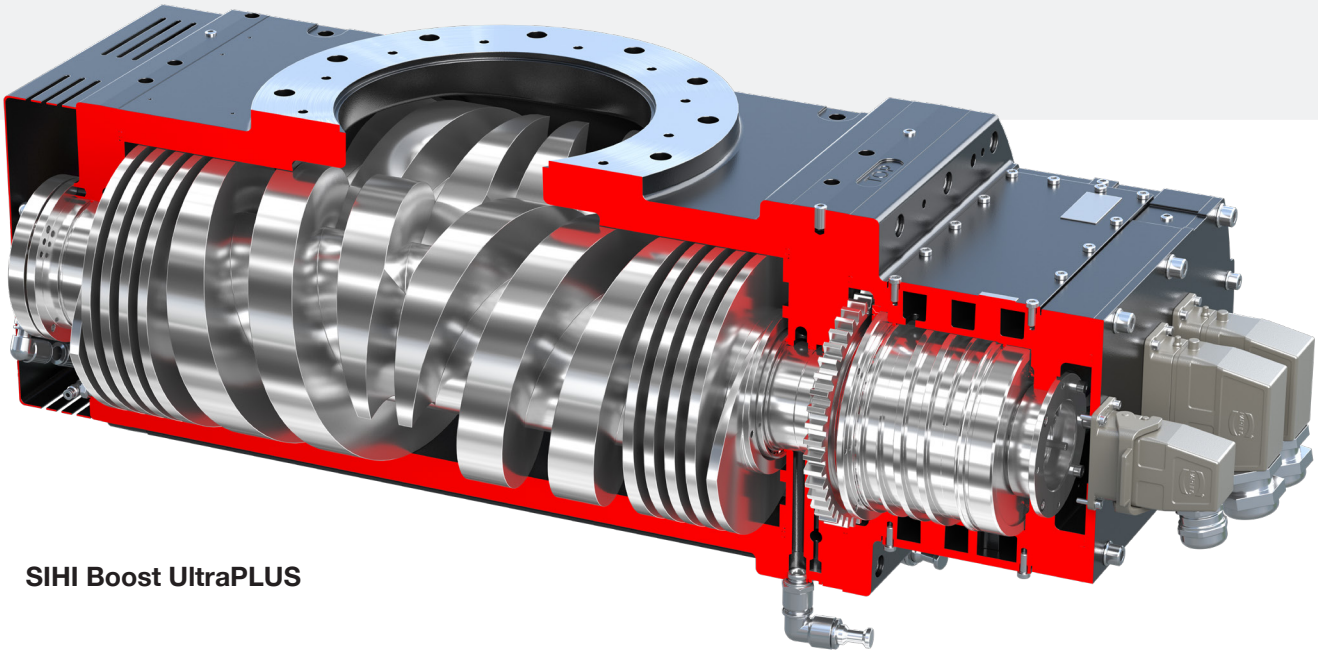
PD H

Explosion-proof, single-stage, dry-screw vacuum pump

Model	Capacity	Typical Process Pressure	Final Pressure	Power Consumption Max. @ 400/460 VAC ~3	Power Consumption Final Pressure @ 400/460 VAC ~3
PD H250	290 m^3/h @ 10 mbar (a) and 20°C (170.7 CFM @ 7.5 Torr (a) and 68°F)	10 mbar (a) (< 7.5 Torr (a))	< 1 mbar (a) (< 0.75 Torr (a))	10/10 kW (13.4/13.4 bhp)	< 7/7 kW (< 9.4/9.4 bhp)
PD H400	400 m^3/h @ 10 mbar (a) and 20°C (235.4 CFM @ 7.5 Torr (a) and 68°F)	10 mbar (a) (< 7.5 Torr (a))	< 1 mbar (a) (< 0.75 Torr (a))	12/12 kW (16.1/16.1 bhp)	< 7/7 kW (< 9.4/9.4 bhp)
PD H630	600 m^3/h @ 10 mbar (a) and 20°C (353.1 CFM @ 7.5 Torr (a) and 68°F)	10 mbar (a) (< 7.5 Torr (a))	< 1 mbar (a) (< 0.75 Torr (a))	20/20 kW (26.8/26.8 bhp)	< 10/10 kW (< 13.4/13.4 bhp)
PD H1000	1,000 m^3/h @ 10 mbar (a) and 20°C (588.6 CFM @ 7.5 Torr (a) and 68°F)	10 mbar (a) (7.5 Torr)	< 1 mbar (a) (< 0.75 Torr (a))	30/30 kW (40.2/40.2 bhp)	< 18/18 kW (< 24.1/14.1 bhp)

Dry screw SIHI Boost series

Dual-stage vacuum systems that deliver deep vacuum with less power. Provide completely dry compression of gases from vacuum up to atmospheric conditions.



SIHI Boost UltraPLUS

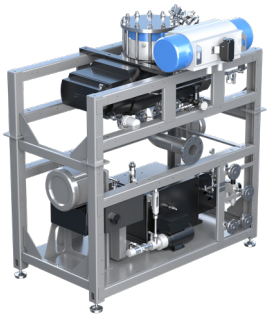
SIHI Boost UltraPLUS dry-running vacuum pump

Significantly faster pump-down times boost profitability of load lock applications.

Flowserve SIHI Boost dry-running vacuum pump systems, introduced in 2013, were designed for industrial medium and fine vacuum applications. The original design delivers clear advantages over traditional Roots blowers. SIHI Boost UltraPLUS advances this technology, more than doubling evacuation speed without increasing footprint through improved cooling, upgraded materials and optimized gap distribution, increasing continuous power from 12.5 to 28 kW.

SIHI Boost operational benefits

- **Low capital costs:** Unique high compression up to 100:1 means that high-capacity deep vacuum can be achieved with a reduced number of stages in which to reduce CAPEX costs.
- **High energy efficiency:** High compression also means that the backing pump stage(s) are much smaller than our competition in which to save electrical power and OPEX costs.
- **Highly reliable operation:** No gearboxes, mechanical seals and mid-stage backing pumps provide a foundation of vastly reduced moving parts and failure risks.
- **Improved uptime:** IoT-ready diagnosis is available to plug-and-play with most DCS systems.



PB A[1]

Explosion-proof, dry-screw vacuum booster pump

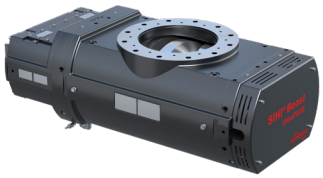
Model	Capacity	Typical Process Pressure	Final Pressure	Power Consumption Max. @ 400/460 VAC ~3	Power Consumption Final Pressure @ 400/460 VAC ~3
PB A 3500	2,300 to 5,900m³/h @ 0.5mbar (a) and 20°C (1,353 to 3472 CFM @ 0.38 Torr (a) and 68 °F) Depends on backing pump and speed.	0.1 to 1 mbar (a) (0.075 to 0.75 Torr)	0.1 to 0.001 mbar (a) (0.075 to 0.00075 Torr) Depends on backing pump and speed.	10/10 kW (< 13.4/13.4 bhp)	2.5 kW to 4.5 kW (3.4 to 6 bhp)
PB A 5000					
PB A 6500					
PB A 8000					



GB A[1]

Dry-screw vacuum booster pump

Model	Capacity	Typical Process Pressure	Final Pressure	Power Consumption Max. @ 400/460 VAC ~3	Power Consumption Final Pressure @ 400/460 VAC ~3
GB A 3500	2,300 to 5,900m³/h @ 0.5mbar (a) and 20°C (1,353 to 3472 CFM @ 0.38 Torr (a) and 68 °F) Depends on backing pump and speed.	0.1 to 1 mbar (a) (0.075 to 0.75 Torr)	0.1 to 0.001 mbar (a) (0.075 to 0.00075 Torr) Depends on backing pump and speed.	Continuous pumping 12.5/12.5 kW (< 16.7/16.7 bhp) Load lock pumping 15.5/15.5 kW (< 20.8/20.8 bhp)	2.5 kW to 4.5 kW (3.4 to 6 bhp)
GB A 5000					
GB A 6500					
GB A 8000					



GB U+[1]

High-performance, dry-screw vacuum booster pump

Model	Capacity	Typical Process Pressure	Final Pressure	Power Consumption Max. @ 400/460 VAC ~3	Power Consumption Final Pressure @ 400/460 VAC ~3
GB U+ A 3501	2,300 to 5,900m³/h @ 0.5mbar (a) and 20°C (1,353 to 3472 CFM @ 0.38 Torr (a) and 68 °F) Depends on backing pump and speed.	0.1 to 1 mbar (a) (0.075 to 0.75 Torr)	0.1 to 0.001 mbar (a) (0.075 to 0.00075 Torr) Depends on backing pump and speed.	21/21 kW (< 28.2/28.2 bhp)	5.5 kW to 7.5 kW (7.4 to 10.1 bhp)
GB U+ A 5001				25.1/25.1 kW (< 33.7/33.7 bhp)	
GB U+ A 6501				27,7/27,7 kW (< 37.2/37.2 bhp)	
GB U+ A 8001				27,7/27,7 kW (< 37.2/37.2 bhp)	

(1) Stand-alone booster pump to be combined with additional dry screw or liquid ring vacuum pump.



CB L

Dual-stage booster pump - SIHI Boost with liquid ring vacuum pump

Model	Capacity	Typical Process Pressure	Final Pressure	Power Consumption Max. @ 400/460 VAC ~3	Power Consumption Final Pressure @ 400/460 VAC ~3
CB-L 3500/162	2,300 m³/h @ 0.5 mbar (a)nd 20 °C (1,353 CFM @ 0.38 Torr (a)nd 68 °F)	1 mbar (a) (0.75 Torr)	< 0.05 mbar (a) (< 37.6 mTorr)	Continuous pumping < 17/18,5 kW (< 22.8/24.8 bhp) Load lock pumping < 20/21.5 kW (< 26.8/28.8 bhp)	< 5.0 kW (< 6.7 bhp)
CB-L 5000/162	3,500 m³/h @ 0.5 mbar (a)nd 20 °C (2,059 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.007 mbar (a) (< 5.26 mTorr)		< 5.5 kW (< 7.4 bhp)
CB-L 6500/162	4,600 m³/h @ 0.5 mbar (a)nd 20 °C (2,706 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.005 mbar (a) (< 3.76 mTorr)		< 6.5 kW (< 8.7 bhp)
CB-L 8000/162	5,500 m³/h @ 0.5 mbar (a)nd 20 °C (3,235 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.003 mbar (a) (< 2.26 mTorr)		< 7.5 kW (< 10.1 bhp)
CB-L 3500/252	2,400 m³/h @ 0.5 mbar (a)nd 20 °C (1,412 CFM @ 0.38 Torr (a)nd 68 °F)	1 mbar (a) (0.75 Torr)	< 0.05 mbar (a) (< 37.6 mTorr)	Continuous pumping < 18,5/20 kW (< 24.8/26.8 bhp) Load lock pumping < 21/23 kW (< 28.8/30.8 bhp)	< 5.5 kW (< 7.4 bhp)
CB-L 5000/252	3,500 m³/h @ 0.5 mbar (a)nd 20 °C (2,059 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.007 mbar (a) (< 5.26 mTorr)		< 6 kW (< 8.0 bhp)
CB-L 6500/252	4,700 m³/h @ 0.5 mbar (a)nd 20 °C (2,765 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.005 mbar (a) (< 3.76 mTorr)		< 7 kW (< 9.4 bhp)
CB-L 8000/252	5,600 m³/h @ 0.5 mbar (a)nd 20 °C (3,294 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.003 mbar (a) (< 2.26 mTorr)		< 8 kW (< 10.7 bhp)
CB-L 3500/327	2,400 m³/h @ 0.5 mbar (a)nd 20 °C (1,412 CFM @ 0.38 Torr (a)nd 68 °F)	1 mbar (a) (0.75 Torr)	< 0.05 mbar (a) (< 37.6 mTorr)	Continuous pumping < 20.5/23 kW (< 27.5/30.8 bhp) Load lock pumping < 23.5/26 kW (< 31.5/34.9 bhp)	< 7.5/9.5 kW (< 10.1/12.7 bhp)
CB-L 5000/327	3,600 m³/h @ 0.5 mbar (a)nd 20 °C (2,118 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.007 mbar (a) (< 5.26 mTorr)		< 8.5/10.5 kW (< 11.4/14.1 bhp)
CB-L 6500/327	4,700 m³/h @ 0.5 mbar (a)nd 20 °C (2,765 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.005 mbar (a) (< 3.76 mTorr)		< 9.5/11.5 kW (< 12.7/15.4 bhp)
CB-L 8000/327	5,700 m³/h @ 0.5 mbar (a)nd 20 °C (3,353 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.003 mbar (a) (< 2.26 mTorr)		< 10.5/12.5 kW (< 14.1/16.8 bhp)
CB-L 3500/427	2,400 m³/h @ 0.5 mbar (a)nd 20 °C (1,412 CFM @ 0.38 Torr (a)nd 68 °F)	1 mbar (a) (0.75 Torr)	< 0.05 mbar (a) (< 37.6 mTorr)	Continuous pumping < 24/28 kW (< 32.2/37.5 bhp) Load lock pumping < 27/31 kW (< 36.2/41.6 bhp)	< 10/14 kW (< 13.4/18.8 bhp)
CB-L 5000/427	3,600 m³/h @ 0.5 mbar (a)nd 20 °C (2,118 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.007 mbar (a) (< 5.26 mTorr)		< 11/15 kW (< 14.8/20.1 bhp)
CB-L 6500/427	4,800 m³/h @ 0.5 mbar (a)nd 20 °C (2,824 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.005 mbar (a) (< 3.76 mTorr)		< 12/16 kW (< 16.1/21.5 bhp)
CB-L 8000/427	5,700 m³/h @ 0.5 mbar (a)nd 20 °C (3,353 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.003 mbar (a) (< 2.26 mTorr)		< 13/17 kW (< 17.4/22.8 bhp)
CB-L 3500/502	2,400 m³/h @ 0.5 mbar (a)nd 20 °C (1,412 CFM @ 0.38 Torr (a)nd 68 °F)	1 mbar (a) (0.75 Torr)	< 0.05 mbar (a) (< 37.6 mTorr)	Continuous pumping < 28/28 kW (< 37.5/37.5 bhp) Load lock pumping < 31/31 kW (< 41.6/41.6 bhp)	< 14/14 kW (< 18.8/18.8 bhp)
CB-L 5000/502	3,600 m³/h @ 0.5 mbar (a)nd 20 °C (2,118 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.007 mbar (a) (< 5.26 mTorr)		< 15/15 kW (< 20.1/20.1 bhp)
CB-L 6500/502	4,800 m³/h @ 0.5 mbar (a)nd 20 °C (2,824 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.005 mbar (a) (< 3.76 mTorr)		< 16/16 kW (< 21.5/21.5 bhp)
CB-L 8000/502	5,700 m³/h @ 0.5 mbar (a)nd 20 °C (3,353 CFM @ 0.38 Torr (a)nd 68 °F)		< 0.003 mbar (a) (< 2.26 mTorr)		< 17/17 kW (< 22.8/22.8 bhp)

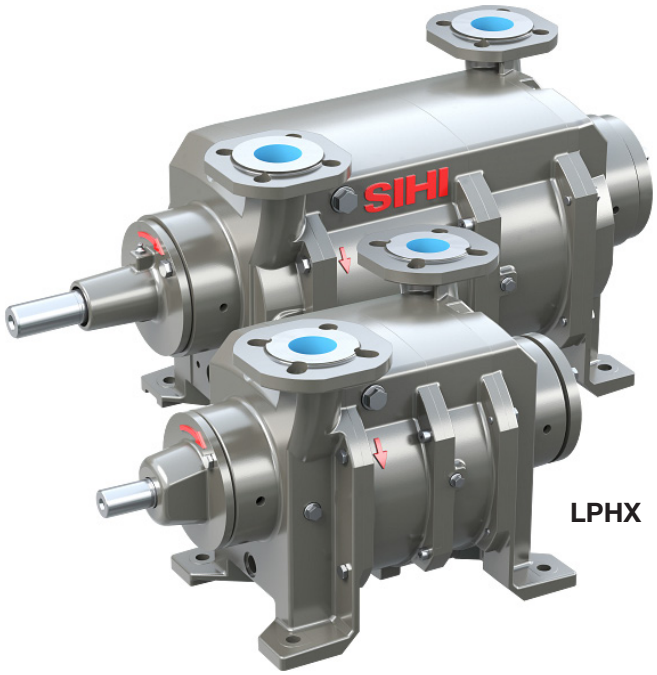
Liquid ring pumps and compressors

Flowserve's liquid ring pumps, a market-leading design, offer unmatched reliability and performance. With a diverse range of sizes and configurations, they provide tailored solutions for a wide array of industrial applications, ensuring optimal efficiency and versatility in demanding environments.

Operating data is valid for process medium = dry air @ 20°C and service liquid = water @ 15°C

Liquid ring vacuum pump working principle

In a liquid ring vacuum pump, an eccentrically mounted impeller rotates inside a cylindrical casing partially filled with service liquid. Centrifugal force forms a liquid ring along the casing wall. Due to the eccentric position, the spaces between the impeller blades change in volume. As these cavities pass the suction port, their volume increases, creating a vacuum that draws gas into the pump. Continued rotation reduces the cavity volume, compressing the gas, which is discharged together with some service liquid; the liquid is separated and recirculated. During compression, the service liquid heats up and must be cooled to prevent vapor pressure from reducing pump efficiency.



LPHX

Operational benefits

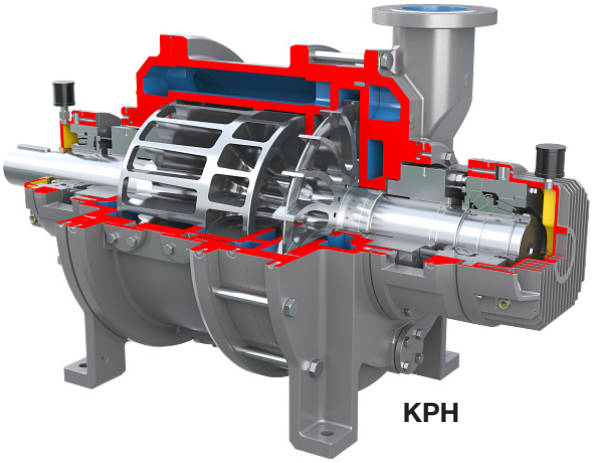
- **ATEX Category 1 without flame arresters:** Providing a unique way of pumping Zone 0 flammable processes without the flame-arrester costs and blockages.
- **Versatile process capability:** Endless liquid ring choices provide an effective in-line condenser that's tolerant to extremely harsh process conditions.
- **Highly robust:** Arguably, this is the machine-enduring vacuum pump available in the market. Wide clearances and very heavy construction give an incredibly long product life with limited maintenance requirements.
- **Corrosion and erosion security:** Multiple material options enable highly corrosive and erosive process media to be pumped.

Liquid ring compressor working principle

Liquid ring vacuum compressors are a proven technology widely used across process industries, particularly for gas and vapor recovery. They are well-suited for operations under severe conditions where safety is critical. Demand for this equipment is expected to grow at nearly 5% per year through 2029, driven by reliable refinery applications such as flare gas recovery. Liquid ring compressors are also used in specialized processes, including chlorine and hydrogen compression, as well as the production of vinyl chloride monomers, biodiesel, ethanol and other transesterification products. A wide range of service liquids can be used to form a seal, making this technology ideal where process contamination must be avoided. Water is the most common service liquid and, combined with a simple design featuring only one moving part, enables efficient operation, long service life, reduced downtime and low maintenance costs. Although the technology has been in use for over 100 years, next-generation liquid ring compressors comply with current and anticipated API 681 standards for the chemical, gas and petroleum industries.

Operational benefits

- **Standards compliant efficiency:** API 681-compliant design with high isothermal efficiency for safe, energy-efficient operation.
- **Flexible installation:** Left or right hand discharge options simplify plant integration.
- **Efficient service liquid control:** Adjustable service liquid consumption optimizes performance across operating conditions.
- **Compact, robust design:** Small footprint with integrated rotor support and between bearings construction for long service life.
- **Low-vibration operation:** Smooth running reduces noise, wear and foundational requirements.

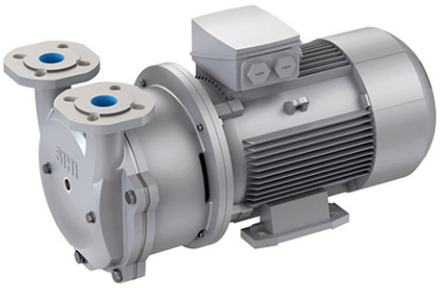


KPH



KPH 85229

Flowserve SIHI KPH 85229 liquid ring compressors deliver reliable compression of a wide range of gases and vapors in services where safety, reliability and demanding process conditions are essential. Engineered on proven liquid ring technology, they perform in severe-duty applications and can operate with a variety of service liquids, making them well-suited for processes where contamination cannot be tolerated. API 681 compliance further strengthens their value for critical oil and gas, petrochemical and chemical processing applications by demonstrating alignment with a recognized industry standard.



LEMD

Single-stage, closed-coupled liquid ring vacuum pump

Model	Nominal Capacity m^3/hr (cfm)	Total Final Pressure mbar (Torr)	Shaft Power kW (hp)
LEMD 27	34 (21)	33 (25)	1.21 (1.63)
LEMD 52	58 (35)	33 (25)	2.24 (3.01)
LEMD 92	75 (45)	33 (25)	3.51 (4.71)
LEMD 127	102 (61)	33 (25)	4.4 (5.9)
LEMD 162	175 (104)	33 (25)	5.6 (7.51)
LEMD 252	235 (139)	33 (25)	7.5 (10.06)
LEMD 327	340 (201)	33 (25)	11.6 (15.55)
LEMD 427	458 (270)	33 (25)	16 (21.45)



LEH/LEHR/KEHR

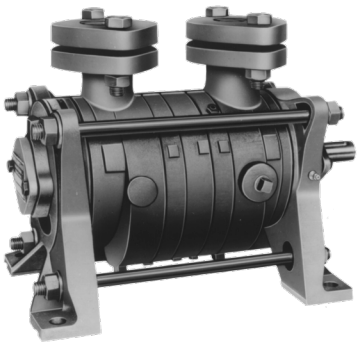
Single-stage, liquid ring vacuum pump

Model	Nominal Capacity m^3/hr (cfm)	Total Final Pressure mbar (Torr)	Shaft Power kW (hp)
LEHR 360*	374 (220)	33 (25)	10.97 (14.7)
LEHR 460*	519 (305)	33 (25)	14.78 (19.8)
LEHR 560*	621 (365)	33 (25)	17.98 (24.1)
LEHR 760*	734 (432)	33 (25)	21.94 (29.4)
LEHR 860*	935 (550)	33 (25)	29.4 (39.4)
LEHR 3400*	3,533 (2,079)	33 (25)	91.76 (123)
LEH 350	350 (207)	33 (25)	10 (13.41)
LEH 450	515 (304)	33 (25)	15.5 (20.78)
LEH 600	660 (389)	33 (25)	20 (26.81)
LEH 800	840 (495)	33 (25)	26 (34.86)
LEH 900	950 (560)	33 (25)	30 (40.22)
LEH 1200	1,460 (860)	33 (25)	41.1 (55.1)
LEH 1500	1,760 (1,036)	33 (25)	51.2 (68.64)
LEH 1800	1,990 (1,172)	33 (25)	60.3 (80.84)
LEH 2200	2,550 (1,501)	33 (25)	68 (91.16)
LEH 3000	3,450 (2,031)	33 (25)	94 (126.01)
LEH 3600	4,100 (2,414)	33 (25)	107 (143.44)
LEH 4400	4,950 (2,914)	33 (25)	136 (182.31)

Small liquid ring compressor

Model	Nominal Capacity m^3/hr (cfm)	Total Final Pressure bar (psig)	Shaft Power kW (hp)
KEHR 360*	335 (197)	2.4 (35)	20.89 (28)
KEHR 460*	424 (249)	2.4 (35)	26.49 (35.5)
KEHR 560*	549 (323)	2.4 (35)	30.59 (41)
KEHR 760*	614 (361)	2.4 (35)	39.92 (53.5)
KEHR 860*	840 (494)	2.4 (35)	60.06 (80.5)

*Models are available in North America only.



LOH

Small liquid ring vacuum pump

Type	Model	Nominal Capacity m^3/hr (cfm)	Total Final Pressure mbar (Torr)	Shaft Power kW (hp)
Single stage	LOH 20103	25 (15)	150 (112)	1.1 (1.48)
	LOH 20107	58 (35)	150 (112)	1.8 (2.42)
Double stage	LOH 05501	7 (4)	80 (60)	0.6 (0.81)
	LOH 25003	26 (16)	40 (30)	1.3 (1.75)
	LOH 25007	53 (32)	40 (30)	2 (2.69)
	LOH 25309	60 (36)	33 (25)	2.3 (3.09)

Small liquid ring compressor

Type	Model	Nominal Capacity m^3/hr (cfm)	Total Final Pressure bar (psig)	Shaft Power kW (hp)
Single stage	LOH 20103	23 (14)	1 (14.5)	1.5 (2.02)
	LOH 20107	51 (31)	1 (14.5)	2.6 (3.49)
Double stage	LOH 05501	5 (3)	2 (29)	1.1 (1.48)
	LOH 25003	22 (13)	2 (29)	2.4 (3.22)
	LOH 25007	48 (29)	2 (29)	4.5 (6.04)
	LOH 25309	58 (35)	1.2 (17)	4.4 (5.9)



LPHX

Medium size liquid ring vacuum pump

Type	Model	Nominal Capacity m^3/hr (cfm)	Total Final Pressure mbar (Torr)	Shaft Power kW (hp)
Single stage	LPHX 40106	95 (56)	150 (113)	2.6 (3.49)
	LPHX 40411	173 (102)	150 (113)	4.2 (5.64)
	LPHX 40516	269 (159)	150 (113)	6.2 (8.32)
	LPHX 50523	520 (307)	120 (90)	15.3 (20.51)
	LPHX 60527	781 (460)	120 (90)	24 (32.18)
Double stage	LPHX 45008	117 (69)	33 (25)	4.2 (5.64)
	LPHX 45311	160 (95)	33 (25)	5.5 (7.38)
	LPHX 45316	215 (127)	33 (25)	7 (9.39)
	LPHX 55312	303 (179)	33 (25)	11.1 (14.88)
	LPHX 55316	378 (223)	33 (25)	13.9 (18.64)
	LPHX 55320	474 (279)	33 (25)	16.2 (21.72)
	LPHX 65320	538 (317)	33 (25)	21.7 (29.09)
	LPHX 65327	732 (431)	33 (25)	25.9 (34.72)

Medium size liquid ring compressors

Type	Model	Nominal Capacity m^3/hr (cfm)	Total Final Pressure bar (psig)	Shaft Power kW (hp)
Single stage	LPHX 40106	90 (53)	0.8 (12)	4 (5.37)
	LPHX 40411	156 (92)	0.8 (12)	6.2 (8.32)
	LPHX 50523	460 (271)	1.5 (22)	28.8 (38.61)
	LPHX 60527	610 (359)	1.2 (17)	30 (40)
Double stage	LPHX 45008	105 (62)	1.5 (22)	7.7 (10.33)
	LPHX 45316	165 (98)	1.2 (17)	12.4 (16.63)



LPHR



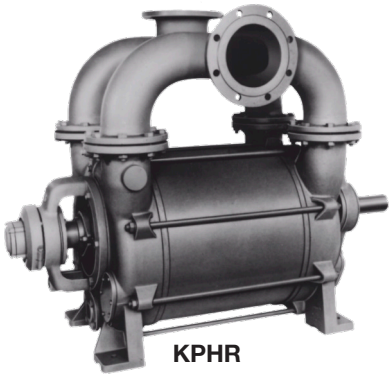
LPH

LPH/LPHR

Large size liquid ring vacuum pump

Type	Model	Nominal Capacity m^3/hr (cfm)	Total Final Pressure mbar (Torr)	Shaft Power kW (hp)
Single stage	LPHR 20103*	26 (15)	153 (115)	1.12 (1.5)
	LPHR 20105*	51 (30)	153 (115)	1.5 (2)
	LPHR 20107*	58 (34)	153 (115)	1.87 (2.5)
	LPHR 3404*	68 (40)	199 (150)	1.87 (2.5)
	LPHR 3408*	128 (75)	199 (150)	3.36 (4.5)
	LPHR 40412*	201 (118)	133 (100)	4.93 (6.6)
	LPHR 40517*	284 (167)	133 (100)	6.42 (8.6)
	LPHR 50518*	422 (248)	119 (89)	10.45 (14)
	LPHR 50523*	561 (330)	119 (89)	13.13 (17.6)
	LPHR 60520*	621 (365)	119 (89)	17.69 (23.7)
	LPHR 60527*	799 (470)	119 (89)	22.38 (30)
	LPHR 70123*	1,020 (600)	119 (89)	28.73 (38.5)
	LPHR 70530*	1,402 (825)	119 (89)	37.68 (50.5)
	LPHR 70540*	1,903 (1,120)	119 (89)	50.73 (68)
	LPHR 80557*	3,619 (2,130)	119 (89)	79.08 (106)
	LPH 70123	1,020 (601)	120 (90)	28 (37.54)
	LPH 70530	1,400 (825)	120 (90)	38 (50.94)
	LPH 70540	1,900 (1,119)	120 (90)	50 (67.03)
	LPH 80540	2,600 (1,531)	120 (90)	64 (85.8)
	LPH 80553	3,300 (1,943)	120 (90)	83 (111.27)
	LPH 90554	4,200 (2,473)	120 (90)	109 (146.12)
	LPH 90567	5,050 (2,973)	120 (90)	132 (176.95)
	LPH 10054	7,550 (4,444)	120 (90)	195 (261.4)
	LPH 11055	10,850 (6,387)	120 (90)	271 (363.28)
Double stage	LPH 25003*	26 (15)	41 (31)	1.35 (1.8)
	LPH 25007*	53 (31)	41 (31)	1.94 (2.6)
	LPHR 3704*	72 (42)	33 (25)	2.84 (3.8)
	LPHR 3708*	128 (75)	33 (25)	4.03 (5.4)
	LPHR 45312*	191 (112)	33 (25)	5.3 (7.1)
	LPHR 45317*	264 (155)	33 (25)	6.87 (9.2)
	LPHR 55312*	339 (199)	33 (25)	11.49 (15.4)
	LPHR 55316*	422 (248)	33 (25)	12.54 (16.8)
	LPHR 55320*	536 (315)	33 (25)	14.92 (20)
	LPHR 65320*	587 (345)	33 (25)	21.64 (29)
	LPHR 65327*	697 (410)	33 (25)	26.11 (35)
	LPHR 75320*	969 (570)	33 (25)	35.81 (48)
	LPHR 75330*	1,411 (830)	33 (25)	44.76 (60)
	LPHR 75340*	1,691 (995)	33 (25)	56.7 (76)
	LPH 75320	1,000 (589)	33 (25)	37 (49.6)
	LPH 75330	1,400 (825)	33 (25)	46 (61.67)
	LPH 75340	1,700 (1,001)	33 (25)	57 (76.41)
	LPH 85340	2,500 (1,472)	33 (25)	86 (115.29)
	LPH 85353	3,100 (1,825)	33 (25)	102 (136.73)
	LPH 95354	4,200 (2,473)	33 (25)	144 (193.03)
	LPH 95367	4,850 (2,855)	33 (25)	163 (218.5)
	LPH 10534	7,400 (4,356)	33 (25)	245 (328.42)
	LPH 11535	10,350 (6,093)	33 (25)	306 (410.19)

* Models are available in North America only.



KPHR



KPH

KPH/KPHR

Large size liquid ring compressors

Type	Model	Nominal Capacity m^3/hr (cfm)	Total Final Pressure bar (psig)	Shaft Power kW (hp)
Single stage	KPHR 20103*	23 (14)	1 (15)	1.65 (2.2)
	KPHR 20107*	51 (30)	1 (15)	2.77 (3.7)
	KPHR 3404*	62 (36)	1 (15)	3.44 (4.6)
	KPHR 3408*	113 (66)	1 (15)	5.53 (7.4)
	KPHR 40412*	196 (115)	1.4 (20)	8.36 (11.2)
	KPHR 40517*	264 (155)	1.5 (22)	11.87 (15.9)
	KPHR 50518*	420 (247)	1.5 (22)	20.15 (27)
	KPHR 50523*	510 (300)	1.5 (22)	25.37 (34)
	KPHR 60520*	595 (350)	1.5 (22)	32.08 (43)
	KPHR 60527*	782 (460)	1.5 (22)	43.27 (58)
	KPHR 70123*	1,003 (590)	1.5 (22)	58.19 (78)
	KPHR 70530*	1,334 (785)	1.5 (22)	74.6 (100)
	KPHR 70540*	1,750 (1,030)	1.5 (22)	93.25 (125)
	KPHR 80557*	3,378 (1,988)	1.7 (25)	156.66 (210)
	KPH 80540	2,850 (1,678)	1.5 (22)	153 (209)
	KPH 80553	3,650 (2,149)	1.5 (22)	194 (264)
	KPH 90554	4,450 (2,620)	1.5 (22)	218 (297)
	KPH 90567	5,300 (3,120)	1.5 (22)	280 (381)
	KPH 10054	7,200 (4,238)	1.5 (22)	387 (527)
	KPH 11055	10,500 (6,181)	1.5 (22)	540 (735)
Double stage	KPHR 25003*	23 (13)	2.1 (30)	2.54 (3.4)
	KPHR 25007*	48 (28)	2.1 (30)	4.7 (6.3)
	KPHR 3704*	65 (38)	1.4 (20)	5 (6.7)
	KPHR 55204*	74 (43)	6.9 (100)	14.55 (19.5)
	KPHR 55206*	118 (69)	6.9 (100)	22.38 (30)
	KPHR 55209*	174 (102)	6.9 (100)	32.08 (43)
	KPHR 55210*	201 (118)	6.9 (100)	36.93 (49.5)
	KPH 55206	100 (59)	7 (102)	22 (29.5)
	KPH 55209	172 (102)	7 (102)	32 (42.9)
	KPH 65112	370 (218)	3.5 (51)	42 (56.31)
	KPH 65118	550 (324)	3.5 (51)	58 (77.75)
	KPH 65127	840 (495)	3.5 (51)	81 (108.58)
	KPH 65212	440 (259)	7 (102)	91 (121.99)
	KPH 65218	660 (389)	7 (102)	133 (178.29)
	KPH 85220	1,115 (657)	7 (102)	225 (301.61)
	KPH 85227	1,450 (854)	7 (102)	282 (378.02)
	KPH 85229	2,150 (1,266)	10 (146)	428 (573.73)
	KPH 92552	3,731 (2,197)	6 (88)	701.2 (939.95)
	KPH 95652	3,730 (2,196)	12 (175)	961 (1,288.21)

*Models are available in North America only.

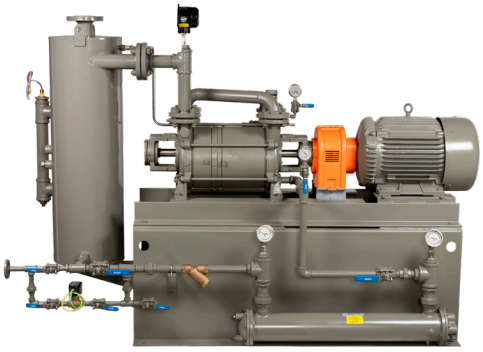
Pre-engineered liquid ring vacuum systems

Standardized systems

Flowserve SIHI modular systems are pre-engineered, liquid ring vacuum systems that can be easily customized to your specific needs. This optimized solution ensures fast turnaround on quotes and deliveries. The system options range from fresh liquid/combine to closed loop operations for new or expanding installations, enabling you to get your process running quickly and economically.

Custom engineering systems are also available.

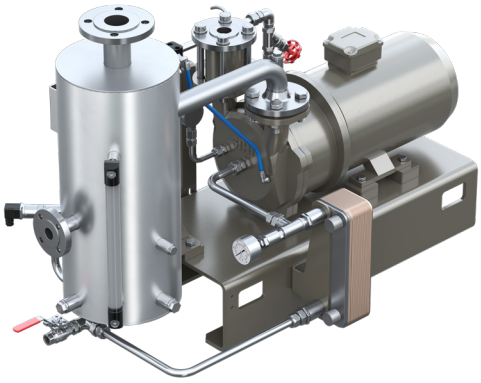
Modular TRS



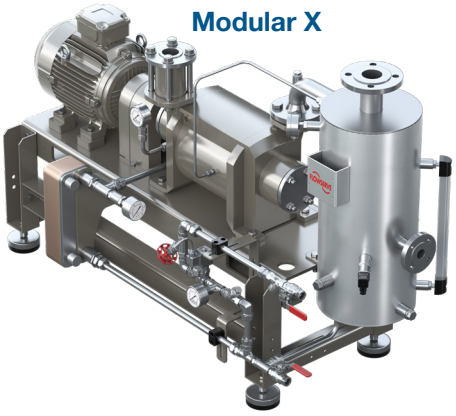
Modular XBAR



Modular D



Modular X



Model	Nominal Capacity m^3/hr (cfm)	Total Final Pressure mbar (Torr)	Shaft Power kW (hp)
TRS*	680 (400)	33 (25)	30 (40)
XBAR*			
Modular D	450 (265)	33 (25)	16.5 (22.5)
Modular X	700 (412)	33 (25)	18.5 (25)

* Models are available in North America only.

RedRaven IoT and QRC network

A revolution in flow motion IoT

Flow control equipment is critical to plant reliability. RedRaven is Flowserve's proactive reliability partnership, delivering insights, expert reviews and practical recommendations to prevent failures. Rather than asking teams to watch dashboards or interpret raw signals, Flowserve specialists identify issues early and guide next steps to protect uptime and reduce risk.

RedRaven combines OEM sensors, secure connectivity and analytics with an integrated monitoring service. Certified vibration analysts in the Flowserve Monitoring Center provide 24/7 oversights, validate alerts, diagnose likely causes, and recommend prescriptive actions. OEM analytics detect 15+ failure modes (e.g., cavitation, imbalance, bearing wear) and convert data into clear priorities, improving maintenance decisions, extending equipment life, and reducing unplanned downtime and costly failures.

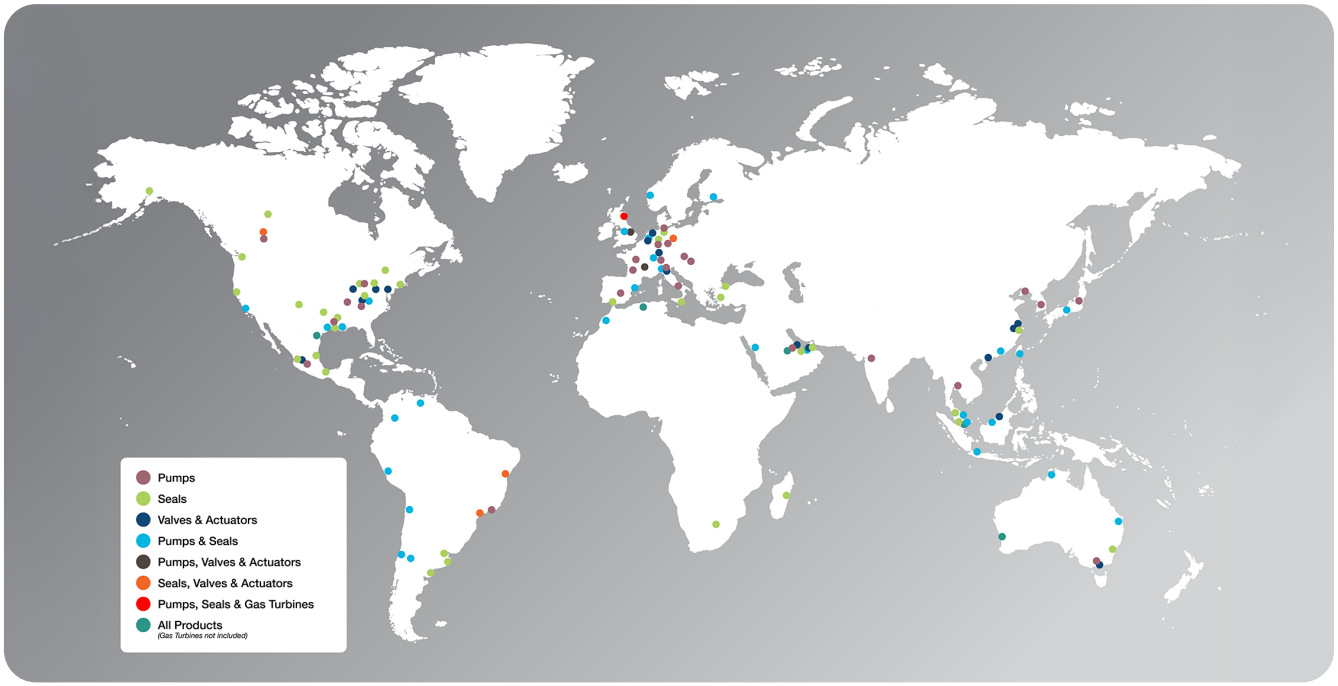
By combining Flowserve's innovative IoT products, analytics technology and expert service, you can:

- **Predict equipment behaviors:** Detect issues early and act quickly using trend analysis to reduce downtime.
- **Refocus maintenance efforts:** Prioritize critical assets, eliminate unnecessary inspections, and improve team efficiency.
- **Enhance equipment efficiency:** Keep assets operating in optimal conditions with OEM expertise and real-time insights.
- **Reduce costs:** Lower total cost of ownership by preventing failures and minimizing production risks.
- **Improve safety:** Reduce manual inspections and technician exposure while enabling informed, timely actions.

REDRAVEN™

Global expertise Flowserve's Quick Response Centers (QRCs) are positioned worldwide to deliver rapid support and services.

Local solutions With over 150 QRCs around the globe, our extensive engineering footprint enables us to solve the toughest challenges and provide fast, reliable service through optimally located centers.



Flowserve Corporation
5215 North O'Connor Blvd.
Suite 700
Irving, Texas 75039-5421 USA

PUCAT002098-NAM-04 (EN/A4) May 2026

Flowserve Corporation has established industry leadership in the design and manufacture of its products. When properly selected, this Flowserve product is designed to perform its intended function safely during its useful life. However, the purchaser or user of Flowserve products should be aware that Flowserve products might be used in numerous applications under a wide variety of industrial service conditions. Although Flowserve can provide general guidelines, it cannot provide specific data and warnings for all possible applications. The purchaser/user must therefore assume the ultimate responsibility for the proper sizing and selection, installation, operation, and maintenance of Flowserve products. The purchaser/user should read and understand the Installation Instructions included with the product, and train its employees and contractors in the safe use of Flowserve products in connection with the specific application.

While the information and specifications contained in this literature are believed to be accurate, they are supplied for informative purposes only and should not be considered certified or as a guarantee of satisfactory results by reliance thereon. Nothing contained herein is to be construed as a warranty or guarantee, express or implied, regarding any matter with respect to this product. Because Flowserve is continually improving and upgrading its product design, the specifications, dimensions and information contained herein are subject to change without notice. Should any question arise concerning these provisions, the purchaser/user should contact Flowserve Corporation at any one of its worldwide operations or offices.

©2026 Flowserve Corporation. All rights reserved. This document contains registered and unregistered trademarks of Flowserve Corporation. Other company, product, or service names may be trademarks or service marks of their respective companies.