

GAS DIAPHRAGM  
LIQUID DIAPHRAGM  
PERISTALTIC  
WOB-L® PISTON PUMPS

**THOMAS**  
An Ingersoll Rand Business

# GLOBAL SOLUTIONS

COMPRESSORS, VACUUM & LIQUID PUMPS



**YOUR TRUSTED  
GLOBAL PARTNER  
FOR OEM LIQUID AND  
GAS COMPRESSORS  
AND PUMPS...**

Using strategically positioned facilities in **North America, Europe** and **Asia**, Thomas manufactures a wide range of pressure, vacuum and liquid technologies including WOB-L® piston, articulated piston, diaphragm, rotary vane, linear and peristaltic pumps.

● OFFICES    ● PRODUCTION CENTERS

## OFFICES

## PRODUCTION CENTERS





# GAS DIAPHRAGM PUMPS

Dry running gas diaphragm pumps work by reducing volume using a flexible diaphragm that is driven by a crank. Suitable for use as a vacuum pump or compressor, they are known for a low sound level, high-efficiency and gas tightness.

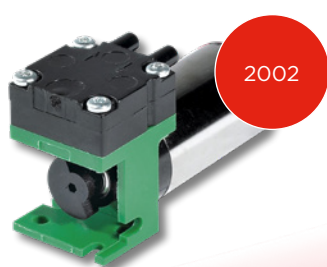
SERIES	1014	2002	3014	1410	1420	1610	1620
<b>FLOW</b>	530 ml/min	800 ml/min	1.0 l/min	5.5 l/min	11.0 l/min	8.0 l/min	16.5 l/min
<b>PRESSURE/ VACUUM</b>	580 mbar/ 47%	600 mbar/ 52%	840 mbar/ 65%	1.9 bar/ 75%	2.7 bar/ 90%	2.0 bar/ 90%	1.8 bar/ 87%
<b>MOTOR</b>	3 V DC	3.5 V LC DC 3.5/4.5/6 V DC 6 V BLDC	3/4.5/12 V LC DC 4.5/6/12 V DC	12/24 V LC DC 12/24 V DC 12/24 V BLDC HP	12/24 V LC DC 12/24 V DC 12/24 V BLDC P 12/24 V BLDC HP	12/24 V DC	12/24 V DC

## FEATURES

- Oil-less
- Low sound & vibration
- Compact & lightweight design
- Reliable, long lifetime

## TYPICAL APPLICATIONS

- Medical Devices
- Laboratory Workstations and Analyzers
- Gas Detectors and Samplers





# LIQUID DIAPHRAGM PUMPS

Self-priming and dry running, liquid diaphragm pumps work by actuating a flexible diaphragm that is driven by a crank. Ideal for applications requiring continuous operation, they provide long term reliability with superior resistance to chemical or mechanical stress.

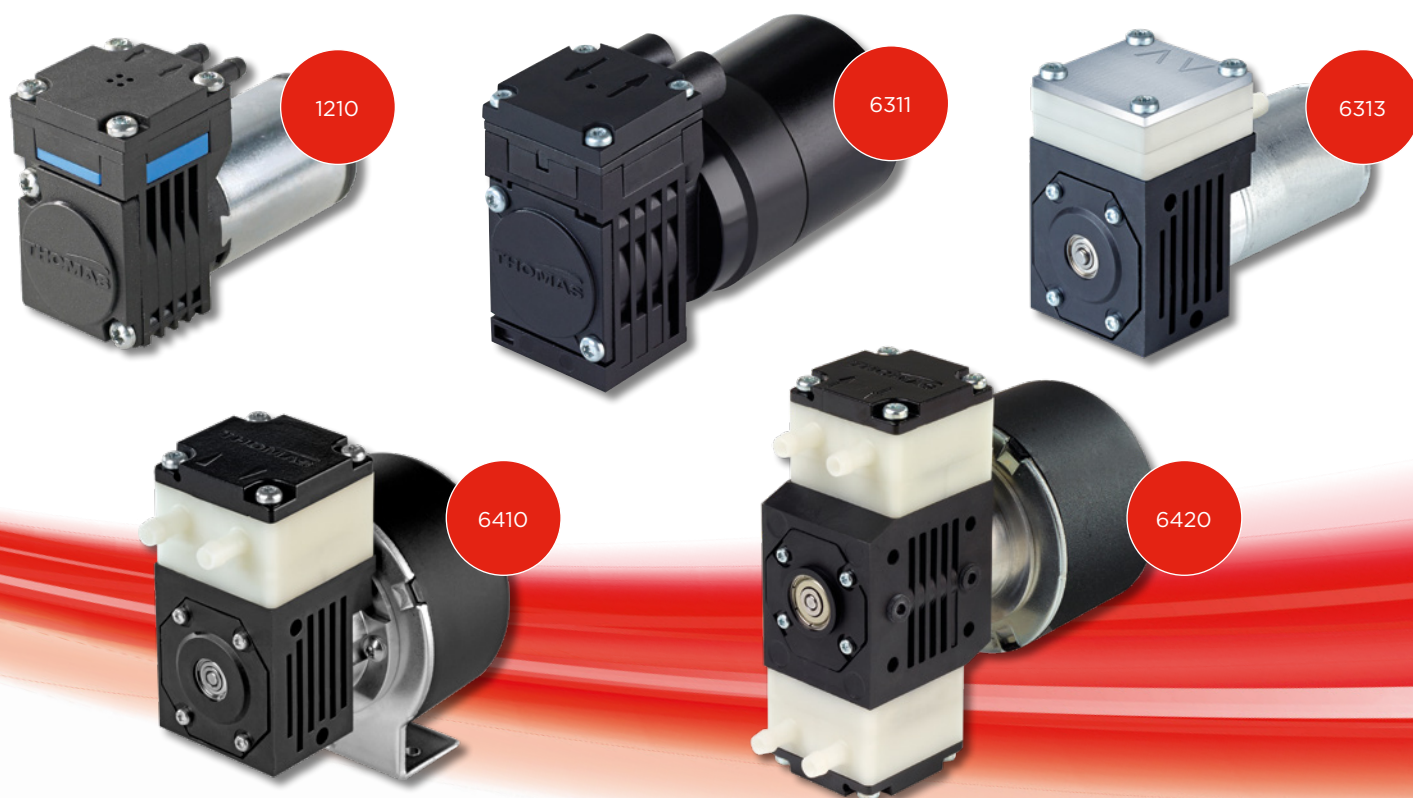
SERIES	1210	6311	6313	6410	6420
<b>FLOW</b>	Up to 180 ml/min	Up to 190 ml/min	Up to 350 ml/min	Up to 800 ml/min	Up to 1800 ml/min
<b>PRESSURE HEIGHT/ SUCTION HEIGHT</b>	Up to 10 m H <sub>2</sub> O/ Up to 6 m H <sub>2</sub> O	Up to 40 m H <sub>2</sub> O/ Up to 3 m H <sub>2</sub> O	Up to 10 m H <sub>2</sub> O/ Up to 7 m H <sub>2</sub> O	Up to 10 m H <sub>2</sub> O/ Up to 3 m H <sub>2</sub> O	Up to 10 m H <sub>2</sub> O/ Up to 3 m H <sub>2</sub> O
<b>MOTOR</b>	DC	BLDC	BLDC	BLDC, DC	BLDC

## FEATURES

- Smooth transfer of liquids
- High efficiency
- Linear controllability of flow
- Reliable, long lifetime even under high pressure
- Flexible design for customized solutions

## TYPICAL APPLICATIONS

- In-Vitro Diagnostics (IVD)
- Continuous Inkjet (CIJ)
- Drop-on-Demand Inkjet (DOD)
- Fuel Cells
- Condensate removal





# PERISTALTIC PUMPS

Using positive displacement, peristaltic pumps force fluid through a tube by a number of rollers that rotate, squeezing a flexible tube against a pump housing. As the roller moves past a point in the tubing, it expands to allow more fluid to enter. During operation, there is at least one of the rollers in contact with the tubing at all times, eliminating the need for valves to prevent backflow.

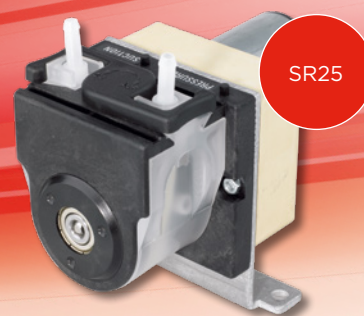
SERIES	SR18	ETL200	ETL500	SR10/30	SR10/50	SR25
<b>FLOW</b>	Up to 50 ml/min	Up to 60 ml/min	From smaller than 1 ml/min up to 3 l/min	Up to 80 ml/min	Up to 220 ml/min	Up to 746 ml/min
<b>PRESSURE HEIGHT/SUCTION HEIGHT</b>	Up to 10 m H <sub>2</sub> O/ Up to 8 m H <sub>2</sub> O	Up to 20 m H <sub>2</sub> O/ Up to 9 m H <sub>2</sub> O	Up to 3 bar	Up to 8 m H <sub>2</sub> O/ Up to 8 m H <sub>2</sub> O	Up to 8 m H <sub>2</sub> O/ Up to 8 m H <sub>2</sub> O	Up to 10 m H <sub>2</sub> O/ Up to 8 m H <sub>2</sub> O
<b>MOTOR</b>	AC	Stepper	Stepper	DC, Stepper	DC	DC, Stepper, AC

## FEATURES

- Compact design
- Self-priming
- Safe to run dry
- Maintenance free
- Different tubing materials

## TYPICAL APPLICATIONS

- Laboratory and Analysis Technology
- Hygiene, Disinfection
- Industrial Dishwashing
- Transfer of media in bioprocessing
- Irrigation in medical devices







# WOB-L<sup>®</sup> PISTON PUMPS

WOB-L<sup>®</sup> piston pumps rely on a fixed, crank-driven piston within a cylinder that creates a distinctive ‘wobble’ as the crankshaft rotates. WOB-L<sup>®</sup> pumps provide a wide range of performance, including higher pressure, deeper vacuum, and higher flow than other technologies such as diaphragm; in addition this proven technology provides consistent performance with fewer mechanical parts in a smaller pump unit.

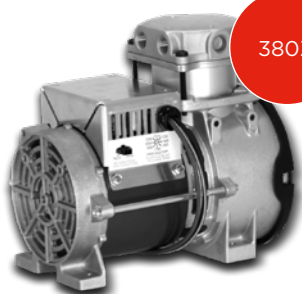
SERIES	380Z	2110Z	2250Z	2380Z	2450	2660
<b>FLOW</b>	Up to 1.55 cfm (43.9 l/min)	Up to 0.50 cfm (14.1 l/min)	Up to 1.15/1.92 cfm (32.6/54.4 l/min)	Up to 3.14 cfm (88.9 l/min)	Up to 3.0 cfm (85.0 l/min)	Up to 4.6 cfm (130.3 l/min)
<b>PRESSURE/ VACUUM</b>	Up to 100 psi (6.9 bar)	Up to 30 psi (2.1 bar)	Up to 30 psi (2.1 bar)/ 25.9"Hg (870 mbar)	Up to 100 psi (6.9 bar)	Up to 30 psi (2.1 bar)	Up to 45 psi (3.1 bar) Up to 27.3"Hg (920 mbar)
<b>MOTOR</b>	24 Volt BLDC or 48 Volt BLDC	12 Volt BLDC	24 Volt BLDC	24 Volt BLDC or 48 Volt BLDC	115/60/1 P.S.C. 230/50/1 P.S.C.	115/60/1 P.S.C. 230/50/60/1 P.S.C. 100/50/60/1 P.S.C.

## FEATURES

- High performance & durability
- Oil-less operation
- Long life reliability
- Low sound/vibration
- Easily/economically serviced

## TYPICAL APPLICATIONS

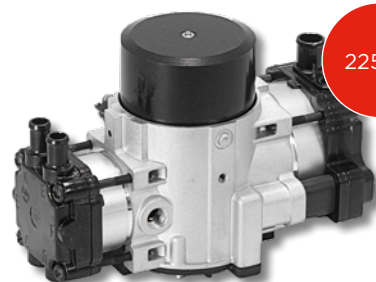
- O<sub>2</sub> Concentrators
- Blood & Laboratory Analyzers
- Aspirators/Respirators/Ventilators
- Dental & Optical Equipment
- Respiratory Therapy Equipment



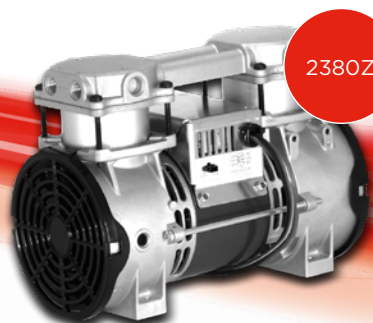
380Z



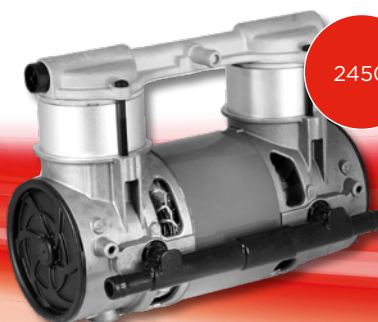
2110Z



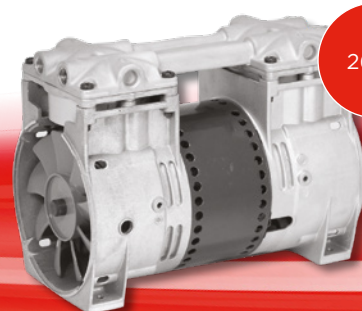
2250Z



2380Z



2450



2660

# STRONGER AS ONE



[www.gd-thomas.com](http://www.gd-thomas.com)

Thomas has over 60 years' experience as a pioneering manufacturer of systems, compressors, vacuum, liquid and OEM pumps in the medical, laboratory, environmental and industrial sector. With a wide range of pressure, vacuum and liquid technologies, Thomas offers the broadest oil-less product range in the industry. With this vast product offering, we design ideal, customized solutions which meet our customers' precise needs.



[www.welchvacuum.com](http://www.welchvacuum.com)

Welch is a manufacturer of an innovative range of vacuum pumps, modular systems and network solutions for use in laboratory and industry. Welch also manufactures standard and custom flanged components, chambers and valves to provide the best vacuum environment for all processes. The range of service maintenance and training provided is extensive and, with subsidiary companies, agents and service partners in more than 40 countries, our reach is worldwide.



[www.tricontinent.com](http://www.tricontinent.com)

TriContinent is a leading manufacturer of precision OEM syringe pumps and liquid handling robots. We are a preferred supplier to the world's leading medical and biotechnology diagnostic and analytics equipment manufacturers. We are well-known for continuous innovative pumps which offer a unique combination of low flow and low pulsation.



[www.zinsser-analytic.com](http://www.zinsser-analytic.com)

Zinsser Analytic is a leading company in customized automation. With more than 45 years of experience we have unique capabilities in developing automated fluid and powder handling systems for the biochemical, pharmaceutical and diagnostic research markets. Zinsser Analytic's consumables product portfolio includes scintillation cocktails and high quality polyethylene vials.



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ILS Innovative Labor Systeme is a leading manufacturer of glass syringes and a global supplier to the world's leading laboratory equipment manufacturers, laboratories and laboratory consumables distributors. Today we manufacture more than 1000 types and variations of microsyringes. Our syringes range from 0,5 QL to 100 mL for precision sampling and dosage in chromatography, spectroscopy, preparation of standard solutions, manual application and for use in autosamplers, diluters, dispensers and other liquid handling instruments.

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