Elmo Rietschle

CLAW VACUUM PUMPS & COMPRESSORS

C-Series

Product Overview

Our dry running C-Series generates contact free vacuum or compressed air efficiently and economically due to the principle of internal compression. This leads to considerable energy savings compared to the traditional rotary lobe design without internal compression.

Wide Spectrum of Performance

With the C-Series claw vacuum pumps and compressors, the following ultimate pressures are attainable during continuous operation; vacuum as low as 29.03 in. HgV. Pressure up to 32 psig.

Innovative Claw Technology

The claws of the C-Series feature an optimized, high precision shape, rolling together without contact, synchronised by a precision gear set. The compression is contact-less and oil free. Special seals separate the compression chamber and gearbox. The claw rotors control the transportation of the compressed gas by opening and closing the inlet and outlet channels. Thus no sealing fluid within the compression chamber is needed.

The overhung rotor design in all sizes up to model 301 is another outstanding feature of this technology. Gas tight versions with reduced leakage rates are available. We hold the patent on the newly designed triple lobe rotors with intermediate air compression; for the first time, vacuum and pressure are being created in one stage, simultaneously.

Technical Specifications

Operating Principle

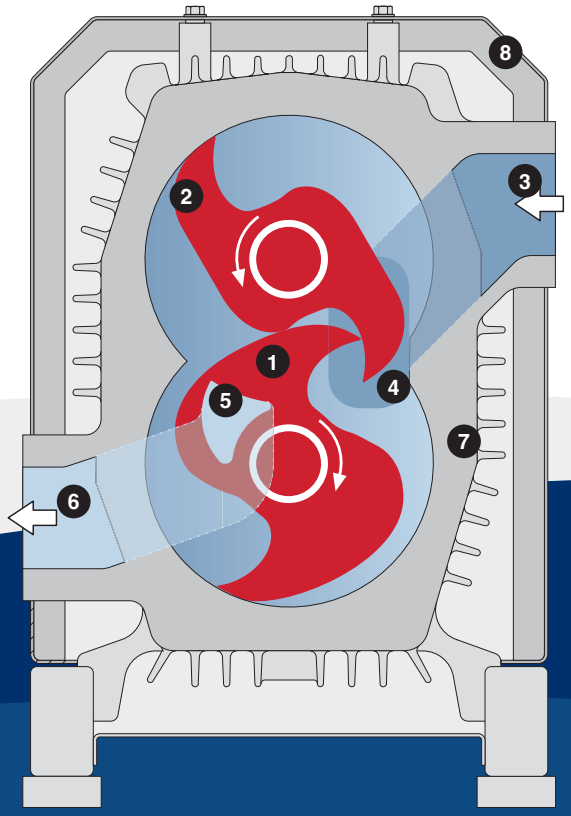
Much like rotary vane and rotary lobe pumps, the claw compressors and vacuum pumps of the C-Series are based on a static compression system. In contrast to rotary lobes, compression happens internally by volume reduction.

A claw pump consists of two rotors **(1 and 2)**. They turn in opposite directions in a compressor housing **(7)** without contact with very tight clearances. They are synchronised via a precision gear. As the claw moves over the suction connection **(3)** and the axial suction channel inlet **(4)** the gas is sucked into the compression chamber.

As the rotors revolve, the gas moves from the suction side to the pressure side. It is then compressed by the reduction of the volume between the rotors until the lower rotor uncovers the discharge channel **(5)**. This “internal compression” leads to high differential pressures at efficiencies of more than 60 %. Afterwards the pre-compressed gas is discharged via the pressure connection **(6)**. To remove the heat generated by the compression process, cooling air is sucked in between the compression housing **(7)** and a silencing cover **(8)** before it leaves the pump.

Advantages at a Glance

- High efficiency
- Contact-less oil-free operation
- No contamination to process gases
- Air Cooled
- Precision German designed and built
- Variable speed drives available
- Low sound level
- Patented triple lobe rotors (pressure/ vacuum version)
- Pressure and vacuum combined in one compression stage



Claw Vacuum Pump Series
Pressure & Compressor Vacuum Pumps

Oil-less vacuum allows for clean performance without the hassle and expense of carbon vane and oil lubricated rotary vane pumps. No more messy oil and exhaust filters to change or expensive carbon vanes to replace, not to mention the downtime and expense incurred to perform these shorter maintenance intervals. Elmo Rietschle claw pumps have service intervals up to 5 years.

C-VLR

CLAW VACUUM PUMPS

Capacities ranging from 42 to 353 cfm and maximum continuous vacuum up to 27 inHg vacuum. Highly efficient, oil-less and contact free operation. Excellent pumping capacities throughout the entire vacuum range. Integrated air cooling without the need for water cooling. Available with optional variable speed drive. Low maintenance; wide range of applications.

C-VLR | 62 & 122 Models

CLAW VACUUM PUMPS

C-VLR 62 and 122 model variants allow you to select the right pump to best fit the application. The “passive” cooled version is ideal to replace carbon vane, liquid ring and oil lubricated rotary vane vacuum pumps in applications requiring down to 18 inHg vacuum. The “active” cooled version employs a pump cooling fan in a compact very quiet pump designed for applications requiring a vacuum level down to 27 inHg. Combining these pumps with a VFD control are ideal candidates for savings credits and rebates from local power companies.

NEW!

UP TO
17% DEEPER VACUUM
THAN THE COMPETITION

C-VLU

CLAW VACUUM PUMPS

It's all about low vacuum. The pinnacle of claw vacuum technology, with deeper ultimate vacuum levels previously only achievable by oil lubricated pumps. The VLU has a low total cost of ownership, with no oil or filters to replace frequently. This sustainable solution is the perfect fit for applications as low as 30 mbar / 29.03 inHg. Available in 6 different sizes, catering to a wide range of applications.

C-DLR

CLAW COMPRESSORS

Capacities ranging from 42 to 353 cfm; maximum pressure in continuous operation up to 32 psig. Highly efficient, oil-less and contact free operation. Excellent pumping capacities throughout the entire vacuum range. Integrated air cooling without the need for water cooling. Available with optional variable speed drive. Low maintenance; wide range of applications. ATEX versions available for biogas or methane compression.

C-KLR

CLAW COMBINATION PRESSURE-VACUUM PUMPS

Capacities ranging from 57 to 82 cfm. Vacuum up to 18 inHg and pressure up to 10 psig. Highly efficient, oil-less and contact free operation. Vacuum and pressure operating points are virtually independent of each other with excellent flow capabilites. Integrated air cooling without the need for water cooling. Integrated after cooler for low temperature compressed air delivery. Low maintenance; wide range of applications.

Applications

Quiet | Efficient | Compact

Elmo Rietschle Claw satisfies demands from modern manufacturing environments: low noise level, high energy efficiency and best use of available space.

Woodworking

- Nesting
- Pick & Place
- Wood Drying

Plastic

- EPS-Foaming
- Pneumatic Conveying
- Calibration
- Degassing Extrudes
- Thermoforming

Medical

- Dental Suction Systems
- Central Vacuum Systems
- General
- Sewage Systems
- Canning Systems

Packaging

- Pick & Place
- Forming

Food & Beverage

- Milking
- Pneumatic Conveying
- Pick & Place
- Ham Drying
- Visceral Evacuation

Central Vacuum Systems

Electronics

- Pick & Place

The leader in every market we serve

by continuously improving all business processes

with a focus on innovation and velocity

Elmo Rietschle

www.ElmoRietschle.com

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QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001

MEMBER OF 100 YEARS OF INDUSTRY LEADERSHIP CAGI Compressed Air & Gas Institute www.cagi.org

NEMA Premium®

Please recycle after use.