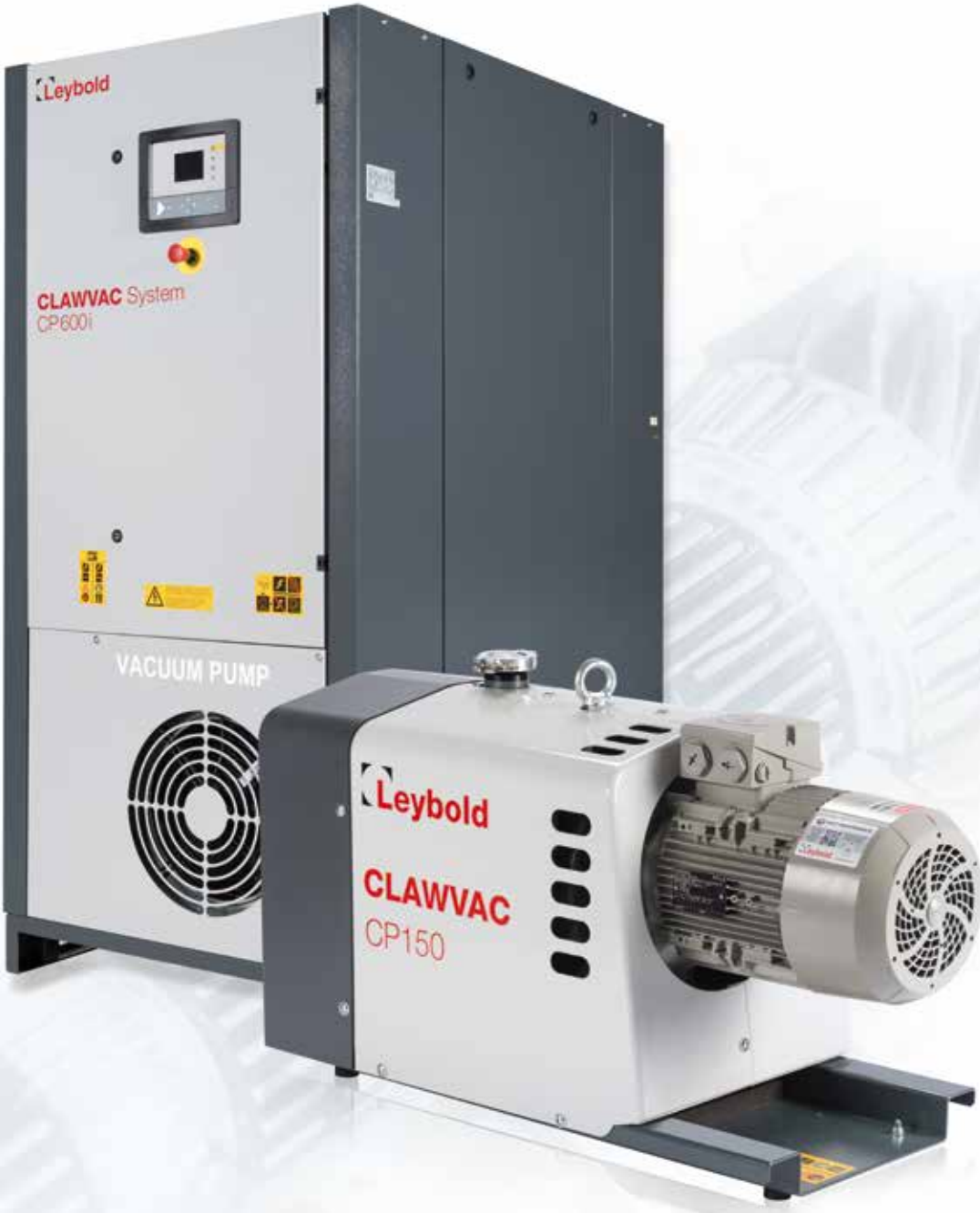
Leybold

CLAWVAC

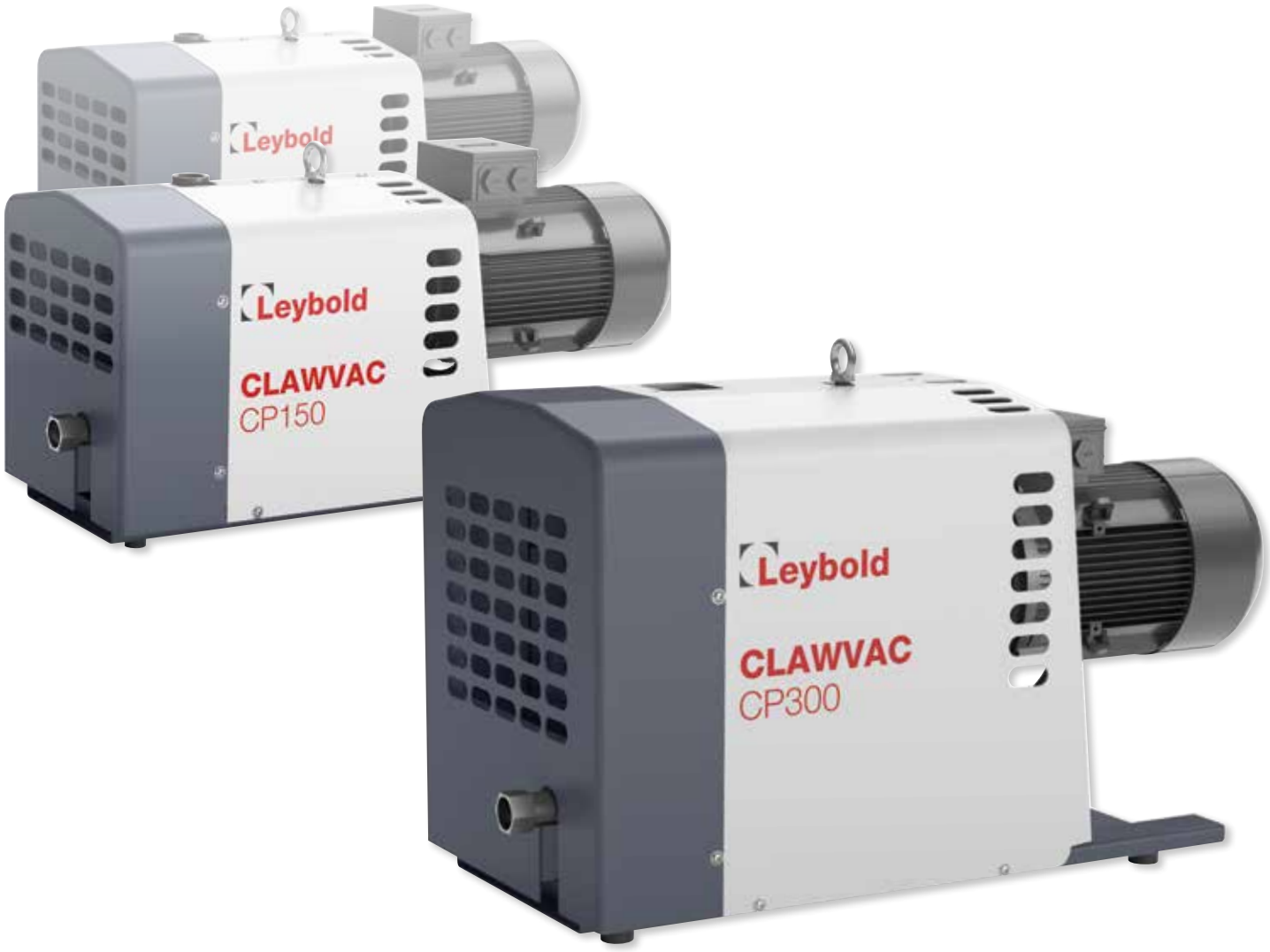
The Claw Benchmark in Rough Vacuum



A cornerstone for rough vacuum applications

CLAWVAC - CP

The CLAWVAC's unique product features offer great advantages for the rough vacuum industry. The pump design enables extreme robustness, especially for challenging applications which include handling of particles and vapour contaminated gases. Therefore, the user will experience a trouble-free and cost-saving operation.



Typical Applications

Food Processing
- Bottling
- Dairy products (e.g. milking)
- Vacuum conveying (e.g. in slaughterhouse)
- Beverage production

Food Packaging
- Thermoforming of foil container
- Tray sealing
- Modified Oxygen Packaging (MAP)

Woodworking
- Holding & lifting
- CNC router
- Drying & impregnation

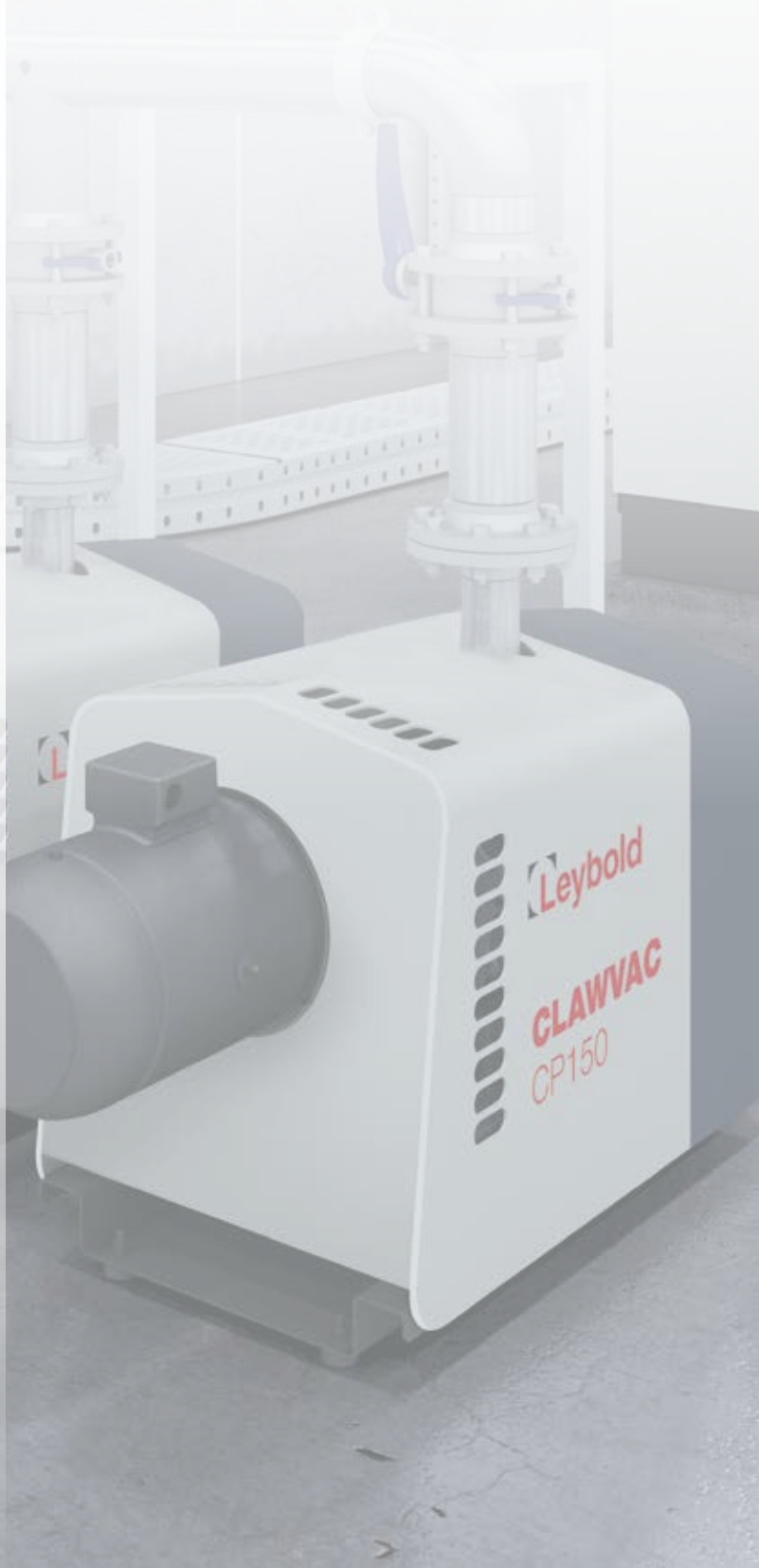
Material Transport & Holding
- Print & paper (press & post-press)
- Vacuum conveying
- Vacuum clamping

Degassing
- Li-battery slurry
- Ceramics & bricks

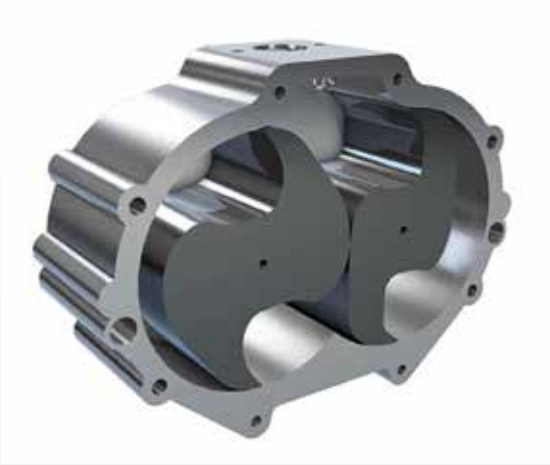
Thermoforming
- Deep drawing e.g. of bath tubs

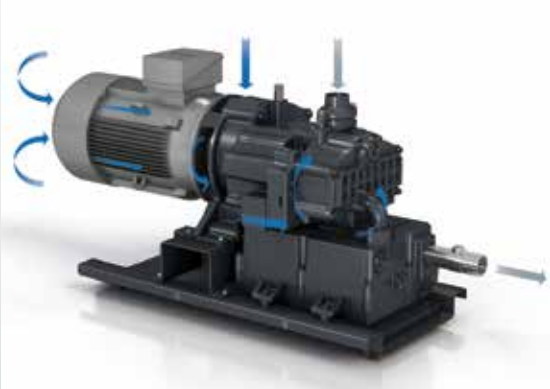
Plastic Industry
- Composite manufacturing
- Granulate conveying
- Extruder degassing (e.g. PP, PE, PS)
- Gluing

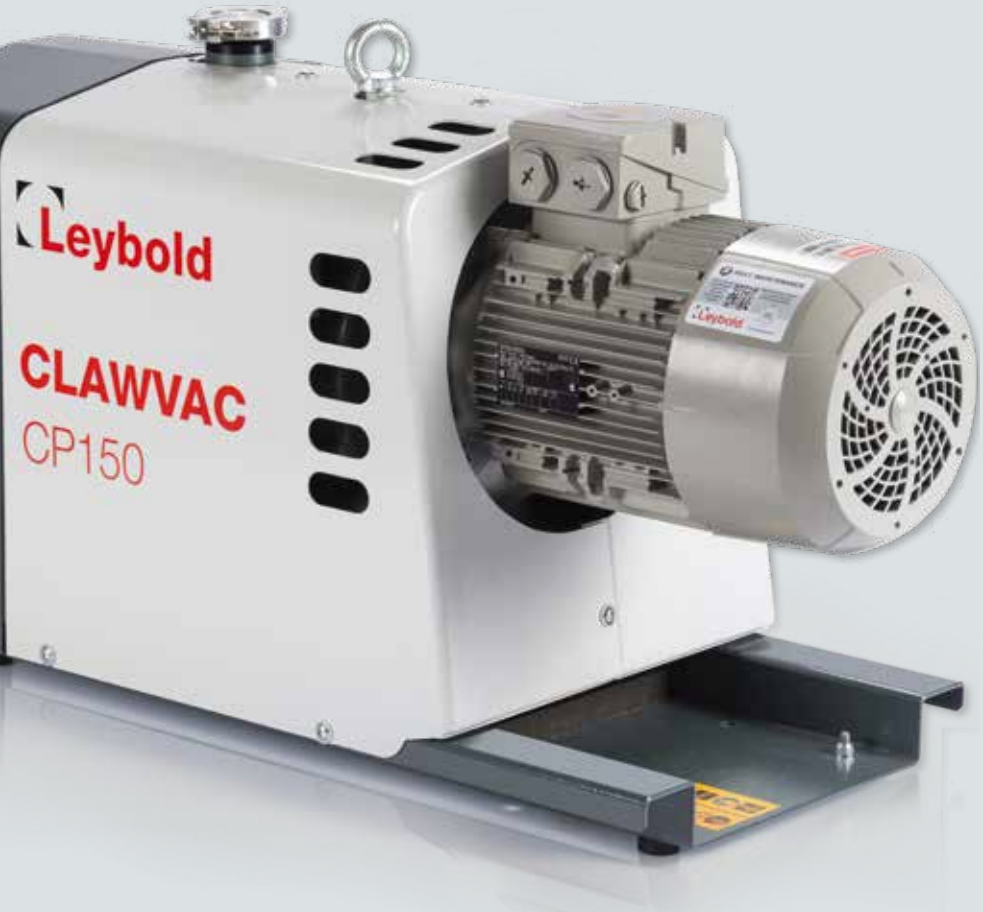
Environmental Engineering
- Sewage degassing
- Biogas production
- Soil remediation



Unique CLAWVAC Features







Innovative Product Features

Dry & Robust

- Segregated gearbox design avoids oil contamination of the process
- Corrosion resistant pumping chamber
- Durable and dependable components for extended lifetime
- Cooled and designed to guarantee the highest uptime

Outperforming

- Best-in-class performance
- Continuous operation at any inlet pressure
- Lowest power consumption

Excellent Simplicity

- Smartly air cooled to create the best performing claw pump
- Compact design with small footprint

Low Maintenance

- Wear free pump chamber
- Fast and simple cleanability of the pump chamber and claws
- Long service intervals

VSD Ready

- Compatible with a Variable Speed Drive (VSD) and setpoint control
- Up to 50% energy savings

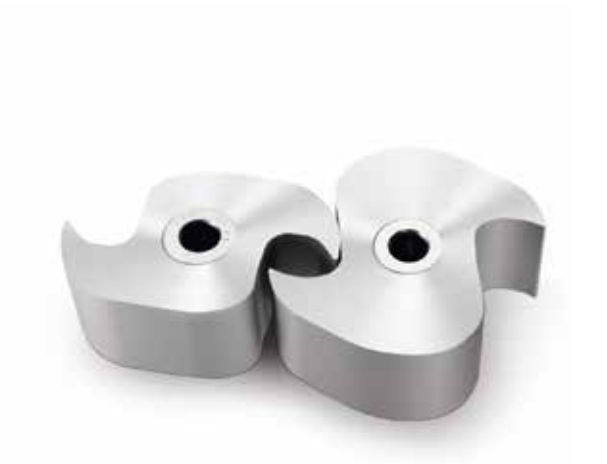
Completely Cleanable

The user has full access to all media touched surfaces.

Housing and claws can be disassembled without need for resetting of the gear timing.

The built-in silencer allows condensate draining and can be removed and opened for cleaning.

Minimal Downtime



Built-in Corrosion Resistance:

Highest capability also for demanding applications by

- Corrosion resistant stainless steel claws
- Coated pumping chamber

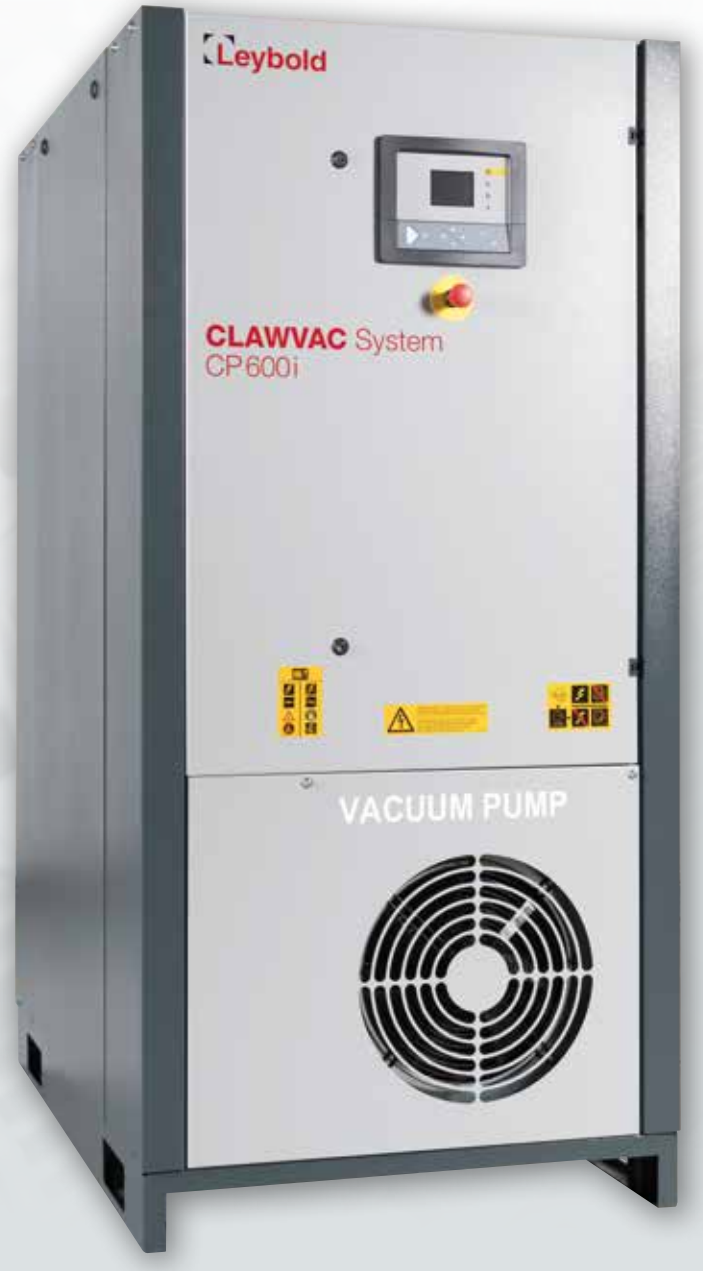
Lowest Maintenance Demand:

- 20,000 hour between oil changes
- Major overhauls extended to 48,000 hours

The compact and complete claw solution

CLAWVAC Systems - CPi

The CLAWVAC system is a one-stop-shop solution, where Leybold's reputation for building quality and superior products extends throughout its vacuum pump and systems range. CLAWVAC systems are ideal, if the application requires a high level of redundancy.



Complete & Dry Solution

Energy Efficient

- Only the required vacuum performance will be delivered
- Up to 50% energy savings in comparison with a fixed speed solution

Smart

- A smartly designed, compact and easy accessible system
- An included controller which smartly controls the system and communicates with the customer

Sustainable

- Dry pumps with minimal impact on the environment
- Even more silent than one CP 300

Reliable & Redundant

- Constant logging of critical pump parameters
- Control principle creates a maximised redundancy, with a maximum uptime

Plug & Play

- Simple to install, connect and start

Features and Design

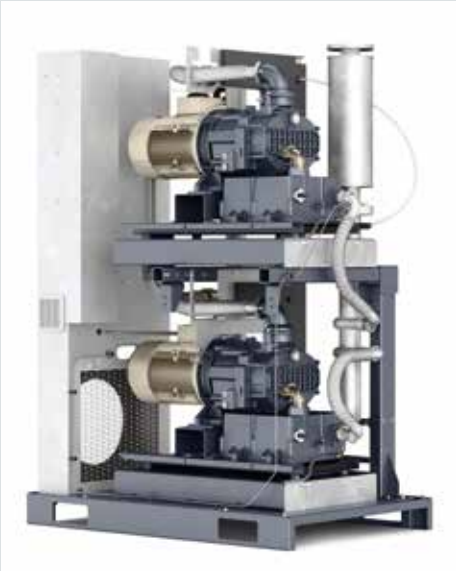
Design Principle

The CP i series is a dry, variable speed driven, multi CLAWVAC vacuum pump system.

Each element of the vacuum pump system is driven by an electric motor. The vacuum pumps are controlled by the Elektronikon controller which is fitted in the front door. An electrical cabinet comprises fuses, transformers, relays etc., and is located behind this front door.

The vacuum pumps use VSD (Variable Speed Drive) technology in combination with cascade switching of fixed speed units. This means: automatic adjustment of the motor speeds of the VSD lead pump in combination with cascade switching of fixed speed pumps, depending on the process demand.

The vacuum pumps are air cooled and are enclosed in a sound-insulated body work.



Typical design of a CLAWVAC System CP 600 i

Technical Features

CLAWVAC Systems are mechanically optimized for each application:

- Strong internal chassis with fork lifting facilities to ease transportation and manoeuvring
- Integrated ‘Hot and cold’ enclosure design, to make the pump able to work continuously at every pressure in ambient temperatures until 40 °C
- Easy accessibility and removability of the pumps for simple service
- Common manifolds for the inlet and outlet, connected to the single pumps
- Integrated exhaust silencer
- Non-return valves prevent from reverse rotation of the pumps and guarantee process isolation during pump standstill
- Condensate drain facilities
- Monitoring and control facilities

Process Compatibility

To ensure the durability and reliability for which Leybold is known for, the CLAWVAC System is equipped with corrosion resistance materials to be compatible with even the harshest applications. The CLAWVAC series vacuum pumps come with stainless steel claws and a resistive and durable coating for the pumping chamber. This is based on years of extensive development and endurance testing. It also features a simple but effective labyrinth sealing arrangement for long life and durability.

Maintainability

The CLAWVAC System is a cleverly designed pump system. That counts also for its maintainability. Its design principles offer a simple, long life and durable pump with a very low maintenance need. Access to the pumps is easy via the removable service panels.

Additionally the up-time is maximised, as in the CLAWVAC System pumps can easily be removed, maintained or replaced by individually isolating, disconnecting and sliding them out from the main chassis and whilst maintaining, the CLAWVAC System can keep on running.

Technical Data
Ordering Information

Technical Data							
		CLAWVAC			CLAWVAC System		
Dry claw pumps	50 Hz	**CP 65**	**CP 150**	**CP 300**	**CPi 600**	**CPi 900**	**CPi 1200**
Pumping speed	m^3/h	65	150	300	44 - 604	44 - 874	44 - 1144
Ultimate vacuum	mbar	50	50	140	150		
Noise level [1]	dB (A)	66	75	77	74	73	73
Motor power	kW	1.8	4.6	6.2	1.2 - 14	1.2 - 20.5	1.2 - 27
Weight	kg	120	160	252	1096	1521	1821
Dimensions (L x W x H)	mm	1035 x 394 x 545		1215 x 501 x 687	1420 x 984 x 1980	1420 x 1639 x 1980	
Connections							
Inlet		G 1 1/4“ or NPT		G 2“ or NPT	DN 80	DN 100	
Outlet		G 1 1/4“ or NPT		G 1 1/4“ or NPT	DN 80	DN 100	

Ordering Information *	CP 65	CP 150	CP 300	CPi 600	CPi 900	CPi 1200
CLAWVAC						
400 V, 50 Hz, 3 phase motor	178065V03	178150V03	178300V03	178600V01	178900V01	1781200V01

[1] According to DIN EN ISO 2151

* For detailed information on our full scope of CLAWVAC pumps and motor versions, please refer to our general catalog.
Visit our webshop www.leyboldproducts.com. **Please contact us for technical details on the entire CLAWVAC Systems range.**

Leybold

Pioneering products. Passionately applied.