

Atlas Copco launches new multiple dry claw vacuum pumps

A powerful combination

The new DZM series from Atlas Copco is a multiple pump system offering high-performance plug-and-play solutions that are easy to install and operate. Multiple claw vacuum pumps combine proven components from compressor systems with the simple and efficient technology of DZS dry claw pumps.

Hanover, 24 April 2017. At ComVac, the leading international trade fair for compressed air and vacuum technology, which is being held in Hanover from 24 to 28 April, Atlas Copco is presenting its new DZM high-performance multiple pump system (Hall 26, Stand B32). These multiple dry claw vacuum pumps offer a durable, reliable solution for a wide variety of applications – from packaging lines, pneumatic conveyors and clamping systems for CNC machines, to moulding machines, drying processes or central vacuum supply systems. Claw vacuum pumps use two claw-shaped rotors running in opposite directions which do not touch each other or the pump chamber. This simple principle ensures that users benefit from a high degree of performance and energy efficiency.

This also applies to the DZM units, which combine between two and four DZS claw vacuum pumps, depending on the application, in a single compact housing. Atlas Copco's sturdy, durable DZS pumps are single-stage oil-free units with air cooling, and require very little maintenance even in arduous conditions. One of the pumps in each DZM unit has a variable speed drive, allowing the vacuum to be adapted precisely to the customer's requirements. This dramatically improves efficiency by reducing the power required and therefore reducing cost of ownership and contributes to saving the planet.

The space-saving vacuum systems are available in three sizes: DZM 600 VSD, DZM 900 VSD and DZM 1200 VSD, with an intake volume flow between 112 and 1230 cubic metres per hour (m³/h). As with individual DZS claw pumps, the DZM system can create a vacuum level up to 140 mbar(a).

High performance with low life cycle costs

The standard features of DZS pumps include stainless steel claws and a corrosion-resistant pump chamber, allowing reliable operation even under difficult conditions. "Process gases flow continuously through vacuum pumps, which may result in premature failure of the pump," says Christoph Angenendt, Industrial Vacuum Communications Manager with Atlas Copco. "It is therefore very important to select suitable materials and coatings."

The claw technology used in the DZS series also offers the advantage that, despite the very tight clearances between rotors and casing, there is no contact between these components and the pump is therefore virtually free from wear. The result is a reliable

pump combining longevity with minimum maintenance expenses and high performance with low life cycle costs. Thanks to the anti-noise hood and smart details such as vibration-reducing feet and an integrated exhaust silencer, the DZS pumps are among the quietest claw pumps on the market; they therefore contribute to a pleasant working atmosphere.

Compact system solution

“Our new DZM multiple pump system is based on the simple design principles of our compressors,” says Angenendt. “We install our high-performance DZS pumps under an anti-noise hood together with all the components required and offer our customers a system solution that is both compact and intelligent.” The sturdy housing protects the pumps, reduces noise levels and heat and contains all the technology required for operation in a single box. In order to protect the heat-sensitive electronics, “hot” and “cold” components are installed separately from each other. The side walls are removable, allowing rapid access and facilitating maintenance.

The user interface features the tried and tested Elektronikon controller from Atlas Copco which is integrated in the front panel. The controller operates the multiple claw pump unit and ensures that the individual pumps are harmonized with each other in operation. The vacuum level is automatically monitored within the system and perfectly matches the process duty point. Accurate control is maintained with the variable speed drive working in conjunction with the cascade control of the remaining pumps. Lag pumps rotate duty on a regular basis to even usage, especially when redundancy is built in to the system, for example, in time of maintenance shut-downs.

Information on pump status, system capacity, system pressure, energy efficiency, special events and maintenance status can be called up on the display and also transmitted via communication modules, if the customer wishes so. “The user receives a plug-and-play solution which is easy to install and handle,” says Christoph Angenendt. “Our multiple pump system is compact, easy to transport, space-saving and less costly than alternative technologies which need to be assembled and installed at the customer’s plant.”

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Atlas Copco is a world-leading provider of sustainable productivity solutions. The Group serves customers with innovative compressors, vacuum solutions and air treatment systems, construction and mining equipment, power tools and assembly systems. Atlas Copco develops products and services focused on productivity, energy efficiency, safety and ergonomics. The company was founded in 1873, is based in Stockholm, Sweden, and has a global reach spanning more than 180 countries. In 2016, Atlas Copco had revenues of BSEK 101 (BEUR 11) and about 45 000 employees.

Atlas Copco's Vacuum Technique business area provides vacuum products, exhaust management systems, valves and related products mainly under the Edwards, Leybold and Atlas Copco brands. The main markets served are semiconductor as well as a variety of industrial segments. The business area has a global service network and innovates for sustainable productivity in order to further improve its customers' productivity. Principal product development and manufacturing units are located in the United Kingdom, Czech Republic, Germany, South Korea, China and Japan.

Industrial Vacuum is a division within Atlas Copco's Vacuum Technique business area. It develops, manufactures and sells sophisticated vacuum products and solutions for customers in the industrial process and rough vacuum sectors, for example steel, CPI (chemical process industries), metallurgy, petrochemical, food packaging and paper handling. The division markets products under the Atlas Copco, Edwards, Quincy and Leybold brands. The division's focus is to improve customers' productivity. The divisional headquarter is in Cologne Germany, the main production locations are in Cologne, Qingdao and Tianjin China, Lutin Czech, Valence France and Antwerp Belgium.