

2019-06-21

Thermprocess / METEC – Vacuum Solutions for Metallurgy

Leybold supplies a coordinated product portfolio for the metalworking industry

Cologne, 21.06.2019 –The need for energy-efficient, sustainable processes is increasing especially with regard to the frictions caused by high energy prices, increasing global warming and scarce resources. These requirements also have a direct impact on vacuum systems which are an elementary component in heat treatment plants and metallurgical processes. Leybold offers a wide range of highly innovative, already proven vacuum solutions especially for this requirement profile. The vacuum specialist will be presenting its portfolio to trade visitors at its stand (Hall 9 / D76) at METEC / Thermprocess 2019 in Düsseldorf from 25 to 29 June.

State-of-the-art mechanical vacuum pump systems are powerful tools for efficient operation. They have a robust design that enables the pumps to withstand harsh production environments. No matter what type of vacuum systems are operated: Innovative vacuum solutions reduce operating costs and CO₂ emissions while providing complete process control.

Pump systems consisting of dry-compressing screw vacuum pumps of the DRYVAC type combined with RUVAC WH Roots pumps have proven themselves in use on secondary metallurgical VD, VOD or RH degassers. By using these standard pumps, even the highest demands on pumping speed can be met with the greatest reliability at competitive prices.

In order to achieve high vacuum in VIM or VAR installations, Leybold offers the most modern oil booster pumps available on the market, which in combination with dry compressing DRYVAC screw pumps and RUVAC Roots pumps ensure maximum system availability at lowest operating costs.

Leybold has an even larger product portfolio for use in vacuum heat treatment furnaces: Oil-sealed SOGEVAC rotary vane pumps have proven themselves in clean processes such as hardening or tempering. For more demanding processes such as soldering, sintering or carburizing, dry-compressing screw pumps are also available. Depending on size and process, pumps of the DRYVAC, SCREWLINE or VARODRY series can be used.

From single pumps to complex steel degassing systems: As the components for vacuum systems are manufactured in large quantities, the delivery time is short, they are cost effective and provide proven high quality, thus contributing to the success of the customer.

SOGEVAC NEO D - the emission-free rotary vane pump

Nowadays, modern vacuum technology must convince its users with emission-free, smooth running and sustainability. With these requirements in mind, Leybold has developed the compact SOGEVAC NEO D, an innovative 2-stage vacuum pump with integrated oil mist separator on the exhaust side. The working environment remains clean and free of oil mist during pumping. Continuous operation is possible without an external filter at any inlet pressure.

The robust SOGEVAC NEO D is optimized for applications requiring a pumping speed in the range of 1×10^{-2} to 1mbar; perfect for small heat treatment furnaces or as a holding pump for diffusion pumps. The SOGEVAC NEO D offers a stable process vacuum but is less expensive than conventional alternatives and saves up to ten percent energy due to its significantly smaller rotating mass. Additional energy savings can be achieved by operating the pump by means of speed control with a frequency converter.

DRYVAC DV 200 and DV 300 - the innovative dry pumps

The dry-compressing screw vacuum pumps are designed for modern, intelligent production. They offer maximum energy efficiency, durability and future-proof network integration. Due to the optimized rotor geometry and the innovative motor design with efficiency class IE3, these pump types minimize power consumption and CO₂ emissions. The bottom line is that DRYVAC pumps are cheaper and more environmentally friendly than comparable models.

The new compact DRYVAC models DV 200 & DV 300 are designed for harsh industrial applications, just as the larger pumps of the same pump series. They offer a long service life, even under demanding conditions with high humidity, dust or other process particles. DRYVAC pumps also require minimal maintenance.

VARODRY - the 100% oil-free, dry-compressing screw pump

The 100% oil-free, dry-compressing and air-cooled VARODRY screw pump guarantees the required operating pressure and a short cycle time, especially in demanding processes. Thanks to its compact design and reduction to the essentials, the vacuum pump can be easily integrated into new or existing systems. Due to the integrated silencer, it is quiet and has a pleasant operational noise.

The air-cooled VARODRY is absolutely dry and clean. This prevents particle or oil migrations into the vacuum chamber or the environment. A further process advantage is their resilience and efficiency. It can be operated continuously at any inlet pressure and is completely resistant to regular shock ventilation. Therefore, any number of cycles can be run without overloading. VARODRY pumps ensure uninterrupted operation without system downtimes. This qualifies it as the ideal vacuum pump for heat treatment applications and metallurgical processes.

SCREWLIN - dry screw pump for extremely dirty applications

In demanding applications such as sintering or carburizing, dry-compressing screw pumps are preferred as backing pumps. They are more efficient and reliable than oil-sealed pumps. Especially the SCREWLIN pumps have proven themselves in extremely dirty applications. Their main advantage: The pump chamber of this pump family can easily be cleaned by the customer on site, for example during process pauses by means of flushing.

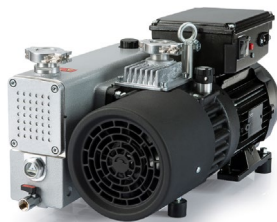
SCROLLVAC - low power consumption, high pumping speed

With the air-cooled, oil-free SCROLLVAC plus, Leybold offers an uncomplicated, reliable backing pump. Its properties predestine it for a wide range of demanding applications, such as laboratory vacuum furnaces. This is also due to the low power consumption of the backing pump combined with high pumping speed. In addition, the SCROLLVAC plus, with its lightweight, compact design, takes up very little space. This enables integration into new and existing vacuum systems.

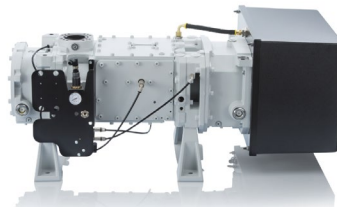
Its functional and design features simplify daily handling of the backing pump. For example, the hermetic sealing of the rotating parts of the pump chamber reduces the risk of contamination. By dispensing with shaft seals that are susceptible to wear, developers have achieved higher integral tightness.

DIP - DIJ - OB - Oil-jet steam pumps and systems for high-vacuum processes

Oil steam jet pumps and systems are characterized by the highest pumping speeds in metallurgical industrial high-vacuum processes. These pumps are robust continuous-running pumps and have proven themselves in steel production processes such as VIM and VAR, or in high-vacuum industrial furnaces. The pumping effect of these ejector pumps is created through the diffusion of the gases that are pumped into the vapor jet. Compared to other high vacuum pumps, the pumping speed compared to the surface area is very high.



SOGEVAC NEO D



DRYVAC 200 / 300



VARODRY



SCREWLINE SP



SCROLLVAC



OIL-DIFFUSION PUMPS & SYSTEMS

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About Leybold

Leybold is a part of the Atlas Copco's Vacuum Technique business area and offers a broad range of advanced vacuum solutions for use in manufacturing and analytical processes, as well as for research purposes. The core capabilities centre on the development of application- and customer-specific systems for the creation of vacuums and extraction of processing gases. Fields of application are secondary metallurgy, heat treatment, automotive industry, coating technologies, solar and thin films such as displays, research & development, analytical instruments, food & packaging, as well as a multitude of other classic industrial processes.

About Atlas Copco

Great ideas accelerate innovation. At Atlas Copco, we have been turning industrial ideas into business-critical benefits since 1873. By listening to our customers and knowing their needs, we deliver value and innovate with the future in mind. Atlas Copco is based in Stockholm, Sweden with customers in more than 180 countries and about 37 000 employees. Revenues of BSEK 95/ 9 BEUR in 2018.

For more information: www.atlascopcogroup.com