

Atlas Copco launches revolutionary innovation packed Variable Speed Drive Liquid Ring Vacuum Pump

Atlas Copco announced a new breakthrough in the world of Liquid Ring Vacuum technology with the launch of its LRP 700-1000 VSD⁺ range of intelligent liquid ring vacuum pumps.

Cologne, Germany, February, 2019: Ideally suited to wet, humid and dirty applications, the LRP VSD⁺ is a state-of-the-art vacuum solution with unrivalled innovation and integration capabilities. A huge departure from the classic liquid ring pumps available in the market today, the LRP VSD⁺ is a compact, high performance, energy efficient system enclosed in a strong, noise-containing canopy.

Uncomplicated plug-and-play product

The ergonomic design of the LRP 700-1000 VSD⁺ along with market leading HMI ensures the optimum operator interface and ease when controlling the vacuum pump. In addition, inlet, outlet and mains cable points are positioned on the top of the pump for straightforward installation. It is not least this feature that makes Atlas Copco's LRP VSD⁺ an uncomplicated plug-and-play product.

Energy and water savings

„The LRP VSD⁺ not only brings energy and water savings to our customers, but also saves on space. Its compact design and small footprint allows users to save space without having to sacrifice any vacuum performance“, explains Alistair Darroch, Product Manager, Liquid Ring Vacuum Technologies. The same applies to functionality: this pump contains a large number of performance-optimized components that would normally be supplied as accessories, often taking up additional space for piping and installation. With the LRP 700-1000 VSD⁺, these components have been integrated into the pump element to maximise efficiency, performance and space saving.

Operating noise in the range of 65dB(a)

The soundproof housing significantly reduces noise pollution in the immediate working environment. Indeed, with operating noise in the range of 65dB(a) the LRP VSD⁺ is an extremely quiet liquid ring pump. Along with noise reduction, the sturdy canopy and cubicle ensure that the pump and internal electronics are effectively protected against dust and water. This feature qualifies the LRP 700-1000 VSD⁺ series for the harshest industrial applications – extending the lifetime of the electronic components as well as the service intervals.

True breakthrough in liquid ring technology

Speaking on the engineering design of the LRP VSD⁺ series, Alistair Darroch commented, “The LRP VSD⁺ vacuum pump is a true breakthrough in liquid ring technology as we know it today. No other liquid ring vacuum pump offers this level of efficiency and economy, while maintaining a high degree of build quality and standard scope of supply. We drew from over 150 years of engineering know-how and applied Atlas Copco’s innovative approach to create something truly unique. By combining the classic and rugged benefits of LRP with Atlas Copco’s variable speed drive technology we are introducing something that the market has not seen before.”

Variable Speed Drive technology

The Variable Speed Drive technology integrated into the LRP VSD⁺ is particularly unique. The twin VSD system operates in absolute harmony within the pump, ensuring optimal vacuum performance at all times. The primary VSD accurately maintains required vacuum levels by controlling the operating speed of the pump, matching pump performance to process demand and saving energy. The second VSD regulates the water circulation pump in response to the operating conditions seen. Optimizing water flow within the pump element and providing maximum performance and stability at all vacuum levels and operating speeds.

“Intelligence is a key feature of the LRP VSD⁺”, continued Alistair Darroch, “Our patented features and unique algorithms balance the operation of the water pump with the

speed of the main motor. This guarantees that the pump always delivers peak performance while maintaining maximum energy efficiency.”

Smart monitoring and remote controllability

Adding to the intelligence of the pump are multiple innovations that allow the LRP VSD⁺ to uniquely meet the needs of the customers and the demands of modern day industrial processes and situations. Automatic Seizure Prevention, ASP, and Automatic Cavitation Prevention, ACP, protect pump and customer process alike. Smart monitoring and remote controllability are further key features that really differentiate the LRP VSD⁺ series.

Key information readily available

Equipped with Atlas Copco’s MkV Elektronikon® controller as standard, the LRP VSD⁺ has a comprehensive in-built plant management system. Key information such as pump status, operating conditions, warning alarms and maintenance information readily available. Multiple pumps can be monitored, controlled and optimized simultaneously, giving customers the most suitable product performance at all times. Paired with Atlas Copco’s SMARTLINK, the LRP VSD⁺ offers game-changing monitoring, control and connectivity.

Designed for an array of applications

With features that ensure optimum performance, maximum vacuum uptime and pump robustness. The Atlas Copco LRP VSD⁺ series is designed for an array of applications that are wet, humid, harsh or dirty; including filtration, food processing, conveying, ePS, drying, degassing and plastics calibration and rubber vulcanization to name a few.

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Atlas Copco Vacuum Technique

Great ideas accelerate innovation. At Atlas Copco Vacuum Technique we collaborate with our customers to turn industrial ideas into leading edge technology in vacuum and abatement solutions. Our passionate people, expertise and service bring sustainable value to industries everywhere.

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.

Industrial Vacuum is a division within Atlas Copco's Vacuum Technique business area. It develops and manufactures sophisticated vacuum products for customers in the industrial process and rough vacuum sectors, for example chemical process industries, metallurgy, petrochemical, food packaging and paper handling. The division markets products under the Atlas Copco, Edwards and Leybold brands. The division's focus is to improve customers' productivity. The divisional headquarters is located in Germany and its main production facilities are located in Germany, Belgium and China.

Captions:



Ideally suited to wet, humid and dirty applications, the LRP VSD⁺ is a state-of-the-art vacuum solution with unrivalled innovation and integration capabilities.



The Variable Speed Drive technology regulates the water circulation pump in response to the operating conditions seen (Photos: Atlas Copco).