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Sulzer launches the high-efficiency HSR turbocompressor

The new HSR line of high-speed turbocompressors is designed for the production of oil-free pressurized air in applications where contamination of the air must be avoided. The HSR utilizes high-performance turbo and magnetic bearing technology that maximizes the efficiency and minimizes the need for maintenance.

The key benefit of the HSR is the fact that it contains no oil at all. This means 100% safe compressed air for processes where no contamination is allowed. Such applications are included for example in the production of fibrous materials, manufacturing of pharmaceutical products, and in the food and beverage industries.

A key technological choice is the use of active magnetic bearings that bring the benefit of no mechanical friction and no mechanical wear. Together with the almost total absence of vibration, this grants the product a long lifetime. Equipment of this kind maintains its efficiency without major overhaul for more than 20 years.





When launching a new product, it is important to explain what it contains. For the HSR, it is equally important to explain what is missing. Thanks to the direct drive and magnetic bearings, there is no need for mechanical gears, bearings and seals. There is no oil or other liquid lubricant anywhere in the product. There are no wearing parts to be replaced, no oil to be refilled and no consumables to be disposed of. What is not included in the product in the first place cannot fail, and this reduces the need for service and/or preventive exchange of expensive parts.

The HSR is cooled by water. The advantage is that both the heat generated by the compression and drive-related losses can be recovered as usable energy. Water cooling also ensures optimal performance and generally extends the lifetime of the components.



Each part of the HSR has been chosen carefully. The two-stage or three-stage compression for maximum pressures of 4.5 and 9 bar (gauge) respectively is done with state-of-the-art turbo air ends, directly driven by a high-speed motor that utilizes permanent magnets. For reaching the necessary speed and for flow control, one or two variable frequency drives control the motor(s). The wide flow range can be extended by applying adjustable diffuser vanes. By utilizing modulating blow-off valves, the flow can be adjusted between 0 and 100%.

To find out how to safeguard the purity of your product, protect the environment and save money by choosing the HSR for your oil-free air compression needs, please visit <u>sulzer.com/hsr</u>.

Sulzer's core strengths are flow control and applicators. We specialize in pumping solutions and services for rotating equipment, as well as separation, mixing and application technology. Intensive research and development in fluid dynamics, process-oriented products, and special materials as well as reliable service solutions help the company maintain its leading position in its focus market segments. Our customers benefit from a network of over 180 production and service sites around the world. In 2017, we achieved sales of roughly CHF 3 billion with around 14'700 employees. Our shares are traded on the SIX Swiss Exchange (SIX: SUN). www.sulzer.com

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