

Rotary screw compressors

DSDX – the next generation

The next generation of DSDX series rotary screw compressors is now available for flow rates from 25 to 31 m³/min. Together with a range of other enhancements, new Sigma compressor airends and IE4 motors have now raised the bar even higher: they now deliver up to nine percent improved specific power and up to nine percent higher flow rates compared to previous models. This results in significantly reduced energy costs, true to Kaeser's motto of "More compressed air for less energy".

Clever design and the proven 1:1 drive concept combine to boost the efficiency of these versatile compressors even further. Featuring all-new airends with high efficiency Sigma Profile rotors and IE4 motors, Kaeser's next generation DSDX series compressors deliver improved specific power of up to nine percent compared with previous models. These improvements, together with a host of other enhancements, such as a redesigned inlet valve and significantly reduced internal pressure losses, result in considerable energy cost savings.

Maximum efficiency

The new Super Premium Efficiency IE4 motors, the most efficient currently available, also help to achieve this improvement and therefore enable peripheral losses in compressed air production to be reduced even further. Moreover, the electronic Thermo Management system regulates oil temperature to ensure a safe and consistent differential from the dew point temperature. This strategy also prevents unnecessarily high airend discharge temperatures and provides additional energy

savings. Heat recovery offers yet another key way to boost energy savings: a compressor transforms 100% of its input electrical drive power into heat, of which 96% can be recovered and reused for heating purposes. Kaeser engineers have now expanded the company's range of heat recovery options with a small yet highly beneficial detail. In systems taking advantage of the heat recovery option, a second electronic Thermo Management system ensures optimised and even more efficient use of the available heat energy. If this heat energy is diverted to heat recovery systems in its entirety, the intelligent Sigma Control 2 controller recognises that it is no longer necessary for the compressor's cooling system to provide cooling and consequently switches off the fluid cooler fan – effectively saving even more energy.

Energy-saving and environmentally friendly fluid filters

The unit interior also reflects Kaeser's commitment to resource conservation: the environmentally friendly fluid filter cartridges no longer have a permanently attached sheet metal housing, but rather are simply inserted into an aluminium housing. The filter cartridges themselves feature a metal-free design and are suitable for thermal disposal at the end of their service life without additional pre-treatment.

Controller ensures optimum performance

The "Sigma Control 2" controller is responsible for monitoring the compressor and, if equipped, the frequency converter (SFC option). This innovative controller also enables the compressor to connect to a network and facilitates straightforward connection to master controller systems, such as the Sigma Air Manager 4.0 or other control centres – thereby making DSDX units completely ready equipped for integration into Industry 4.0 environments.

Full range of models

The highly versatile DSDX series includes both water- and air-cooled models. Since variable-speed drive can be advantageous for certain applications, versions are also available with variable-speed control implemented via a frequency converter. As with the standard models, these versions are also designed with maximum efficiency, reliability and ease of maintenance in mind. Naturally as per the EMC Directive, the



entire SFC compressor is tested and certified to EN 55011 Class A1 industrial network standards.

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Kaeser's DSDX series rotary screw compressors are more efficient than ever