

The variable speed FSD rotary screw compressor from  
Kaeser

## **Maximum savings, Maximum flexibility**

When dealing with consumption of mass volumes of compressed air, not only is air system reliability important, but so too is efficient and flexible compressed air production. With a free air delivery of up to 54 m<sup>3</sup>/min, Kaeser's new space-saving FSD 571 SFC rotary screw compressor with variable speed drive meets all of these requirements.

The investment in variable speed control quickly pays for itself - especially when used for applications with fluctuating peak load demand - as the SFC version's wide control range precisely matches system performance to meet actual air demand.

The unit is also air-cooled: Air-cooling of screw compressors is up to 60 percent cheaper than using water-cooled systems. Kaeser's new FSD compressor range now enables users to take advantage of these significant savings for drive powers of 250 kW and higher. This is made possible by Kaeser's highly effective cooling system, which uses an innovative radial fan that draws cool ambient air in through the cooler. The system prevents the cooling air from being pre-warmed and, as a result, optimises the cooling effect to allow trouble-free operation even in extreme operating conditions up to + 45 °C.

However, the list of advantages that FSD series compressors have to offer doesn't stop there. They provide the very best in energy efficiency, compact design, quiet operation user-friendliness, ease of maintenance and reliability. Moreover, the FSD

571 SFC has a free air delivery of up to 54 m<sup>3</sup>/min and offers exceptional flexibility thanks to its variable speed control module. This feature enables the compressor to cope with fluctuating peak load demand both efficiently and reliably at all times, as the unit precisely adjusts system performance to meet actual air demand.

FSD compressors gain their efficiency by using specially developed airends equipped with Kaeser's world-renowned "Sigma Profile" rotors. In addition, each unit features a high-efficiency IE3-rated motor that turns at only 1490 rpm, which further enhances system service life. The airend and motor are designed to operate at the same low speed and are linked via a 1:1 maintenance-free drive coupling. This feature not only eliminates the transmission losses associated with gear or belt drive, but also considerably reduces energy consumption, maintenance requirement and sound output levels. The cooling system with its unique airflow design and radial fan also plays an important role in ensuring that FSD compressors provide ultra-quiet performance. Although the fan uses significantly less energy than a conventional axial fan, it still has more than four times the reserve thrust of standard designs. This enables connection of exhaust ducting without having to install additional extractor fans. Water-cooled FSD units are also available if required.

The PC-based "Sigma Control 2" internal compressor controller is fitted as standard on all FSD models. This user-friendly controller allows greater energy saving potential, reduces maintenance requirement and increases compressor system reliability and availability. The "Sigma Control 2" also enables direct communication with the "Sigma Air Manager" (SAM) compressor management system, which also uses PC-based technology. The SAM provides seamless interaction between all components (up to 16) in the compressor system and offers complete air cost transparency. In addition, its minimal switching differential minimises equipment idling time, consequently increasing efficiency and enabling highly flexible control.

Together with correct planning and the use of perfectly matched compressed air system components, FSD compressors can help achieve considerable energy savings of 30 percent or more compared with conventional compressed air solutions.



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The FSD 571 SFC features cost-effective air-cooling and Kaeser's maintenance-free 1:1 direct drive system, whilst the unit's variable speed control ensures maximum flexibility and a free air delivery of up to 54 m<sup>3</sup>/min. This advanced compressor package provides all the advantages of modern modular design to ensure an efficient and reliable source of quality compressed air.