KAESER COMPRESSORS

Dry-running Rotary Screw Compressors

DSG-2 Series

Two-stage, free air delivery up to 30.1 m³/min, pressure 4, 6, 8 and 10 bar

OILFREE.AIR

DSG-2 series

The new dimension in oil-free compression

Two-stage dry-running KAESER rotary screw compressors not only impress with their meticulous design, but also with their many innovative details - all of course with renowned KAESER quality.

Long-term efficiency

Compressed air simply has to be available where and whenever it is needed. KAESER dry-running two-stage rotary screw compressors are therefore built to last and to ensure many years of dependable service. Comprising tried and tested components that have been developed as a result of KAESER's near century of experience in mechanical engineering, KAESER compressors deliver the durability and compressed air availability to meet even the toughest of demands.

Innovation you can trust

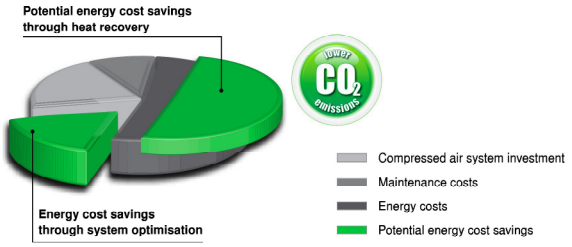
Using all of the advantages that KAESER's advanced Research and Development Centre in Coburg has to offer, KAESER's engineers designed every detail of the two-stage dry-running rotary screw airend with maximum efficiency and performance in mind. As a result, KAESER dry-running rotary screw compressors, for example, are available with drive powers up to 355 kW (FSG-2 series).

Efficiency as standard

KAESER quality and expertise really count when it comes to those all-important total system costs for asset investments such as compressors, or complete compressed air supply systems. Lowest possible compressed air costs and maximum availability can be guaranteed only through a combination of perfect interplay between energy efficiency and service / maintenance, and by viewing the compressed air supply system as a whole.

Service-friendly

These versatile systems were engineered for maximum ease-of-use and servicing right from the outset of the design stage. Fewer wearing parts and the use of premium quality materials ensure reduced maintenance requirement, longer service intervals and extended service life. Excellent component accessibility as a result of generously sized maintenance doors and a swing-out cooler are just some of the features that make servicing so effortless.



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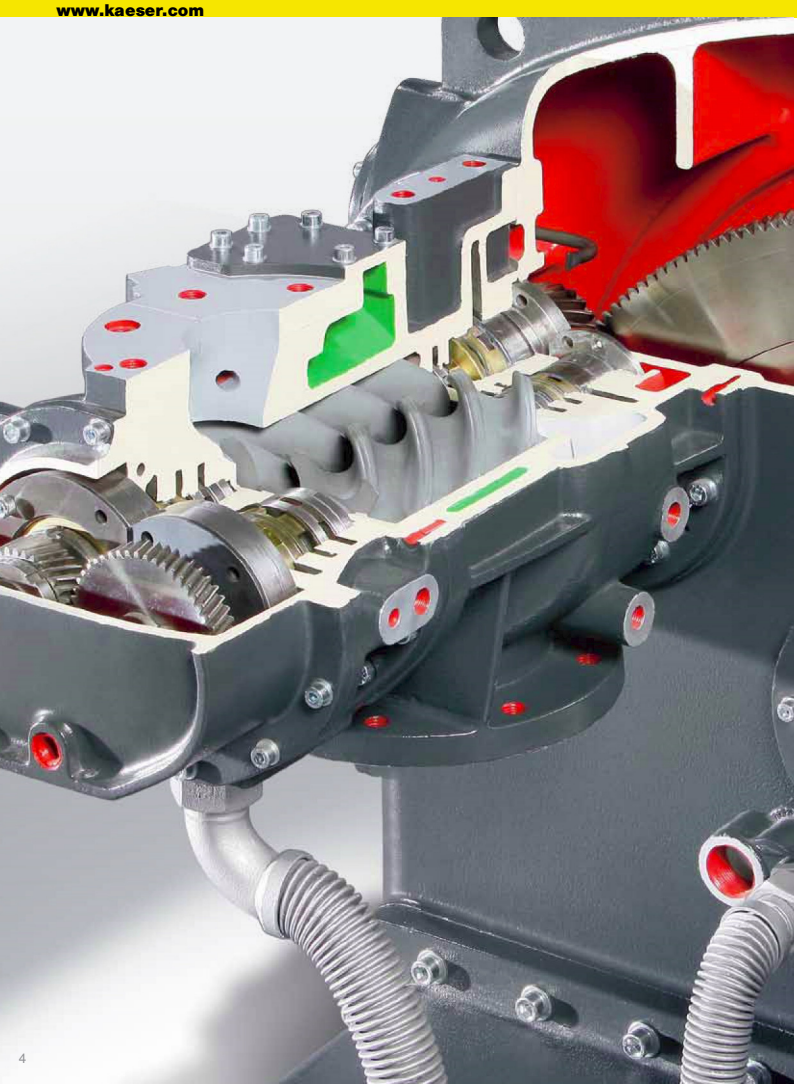
Innovation – Quality – KAESER

Image: DSG 180-2 RD SFC

MADE BY KAESER

i.HOC

(Integrated Heat of Compression Dryer)



DSG-2 series

Convincing technology

Proven airends

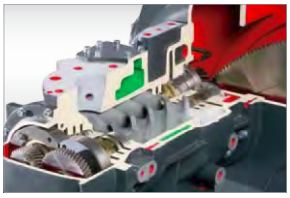
At the heart of every KAESER dry-running rotary screw compressor lies a tried and tested dry-running, two-stage rotary screw airend. Providing optimum performance and dependability, every airend ensures maximum efficiency throughout its entire service life.

Durable coating

The blasted and bonderised rotors are treated using the special “Ultra Coat” process to produce an innovative and durable coating which is resistant to temperatures of up to 300 °C. Since this cost-reducing coating is highly abrasion-resistant, its sealing and protection performance remains consistent even after years of operation.

Chromium steel rotors

The second compression stage’s rotors are made from stainless steel, which eliminates the risk of rotor seizing or jamming caused by corrosion.



Airend cooling

In the places where things really heat up, i.e. in the second compression stage, coolant flows directly through the walls of the airend housing to ensure best possible heat dissipation and therefore efficiency.

DSG-2 series

Efficient drive systems with advanced control

SIGMA CONTROL 2

The SIGMA CONTROL 2 ensures efficient control and system monitoring. The large display and RFID reader provide easy communication and maximum security, whilst the SD-card slot greatly simplifies fault analysis tasks.

Optimised drive systems

Perfect harmonisation of the frequency converter and drive motor ensures exceptional efficiency across the machine's entire operating range and minimises machine vibrations. Moreover, the thermally optimised control cabinet allows unhindered operation in ambient temperatures of up to + 45 °C.

High efficiency IE3 drive motors

DSG-2 series compressors are equipped exclusively with premium efficiency IE3 AC motors. For SFC models, KAESER uses optimised frequency converter motors with insulated motor bearings.

Easy-access coupling

The electric motor directly drives the airend with near zero transmission loss via a maintenance-free coupling. As there is no need for complicated disassembly work, the easy-access coupling can be exchanged quickly and easily.

DSG-2 series

Quality in detail

Hydraulic inlet valve

The hydraulically operated inlet valves on KAESER dry-running rotary screw compressors are unaffected by contamination and condensate. This makes them more reliable and easier to maintain than pneumatic valves.

Fibre-free pulse dampers

KAESER's new fibre-free pulse dampers keep pressure losses to an absolute minimum, help maintain consistent air quality and, unlike fibre versions, do not present a source of contamination for the compressed air.

Dependable oil reservoir ventilation

The microfilter in the oil tank ventilation system prevents intake of oil-laden air. This is a key detail to ensure that compressed air quality is reliably maintained at all times.

Highly efficient condensate separator

Thanks to its flow-optimised design, the newly developed condensate separator reliably separates the condensate downstream from the air coolers, with minimal pressure loss.

1 Radial fan for optional heat exchanger downstream from the i.HOC rotation dryer
2 Cooler combination, air-cooled DSG-2
3 Radial fan cooler combination

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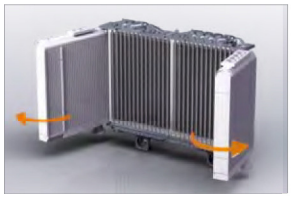
DSG-2 series

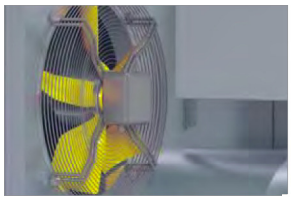
Efficient cooling systems

Air cooling:



Air cooling reduces operating costs

Air-cooled versions are designed to meet the demands of even the toughest operating environments and can be used in ambient temperatures as high as +45 °C. The low and high pressure stages are each equipped with their own stainless steel / aluminium cooler combinations.



KAESER standstill fan

Due to the standstill fan, the large radial fan of air-cooled systems can be shut down when the compressor is in standby mode. Heat trapped in the compressor is then safely removed through the energy-saving, temperature-controlled standstill fan.

Water cooling:

Parallel heat exchanger

Both the low and high pressure stages of water-cooled KAESER dry-running rotary screw compressors are equipped with their own dedicated parallel heat exchanger for enhanced heat transfer. This optimised cooling results in improved specific power performance.

Optimised water cooling

Water-cooled models are equipped with high efficiency air / water heat exchangers. CuNi10Fe cooling pipes with internal lamella fins provide optimum heat transfer and lowest possible compressed air discharge temperatures with minimal pressure loss.