

Rotary Screw Compressors HSD/HSD SFC Series

Free air delivery 10.1 to 86.0 m³/min – Pressure 5.5 to 15bar

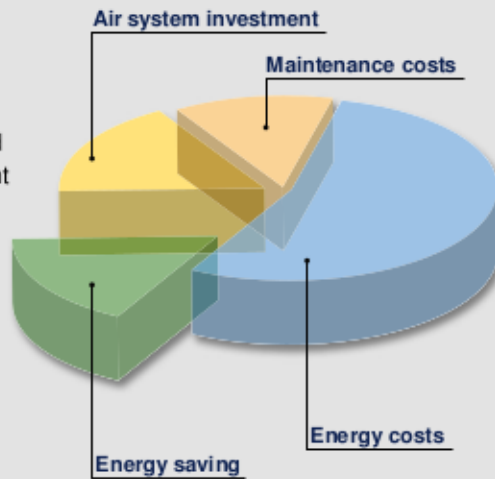


What do you expect from a compressor system?

As a compressed air user, you expect maximum efficiency and reliability from your air system.

That may sound simple, but these advantages are influenced by many different factors: Energy costs, for example, taken over the lifetime of a compressor, add up to a multiple of investment costs. Efficient energy consumption therefore plays a vital role in the production of compressed air, as does reliability of the compressor. In many cases, a reliable compressed air supply is essential to guarantee maximum performance from valuable production systems.

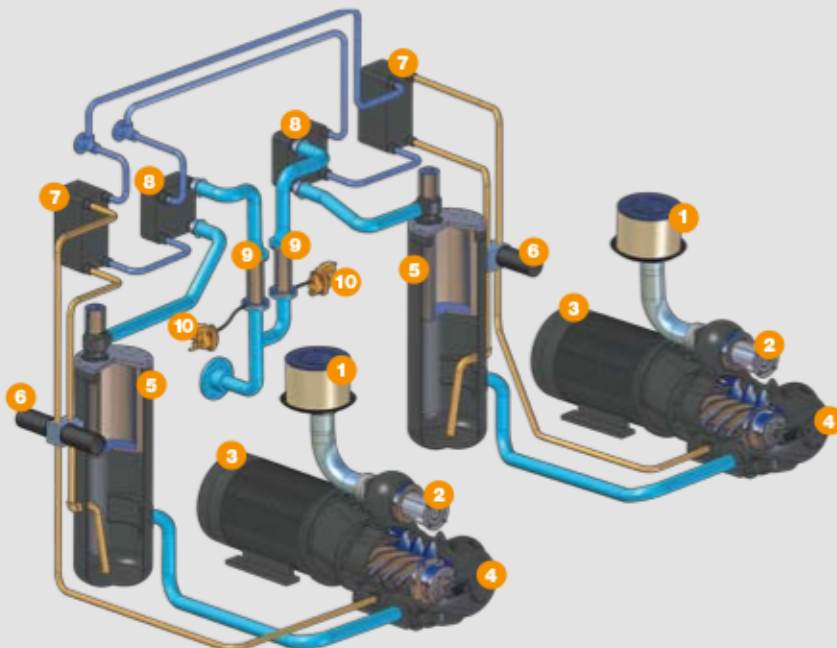
Reliability also ensures a supply of constant quality compressed air that optimises efficiency of the air treatment equipment downstream of the compressor. With regards to sound protection, it is always better to keep noise emissions to a minimum from the outset by using a quiet compressor rather than have to retro-fit sound protection measures later on. Last but not least, a truly efficient compressor is simple and cost-effective to maintain.



The HSD series from Kaeser

Comprising two self-contained compressor units installed within a single housing, these innovative systems set the new standard for compact design, high performance air delivery, reliability and efficiency.

Function diagram:



HSD Double depend



- 1 Air filter
- 2 Inlet valve
- 3 Electric motor
- 4 Rotary screw air end
- 5 Separator with cartridge
- 6 Fluid filter
- 7 Fluid cooler
- 8 Compressed air aftercooler
- 9 Centrifugal separator
- 10 ECO DRAIN condensate drain

HSD

Twin compressor performance

Versatility and meticulous design as standard

One of the key benefits of the HSD's clever design is the ability to provide high delivery volumes of quality compressed air to meet the needs of even the most demand-intensive applications (47 to 86 m³/min). System availability is also optimised, as each compressor section operates completely independently from the other, which means that performance can be precisely adjusted to suit requirement and costly idling can be kept to an absolute minimum.

Kaeser's meticulous attention to detail, such as large double doors to ensure component accessibility, or the use of 2 large internal fans for optimised cooling performance, ensure user-friendly operation and exceptional ease of maintenance.



Double dependability

The use of two completely independent compressor units in HSD systems ensures maximum compressed air dependability. If one unit is shutdown, approximately 50% of total compressed air delivery is still available.



More m³, less m²

HSD compressors provide more air and dependability with less space requirement: Up to 83 m³/min (HSD - HSD SFC up to 86 m³/min) and a footprint of only 7.45 m².

HSD

Reduced energy and maintenance costs

More air, more savings ...

Using only premium grade materials, KAESER manufactures all airend rotors and casings at its production facility in Coburg, Germany. Featuring KAESER's world renowned high efficiency "Sigma Profile" rotors, every airend is produced, tested and assembled in accordance with the strictest quality control standards to ensure outstanding performance and unrivalled energy efficiency.



2x



HSD – The new standard

"HSD" series rotary screw compressors are the perfect choice for users who require large volumes of quality compressed air. Moreover, these versatile units ensure maximum system availability thanks to their unique dual compressor design.



Centrifugal separator with ECO DRAIN

A centrifugal separator is installed in each compressor unit to provide pre-separation of condensate. The accumulated condensate from each unit is reliably drained off without pressure loss via an ECO DRAIN condensate drain.

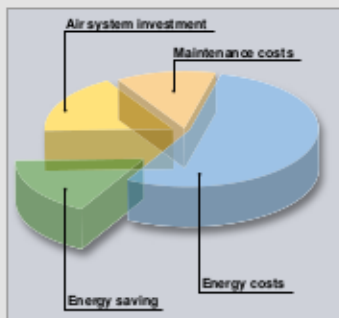
HSD SFC

Minimal space requirement, maximum po

What are the best uses for frequency control?

Users expect frequency controlled machines in particular to provide best possible matching of air production to air demand. This may sound fair enough, but two key aspects are required to turn this expectation into a reality: The first is detailed knowledge and experience regarding compressed air system planning and the second is a correspondingly wide range of products from which to choose in order to be able to meet the application's exact needs.

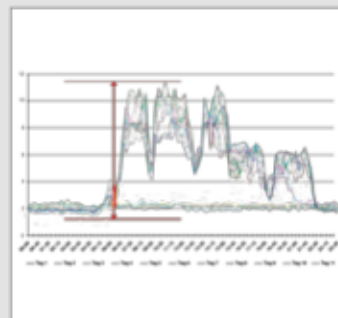
By eliminating the control gaps and excessive idling of conventionally controlled systems, installations comprising a combination of conventional and frequency controlled compressors from KAESER Kompressoren can achieve energy savings of over 50%.



Exceptional efficiency

Energy costs account for up to 80 percent of compressed air costs. The larger the compressor system, the greater the cost-saving effect of efficiency enhancement measures. KAESER's engineers therefore design

every compressor system with maximum efficiency in mind.



Air Demand Analysis (ADA)

Developed by KAESER, the computer-aided "Air Demand Analysis", or ADA for short, allows meaningful and accurate data to be gathered to aid compressed air system optimisation. From the resulting air consumption

profiles, KAESER's Energy Saving System (KESS) can then help determine the best system configuration for the individual air application.

HSD equipment

Complete unit

Ready for operation, fully automatic, silenced, vibration damped, all panels powder coated.

Sound insulation

Lined with glass-fibre laminated mineral wool, maximum 71-73dB (A) to PN8NTC 2.3 at 1 m distance, free-field measurement.

Vibration damping

Base frame with dual antivibration mountings using rubber bonded metal elements.

Airend

Genuine KAESER single stage rotary screw airend with SIGMA PROFILE rotors and cooling fluid injection.

Drive

Direct drive via high-flex coupling, without gearing.

Electric motor

Premium quality German-made motor. High efficiency, protected to IP 55, ISO F for greater power reserve. Also available with PTC100 thermistor sensors; externally lubricated bearings.

Connection from motor to airend

Cast coupling flange.

Electrical components

Control cabinet to IP 54, containing automatic star-delta starter, motor overload protection, control transformer and volt-free contacts for ventilation control.

Fluid and air flow

Dry air intake filter with pre-filtration, pneumatic inlet and venting valves, fluid reservoir with three-stage separator system, pressure relief valve, minimum pressure / check valve,

centrifugal separator, thermostatic valve and micro-filter in coolant circuit, all fully piped using flexible couplings.

Cooling

Water-cooling as standard, soldered plate heat exchanger, cabinet ventilation via two independently controllable fans.

SIGMA CONTROL

Interfaces for data communication comprising RS 232 for a modem, RS 485 for a slave compressor in base load sequencing mode and a Profibus DP interface for data networks.

Technical Specifications – HSD

Standard version (Water-cooled)

Model	Working pressure bar	FAD *) Complete package at working pressure m³/min	Max. working pressure bar	Rated motor power kW	Dimensions W x D x H mm	Sound level **) dB(A)	Weight kg
HSD 651	7.5	66.1	8.5	360	3470 x 2145 x 2350	71	8100
	10	53.4	12				
	13	43.0	15				
HSD 711	7.5	71.8	8.5	400	3470 x 2145 x 2350	72	8500
	10	59.4	12				
	13	46.2	15				
HSD 761	7.5	77.6	8.5	450	3470 x 2145 x 2350	72	8600
	10	65.1	12				
	13	52.3	15				
HSD 831	7.5	83.4	8.5	500	3470 x 2145 x 2350	73	8700
	10	70.8	12				
	13	58.4	15				

SFC-Versions with variable speed drive (water-cooled)

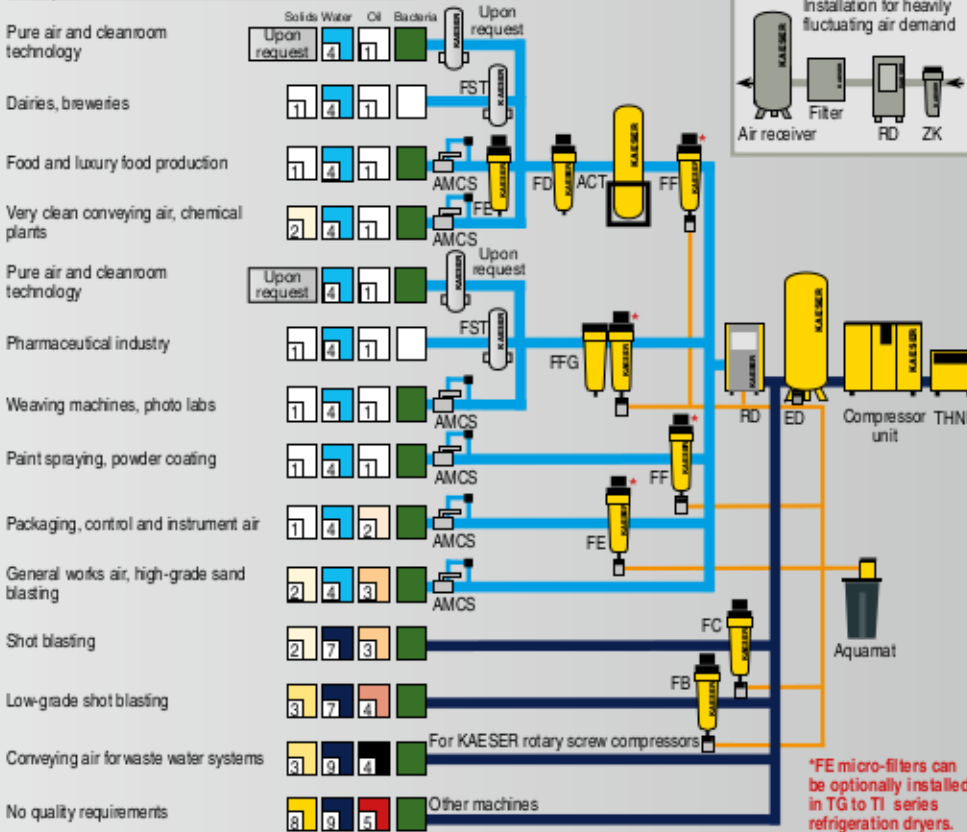
Model	Working pressure bar	FAD *) Complete package at working pressure m³/min	Max. working pressure bar	Rated motor power kW	Dimensions W x D x H mm	Sound level **) dB(A)	Weight kg
HSD 651 SFC	7.5	10.1 – 66.0	8.5	382	4370 x 2145 x 2350	73	9100
	10	8.4 – 56.1	12				
HSD 761 SFC	7.5	11.7 – 75.9	8.5	410	4370 x 2145 x 2350	74	9600
	10	9.8 – 63.8	12				
	13	8.0 – 54.0	15				
HSD 831 SFC	7.5	11.8 – 86.0	8	515	4370 x 2145 x 2350	75	10100
	10	9.8 – 73.6	12				
	13	9.4 – 62.6	15				

*) FAD of complete package as per ISO 1217 : 1996, Annex C: Absolute inlet pressure 1 bar (a), cooling and air inlet temperature 20 °C

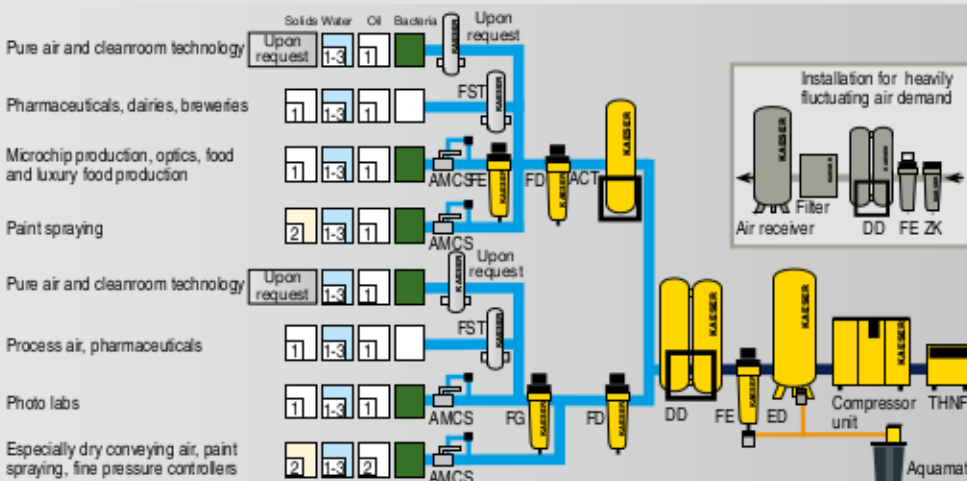
Choose the required grade of treatment according to your field of application:

Air treatment using a refrigeration dryer (pressure dew point + 3 °C)

Examples: Selection of treatment classes to ISO 8573-1¹⁾



For air mains subject to sub-zero temperatures: Compressed air treatment with a desiccant dryer (pressure dew point to -70 °C)



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