

Rotary Screw Compressors With Fluid Cooling

With 1:1 Direct Drive

CSD SERIES

Flow rate from 1.05 to 16.95 m³/min, Pressure 5.5 to 15 bar



BSD – Setting the standard

KAESER Compressors N pushes the boundaries of compressed air efficiency once again with its latest generation of CSD and CSDX series rotary screw compressors. The value-added user benefits are immediately apparent just by taking a quick glance at the completely redesigned compressor enclosure.

CSD/CSDX – Quadruple savings

These versatile rotary screw compressor ranges provide significant energy savings in four ways: Firstly, low speed SIGMA PROFILE airends equipped with flow-optimised rotors have enabled specific power to be reduced by up to six percent compared with previous models. Secondly, the use of IE3 drive motors maximises energy efficiency (use of these motors became mandatory in the EU from the 1st of January 2015). Thirdly, KAESER's 1:1 drive design eliminates the transmission losses associated with gear or V-belt driven systems, as the motor directly drives the airend. Fourthly, the SIGMA CONTROL 2 compressor controller enables compressor performance to be precisely matched to actual air demand thereby allowing additional energy savings.

Perfect partners

CSD and CSDX series rotary screw compressors are the perfect choice for high efficiency compressed air systems in industrial settings. The internal SIGMA CONTROL 2 compressor controller offers numerous communication channels, which allows seamless communication with advanced master controllers, such as KAESER's SIGMA AIR MANAGER, and in-house centralised control systems. This enables simple set-up and achieves unprecedented levels of efficiency.

Ease of maintenance ensures savings

The distinctive and eye-catching design of these systems from the outside is complemented by intelligent component layout on the inside for even greater energy efficiency: All service and maintenance points are within easy reach and are directly accessible from the front of the unit.

Electronic Thermo Management (ETM)

Powered via an electric motor, the sensor-controlled temperature control valve integrated into the cooling circuit is the heart of the innovative Electronic Thermal Management (ETM) system. The new SIGMA CONTROL 2 compressor controller monitors intake and compressor temperature in order to prevent condensate formation, even with differing air humidity conditions. ETM dynamically controls the fluid temperature - low fluid temperature enhances energy efficiency. This system also enables end users to better adapt heat recovery systems to suit their specific needs.

Complete package

1. Ready for operation.
2. Fully automatic.
3. Super silenced.
4. Vibration-damped.
5. All panels powder-coated.
6. For ambient temperatures up to +45 °C.
7. Service-friendly design: Motor bearing lubrication from the outside (also fan motor).

Airend

1. Single stage with cooling fluid injection for optimal rotor cooling.
2. Genuine KAESER screw compressor airend with energy-saving SIGMA Profile.
3. 1:1 drive.

Cooling fluid and air circuit

1. Dry air intake filter with pre-filtration.
2. Inlet silencer.
3. Inlet and vent valves, pneumatic.
4. Cooling fluid separation tank with three-stage separation system.
5. Safety valve.
6. Minimum pressure check valve.
7. Thermostatic valve and eco fluid filter in coolant circuit.
8. Fluid and compressed air cooler.
9. Fan motor, speed-controlled (CSDX).
10. Centrifugal separator with electronically-controlled condensate drain for energy savings without pressure loss.
11. Piping and centrifugal separator made from stainless steel.

Refrigeration dryer (T models)

1. Scroll refrigerant compressor with energy-saving shut-down feature.
2. Linked to operational status of the compressor when inactive.
3. Alternatively, continuous operation can be selected on site.
4. With electronically-controlled, energy-saving condensate drain.
5. Contains fluorinated greenhouse gas R-134a.

Electrical components

1. Super Premium-Efficiency IE4 drive motor with Pt100 windings temperature sensor for motor monitoring.
2. Control cabinet to IP 54.
3. Control cabinet ventilation.
4. Automatic star-delta starter.
5. Overload relays.
6. Control transformer.
7. SFC versions also with frequency converter.