Rotary Screw Compressors
CSD Series
With the world-renowned SIGMA PROFILE ®
Free air deliveries 5.5 to 12 m³/min, Pressure 5.5 to 15 bar
One-to-one drive – Ultimate efficiency

The drive motor and the airend in CSD series compressors are designed to operate at the same low speed. This enables the drive and compression units to be linked via a maintenance-free coupling, which avoids the transmission losses associated with gear driven units. One-to-one drive reduces the number of components needed in comparison with gear drive, significantly increasing reliability and service life. Sound levels are also considerably lower. The airend in each CSD model is designed to specifically match air demand and ensures outstanding efficiency through low-speed operation of only 2980 rpm.
Optimised oil separation system

CSD machines are fitted with a new, highly efficient separator system. The cooling fluid is initially separated from the compressed air by centrifugal force in the separator tank. Only a minimal amount of fluid remains to be removed by the high capacity, deep-bed filter in the separator cartridge. These two factors double the operational life of the cartridge compared with conventional systems and ensure minimum aerosol content in the compressed air delivery (< 1 mg/m³). The improved air quality eases the burden on the downstream air treatment components. The optional filter pressure drop monitoring set further enhances efficient operation.

Synthetic coolant

SIGMA FLUID, a KAESER synthetic coolant, allows an extended service interval of over 6000 operating hours. Nevertheless, as a preventative protection measure for your equipment, we strongly recommend that a fluid analysis be carried out after 6000 operating hours due to the varied nature of environmental and intake conditions. Due to its lower vapour pressure, less SIGMA FLUID is consumed in comparison with mineral oils and its reduced tendency to emulsify makes condensate treatment and disposal easier and less expensive. SIGMA FLUID therefore not only helps reduce service costs but also increases reliability.

Easy maintenance

All models feature high quality, durable components that are positioned logically and contribute to the outstanding performance and reliability of these compressor packages. Component accessibility is made simple through wide opening doors, easy lift off panels and a sensible design that ensures unrivalled ease of maintenance. The rear and left side of CSD units can be positioned right next to a wall to maximise use of space.

SIGMA CONTROL

Based on robust PC architecture, the SIGMA CONTROL offers the possibility of Dual, Quadro, Vario and Continuous control. Clearly marked navigation and input keys on the user interface are used to move around within the menu options of the four line alpha-numeric display. This powerful compressor controller can also display information in any 1 of 30 selectable languages at just the press of a button. The SIGMA CONTROL automatically controls and monitors the compressor package. The Profibus interface enables exchange of data and operational parameters allowing the SIGMA Control to communicate with other air management systems such as the SIGMA Air Manager. Interfaces are provided as standard for connection of a modem, a second compressor in base-load sequencing mode and for connection to data networks (Profibus DP).
**Equipment**

**Complete unit**
Ready for operation, fully automatic, super silenced, vibration damped, all panels powder coated.

**Sound insulation**
Lined with washable plastic foam: maximum 70 dBA to PN8NTC 2.3 at 1 m distance, free-field measurement.

**Vibration damping**
Double insulated anti-vibration mountings using rubber bonded metal elements.

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

**Electric motor**
Direct, torsional-elastic coupling, without gearing.

**Electric motor**
High efficiency EFF1-rated motors consume less power for greater output and are standard throughout the range of KAESER compressors. The motors are protected to IP55 and conform to insulation Class F for greater power reserve. Also available with PTC thermistor sensors for full motor protection.

**Connection from motor to airend**
Airend with integral 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, thermostatic valve and micro-filter in coolant circuit, all fully piped using flexible Aerquip couplings.

**Cooling**
The standard version is air cooled; separate aluminium coolers for compressed air and fluid, radial fan driven by its own motor.

**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.

**Dimensions**
Ergonomic control panel
Red, yellow and green LEDs show system operational status at a glance. Also features a four-line plain text display, 30 selectable languages, touch keys with icons and a duty cycle indicator.

**Prime functions**
Fully automatic monitoring and regulation of airend discharge temperature; monitoring of motor current, direction of airend rotation, air filter, fluid filter and fluid separator cartridge; display of performance data, service intervals of primary components, operating hours, status data and event memory data. Selection of Dual, Quadro, Vario and Continuous control modes as required.

*(For further information refer to SIGMA CONTROL / SIGMA CONTROL BASIC brochure P-780)*

**KESS (KAESER’s Energy Saving System)**
Provides comprehensive analysis of your compressed air usage, enabling KAESER’s experts to plan and design a system that is specially tailored to meet all of your compressed air needs. Typically ensuring a 95-98% load capacity.

**CSD Series – Technical Specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. working pressure bar</th>
<th>FAD*)</th>
<th>Max. working pressure m³/min</th>
<th>Rated motor power KW</th>
<th>Dimensions W x D x H mm</th>
<th>Sound level **)</th>
<th>Weight kg</th>
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<tbody>
<tr>
<td>CSD 82</td>
<td>7.5 10 13</td>
<td>8.26 6.69 5.90</td>
<td>8 11 15</td>
<td>45</td>
<td>1650 x 1041 x 1865</td>
<td>70</td>
<td>1260</td>
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<tr>
<td>CSD 102</td>
<td>7.5 10 13</td>
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<td>1650 x 1041 x 1865</td>
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<tr>
<td>CSD 122</td>
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<td>12.01 10.06 8.08</td>
<td>8 11 15</td>
<td>75</td>
<td>1650 x 1041 x 1865</td>
<td>72</td>
<td>1330</td>
</tr>
</tbody>
</table>

*) FAD to ISO 1217: 1996, Annex C. **) Sound level to PN8NTC 2.3 at 1 m distance, free-field measurement

**Comprehensive design know-how**
KEASER’s design know-how provides exceptional efficiency and produces application-specific quality compressed air at lowest possible cost. Use this expertise to your advantage and let KAESER design your compressed air system.

**Dimensions**

View from right

Front view

Rear view

3D-View
Compressors

AMCS

1-3

FE

DD FE ZK

Spraying, fine pressure controllers

Especially dry conveying air, paint

Photo labs

Process air, pharmaceuticals

Paint spraying, fine pressure controllers

PE21300611 Specifications are subject to change without notice