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

- **THNF** = Bag filter
  - Air treatment using a refrigeration dryer (+3°C pressure dew point)
- **ZK** = Centrifugal separator
  - Separates accumulating condensate
  - Installation for heavily fluctuating air demand
- **ED** = Eco Drain
  - Upon request
- **FD** = Particulate filter
  - Separates aerosol oil and solid particles
- **FE** = Micro-filter
  - Upon request
  - Very clean conveying air,
  - Chemical plants
- **FG** = Activated carbon filter
  - Upon request
  - For sterile compressed air
  - Pharmaceutical industry, dairies, breweries
  - Food and semi-luxury food production
  - Process air, pharmaceuticals
- **DD** = Desiccant dryer
  - For drying compressed air, pressure dew point to -70 °C
- **ACT** = Activated carbon adsorber
  - For adsorption of oil vapours
  - Paint spraying, powder coating
- **RD** = Refrigeration dryer
  - For drying compressed air, pressure dew point to +3 °C
- **FST** = Sterile filter
  - For sterile compressed air
  - Packaging, control and instrument air

Contaminants: Solids, Water, Oil, Bacteria

Degree of filtration:

1) Humidity
   - Max. particle size
   - Class ISO 8573-1

2) Content
   - Max. particle concentration
   - 0.01 mg/m³
   - 0.1 mg/m³
   - 0.1 mg/m³
   - 0.1 mg/m³
   - 0.01 mg/m³
   - 0.5 mg/m³
   - 1 mg/m³
   - 5 mg/m³
   - 21 mg/m³

3) Pressure dew point
   - ≤ -20 °C
   - ≤ -40 °C
   - ≤ -70 °C

4) Oil content
   - ≤ 0.01 mg/m³
   - ≤ 0.1 mg/m³
   - ≤ 0.5 mg/m³
   - ≤ 1 mg/m³
   - ≤ 5 mg/m³
   - ≤ 21 mg/m³
   - ≤ 54 mg/m³
   - ≤ 94 mg/m³
   - ≤ 35 mg/m³
   - ≤ 1 mg/m³
   - ≤ 0.1 mg/m³
   - ≤ 0.01 mg/m³

Specifications are subject to change without notice.
KAESER –
The global compressed air systems provider

KAESER was established in 1919 as a machine workshop, but started on the road to becoming one of the world’s leading compressed air system providers in the 1950s when founder, Carl Kaeser Snr, made the decision to start manufacturing reciprocating compressors. The breakthrough on the road to today’s market-leading position among the world’s top compressed air system suppliers came when KAESER developed the rotary screw airend featuring the SIGMA PROFILE.

With expertise and commitment from 3,500 dedicated employees worldwide, KAESER now ranks amongst the world’s largest and most successful compressor manufacturers, exporting compressed air system equipment to almost every corner of the planet.

Main plant, Coburg

The KAESER headquarters in Coburg currently employs approx. 1600 people. The facility covers an area of over 120,000 m² and produces KAESER’s extensive range of compressors.

All companies in the international KAESER group are linked by the very latest information- and network-technology.

Contents:

KAESER – The global compressed air systems provider
More air, more savings... KAESER rotary screw compressors with V-belt drive (to 22 kW)
KAESER rotary screw compressors with 1:1 drive (to 315 kW)
KAESER rotary screw compressors with refrigeration dryer (to 22 kW)
KAESER rotary screw compressors with refrigeration dryer (to 132 kW)
KAESER rotary screw compressors with Sigma Frequency Control (SFC)
SIGMA CONTROL and SIGMA CONTROL BASIC
Information technology – Tailored system solutions
Premium quality, precision machined
Expert advice and professional customer service
More and more users choose KAESER
Technical specifications
More air, more savings...

KAESER SIGMA PROFILE

Developed by KAESER and continuously enhanced ever since, the KAESER SIGMA PROFILE brings power savings of up to 15 percent compared with conventional screw air end rotor profiles.

All KAESER rotary screw air ends feature this energy-saving rotor profile and are designed to ensure maximum energy efficiency.

The generously-sized, precision-aligned roller bearings and close-tolerance machining guarantee long service life and outstanding reliability.

Energy-saving compressor air end with SIGMA PROFILE rotors

A specific drive power can be used to turn a smaller air end at high speed or a larger air end at slow speed. Larger, lower speed air ends are more efficient and deliver more compressed air for the same drive power.

This is why KAESER manufactures low speed air ends with optimised rotor profiles. Every KAESER rotary screw compressor quickly pays for itself through significant savings in energy costs.

Energy saving controllers SIGMA CONTROL and SIGMA CONTROL BASIC

The SIGMA CONTROL automatically regulates and monitors the compressor. It is a robust PC-based industrial computer with real-time operating system and update capability. System operating status can be viewed at a glance via user-friendly ‘traffic light’ LEDs. The four-line plain text display, touch keys and icons ensure ease of operation.

In case of an alarm, the safety shutdown sequence immediately switches the compressor off. The SIGMA CONTROL offers the possibility of Dual, Quadro and Vario Control modes and the most efficient mode can be determined directly onsite using the programmable compressor duty cycle display feature.

Interfaces are provided as standard for connection of a modem, a second compressor in base load sequencing mode and for connection to data networks.

Lower life-cycle costs

Energy costs taken over the lifetime of any compressor add up to many times that of the initial capital cost, which can make any purchase price difference a false economy. Efficiency and reliability are vital in the production of compressed air and KAESER achieves these objectives with quality, durable components that are built to last.

Energy-saving KAESER rotary screw compressors can help users to significantly reduce their compressed air costs.
KAESER rotary screw compressors with V-belt drive (to 22 kW)

How KAESER rotary screw compressors work

Atmospheric air is drawn through the inlet filter (1) into the airend (2) where it is compressed. The airend is driven by the electric motor (3). Specially developed SIGMA FLUID is injected into the airend to serve as coolant, lubricant and sealant. Under normal conditions the air reaches a temperature of only approx. 80 °C during compression.

A three-stage separator (4) removes the cooling fluid from the compressed air. The fluid passes through the cooler, the microfilter and back to the point of injection. A thermostatic valve (5) regulates and optimises the fluid temperature. The air emerges from the separator cartridge with a remaining fluid content of less than 2 mg/m³, passes through the minimum pressure check valve (6) and finally through the after-cooler (7).

In the after-cooler the air is cooled down to between 5 and 10K above ambient. Most of the moisture carried in the air is removed in the after-cooler. The air finally leaves the compressor at the outlet (8).

Efficient KAESER V-belt drive

KAESER screw compressors with V-belt drive provide outstanding efficiency and reliability. KAESER was one of the first compressor manufacturers to introduce the V-belt drive system. The KAESER drive is characterised by an automatic tensioning device that ensures constant transmission efficiency and reduced maintenance costs. Furthermore, rotary screw compressors with V-belt drive are especially flexible should an increase in working pressure become necessary.

Save energy with the KAESER SIGMA PROFILE

Every KAESER rotary screw airend is equipped with energy-saving SIGMA PROFILE rotors. Meticulous engineering to the highest quality standards and precision-aligned roller bearings ensure long service life and outstanding reliability.

SIGMA CONTROL

This internal compressor controller is a robust PC-based industrial computer with a real-time operating system and update capability. System operational status can be displayed in any one of 30 selectable languages, whilst ‘traffic light’ style LEDs indicate status at a glance.

Automatic belt tensioning

The automatic belt tensioning device ensures consistent transmission efficiency and excellent drive system reliability.

Cooling air filter mats

Ambient air used for cooling is contaminated to some degree, but the filter mats through which the air is drawn into the cabinet prevent the cooler from clogging.

Optimised separation system

The combination of optimum flow separation and the special separator cartridge results in a minimal fluid content of less than 2 mg/m³ in the discharged compressed air. The separator system also requires very little maintenance.
**KAESER rotary screw compressors with 1:1 drive (to 315 kW)**

**Why 1:1 drive?**
In compressed air packages featuring 1:1 direct drive the motor drives the airend directly without transmission loss via a maintenance-free coupling. 1:1 direct drive rotary screw compressors provide outstanding performance and enable significant savings.

KAESER’s comprehensive range of specially designed airends are manufactured and developed to meet every compressed air user’s needs.

**Efficient cooling system**
In addition to improved cooling efficiency, the system has further benefits to offer. The inside of the cabinet remains clean because surrounding air is drawn through the cooler into the cooler box and then exhausted directly upward out of the machine. Contamination from the cooling air is trapped on the outside of the cooler. Clogging is easily noticed and quickly cleaned off without the need for any dismantling work. Operational reliability is improved and maintenance requirement is significantly reduced.

**Triple savings with 1:1 drive:**
- No power transmission losses.
- Large, low speed airends provide more air for less energy.
- Significantly reduced maintenance costs.

**Energy-saving SIGMA PROFILE**
Every KAESER rotary screw airend is equipped with energy-saving SIGMA PROFILE rotors. Components manufactured to the highest standards and precision aligned roller-bearings ensure long service life with maximum reliability.

**Low speed operation**
Large, low speed airends are more efficient than small high speed airends because they supply more air for the same drive power. Low speeds mean less wear and consequently less maintenance costs.

**Energy-saving 1:1 drive**
1:1 drive reduces the number of components needed in comparison with gear drive, increasing reliability and service life through elimination of wear and transmission losses.

**Powerful radial fan**
The quiet and powerful radial fan draws in cool ambient air through the cooler. Its high residual thrust can deal with partial clogging of the cooler and still have enough reserve to allow connection of a long exhaust duct. In addition, the radial fan consumes significantly less drive power than conventional axial fans, saving even more energy.

**SIGMA CONTROL**
This internal compressor controller is a robust PC-based industrial computer with a real-time operating system and update capability. System operational status can be displayed in any one of 30 selectable languages, whilst ‘traffic light’ style LEDs indicate status at a glance.
KAESER rotary screw compressors with refrigeration dryer (to 22 kW)

Aircenter – The compact air system
The KAESER AIRCENTER is a complete, turnkey system for the production of dry compressed air.

The arrangement of a KAESER screw compressor with its highly efficient SIGMA Profile airend, together with an energy efficient SECOTEC refrigeration dryer mounted on a horizontal air receiver, creates a compact and highly economical package. Furthermore, minimal installation work is required compared with conventional compressed air systems.

Space-saving combination of rotary screw compressor and refrigeration dryer
A major design feature of the KAESER AIRTOWER range is that the compressor and slide-out dryer are both completely separate, independently functioning modules. This means that each can be operated individually making it possible to isolate and service the dryer whilst the compressor is operating. As the dryer is contained in its own separate cabinet, there is sufficient space to allow the dryer components to be generously sized yet easily accessible.

Energy-saving refrigeration dryers
The dryer shut-down feature – which is linked to compressor operation – significantly reduces energy consumption.

Save energy with the KAESER SIGMA PROFILE
Every KAESER rotary screw airend is equipped with energy-saving SIGMA PROFILE rotors. Components manufactured to the highest standards and precision aligned roller-bearings ensure long service life with maximum reliability.

SIGMA CONTROL
This internal compressor controller is a robust PC-based industrial computer with a real-time operating system and update capability. System-operational status can be displayed in any one of 30 selectable languages, whilst ‘traffic light’ style LEDs indicate status at a glance.

Professional planning
Compressed air supply system with separate components

Compressed air supply system with Aircenter
Only properly designed air systems can meet the demands for air quality, availability and efficiency that are placed on a modern compressed air supply. Therefore let KAESER design your compressed air supply system.
The innovative ASD T to CSDX T series

ASD T to CSDX T rotary screw compressors are versatile, reliable and highly efficient.

With an integrated refrigeration dryer module, these complete air systems provide a dependable source of quality compressed air.

The air compressor and refrigeration dryer are installed in separate cabinets, which not only prevents exposure of the dryer to any heat from the compressor unit, but also enables excellent component accessibility for ease of maintenance.

Turnkey operation

Attached to the standard compressor unit, the refrigeration dryer module is delivered fully connected and ready for operation. The separate cabinet design allows the dryer components to be generously sized yet easily accessible and shields the dryer from exposure to heat arising from the compression process. The high performance cooling system ensures reliable air package operation up to an ambient temperature of +45 °C.

Energy-saving refrigeration dryers

The dryer shut-down feature - which is linked to compressor operation - significantly reduces energy consumption.

Efficient centrifugal separator

A centrifugal separator with an electronically controlled ECO DRAIN is located upstream of the refrigeration dryer, ensuring reliable, efficient initial condensate separation and drainage even at high ambient temperatures and humidity.

Dependable refrigeration drying

The refrigeration dryer is also equipped with an electronic ‘ECO DRAIN’. The level-controlled condensate drain eliminates the compressed air losses associated with solenoid valve control, which not only saves energy, but also enhances operational reliability.

Space-saving modular design

The refrigeration dryer module turns a standard rotary screw compressor into a compact compressed air supply system. All components are easily accessible, both simplifying and speeding up all maintenance work.

Reliability with SIGMA CONTROL

The SIGMA CONTROL constantly monitors compressor, dryer and condensate drain operation. Warning and alarm messages can be transferred to a central control system.
KAESER rotary screw compressors with Sigma Frequency Control (SFC)

Outstanding performance with SFC
SM SFC to FSD SFC series compressors from KAESER are exceptionally efficient variable speed rotary screw compressors. SM, SK and ASK SFC models use KAESER’s minimal maintenance V-belt drive system, which features automatic belt tensioning to ensure optimum power transmission. Larger models from the ASD SFC upwards are equipped with the speed-controlled 1:1 direct drive.

The large, slow-speed KAESER airenDs with energy-saving SIGMA PROFILE rotors provide outstanding performance throughout the entire control range. Every KAESER SFC compressor model is capable of 100 percent duty cycles without any increase in maintenance requirement.

Ultimate efficiency with 1:1 drive
Significantly increasing reliability and service life, 1:1 drive (available with ASD SFC upwards) reduces the number of components needed in comparison with gear drive and eliminates the associated transmission losses. Sound levels are also considerably lower.

The benefits speak for themselves: efficient power transmission, optimal energy consumption and reduced servicing / downtime costs.

SIGMA CONTROL
This internal compressor controller is a robust PC-based industrial computer with a real-time operating system and update capability. System operational status can be displayed in any one of 30 selectable languages, whilst ‘traffic light’ style LEDs indicate status at a glance.

Consistent pressure
SFC compressors are able to control air flow to match actual demand by continuously adjusting the airend speed within the given control range. Pressure can be maintained to within ± 0.1 bar, consequently enabling the maximum system pressure to be reduced. This can lead to significant savings, as each 1 bar pressure decrease results in a six percent reduction in energy consumption.

Perfect performance – even at high ambient temperatures
Contained in its own separately cooled cabinet, the generously sized SFC module enables perfect performance at ambient temperatures of up to +45 °C.

Complete package EMC certified
The electromagnetic compatibility (EMC) of components and of the complete machine has been tested and certified in accordance with all applicable regulations.

Soft start with no current spikes
The soft rise in motor starting current from zero to full load without current spikes leads to an almost unlimited motor starting frequency (the number of possible motor starts within a given time period without overheating occurring). The continuously variable acceleration and deceleration significantly reduces component stress.
SIGMA CONTROL and SIGMA CONTROL BASIC
Tailored intelligence

SIGMA CONTROL for SX to HS series compressors

With its versatile control, monitoring and communication abilities, the SIGMA CONTROL is the ideal choice for applications requiring sophisticated communication functionality. It is therefore fitted as standard on all KAESER ASD to HS series rotary screw compressors and is optionally available for SX, SM, SK and ASK series compressors.

SIGMA CONTROL basic available with SX, SM, SK and ASK series compressors

The SIGMA CONTROL basic is available with KAESER’s SX, SM, SK and ASK series rotary screw compressors. It is the perfect solution for users who initially require a single compressor for their air supply, but who also may wish to expand the compressed air system in the future. Furthermore, KAESER’s modular control and compressed air management concept ensures trouble-free system compatibility.

SIGMA CONTROL – Main Features

- 30 languages – large plain text display
- Three-channel timer with ten settings per channel for day, week and year
- Base-load changeover for two compressors
- Dual, Quadro, Varios and Continuous control modes
- Signal input for remote ON/OFF
- Signal input for load/idle
- External alarm e.g. for refrigeration dryer
- External maintenance alarm e.g. for ECO DRAIN
- Volts-free contacts: Controller on, group alarm, motor running, alternative factory adjustable volts-free contacts: Compressor ON, group alarm, remote operation, idle, on-load, timer active, timer contact, emergency off, bus alarm, air network pressure loss
- “Motor running” changeover contact for ventilation systems, volts-free, max 3 A, 230 V ±10%
- Service hours counter, measurement and status data interfaces: RS 232 for modem, RS 485 for slave compressor, Pro//Bus DP
- Safety circuit for compressor protection
- Electronic pressure transducer
- Configurable inputs / outputs for additional functionality

This list only highlights some of the SIGMA CONTROL’s functionality.

SIGMA CONTROL basic – Main features

- Quick and simple operation with clear icons and large display
- Fully automatic DUAL control (full load idle on/off control)
- Monitoring of air network pressure parameters, ambient temperature and direction of rotor rotation
- Counter for service, load and operation hours
- Adjustable service intervals, pressure and temperature unit selection (bar/psi/MPa, °C/°F)
- Adjustable nominal system pressure
- Adjustable switching differential
- Group alarm volts-free contact
- Electronic pressure transducer

The function keys in detail

Basic functions

- ON key switches the compressor ‘ON’ -> automatic operation. Green LED indicates ‘Compressor ON’.
- OFF key switches the compressor ‘OFF’.

Additional functions

- Idle key switches the compressor from load to idle.
- Idle icon green LED indicates ‘Compressor idling, no air supply’.
- Load icon green LED indicates ‘Compressor on load, air being supplied’.
- Remote ON key (green LED) switches remote control ‘ON’ and ‘OFF’.
- Timer ON/OFF key (green LED) switches the timer ‘ON’ and ‘OFF’.

‘Traffic light’ functions

- Alarm on/off LED indicates ‘Compressor alarm’. Compressor is shut down on alarm.
- Communication alarm on/off LED indicates ‘Data communication to other systems interrupted or faulty’.
- Maintenance icon yellow LED indicates ‘Maintenance due’ or ‘Maintenance counter exceeded’ or ‘Warning’.
- Power ON icon (green LED) indicates ‘Main switch ON, power supply available’.

Menu functions

- UP key scrolls through text line by line.
- DOWN key scrolls through text line by line.
- ESC key returns to next higher menu level.
- Return key initiates jump to next sub-menu or accepts value.
- Acknowledge key confirms alarm and – when permitted – resets the alarm memory.
- Info key accesses current event information memory.

The optional memory module...

...enables compressors equipped with the SIGMA CONTROL basic to be connected to master control systems such as the KAESER SIGMA AIR MANAGER.
Information technology
Tailored system solutions

Tomorrow’s technology, today: SIGMA AIR MANAGER

The SIGMA AIR MANAGER from KAESER is the first PC-based master compressed air management system to combine cutting-edge Internet and Web server technology within a single unit. The SIGMA AIR MANAGER optimises compressor operation: it minimises power requirement by automatically selecting the most favourable machine configuration from up to 16 compressors. The Sigma Air Manager takes advantage of modern pressure band control to regulate pressure to within ±0.1 bar, enabling maximum system pressure to be reduced. This can lead to significant savings, as each 1 bar decrease results in a six percent reduction in energy consumption.

The SIGMA AIR CONTROL basic data visualisation feature, integrated as standard in every SIGMA AIR MANAGER master controller, allows current operational data, messages and alarms to be viewed at any time via the Internet simply by using a standard browser and requires no additional software.

Visualisation and long-term analysis with SIGMA AIR CONTROL basic and SIGMA AIR CONTROL plus (Optional)

- Long-term data measurement for reporting, analysis, control and audits
- For targeted compressed air cost reduction
- Highly informative energy cost summaries
- Additional cost pools can be added
- No additional software required (system uses Internet Explorer)
- Visualisation via RS 232/Intranet/telephone network
- Real-time data online

Compressed air system data stored and processed in the SIGMA AIR MANAGER can be transferred via telephone or computer network (Ethernet).

SMS messages, for example, can be forwarded to a service technician’s mobile telephone.

Service and/or alarm messages can be sent by SMS to a personal mobile telephone.

Long-term data storage and compressed air auditing is also available if required (SIGMA AIR CONTROL plus).

The internal SIGMA CONTROL compressor controller forms the basis for comprehensive system monitoring and management. Data exchange between the SIGMA CONTROL and SIGMA AIR MANAGER is carried out via the Profinet DP interface.

Rotary screw compressor
- With energy-saving motor for minimised energy costs
- Highly efficient SIGMA PROFILE ensures more air for less energy consumption

SIGMA-CONTROL compressor controller
- Proven Siemens industrial PC
- Future compatible with update capability
- Exceptional versatility, even allows connection of external components (e.g., refrigeration dryer)
- Prepared for Teleservice and connection of control and communication systems (Profinet DP) as standard with multi-function timer

Compressed air management system
SIGMA AIR MANAGER

Refrigeration dryer
- Ensures quality, dry compressed air
- Condensate-free compressed air, 3 °C pressure dew point
- SECOTEC cycling control enables up to 90% energy savings

Air filters
- For clean compressed air
- Minimal pressure drop

Centrifugal separator
- Consistent degree of separation

Air cooler
- Galvanised both internally and externally as per DIN 50976
- Long service life
- Condensate drain
- Automatic electronic-controlled condensate drain
- Unimpaired reliability
- No compressed air losses

Oil/water separation system
- Treats compressor condensate
- Complies with applicable water regulations
- Approved by the Berlin Structural Engineering Institute
- Saves disposal costs

Air mains charging system
- Treated compressed air even when network is depressurised
- Significantly reduced leakage losses
Premium quality, precision machined

Research and development
Ongoing research and development help KAESER maintain and extend its competitive edge. KAESER is dedicated to producing maintenance-friendly compressed air equipment of the highest quality to provide maximum reliability and efficiency.

Precision milling and grinding
The SIGMA PROFILE rotors are machined on CNC profile grinders to an accuracy of one micron.

Detailed inspection
Each rotor pair undergoes detailed inspection for fitting accuracy and interplay.

Meticulous assembly
All airends and compressor packages are assembled to the highest standards by KAESER’s qualified specialists in accordance with KAESER’s Quality Management System.

Environmentally-friendly powder coating
KAESER screw compressor enclosures feature a highly resilient and durable powder-coated surface. Subjected to a specialised 180°C treatment process, the topcoat is corrosion- and scratch-resistant and meets the toughest demands.

Flexible machining centres
Modern machining centres installed in specially air conditioned rooms produce the rotors and casings for KAESER airends. Quality management to ISO 9001 ensures unrivalled product quality.

Continuous quality control
Precision machining tolerance inspection via state-of-the-art 3-D coordinate measuring equipment ensures consistent product quality and component characteristics.

Comprehensive testing
Efficient and reliable rotary screw compressors are the result of thorough production and quality assurance. Before delivery, every compressor has to undergo comprehensive testing, during which all mechanical and electrical inspection results are recorded.
Expert advice and professional customer service – SIGMA AIR SERVICE

Global service and advice
KAESER is represented throughout the world by in-country subsidiaries and qualified partners. No matter where, our customers can rely on fast and dependable customer support.

Certified Quality Management System
KAESER’s QM system to DIN/ISO 9001 is under constant development to ensure our high standards – now and in the future.

SIGMA AIR UTILITY
“SIGMA AIR UTILITY” – just buy the air you need. Now you can buy compressed air at a fixed price per unit, just like electricity, or any other utility.

Optimised air supplies
After carrying out a computer-aided Air Demand Analysis (ADA), we will quickly determine your business’s compressed air demand and provide an exact itemised air cost analysis. With help from KAESER’s Energy Saving System (KESS), the ADA data forms the basis for determining a cost-optimised air supply system.

Worldwide Teleservice
KAESER TELECARE, a cost-saving service solution based on global networking and data communication, enables remote diagnosis and demand-oriented maintenance. The service provides improved availability and optimised overall air supply efficiency.

Outstanding customer service
Our goal is total customer satisfaction, which is why we have installed a worldwide service network providing global customer support. Expert service technicians and engineers are available throughout the world to give fast, reliable help where you need it, when you need it.

Genuine KAESER parts
KAESER’s service personnel use only genuine maintenance and spare parts with proven long-term quality to ensure unrivalled reliability and long service life. Only Kaeser original parts guarantee tested quality.
More and more users choose KAESER

Pressure and vacuum applications
KAESER rotary blowers with OMEGA PROFILE are used in pressure/vacuum applications for drying, aerating waste water clarifiers, conveying powder or granular material, cleaning by suction, inspection and packaging.

Tunnelling and water pollution protection
Diesel-powered MOBILAIR compressors are as economical as they are versatile. They are used in a wide range of applications, such as supplying air for tunnel construction projects (e.g. the Cologne city transit tunnel) or for oil booms used for oil spill containment in harbours.

Trade and industry
The majority of industrial compressed air requirements are met by rotary screw compressors, which are also being increasingly used in trade and workshop applications. KAESER screw compressors with SIGMA PROFILE rotor airends reflect this growing trend, as more than 200,000 of these economical and reliable systems are currently in service throughout the world.

PET bottle production
KAESER has developed a remarkably economical system solution for this growing field of application. The SIGMA PET AIR bottle production system comprises a low pressure stage (rotary screw compressor, control air), a high pressure stage (booster, blow moulding) and efficient refrigeration drying. In addition to outstanding system performance, air users benefit from low investment and operating costs.

Dust evacuation, packaging, filtration
KAESER rotary screw vacuum packages with the special KAESER vacuum airend are just as much at home evacuating, testing, drying, and degassing as they are for filtration or filling bottles and tubes. These units are also equipped with the advanced PC-based SIGMA CONTROL compressor controller.
Rotary screw compressors with V-belt drive (to 22 kW)

<table>
<thead>
<tr>
<th>Model</th>
<th>Max. operating pressure bar</th>
<th>FAD* overall</th>
<th>Max. rated power kW</th>
<th>Dimensions W x D x H mm</th>
<th>Sound level dB(A)</th>
<th>Weight kg</th>
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<tr>
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<td>105</td>
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Rotary screw compressors with 1:1 drive (to 450 kW)

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<tr>
<th>Model</th>
<th>Working pressure bar</th>
<th>FAD* overall</th>
<th>Max. operating pressure bar</th>
<th>Max. rated power kW</th>
<th>Dimensions W x D x H mm</th>
<th>Sound level dB(A)</th>
<th>Weight kg</th>
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<td>13</td>
<td>1120 x 780 x 1255</td>
<td>66</td>
<td>390</td>
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Rotary screw compressors with V-belt drive (to 450 kW)

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<tr>
<th>Model</th>
<th>Working pressure bar</th>
<th>FAD* overall</th>
<th>Max. operating pressure bar</th>
<th>Max. rated power kW</th>
<th>Dimensions W x D x H mm</th>
<th>Sound level dB(A)</th>
<th>Weight kg</th>
</tr>
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<tbody>
<tr>
<td>CSDX – HS series</td>
<td></td>
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</tr>
<tr>
<td>CSDX 177</td>
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</table>

Rotary screw compressors with V-belt drive (to 450 kW)

<table>
<thead>
<tr>
<th>Model</th>
<th>Working pressure bar</th>
<th>FAD* overall</th>
<th>Max. operating pressure bar</th>
<th>Max. rated power kW</th>
<th>Dimensions W x D x H mm</th>
<th>Sound level dB(A)</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>GS – HS series</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>GS 680</td>
<td>7.5</td>
<td>10</td>
<td></td>
<td>60.2</td>
<td>4010 x 2260 x 2454</td>
<td>82</td>
<td>9100</td>
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<tr>
<td>HS 680</td>
<td>7.5</td>
<td>10</td>
<td></td>
<td>70.2</td>
<td>4065 x 2260 x 2454</td>
<td>84</td>
<td>9800</td>
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</table>
## Rotary screw compressors with refrigeration dryer (to 15 kW)

<table>
<thead>
<tr>
<th>Model</th>
<th>Work-</th>
<th>FAD*) overall</th>
<th>Max.</th>
<th>Motor</th>
<th>Dryer</th>
<th>Refriger-</th>
<th>Pressure</th>
<th>Pressure</th>
<th>Dimensions</th>
<th>Sound</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>ing pressure bar</td>
<td>package</td>
<td>operating pressure bar</td>
<td>kW</td>
<td>rated power</td>
<td>ant</td>
<td>pressure</td>
<td>volume</td>
<td>W x D x H</td>
<td>level dB(A)</td>
<td>kg</td>
</tr>
<tr>
<td><strong>AIRCENTER Series</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIRCENTER 3</td>
<td>7.5</td>
<td>0.313</td>
<td>7.5</td>
<td>0.233</td>
<td>7.5</td>
<td>0.25</td>
<td>R 134a</td>
<td>3</td>
<td>280</td>
<td>1600 x 845 x 1527</td>
<td>65</td>
</tr>
<tr>
<td>AIRCENTER 4</td>
<td>7.5</td>
<td>0.424</td>
<td>7.5</td>
<td>0.329</td>
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<td>0.25</td>
<td>R 134a</td>
<td>3</td>
<td>280</td>
<td>1600 x 845 x 1527</td>
<td>66</td>
</tr>
<tr>
<td>AIRCENTER 6</td>
<td>7.5</td>
<td>0.538</td>
<td>7.5</td>
<td>0.360</td>
<td>7.5</td>
<td>0.25</td>
<td>R 134a</td>
<td>3</td>
<td>280</td>
<td>1600 x 845 x 1527</td>
<td>66</td>
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<tr>
<td>AIRCENTER 9</td>
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<td>0.600</td>
<td>7.5</td>
<td>0.470</td>
<td>7.5</td>
<td>0.32</td>
<td>R 134a</td>
<td>3</td>
<td>270</td>
<td>1300 x 1716</td>
<td>64</td>
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<tr>
<td>AIRCENTER 12</td>
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<td>0.800</td>
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<td>0.177</td>
<td>7.5</td>
<td>0.32</td>
<td>R 134a</td>
<td>3</td>
<td>270</td>
<td>1300 x 1716</td>
<td>64</td>
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<tr>
<td>AIRCENTER 15</td>
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<td>0.32</td>
<td>R 134a</td>
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<tr>
<td>AIRCENTER 23</td>
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<td>3</td>
<td>380</td>
<td>1440 x 785 x 1627</td>
<td>64</td>
</tr>
<tr>
<td>AIRCENTER 34</td>
<td>7.5</td>
<td>2.300</td>
<td>7.5</td>
<td>1.405</td>
<td>7.5</td>
<td>0.43</td>
<td>R 134a</td>
<td>3</td>
<td>380</td>
<td>1440 x 785 x 1627</td>
<td>66</td>
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<tr>
<td><strong>AIRTOWER Series</strong></td>
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</tr>
<tr>
<td>AIRTOWER 3</td>
<td>7.5</td>
<td>0.313</td>
<td>7.5</td>
<td>0.233</td>
<td>7.5</td>
<td>0.34</td>
<td>R 134a</td>
<td>3</td>
<td>-</td>
<td>685 x 774 x 1254</td>
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<tr>
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<td>0.424</td>
<td>7.5</td>
<td>0.329</td>
<td>7.5</td>
<td>0.34</td>
<td>R 134a</td>
<td>3</td>
<td>-</td>
<td>685 x 774 x 1254</td>
<td>68</td>
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<td>AIRTOWER 6</td>
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<td>0.538</td>
<td>7.5</td>
<td>0.360</td>
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<td>0.34</td>
<td>R 134a</td>
<td>3</td>
<td>-</td>
<td>685 x 774 x 1254</td>
<td>68</td>
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<tr>
<td><strong>SM T – SK T Series</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>SM 9T</td>
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<td>8</td>
<td>0.467</td>
<td>10</td>
<td>0.3</td>
<td>R 134a</td>
<td>3</td>
<td>-</td>
<td>630 x 1074 x 1100</td>
<td>64</td>
</tr>
<tr>
<td>SM 12T</td>
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<td>1.120</td>
<td>8</td>
<td>0.177</td>
<td>10</td>
<td>0.3</td>
<td>R 134a</td>
<td>3</td>
<td>-</td>
<td>630 x 1074 x 1100</td>
<td>64</td>
</tr>
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<td>10</td>
<td>0.3</td>
<td>R 134a</td>
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<td>-</td>
<td>630 x 1074 x 1100</td>
<td>64</td>
</tr>
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<td>-</td>
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<td>-</td>
<td>1305 x 704 x 1200</td>
<td>65</td>
</tr>
</tbody>
</table>

*) Performance data to ISO 1217: 1996, Annex C. **) Sound level to PN8N/TC 2.3 at 1 m distance, free-field measurement.

***) At high fan speed.
<table>
<thead>
<tr>
<th>Model</th>
<th>Working pressure bar</th>
<th>Rated power kW</th>
<th>Rated pressure m³/min</th>
<th>Motor speed range Hz</th>
<th>Rated pressure bar</th>
<th>Rated pressure m³/min</th>
<th>Min. pressure m³/min</th>
<th>Min. pressure bar</th>
<th>Overall dimensions mm</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM12 F6C – CDSX F6C Series</td>
<td>7.5</td>
<td>5.60 - 22.50</td>
<td>6 - 10</td>
<td>180 ± 1.00</td>
<td>450 - 1620</td>
<td>15 - 100</td>
<td>2830 x 1285 x 2025</td>
<td>15 - 20</td>
<td>10</td>
<td>3285 x 2142 x 2625</td>
</tr>
<tr>
<td>SK21 F6C</td>
<td>7.5</td>
<td>6.62 - 26.90</td>
<td>6 - 10</td>
<td>200 ± 1.00</td>
<td>450 - 1920</td>
<td>15 - 1710</td>
<td>2830 x 1920 x 2025</td>
<td>15 - 20</td>
<td>10</td>
<td>3285 x 1710 x 2025</td>
</tr>
<tr>
<td>SK31 F6C</td>
<td>7.5</td>
<td>11 - 15</td>
<td>6 - 10</td>
<td>9.80 - 45.10</td>
<td>450 - 1920</td>
<td>15 - 3900</td>
<td>2830 x 1920 x 2025</td>
<td>15 - 20</td>
<td>10</td>
<td>3285 x 1710 x 2025</td>
</tr>
<tr>
<td>SM32 F6C – CDSX F6C Series</td>
<td>7.5</td>
<td>10.2 - 60.5</td>
<td>6 - 9</td>
<td>132</td>
<td>450 - 1620</td>
<td>15 - 100</td>
<td>2830 x 1285 x 2025</td>
<td>15 - 20</td>
<td>10</td>
<td>3285 x 2142 x 2625</td>
</tr>
<tr>
<td>SK21 F6C</td>
<td>7.5</td>
<td>11 - 15</td>
<td>6 - 10</td>
<td>9.80 - 45.10</td>
<td>450 - 1920</td>
<td>15 - 3900</td>
<td>2830 x 1920 x 2025</td>
<td>15 - 20</td>
<td>10</td>
<td>3285 x 1710 x 2025</td>
</tr>
<tr>
<td>SK31 F6C</td>
<td>7.5</td>
<td>11 - 15</td>
<td>6 - 10</td>
<td>9.80 - 45.10</td>
<td>450 - 1920</td>
<td>15 - 3900</td>
<td>2830 x 1920 x 2025</td>
<td>15 - 20</td>
<td>10</td>
<td>3285 x 1710 x 2025</td>
</tr>
<tr>
<td>SM42 F6C – CDSX F6C Series</td>
<td>7.5</td>
<td>10.2 - 60.5</td>
<td>6 - 9</td>
<td>132</td>
<td>450 - 1620</td>
<td>15 - 100</td>
<td>2830 x 1285 x 2025</td>
<td>15 - 20</td>
<td>10</td>
<td>3285 x 2142 x 2625</td>
</tr>
<tr>
<td>SK21 F6C</td>
<td>7.5</td>
<td>11 - 15</td>
<td>6 - 10</td>
<td>9.80 - 45.10</td>
<td>450 - 1920</td>
<td>15 - 3900</td>
<td>2830 x 1920 x 2025</td>
<td>15 - 20</td>
<td>10</td>
<td>3285 x 1710 x 2025</td>
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<tr>
<td>SK31 F6C</td>
<td>7.5</td>
<td>11 - 15</td>
<td>6 - 10</td>
<td>9.80 - 45.10</td>
<td>450 - 1920</td>
<td>15 - 3900</td>
<td>2830 x 1920 x 2025</td>
<td>15 - 20</td>
<td>10</td>
<td>3285 x 1710 x 2025</td>
</tr>
</tbody>
</table>
Choose the required grade of treatment according to your field of application:

**Air Treatment:** Using a refrigeration dryer (+3°C pressure dew point)

- **Pneumatics, Dairies, Breweries**
- **Food and semi-luxury food production**
- **Very dry conveying air:** chemical plants
- **Pure air and cleanroom technology**
- **Pharmaceutical industry**
- **Welding machines, photo labs**
- **Paint spraying, powder coating**
- **For KAESER rotary screw compressors**

**Filters**

- **FD** = Particulate filter
- **FD** = Activated carbon filter
- **FE** = Microfilter
- **ACT** = Activated carbon adsorber
- **FF** = Microfilter
- **FG** = Activated carbon filter
- **FFG** = Activated carbon and microfilter combination
- **Aquamat** = Condensate treatment system

**Installation for heavily fluctuating air demand**

- **Air receiver**
- **RD** = Refrigeration dryer
- **ED** = Eco Drain
- **ZK** = Centrifugal separator
- **Compressor THNF**
- **Aquamat**

**Contaminations:**

- **Solids**
- **Water**
- **Oil**
- **Bacteria**

**For air systems subject to sub-zero temperatures:**

- **Compressed air treatment with a desiccant dryer (down to -70 °C pressure dew point)**
- **Paint spraying, fine pressure controllers**
- **Especially dry conveying air, paint spraying, fine pressure controllers**

**Degree of filtration:**

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Solid particles</th>
<th>Handicap</th>
<th>Total oil content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>DAL</td>
<td>MAL</td>
<td>&lt; 0.1</td>
</tr>
<tr>
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<td>0-1</td>
<td>0-1</td>
<td>0-0.1</td>
</tr>
<tr>
<td>1</td>
<td>1-10</td>
<td>1-10</td>
<td>0-1.0</td>
</tr>
<tr>
<td>2</td>
<td>10-100</td>
<td>10-100</td>
<td>0-5.0</td>
</tr>
<tr>
<td>3</td>
<td>100-1000</td>
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<tr>
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<td>1000-10000</td>
<td>1000-10000</td>
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<tr>
<td>5</td>
<td>10000-100000</td>
<td>10000-100000</td>
<td>0-100.0</td>
</tr>
</tbody>
</table>

**Specifications:**

- **FAD:** 0.23 to 79 m³/min - Pressure 5.5 to 15 bar

**With the world-renowned SIGMA PROFILE**

**Rotary Screw Compressors SX – HS Series**

**Kaeser Compressed Air Systems**

- Victoria Gardens, Burgess Hill, West Sussex RH15 9RQ
- Tel: 01444 241671 Fax: 01444 247304 E-Mail: info@hpcplc.co.uk www.hpccompressors.co.uk

**Website:** www.hpccompressors.co.uk