KAESER COMPRESSORS®


# Reciprocating Compressors with a DIFFERENCE

**i.Comp 8 and 9 Series**
Displacement 404 to 570 l/min, Pressure up to 11 bar
Maximum efficiency thanks to new drive concept.

**OILFREE.AIR**

**www.kaeser.com**

i.Comp 8 / 9 Series

# Reciprocating compressors with variable speed control

Robust, compact and extremely versatile, the i.Comp 8 / 9 also features an impressive new drive concept.
The roto-moulded PE enclosure conceals an oil-free reciprocating compressor powered by a variable-speed drive motor, which always delivers the exact volume of compressed air actually required. With the i.Comp TOWER T version, compressor block, air receiver, refrigeration dryer and SIGMA CONTROL 2 controller are all housed together within one complete turnkey package, making it ideally suited to trades, industrial, workshop and laboratory applications.

## The compact compressor station

The single-stage, oil-free reciprocating compressor can deliver up to 570 l/min at pressures up to 11 bar and features a motor that is particularly flexible, thanks to its variable speed control. This compact compressed air station stands out for its Made in Germany quality. The sound-insulating polyethylene enclosure is robust and impact-resistant, helping it to retain a high residual value.

## Maximum energy efficiency

The i.Comp 8 / 9 is highly efficient in all load phases. Significantly reduced switching operations minimise energy losses and relieve pressure on the compressed air lines. This compact powerhouse also benefits from a substantially improved specific output in comparison to conventional reciprocating compressors.

## Power and endurance

Thanks to its unlimited switching frequency, the i.Comp 8 / 9 is a true endurance runner. Even 100% duty cycles at ambient temperatures as high as +45 °C are just a walk in the park. A powerful fan and optimised cooling air flow reduce the operating temperature of the compressor so as to allow continuous operation, whilst temperature monitoring in the compressor motor prevents overheating.

## Quiet and clean

A reciprocating compressor beside which normal conversation can take place? With a maximum sound pressure level of 65.7 dB(A) the i.Comp 8 / 9 is incredibly quiet, thanks to its exceptionally smooth-running compressor and sound-insulating PE enclosure. Furthermore, the compressor block contains no oil. i.Comp TOWER T versions deliver a constant supply of dry compressed air at a pressure dew point of +3 °C, whilst accumulating condensate is reliably drained away.

## Energy-efficient operation

The i.Comp CONTROL controller, fitted as standard (package/TOWER), ensures reliable and efficient operation at all times. When the optional SIGMA CONTROL 2 controller (fitted as standard to TOWER T versions) is selected, the i.Comp 8 / 9 is network-capable and can be connected to the SIGMA AIR MANAGER 4.0 master controller.

## Space-saving installation

Thanks to their compact dimensions, high-performance i.Comp 8 / 9 TOWER T units have a footprint of less than 1 m². The roto-moulded PE enclosure is easy to open, making servicing a breeze.


## Made in Germany

Every i.Comp compressor comes equipped with a KAESER compressor block built to Made in Germany quality standards. These blocks are manufactured in the KAESER reciprocating compressor production centre at the factory in Coburg, where the complete systems are also assembled and tested. High-quality materials and meticulous assembly guarantee maximum compressed air performance and long service life.

# Outstanding versatility – the right solution for every application


Image: i.Comp 9 G

Image: i.Comp 9 TOWER

Image: i.Comp 9 TOWER T

i.Comp 8 / 9 Series

# The all-in-one compressed air station

With the i.Comp 8 / 9 TOWER T, KAESER offers an efficient complete package which brings together a reciprocating compressor, compressed air treatment, refrigeration dryer and optional filters, all within one robust, compact housing. Mounted atop two air receivers, each with a capacity of 40 l, it is a perfect all-round compressed air station.

At the heart of the innovative i.Comp family lies a new drive concept, which provides a multitude of advantages. Infinitely variable frequency control allows it to deliver the exact amount of power needed to meet actual compressed air demand, whilst optimised flow paths and cylinder-cooling ensure the highest levels of efficiency and the reduced-size crank drive guarantees smooth operation. The resulting minimal levels of wear ensure substantially lower maintenance costs. Reducing the number of inlet filters to just one reduces pressure losses, as well as wear and tear on components.

Plug and play – all that is needed is to connect this compact compressed air station to a power supply and the compressed air distribution network. No further installation work is necessary. The complete system delivers outstanding energy efficiency, maintenance-friendliness, durability and perfectly-matched components to ensure years of dependable, cost-effective service.


The roto-moulded PE enclosure is easy to open, making servicing a breeze.

# The DIFFERENCE:
# So much more than the sum of its parts

## Tower T

| Air receiver | Refrigeration dryer | Controller | Condensate drain | Optional filters |
|---|---|---|---|---|
| 2 x 40 l | ● | SIGMA CONTROL 2 | ECO-DRAIN 31 | Filter with ECO-DRAIN 31 |

## Tower

| Air receiver | Refrigeration dryer | Controller | Condensate drain | Optional filters |
|---|---|---|---|---|
| 2 x 40 l | – | i.Comp Control (Standard) | KAESER-DRAIN | Filter with float |
| 2 x 40 l | – | SIGMA CONTROL 2 (Optional) | ECO-DRAIN 31 | Filter with ECO-DRAIN 31 |

## Package

| Air receiver | Refrigeration dryer | Controller | Condensate drain | Filters |
|---|---|---|---|---|
| – | – | i.Comp Control (Standard) | – | – |
| – | – | SIGMA CONTROL 2 (Optional) | – | – |

● Yes – No

# Perfect interplay



## i.Comp CONTROL

The i.Comp CONTROL matches the compressor speed precisely to the required pressure, which can be adjusted easily and conveniently using the controller's arrow keys. The compressor is also equipped with a maintenance indicator, whilst clear icons and symbols make operating the i.Comp CONTROL simple and intuitive.


## SIGMA CONTROL 2

The intelligent SIGMA CONTROL 2 controller allows input of precise pressure settings. All information can be communicated to a master controller via the SIGMA NETWORK, whilst the SD card slot makes updates quick and easy, thereby minimising service costs.

## SIGMA AIR MANAGER 4.0

Master controllers are now expected to do far more than optimise compressor operation according to current demand.

Efficiency is playing an ever-increasing role.

Therefore, with the SIGMA AIR MANAGER 4.0, KAESER has developed a patented, simulation-based optimisation process that predictively selects the most efficient switching operations based on compressed air consumption profile analysis and equipment and system behaviour, in relation to the prevailing technical operating conditions.

Action, not reaction; decisions are no longer dictated by a narrow pressure range. Instead, the key is to achieve the lowest possible compressed air production costs through intelligent, energy-saving switching strategies.

The SAM 4.0 supports operation in 30 languages, whilst the easy-to-use 12-inch colour touchscreen shows at a glance whether the station is operating in the “green zone”


from an energy management perspective. Operating status, pressure curve, flow rate and performance data, as well as maintenance and fault messages, are displayed and analysed in real-time.

i.Comp 8 / 9 Series

# The benefits

## Compressor block

To ensure the right levels of quality, KAESER manufactures all of its reciprocating compressor blocks in-house. Using premium-grade materials, all components are manufactured, inspected and assembled with meticulous care and precision. The result is a highly durable, oil-free compressor block that is capable of outstanding performance and unrivalled energy efficiency.

Optimised flow paths and highly effective cylinder-cooling ensure low levels of wear and tear and maximum efficiency for a long-lasting service life. The cylinders' combined inlet area helps to minimise intake air losses, whilst the reduced-size crank drive guarantees smooth operation.

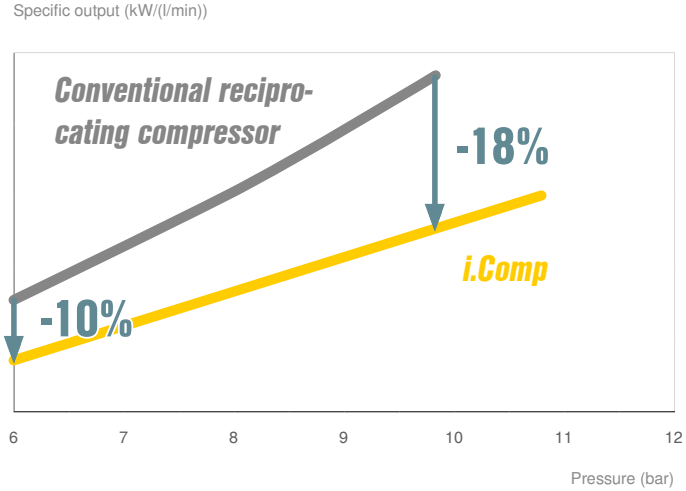
## Drive motor

The i.Comp 8 / 9 is equipped with a powerful external rotor drive motor featuring an integrated electronic controller, which is capable of operating at around 90% efficiency. The volt-hertz frequency converter adjusts the speed according to actual current air demand.

This optimisation of motor and compressor performance serves to reduce stress on both mechanical and electrical components, thereby minimising wear and tear. A soft-start feature protects the network, motor and mechanical transmission components from overload.

## Sound insulation

The sound-insulating polyethylene enclosure on the i.Comp 8 / 9 ensures a remarkably quiet performance. This highly effective soundproofing is further aided by a well thought-out airflow – deflected 180° in the air inlet ducting and exhaust air cushions – combined with the fact that the compressor is decoupled from the PE enclosure. This means that the i.Comp 8 / 9 is so quiet that it can be operated directly in the workplace.




## Highly efficient

The single-stage, oil-free reciprocating compressor is highly efficient in all load phases. An economical partial load operation contributes even further energy savings. Reduced switching operations minimise energy losses and relieve pressure in the compressed air lines. Thanks to its variable-speed drive motor, the i.Comp 8 / 9 always delivers the exact amount of compressed air that is required, thereby ensuring particularly efficient operation. The i.Comp 8 / 9 has a specific output up to 18% lower than conventional reciprocating compressors.

i.Comp 8 / 9 Series

# Service and maintenance


## Child's play

Servicing is a breeze with the i.Comp 8 / 9. The roto-moulded PE enclosure is designed for easy opening and closing, thereby ensuring full access to all components. Servicing is carried out from one side only, meaning that this compact powerhouse can be installed right up against the wall.

KAESER dry-running compressors benefit from exceptionally low maintenance requirements. No oil changes are necessary and the direct drive is completely maintenance-free. With i.Comp TOWER T versions, dryer testing can be conveniently carried out via the easily accessible test connections.

# Installation against a wall

# Equipment

### Complete system

Ready for operation, fully automatic, super-silenced, vibration damped, double-walled, roto-moulded polyethylene enclosure, easy access to all maintenance components when enclosure is open.

### Compressor block

Original KAESER single-stage, oil-free reciprocating compressor block with combined cylinder inlet area and reduced-size crank drive, manufactured to Made in Germany quality standards.

### Drive motor

High-performance external rotor drive motor with integrated electronic controller, volt-hertz frequency converter, soft-start feature.

### SIGMA CONTROL 2

“Traffic light” style LEDs display operating status at a glance; clear text display, 30 selectable languages, soft-touch keys with icons; fully automatic monitoring and control; standard-equipped Ethernet interface without connection to control technology; SD card slot for data-logging and updates, RFID reader, web server.

### Refrigeration dryer (with T version)

Electronically-controlled ECO-DRAIN condensate drain. refrigerant compressor with energy-saving cycling shut-down feature; linked to operational status of the compressor when inactive, continuous operation can alternatively be selected at the user-end; climate-friendly refrigerant R-513A (GWP of just 631).

# Application examples

Breweries

Laboratories

Vehicle workshops

i.Comp 8 / 9 Series

# Technical specifications

| Model | Drive motor rated power | Maximum gauge pressure | Speed control range | Displacement | | Dimensions W x D x H |
|---|---|---|---|---|---|---|
| | | | | at 6 bar | at 11 bar | |
| | kW | bar | rpm | l/min | l/min | mm |
| i.Comp 8 G | 3.1 | 11 | 1000 - 2100 | 404 | 291 | 790 x 1150 x 1030 |
| i.Comp 8 TOWER | 3.1 | 11 | 1000 - 2100 | 404 | 291 | 840 x 1130 x 1380 |
| i.Comp 8 TOWER T | 3.1 | 11 | 1000 - 2100 | 404 | 291 | 840 x 1130 x 1380 |
| i.Comp 9 G | 4.2 | 11 | 1000 - 2100 | 570 | 409 | 790 x 1150 x 1030 |
| i.Comp 9 TOWER | 4.2 | 11 | 1000 - 2100 | 570 | 409 | 840 x 1130 x 1380 |
| i.Comp 9 TOWER T | 4.2 | 11 | 1000 - 2100 | 570 | 409 | 840 x 1130 x 1380 |

## Technical specifications for add-on refrigeration dryer

| Model | Refrigeration dryer power consumption | Pressure dew point | Refrigerant | Refrigerant charge | Global warming potential | $CO_2$ equivalent | Hermetic refrigeration circuit |
|---|---|---|---|---|---|---|---|
| | kW | °C | | kg | GWP | t | |
| i.CT 9 / 50 Hz | 0.28 | +3 | R-513A | 0.22 | 631 | 0.14 | Yes |
| i.CT 9 / 60 Hz | 0.28 | +3 | R-513A | 0.20 | 631 | 0.13 | Yes |

The refrigeration dryer contains a refrigerant which is classified as a fluorinated greenhouse gas.

# Dimensions

valid for i.Comp 8 / 9 G


valid for i.Comp 8 / 9 TOWER , i.Comp 8 / 9 TOWER T

# The world is our home

As one of the world's largest manufacturers of compressors, blowers and compressed air systems, KAESER KOMPRESSOREN is represented throughout the world by a comprehensive network of branches, subsidiaries and authorised distribution partners in over 140 countries.

By offering innovative, efficient and reliable products and services, KAESER KOMPRESSOREN's experienced consultants and engineers work in close partnership with customers to enhance their competitive edge and to develop progressive system concepts that continuously push the boundaries of performance and technology. Moreover, decades of knowledge and expertise from this industry-leading systems provider are made available to each and every customer via the KAESER group's advanced global IT network.

These advantages, coupled with KAESER's worldwide service organisation, ensure that every product operates at peak performance at all times, whilst providing maximum availability.


LGA InterCert
Certified
QM/EM System
DIN EN ISO 9001:2015/
14001:2015

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