

Reciprocating Compressors Industrial Quality

Air delivery 0.87 to 16.10 m³/min – Pressure 5.5 to 15 bar



What do you expect from an industrial quality reciprocating compressor?

As a compressed air user, you expect maximum efficiency and reliability from your air system. Therefore, the most efficient reciprocating compressors are dependable, robust, require little maintenance, have a long service life and provide optimum flexibility. KAESER industrial quality air compressors meet all of these criteria to ensure a compressed air supply of the highest quality.

Advantages of KAESER industrial reciprocating compressors include:

- The knowledge and expertise of more than 80 years experience in precision engineering and design
- Made in Germany from the highest quality materials, KAESER's compressor blocks are logically designed and undergo rigorous inspection to guarantee years of reliable service.
- Outstanding performance, dependability, ease of maintenance and long service life.
- Energy-saving drive motors rated to 'EU eff2' standards
- Exceptional versatility to meet the needs of a wide range of compressed air applications
- Proven oil-lubricated and dry-running reciprocating compressor technology

Industrial reciprocating compressors

Key features:

- Compressor blocks Made in Germany
- Modular design
- Optimum quality assured



Made in Germany

KAESER compressor blocks are made from materials of the highest quality. Each component is manufactured, inspected and assembled with meticulous care and precision. The result is a highly durable compressor which combines outstanding performance with unrivalled energy efficiency.



Wear-free cylinder

Our special machining process produces a perfect finish on the inside wall of the cylinder, which makes running-in of the compressor unnecessary as no significant wear takes place after the unit is started for the first time.



Stainless steel valves

The valve reeds in the corrosion resistant stainless steel valves are equipped with lift limiters to ensure air-tight valve closure and to prevent build-up of oil carbon. This results in exceptional service life and dependability.



Precision machining

Using the most advanced manufacturing processes and with more than 80 years of experience in precision engineering, KAESER's skill and expertise guarantees products of the very highest quality standards.



QM-System testing

Each compressor system undergoes comprehensive testing before delivery. All components must pass the stringent tests determined by our Quality Management System.

Quality: Made in Germany

Made in Germany: This phrase represents KAESER's continued commitment to producing specifically tailored compressed air solutions that deliver unrivalled customer satisfaction. Each compressor block is meticulously assembled and tested to the very highest quality standards at KAESER's reciprocating compressor production centre in Coburg, Germany. The logical, modular design of each system provides maximum flexibility, which not only allows system performance to be precisely matched to requirement, but also ensures optimum efficiency.

Low speed operation ensures maximum reliability and extended service life

Dual systems

- Space-saving design with twin compressor units mounted on a single air receiver
- A reliable source of compressed air at all times, even whilst one unit is being serviced
- Maximum working pressure: 10 bar
- Ready for immediate use
- Available with sound enclosure (up to KCD 450-100)



Directly coupled unit
The drive motor is directly coupled to the compressor block. Low speed operation of only 1500 rpm ensures maximum reliability and extended service life.



Dual pressure switches
Dual pressure switches vent the compressors for unloaded starting. The cut-in and cut-out pressures can also be individually set.

Base-mounted systems up to 35 bar

- Ideal for use as an auxiliary compressor with existing air receivers
- Pressure: 35 bar
- Low speed operation (710 – 1160 strokes per min) ensures maximum reliability and extended service life



Highly effective cooling
Aluminium cylinder heads provide exceptional heat dissipation to ensure extended service life.



V-belt drive
with automatic belt tensioning ensures minimal maintenance and long service life.

Technical specifications

| | | 10 bar dual systems | | | | | | | |
|--|-----------------|--------------------------------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|
| | | KCCD 130-100 | KCD 350-100 | KCD 450-100 | KCCD 130-150 | KCD 350-350 | KCD 450-350 | KCD 630-350 | KCD 840-350 |
| Displacement | l/min | 2x 130 | 2x 350 | 2x 450 | 2x 130 | 2x 350 | 2x 450 | 2x 630 | 2x 840 |
| Effective air delivery ¹⁾ at 6 bar | | 2x 80 | 2x 230 | 2x 300 | 2x 80 | 2x 230 | 2x 300 | 2x 440 | 2x 590 |
| | at 8 bar | 2x 73 | 2x 210 | 2x 280 | 2x 73 | 2x 210 | 2x 280 | 2x 410 | 2x 544 |
| Motor power ²⁾ | kW | 2x 0.75 | 2x 1.7 | 2x 2.4 | 2x 0.75 | 2x 1.7 | 2x 2.4 | 2x 3 | 2x 4 |
| Number of cylinders | | 2x 1 | 2x 1 | 2x 2 | 2x 1 | 2x 1 | 2x 2 | 2x 2 | 2x 2 |
| Air receiver volume | l | 90 | 90 | 90 | 350 | 350 | 350 | 350 | 350 |
| Sound pressure level ³⁾ dB(A) | | 78 | 79 | 80 | 78 | 79 | 80 | 79 | 81 |
| Length | mm | 1080 | 1110 | | 1800 | | | | |
| Width | mm | 380 | 490 | 500 | 600 | | | 660 | |
| Height | mm | 760 | 830 | 780 | 1050 | 1120 | 1100 | 1200 | 1220 |
| Weight | kg | 85 | 105 | | 150 | 170 | 180 | 230 | 240 |
| With sound enclosure | | | | | | | | | |
| Sound pressure level ³⁾ dB (A) | | 69 | 69 | 70 | - | - | - | - | - |
| Start mode | | Direct start, unloaded | | | | | | | |
| Motor protection | | Overload protection trip as standard | | | | | | | |
| Anti-vibration mounts | | Standard | | | | | | | |

¹⁾ Effective air delivery as per VDMA standard sheet 4362 – ²⁾ Power supply: 400 V, 50 Hz, 3 Ph
³⁾ Free field measurement to DIN 45635 at 1 m distance (with both compressors in operation)

Technical specifications

| | | 35 bar, base-mounted | | | | | | | |
|--|--------------------|----------------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | | K 175-2-G/H35 | K 250-2-G/H35 | K 350-2-G/H35 | K 500-2-G/H35 | K 700-2-G/H35 | K 1000-2-G/H35 | K 1300-2-G/H35 | K 1600-2-G/H35 |
| Displacement | l/min | 175 | 250 | 350 | 500 | 700 | 1000 | 1300 | 1600 |
| Effective air delivery ¹⁾ at 6 bar | | 136 | 202 | 284 | 407 | 560 | 800 | 1150 | 1400 |
| | at 8 bar | | | | | | | | |
| Motor power ²⁾ | kW | 2.2 | 3 | 4 | 5.5 | 7.5 | 11 | 15 | 18.5 |
| Number of cylinders | | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 |
| Block speed | strokes/min | 910 | 710 | 760 | 760 | 810 | 1130 | 960 | 1160 |
| Sound pressure level ³⁾ dB(A) | | 75 | 72 | 74 | 76 | 80 | 81 | 83 | 84 |
| Length | mm | 890 | 1280 | 1290 | 1450 | 1470 | 1570 | 1620 | |
| Width | mm | 380 | 490 | | 590 | | 820 | 860 | |
| Height | mm | 520 | 710 | 690 | 900 | | 910 | 950 | |
| Weight | kg | 60 | 140 | 155 | 220 | 235 | 430 | 315 | 470 |
| Auto. star-delta starter ⁴⁾ | | Not necessary | | | Option | Option | Option | Option | Option |
| Anti-vibration mounts | | Standard | | | | | | | |

¹⁾ Effective air delivery as per VDMA standard sheet 4362 – ²⁾ Power supply: 400 V, 50 Hz, 3 Ph – ³⁾ Free field measurement to DIN 45635 at 1 m distance – ⁴⁾ To be installed on-site

Oil-free compressors – Minimal sound and maintenance

Compact systems

- Compact design and super-quiet due to highly effective silencing
- Belt drive with automatic tensioning ensures optimum power transmission
- Complete with control cabinet and sound enclosure
- Turnkey design



Control cabinet
Completely wired; control panel includes operating hours counter and mode selector switch.



Superior cooling
Excellent cooling with copper after-cooler.



Technical specifications

| | AIRBOX, oil-free, 7 bar | | | | |
|---|--|--------------|------------------|---------------|---------------|
| | AIRBOX 500 T | AIRBOX 700 T | AIRBOX 850 T | AIRBOX 1200 T | AIRBOX 1700 T |
| Displacement l/min | 500 | 700 | 850 | 1200 | 1700 |
| Effective air delivery¹⁾ at 6 bar | 290 | 485 | 590 | 855 | 1190 |
| Motor power²⁾ kW | 3 | 4 | 5.5 | 7.5 | 11 |
| Number of cylinders | 2 | 2 | 2 | 2 | 3 |
| Block speed strokes/min | 725 | 765 | 930 | 940 | 820 |
| Sound pressure level³⁾ db (A) | 66 | 67 | 68 | 68 | 69 |
| Length mm | 680 | 680 | 680 | 895 | 895 |
| Width mm | 670 | 670 | 670 | 905 | 905 |
| Height mm | 1005 | 1005 | 1005 | 1225 | 1225 |
| Weight kg | 235 | 235 | 260 | 450 | 515 |
| Start mode | Direct start | | Star-delta start | | |
| Electrics | Completely wired control cabinet as standard | | | | |
| Vibration damping | Dual anti-vibration damping as standard | | | | |
| Sound insulation | Standard version silenced with sound enclosure | | | | |

¹⁾ Effective air delivery as per VDMA standard sheet 4362 – ²⁾ Power supply: 400 V, 50 Hz, 3 Ph – ³⁾ Free field measurement to DIN 45635 at 1m distance

Directly coupled systems

- Compact design with direct coupling of drive motor and compressor block
- Teflon-coated pistons and low speed operation (1500 strokes per min) ensure exceptional durability
- Air receiver internally coated



Dual cooling
Highly effective cooling with double-stream airflow. Crank casing internally cooled to enable maximum pressure up to 10 bar (KCT 401 to 840).



Direct drive
Directly coupled units are maintenance-free and eliminate the transmission losses associated with other drive system designs.

Technical specifications

| | 7 bar | | | 10 bar horizontal | | | | 10 bar vertical | | |
|---|--------------------------|-------------------------|-------------|---------------------------|-------------|-------------|-------------|---------------------------|----------------|----------------|
| | KCT 110-25 | KCT 230-40 | KCT 420-100 | KCT 401-100 | KCT 550-100 | KCT 840-100 | KCT 840-250 | KCT401-250 St | KCT 550-250 St | KCT 840-250 St |
| Displacement l/min | 110 | 230 | 420 | 400 | 550 | 840 | 840 | 400 | 550 | 840 |
| Effective air delivery¹⁾ at 6 bar | 60 | 150 | 252 | 275 | 376 | 575 | 575 | 275 | 376 | 575 |
| at 8 bar | - | - | - | 250 | 345 | 525 | 525 | 250 | 345 | 525 |
| Air receiver volume²⁾ l | 24 | 40 | 90 | 90 | 90 | 90 | 250 | 250 | 250 | 250 |
| Motor power kW | 0.75 | 1.4 (2.2) ³⁾ | 2.2 | 2.4 | 3 | 4 | 4 | 2.4 | 3 | 4 |
| Number of cylinders | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Block speed strokes/min | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 | 1500 |
| Sound pressure level³⁾ db (A) | 72 | 73 | 75 | 75 | 76 | 78 | 78 | 75 | 76 | 78 |
| Length mm | 640 | 820 | 1080 | 1080 | 1240 | 1240 | 1600 | 690 | 700 | 680 |
| Width mm | 290 | 480 | 570 | 480 | | 680 | 680 | 660 | 630 | 680 |
| Height mm | 680 | 740 | 840 | 900 | 950 | 1000 | 1160 | 1770 | 1800 | 1920 |
| Weight kg | 35 | 60 | 75 | 90 | 100 | 120 | 170 | 135 | 145 | 170 |
| With sound enclosure | Enclosure over enclosure | | | Enclosure over compressor | | | | Enclosure over compressor | | |
| Sound pressure level⁴⁾ db (A) | 62 | 63 | 65 | 65 | 66 | 68 | 68 | 65 | 66 | 68 |

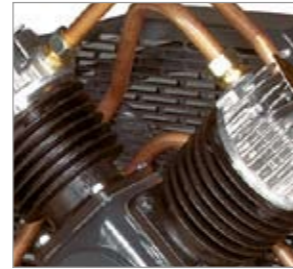
¹⁾ Effective 1) Free air delivery as per VDMA standard sheet 4362 – ²⁾ Air receiver internally coated
³⁾ Actual required power (maximum motor power) – ⁴⁾ Free field measurement to DIN 45635 at 1 m distance.

Systems to meet your individual compressed air needs

Oil-free base-mounted compressors

- Ideal for use as an auxiliary compressor and for use with existing air receivers
- KCT series: Directly coupled
- KT series: Belt driven

KT 550



Highly effective cooling
Aluminium cylinder heads provide exceptional heat dissipation to ensure extended service life.



Accessories
Specially selected set of control and connection components to ensure trouble-free installation.

Integrated compressors

- Oil-free integrated compressors with 1:1 direct drive

KCT 550

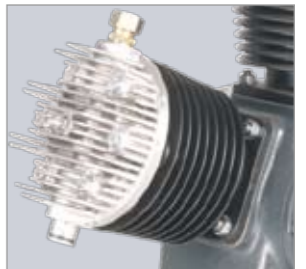


Dual cooling
Highly effective cooling with double-stream airflow.

Integrated compressor blocks

- Integrated compressor blocks designed for V-belt drive

KT 1500



Highly effective cooling
Aluminium cylinder heads provide exceptional heat dissipation to ensure extended service life.



Technical specifications

| | Oil-free, directly coupled base-mounted compressors | | | | | | | | Base-mounted, oil-free, V-belt drive | | | | | | | |
|--|---|---------------|-------------------------|-----------|-----------|-----------|-----------|--------------|--------------------------------------|---------------|----------|----------|----------|-----------|-----------|------|
| | KCT 110-G | KCT230 G | KCT 420-G | KCT 180-G | KCT 401-G | KCT 550-G | KCT 840-G | KCT 1000-2-G | KT 150-G | KT 250-G | KT 500-G | KT 700-G | KT 850-G | KT 1000-G | KT 1500-G | |
| Displacement | l/min | 110 | 230 | 150 | 180 | 400 | 550 | 840 | 1000 | 150 | 250 | 500 | 700 | 580 | 1000 | 1500 |
| Effective air delivery ¹⁾ at 6 bar | | 60 | 152 | 252 | 100 | 275 | 375 | 575 | 700 | 85 | 150 | 290 | 485 | 590 | 715 | 1035 |
| Max. working pressure | bar | 7 | 7 | 7 | 10 | 10 | 10 | 10 | 10 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Motor power | kW | 0.75 | 1.4 (2.2) ²⁾ | 2.2 | 1.1 | 2.4 | 3 | 4 | 7.5 | 1.1 | 1.2 | 3 | 4 | 5.5 | 5.5 | 11 |
| Number of cylinders | | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 3 |
| Block speed | strokes/min | 1500 | | 1500 | | 1500 | 1500 | 1500 | 980 | 820 | 725 | 765 | 930 | 760 | 720 | |
| Sound pressure level ³⁾ | | 72 | 73 | 75 | 70 | 75 | 76 | 78 | 82 | 70 | 75 | 78 | 79 | 80 | 80 | 82 |
| Length | mm | 510 | 510 | 510 | 510 | 600 | 670 | 670 | 850 | 590 | 880 | 1300 | 1280 | 1260 | 1450 | 1520 |
| Width | mm | 300 | 480 | 560 | 340 | 480 | 480 | 680 | 620 | 360 | 380 | 490 | 490 | 490 | 580 | 790 |
| Height | mm | 480 | 420 | 430 | 560 | 450 | 510 | 570 | 690 | 440 | 470 | 470 | 680 | 680 | 870 | 950 |
| Weight | kg | 17 | 40 | 45 | 35 | 50 | 60 | 85 | 130 | 37 | 55 | 140 | 155 | 165 | 225 | 400 |
| Auto. star-delta starter | | Not necessary | | | | | | | Option | Not necessary | | | Option | Option | Option | |

¹⁾ Effective air delivery as per VDMA standard sheet 4362 – ²⁾ Power supply: 400 V, 50 Hz, 3 Ph – ³⁾ Free field measurement to DIN 45635 at 1m distance

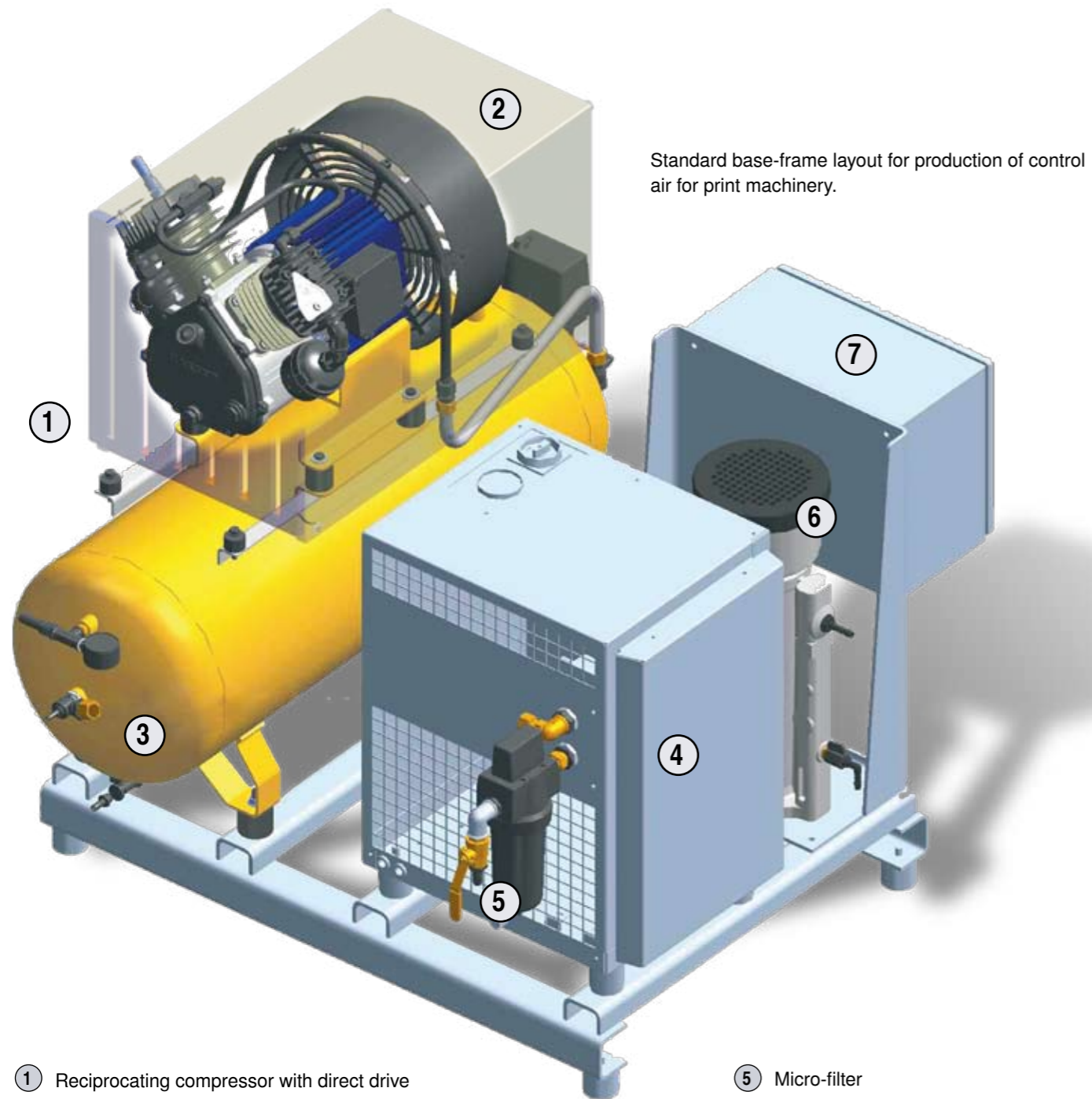
Technical specifications

| | Oil-free integrated base-mounted compressors | | | | | | | | Oil-free integrated compressor blocks | | | | | | | |
|--|--|---------|-------------------------|---------|---------|---------|---------|------------|---------------------------------------|--------|--------|--------|--------|---------|---------|------|
| | KCT 110 | KCT 230 | KCT 420 | KCT 180 | KCT 401 | KCT 550 | KCT 840 | KCT 1000-2 | KT 152 | KT 252 | KT 500 | KT 700 | KT 850 | KT 1000 | KT 1500 | |
| Displacement | l/min | 110 | 230 | 420 | 180 | 400 | 550 | 840 | 1000 | 150 | 250 | 500 | 700 | 850 | 1000 | 1500 |
| Effective air delivery ¹⁾ at 6 bar | | 60 | 152 | 265 | 110 | 275 | 375 | 575 | 700 | 85 | 150 | 290 | 485 | 590 | 715 | 1035 |
| Max. working pressure | bar | 7 | | 7 | 10 | 10 | 10 | 10 | 10 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Number of cylinders | | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 3 |
| Block speed | strokes/min | 1500 | | | | | | | 1500 | 980 | 820 | 725 | 765 | 930 | 760 | 720 |
| Length | mm | 380 | 500 | 500 | 510 | 580 | 600 | 640 | 770 | 210 | 280 | 385 | 385 | 385 | 400 | 525 |
| Width | mm | 240 | 470 | 560 | 300 | 475 | 475 | 650 | 620 | 230 | 480 | 700 | 720 | 720 | 800 | 800 |
| Height | mm | 285 | 350 | 360 | 520 | 400 | 400 | 550 | 660 | 300 | 340 | 470 | 490 | 490 | 560 | 635 |
| Weight | kg | 25 | 38 | 45 | 28 | 52 | 50 | 58 | 125 | 8 | 16 | 55 | 53 | 53 | 85 | 95 |
| Integrated motor | kW | 0.75 | 1.5 (2.2) ²⁾ | 2.2 | 1.1 | 2.4 | 3 | 4 | 7.5 | - | - | - | - | - | - | - |
| Single compressor block | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Required motor power | kW | - | - | - | - | - | - | - | - | 1.1 | 1.5 | 3 | 4 | 5 | 5.5 | 11 |
| Required fan wheel ø mm | | - | - | - | - | - | - | - | - | 280 | 360 | 500 | | 600 | 680 | |

¹⁾ Effective air delivery as per VDMA standard sheet 4362 – ²⁾ Power supply: 400 V, 50 Hz, 3 Ph

Tailored solutions

With decades of experience in compressed air system design & planning and satisfied customers in every industrial sector, Kaeser Kompressoren is able to provide the perfect compressed air solution to meet your exact needs. The modular design concept of our wide range of industrial reciprocating compressors allows us to create turnkey compressed air systems to suit any compressed air requirement.



Standard base-frame layout for production of control air for print machinery.

- ① Reciprocating compressor with direct drive
- ② Sound enclosure
- ③ Internally-coated air receiver
- ④ Refrigeration dryer

- ⑤ Micro-filter
- ⑥ Condensate treatment system
- ⑦ Control unit



Breweries

KAESER industrial reciprocating compressors provide breweries with a dependable supply of clean compressed air e.g. for use in wort aeration.



Winter sports

KAESER oil-free reciprocating compressors ensure ski pistes are evenly covered with snow and help to significantly extend the winter sport season in lower and mid-level resorts.



Viticulture

The annual winter ritual of pruning the grape vines is made simple thanks to reciprocating compressor systems from KAESER.



Research and development

Laboratories require compressed air of the very highest quality, which is never a problem for KAESER compressors.



Sprinkler systems

KAESER compressors provide the reliability that is so essential for fire protection systems.



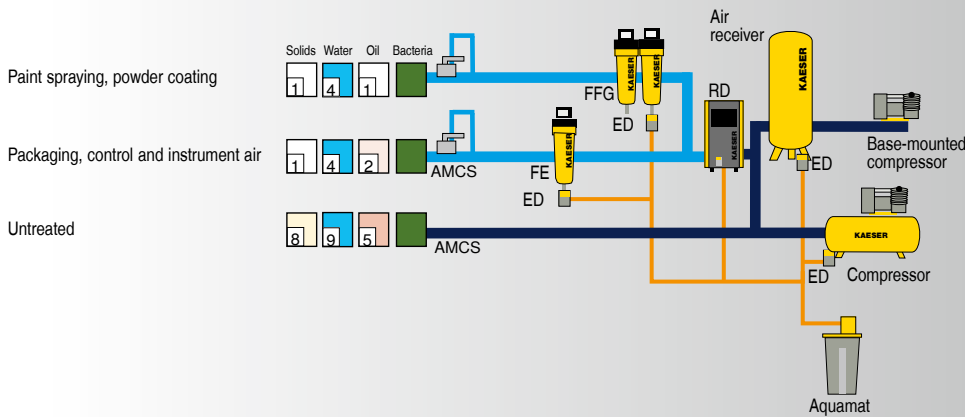
Printing

Printing works throughout the world rely on the dependability and exceptional performance of KAESER compressor systems to keep production costs to an absolute minimum.

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

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

Examples: Selection of treatment classes to ISO 8573-1



Explanation:

ED = ECO-DRAIN

Electronic level-controlled condensate drain

FB = Pre-filter

FC = Pre-filter

FE = Micro-filter

Separates aerosol oil and solid particles

FFG = Micro-filter

Separates aerosol oil and solid particles

FG = Activated carbon filter

For adsorption of oil vapours

FFG = Activated carbon and micro-filter combination

RD = Refrigeration dryer

For drying compressed air, pressure dew point to +3 °C

Aquamat = Condensate treatment system

AMCS = Air-main charging system

Contaminants:

| | | |
|---|------------------|---|
| + | Solids | - |
| + | Water/condensate | - |
| + | Oil | - |
| + | Bacteria | - |

Degree of filtration:

| Class ISO 8573-1 | Solid particles ¹⁾ | | Humidity ²⁾ | Total oil content ³⁾ |
|------------------|---|--|--|---------------------------------|
| | Max. particle size µm | Max. particle concentration mg/m ³ | Pressure dew point (x= liquid water ing/m ³) | mg/m ³ |
| 0 | e.g. Consult KAESER regarding pure air and cleanroom technology | | | |
| 1 | 0.1 | 0.1 | ≤ - 70 | ≤ 0.01 |
| 2 | 1 | 1 | ≤ - 40 | ≤ 0.1 |
| 3 | 5 | 5 | ≤ - 20 | ≤ 1 |
| 4 | 15 | 8 | ≤ + 3 | ≤ 5 |
| 5 | 40 | 10 | ≤ + 7 | - |
| 6 | - | - | ≤ + 10 | - |
| 7 | - | - | x ≤ 0.5 | - |
| 8 | - | - | 0.5 < x ≤ 5 | - |
| 9 | - | - | 5 < x ≤ 10 | - |

¹⁾ As per ISO 8573-1:1991 (The specification for particle content is not measured as per ISO 8573-1:2001, as the limits defined there in for Class 1 are to be applied to 'Clean Rooms')

²⁾ As per ISO 8573-1:2001



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