KAESER COMPRESSORS


# Compressed Air Treatment

**Compressed air treatment diagram for rotary screw compressors**
The perfect treatment components for every application

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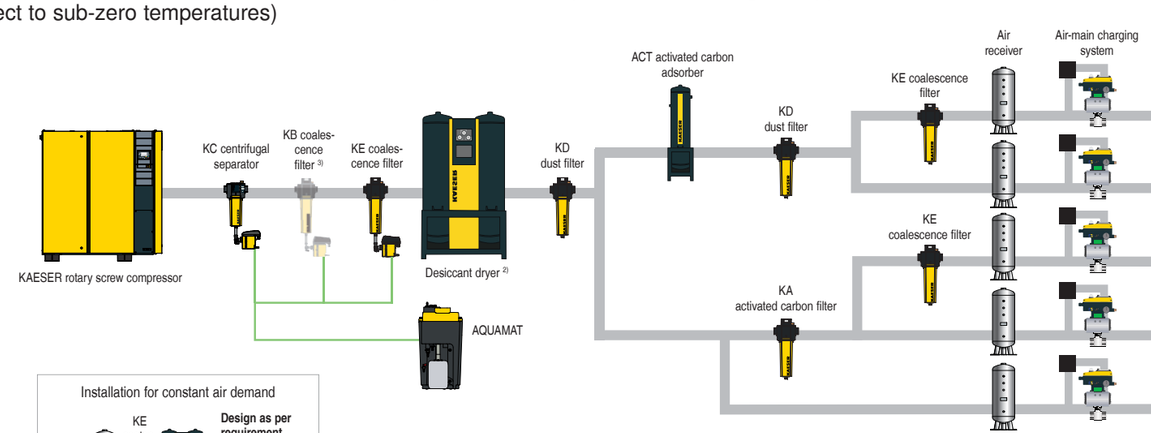
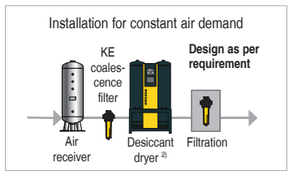
# Installation recommendations for pure compressed air

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

Application examples: Selection of compressed air treatment classes to ISO 8573-1 (2010)

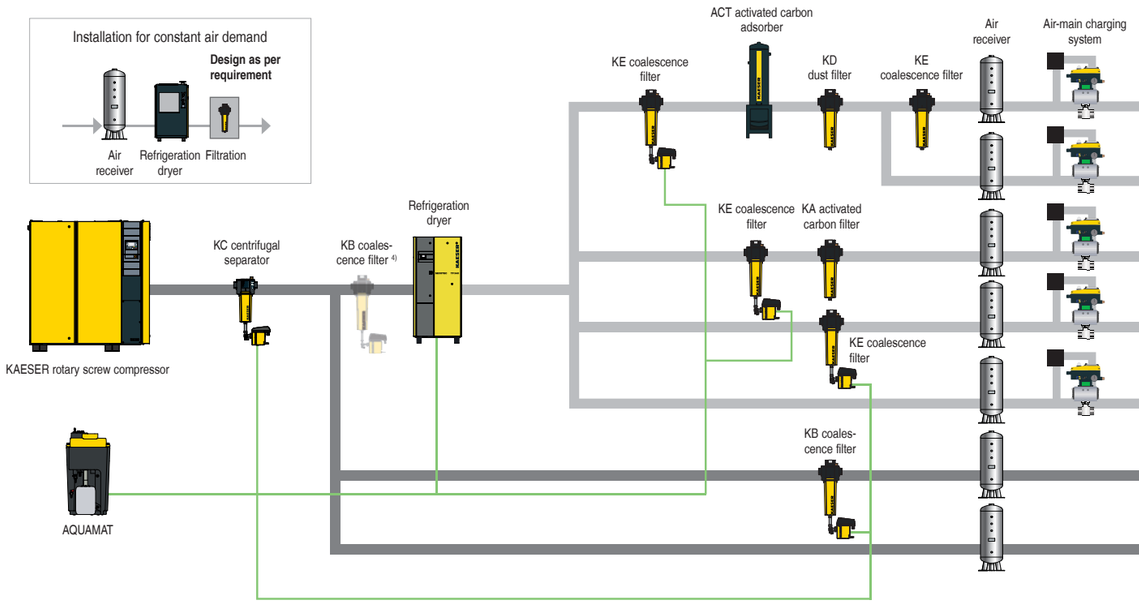
Compressed air treatment with a desiccant dryer (pressure dew point to -70 °C, e.g. for applications subject to sub-zero temperatures)




| Achievable compressed air quality classification | | | Sector/application |
|---|---|---|---|
| Particles | Water | Oil | |
| 1 | 1-3 | 1 | Pure air and clean-room technology, pharmaceutical industry, food production |
| 2 | 1-3 | 1 | Paint spraying installations |
| 1 | 1-3 | 1 | Process air, pharmaceuticals |
| 2 | 1-3 | 1 | Photo labs |
| 2 | 1-3 | 2 | Especially dry conveying air, paint spraying, finepressure controllers |

Compressed air treatment using a refrigeration dryer (pressure dew point to +3 °C)




| Achievable compressed air quality classification | | | Sector/application |
|---|---|---|---|
| Particles | Water | Oil | |
| 1 | 4 | 1 | Pure air and clean-room technology, dairies, breweries, food production |
| 2 | 4 | 1 | Especially clean conveying air, chemical plants |
| 1 | 4 | 1 | Weaving machines, photo labs, pharmaceutical industry |
| 1 | 4 | 2 | Paint spraying, powder coating, packing, control and instrument air |
| 4 | 4 | 3 | General works air, high-grade sand blasting |
| 4 | 7 | 3 | Shot-blasting |
| 6 | 7-X | 4 | Conveying air for wastewater systems |

**Compressed air quality classification as per ISO 8573-1 (2010):**

**Particles**

| Class | Max. particle count per m³ of a particle size with d [µm] 1) | | |
|---|---|---|---|
| | 0.1 ≤ d ≤ 0.5 | 0.5 ≤ d ≤ 1.0 | 1.0 ≤ d ≤ 5.0 |
| 0 | e.g. Consult KAESER regarding pure air and clean-room technology | | |
| 1 | ≤ 20,000 | ≤ 400 | ≤ 10 |
| 2 | ≤ 400,000 | ≤ 6,000 | ≤ 100 |
| 3 | Not defined | ≤ 90,000 | ≤ 1,000 |
| 4 | Not defined | Not defined | ≤ 10,000 |
| 5 | Not defined | Not defined | ≤ 100,000 |
| **Class** | **Particle concentration $C_p$ in mg/m³ 1)** | | |
| 6 | $0 < C_p \leq 5$ | | |
| 7 | $5 < C_p \leq 10$ | | |
| X | $C_p > 10$ | | |

**Water**

| Class | Pressure dew point, in °C |
|---|---|
| 0 | e.g. Consult KAESER regarding pure air and clean-room technology |
| 1 | ≤ – 70 °C |
| 2 | ≤ – 40 °C |
| 3 | ≤ – 20 °C |
| 4 | ≤ + 3 °C |
| 5 | ≤ + 7 °C |
| 6 | ≤ + 10 °C |
| **Class** | **Concentration of liquid water $C_W$ in g/m³ 1)** |
| 7 | $C_W \leq 0.5$ |
| 8 | $0.5 < C_W \leq 5$ |
| 9 | $5 < C_W \leq 10$ |
| X | $C_W > 10$ |

**Oil**

| Class | Total oil concentration (fluid, aerosol + gaseous) [mg/m³] 1) |
|---|---|
| 0 | e.g. Consult KAESER regarding pure air and clean-room technology |
| 1 | ≤ 0.01 |
| 2 | ≤ 0.1 |
| 3 | ≤ 1.0 |
| 4 | ≤ 5.0 |
| X | > 5.0 |

1) At reference conditions 20 °C, 1 bar(a), 0% humidity.
2) An aftercooler is required where applicable for heat regenerated desiccant dryers.
3) The KB filter stage is installed upstream for critical applications requiring high compressed air purity.
4) The KB filter stage is installed upstream for third party compressors / contaminated and heavily corroded pipework.

# The world is our home

As one of the world's largest compressed air systems providers and compressor manufacturers, KAESER KOMPRESSOREN is represented throughout the world by a comprehensive network of branches, subsidiary companies and authorised partners

With innovative products and services, KAESER KOMPRESSOREN's experienced consultants and engineers help customers to enhance their competitive edge by working in close partnership to develop progressive system concepts that continuously push the boundaries of performance and compressed air efficiency. Moreover, the decades of knowledge and expertise from this industry-leading system provider are made available to each and every customer via the KAESER group's global computer network.

These advantages, coupled with KAESER's worldwide service organisation, ensure that every product operates at the peak of its performance at all times and provides maximum availability.


LGA InterCert
Certified QM/EM System
ISO 9001:2008 / ISO 14001:2004

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