

KAESER
COMPRESSORS

Built for a lifetime.[™]



Compressed Air Filters

Particulate, Moisture, and Oil Removal

20 - 500 scfm

www.kaeser.com

Compressed Air Filters: 20 - 500 scfm

Superior filtration

Proper filtration is necessary to ensure consistent air quality, but with it comes pressure drop. Every 2 psi of pressure drop increases power costs by 1%. Kaeser filters remove more contaminants with less pressure drop for lower operating costs. With a complete selection of application-specific filter types, sizes, technical service, and support, Kaeser offers a customized solution for all of your compressed air quality needs.

Why treat compressed air

Ambient air contains contaminants that are drawn into the compressor. These contaminants are concentrated during compression and can easily pass into the compressed air system. A typical compressed air system is contaminated with abrasive solid particles such as dirt, rust and pipe scale, compressor lubricants, condensed water droplets, and oil and hydrocarbon vapors.

Contaminated compressed air systems increase operating costs by reducing efficiency. This results in damaged pneumatic equipment, higher maintenance and repair costs, reduced production (due to downtime), and increased product rejections.

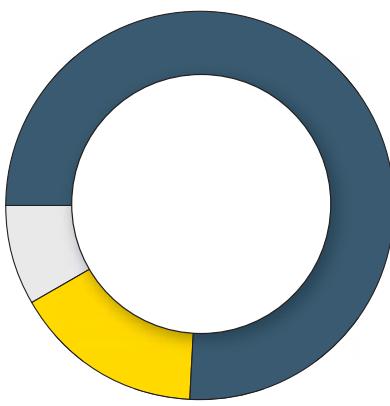
Meeting your air quality requirements

Properly sized and selected Kaeser filters in conjunction with the appropriate dryer will remove harmful contaminants. This allows the compressed air system to deliver the quality of air required—whether it's plant, instrument, or breathing air.

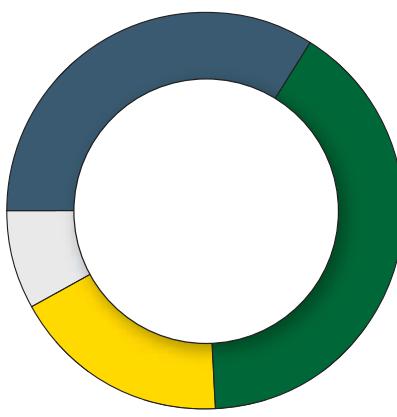
High performance filters and separators

Engineered and developed using the latest innovations and manufacturing techniques, Kaeser filter housings are designed with larger flow areas to ensure the lowest pressure drop and provide easier installation, operation, and maintenance. The result is consistent product quality with minimized operating costs.

Life cycle cost savings



Conventional Filters



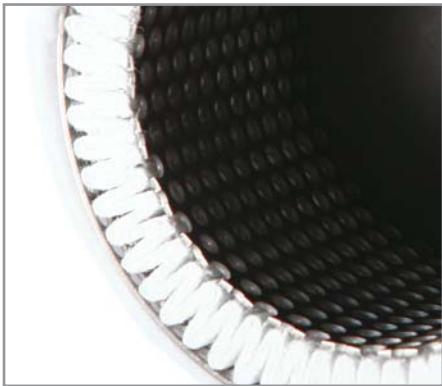
Kaeser Filters

- █ Potential energy cost savings through reduced pressure drop
- █ Energy costs
- █ Maintenance costs
- █ Filter purchase price

*Particulate filter example:
Flow rate 485 scfm, 4800 hr/yr, \$0.10 kWh,
operating at 100 psig, over 10 years.*



Key Features



Deep pleated filter elements

Kaeser's KB, KD, and KE dust and coalescing filter elements feature deep-pleated filter elements wrapped in stainless steel cages. The extra large surface area ensures superior filtration, increased efficiency, and reduced pressure drop.



High efficiency carbon matting

Unlike the granular material used in many other filters, Kaeser's KA filters use carbon impregnated matting to prevent channeling while also reducing pressure drop. This highly absorptive matting is also effective at preventing particles from escaping.



Minimized pressure losses

The generously-sized connection flanges help keep pressure losses to an absolute minimum. Additionally, all particulate and coalescing filters (KB, KD, KE) come standard with a differential pressure gauge to check filter efficiency at a glance.

Filter Accessories



FDPS sensor

Filter differential pressure sensor pressure gauge with volt-free contacts for remote alarm indication.



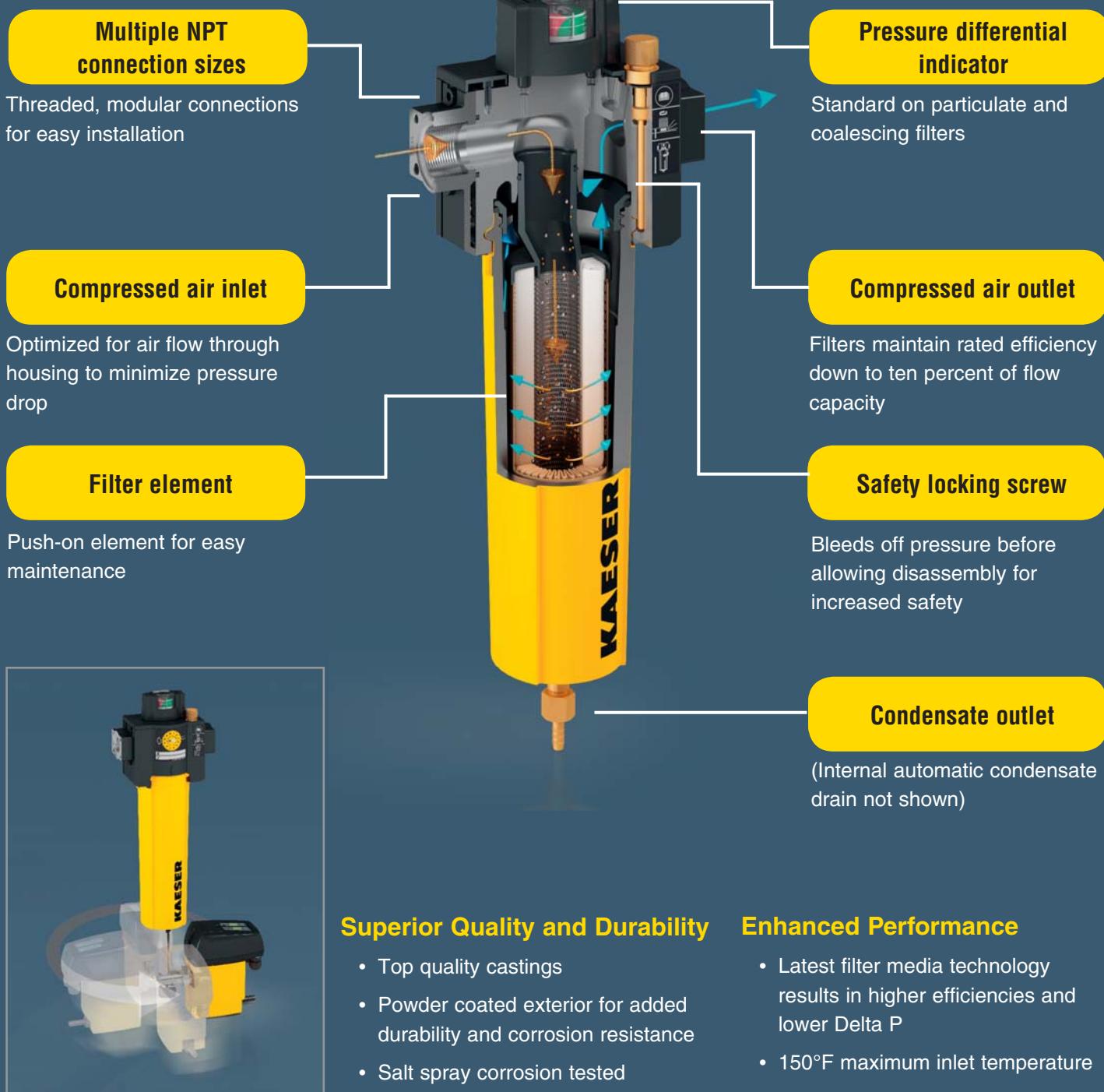
Modular connection kit

Available in multiple sizes for installation flexibility.



Wall mounting kit

Includes all the necessary hardware for fast and easy mounting.



Installation flexibility

The optional Eco-Drain can rotate 360° to fit any installation requirement. Drain access is never a problem even when installed in tight corners or against a wall.

Superior Quality and Durability

- Top quality castings
- Powder coated exterior for added durability and corrosion resistance
- Salt spray corrosion tested
- Treated interior
- Continuously-welded, stainless steel inner and outer cages for filter elements
- 5-year warranty on filter head and housing

Enhanced Performance

- Latest filter media technology results in higher efficiencies and lower Delta P
- 150°F maximum inlet temperature
- 232 psig maximum working pressure
- Stainless steel support sleeves, oil and acid resistant coated collars, and end caps
- The tapered housing and non-turbulent lower filter zone prevent condensate from being picked up by the air flow

Filter Types

	KC (Cyclone) Moisture Separator	KB* (Basic) Coalescing and Particulate	KE* (Extra Fine) Extra Coalescing and Particulate	KD (Dust) Particulate (Afterfilter)	KA (Adsorb) Vapor
Liquid Removal (%)	99+% of water	100% of water	99.999+% of oil	N/A	N/A
Max. Liquid Loading (ppm w/w)	25,000	2,000	100	0	0
Solid Particle Removal	N/A	Meets ISO Class 2	Meets ISO Class 1	N/A	Meets ISO Class 1
Oil Carry-Over	N/A	Meets ISO Class 2	Meets ISO Class 1	N/A	Meets ISO Class 1 for vapor with KE pre-filter
Pressure Drop Wet (psi)	< 1	2	3	N/A	< 1
Pressure Drop Dry (psi)	N/A	0.5	1	< 1	N/A

All drains come standard with an internal drain trap.

* Available with optional zero-loss Eco-Drain 30 or 31 to save energy and prevent compressed air loss

Global Standards

ISO 8573.1:2010 was developed by ISO (International Organization for Standardization) as a reference to help facility engineers specify compressed air quality for solid particulates, humidity, and oil.

A typical pharmaceutical plant, for example, might have a compressed air specification of ISO Quality Class 1.2.1. as shown outlined in the specifications below.

SOLID PARTICLES / DUST			
Class	Max. particle count per m ³ of a particle size with d* (µm)		
	0.1< d ≤ 0.5	0.5 < d ≤ 1.0	1.0 < d ≤ 5.0
0	Consult Kaeser		
1	≤20,000	≤400	≤10
2	≤400,000	≤6,000	≤100
3	not specified	≤90,000	≤1,000
4	not specified	not specified	≤10,000
5	not specified	not specified	≤100,000
Class	Particle concentration* Cp (mg/m ³)		
	0 < Cp ≤ 5		
6	5 < Cp ≤ 10		
X	Cp > 10		

HUMIDITY AND LIQUID WATER		
Class	Pressure dew point	
0	Consult Kaeser	
1	≤70°C	≤-94°F
2	≤-40°C	≤-40°F
3	≤-20°C	≤-4°F
4	≤ 3°C	≤38°F
5	≤7°C	≤45°F
6	≤10°C	≤50°F
Class	Concentration of liquid water* Cw (g/m ³)	
	Cw ≤ 0.5	
7	0.5 < Cw ≤ 5	
8	5 < Cw ≤ 10	
X	Cw > 10	

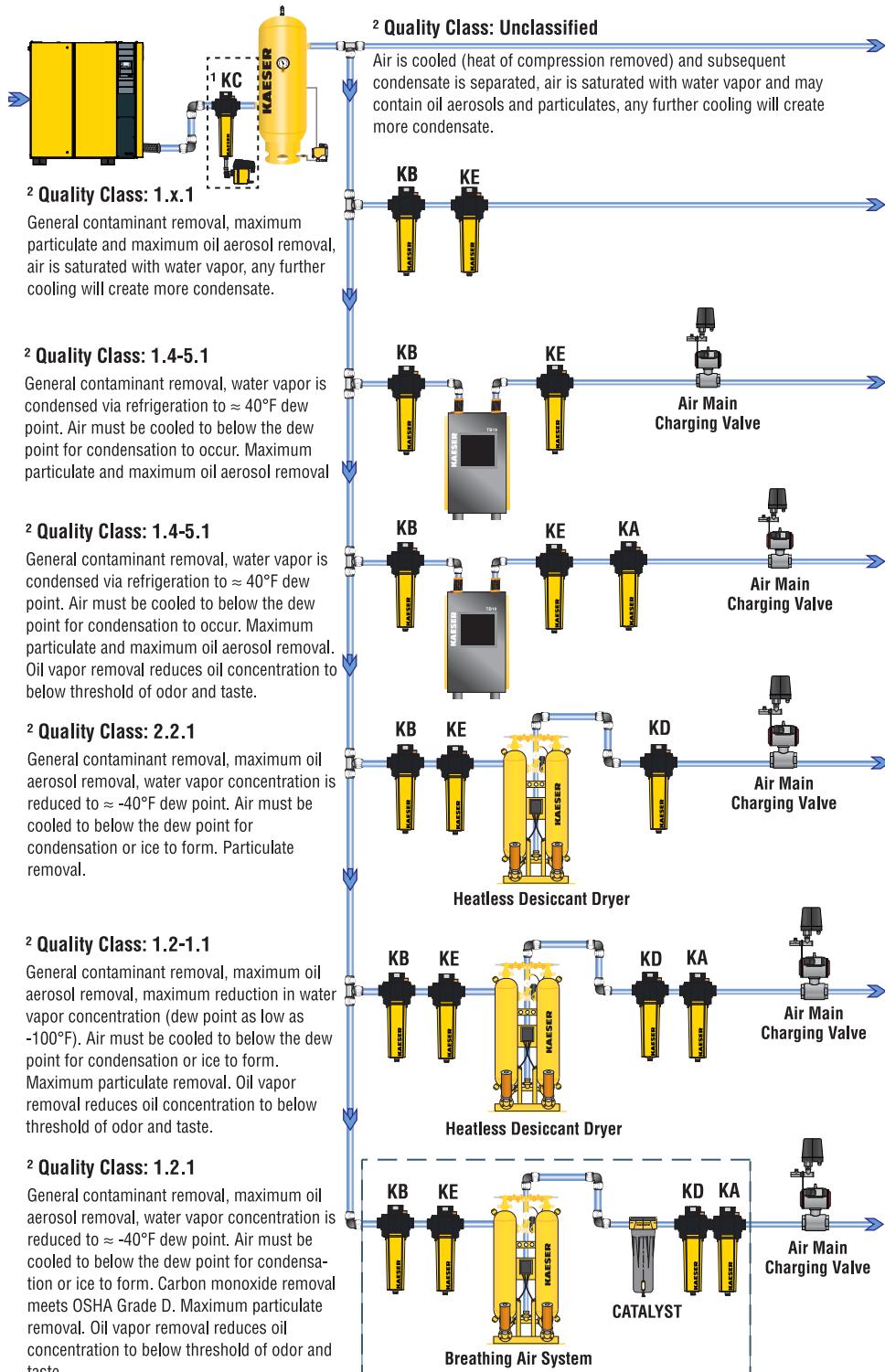
Class	Total oil concentration* (liquid, aerosol, and vapor)	
	(mg/m ³)	(ppm w/w)
0	Consult Kaeser	
1	≤0.01	≤0.008
2	≤0.1	≤0.08
3	≤1.0	≤0.8
4	≤ 5.0	≤4
X	> 5.0	> 4

* At reference conditions: 68°F (20°C), 14.5 psia (1 bar), 0% relative humidity

Examples of Air Treatment Configurations

with ISO 8573.1: 2010 Quality Classes Shown

These configurations don't depict every possible dryer-filter combination. Your Kaeser representative can help select the appropriate air treatment products for your application.



¹ For compressors without an integrated moisture separator.

² Configuration meets ISO class when tested in an ISO 12500 certified facility per ISO 12500 testing directives.

Technical Specifications

Model	Air Flow @100 psig (cfm)	Standard Conn. Size NPT(F)* (in.)	Max. Working Pressure (psig)	Housing Dimensions W x D x H (in.)	Weight (lbs.)	
F6	20	1/2	232	6.1 x 3.4 x 14.1	7.5	
F9	30	3/4		6.5 x 3.9 x 15.4	8.8	
F16	55			6.5 x 3.9 x 17.3	9.3	
F22	75	1		6.5 x 3.9 x 17.3	9.5	
F26	90			9.3 x 6.0 x 18.1	18.1	
F46	160	1-1/2		9.3 x 6.0 x 21.5	20.1	
F83	290			9.3 x 6.0 x 29.4	23.6	
F110	390	2		9.3 x 6.0 x 29.4	24.5	
F142	500					

* Other connection sizes available

Specifications are subject to change without notice.



Silicone-free certification

Silicone-free versions of Kaeser filters are also available as an option. These filters are compliant with test standard PV-VW 3.10.7 and each one undergoes an individual coating test to confirm compliance. The supplied manufacturer's certificate attests that the product is silicone-free.

Proper Filter Sizing

To find the maximum flow for a filter size at pressures other than 100 psig, multiply the rated flow by the Correction Factor corresponding to the minimum pressure at the inlet of the filter.

Do not select filters by pipe size. Use flow rate and operating pressure.

Correction Factors

Operating Pressure (psig)	30	40	60	80	100	120	140	160	180	200	220	230
Capacity Correction Factor	0.39	0.48	0.65	0.83	1.00	1.08	1.16	1.23	1.30	1.37	1.43	1.46

Note: Maximum inlet temperature is 150°F.

KAESER
COMPRESSORS

Built for a lifetime.™

www.kaeser.com

Kaeser Compressors, Inc.
511 Sigma Drive
Fredericksburg, VA 22408 USA
Telephone: 540-898-5500
Toll Free: 800-777-7873
info.usa@kaeser.com

Kaeser Compressors Canada Inc.
3760 La Verendrye Street
Boisbriand, QC J7H 1R5 CANADA
Telephone: (450) 971-1414
Toll free: (800) 477-1416
info.canada@kaeser.com

Kaeser Compresores de México
S de RL de CV
Calle 2 #123
Parque Industrial Juríca
76100 Querétaro, Qro.
Telephone: 01 (442) 218 64 48
sales.mexico@kaeser.com

Kaeser Compresores de
Guatemala y Cia. Ltda.
Calz. Atanasio Tzul 21-00, zona 12
El Cortijo II, Bodega 501
01012—Guatemala City
Telephone: +502 2412-6000
info.guatemala@kaeser.com

