

KAESER
COMPRESSORS

Built for a lifetime.™



Compressed Air Filters

Particulate, Liquid, and Oil Removal

20 - 500 scfm

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.

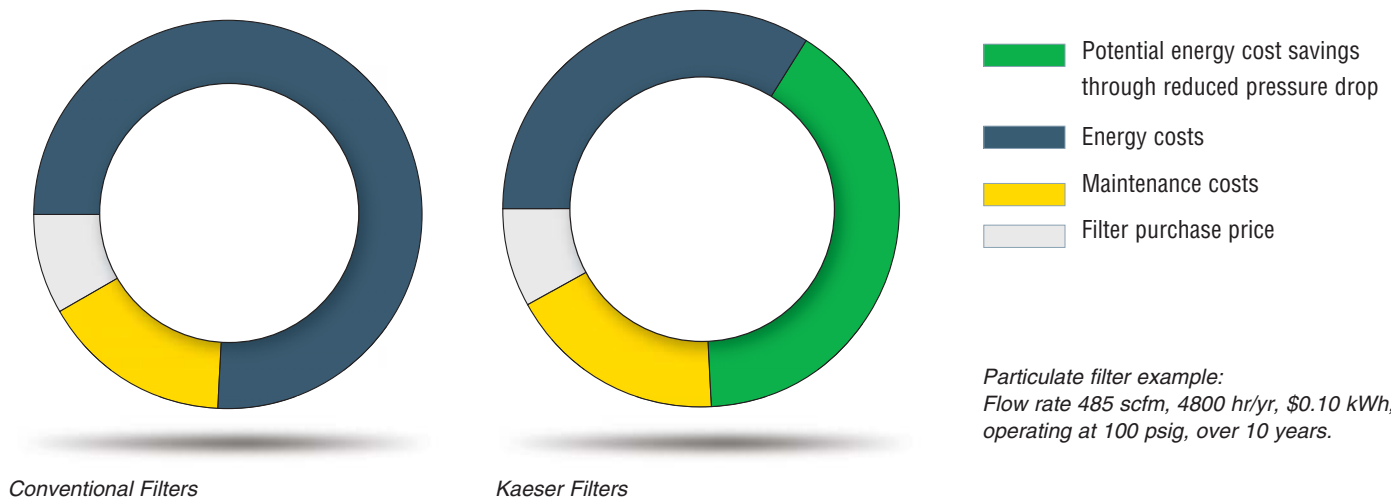
Meeting your air quality requirements

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

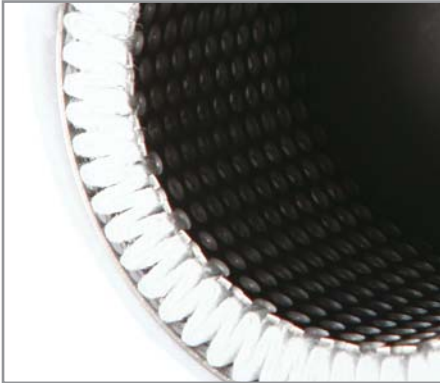
Engineered and developed using the latest innovations and manufacturing techniques, Kaeser filter housings are designed with larger flow areas to ensure the lowest pressure drop and provide easier installation, operation, and maintenance. The result is consistent product quality with minimized operating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

Life cycle cost savings





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.

Multiple NPT connection sizes

Threaded, modular connections for easy installation

Compressed air inlet

Optimized for air flow through housing to minimize pressure drop

Filter element

Push-on element for easy maintenance

Pressure differential indicator

Standard on particulate and coalescing filters

Compressed air outlet

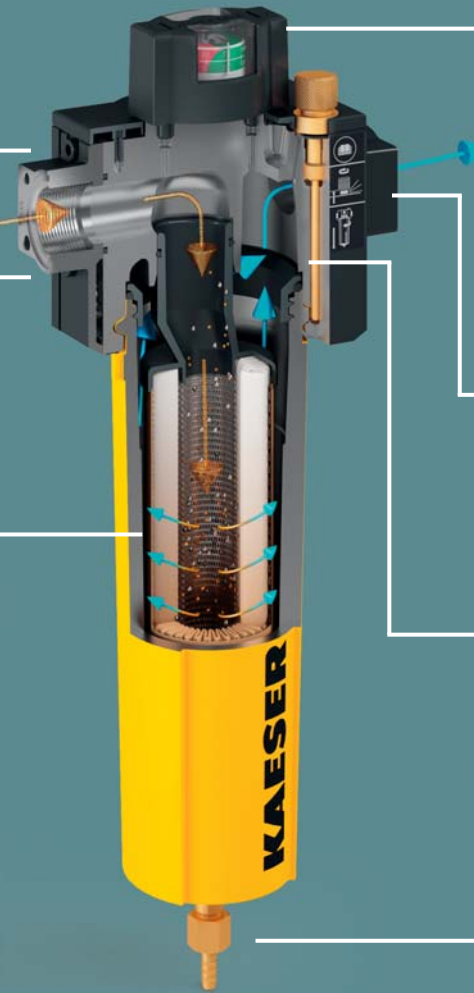
Filters maintain rated efficiency down to ten percent of flow capacity

Safety locking screw

Bleeds off pressure before allowing disassembly for increased safety

Condensate outlet

(Internal automatic condensate drain not shown)



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 ¹ <i>(Cyclone)</i> Moisture Separator	KB ² <i>(Basic)</i> Coalescing and Particulate	KE ² <i>(Extra Fine)</i> Extra Coalescing and Particulate	KD <i>(Dust)</i> Particulate (Afterfilter)	KA <i>(Adsorb)</i> Vapor
Initial pressure differential at saturation	1.5 psi	2.0 psi	< 2.9 psi	< 0.5 psi (New, dry)	0.5 psi (New, dry)
Aerosol content at inlet	-/-	10 mg/m ³	10 mg/m ³	-/-	-/-
Remaining aerosol content at outlet as per ISO 12500-1:06-2007	-/-	< 0.1 mg/m ³	< 0.01 mg/m ³	-/-	-/-
Filter medium	-/-	Deep pleated with support structure and polyester drainage fiber		Deep pleated with support structure	High efficiency carbon fiber
Application	Bulk liquid separation	Filters solids, liquids, aerosols, and particulates	Same as KB, but for higher compressed air quality	Exclusively for filtering particulates	Exclusively for removing oil vapor

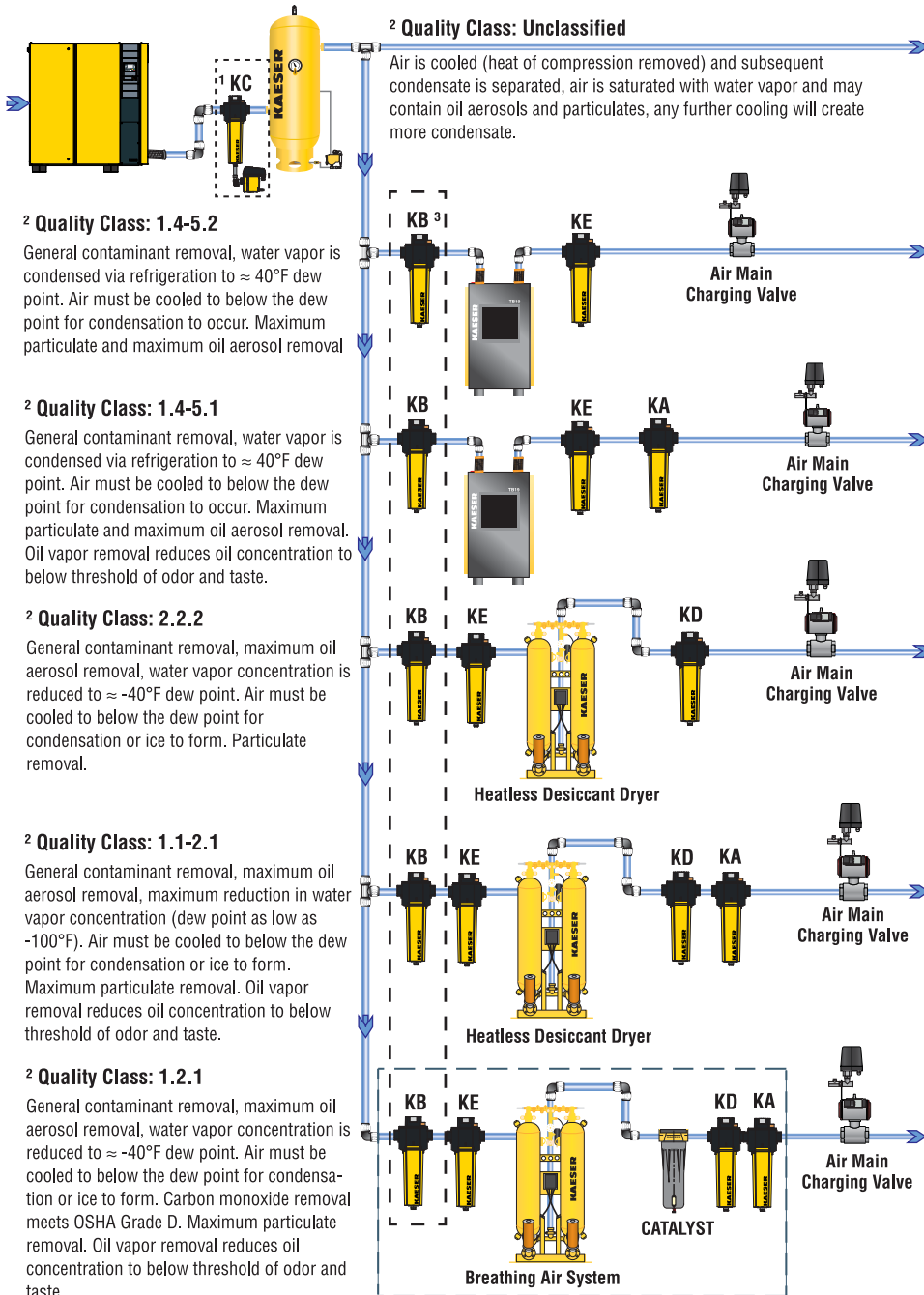


¹ Eco-Drain 31 is standard.

² Float-type drain is standard. Available with optional zero-loss Eco-Drain 30 or 31 to save energy and prevent compressed air loss.

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.

³ KB not needed if non-corrosive tank and piping are used before dryer

ISO 8573.1:2010

SOLID PARTICLES / DUST			
Class	Max. particle count per m^3 of a particle size with d^* (μm)		
	$0.1 < d \leq 0.5$	$0.5 < d \leq 1.0$	$1.0 < d \leq 5.0$
0	Consult Kaeser		
1	$\leq 20,000$	≤ 400	≤ 10
2	$\leq 400,000$	$\leq 6,000$	≤ 100
3	not specified	$\leq 90,000$	$\leq 1,000$
4	not specified	not specified	$\leq 10,000$
5	not specified	not specified	$\leq 100,000$
Class	Particle concentration* C_p (mg/m^3)		
6	$0 < C_p \leq 5$		
7	$5 < C_p \leq 10$		
X	$C_p > 10$		

HUMIDITY AND LIQUID WATER		
Class	Pressure dew point	
0	Consult Kaeser	
1	$\leq 70^\circ\text{C}$	$\leq -94^\circ\text{F}$
2	$\leq -40^\circ\text{C}$	$\leq -40^\circ\text{F}$
3	$\leq -20^\circ\text{C}$	$\leq -4^\circ\text{F}$
4	$\leq 3^\circ\text{C}$	$\leq 38^\circ\text{F}$
5	$\leq 7^\circ\text{C}$	$\leq 45^\circ\text{F}$
6	$\leq 10^\circ\text{C}$	$\leq 50^\circ\text{F}$
Class	Concentration of liquid water* C_w (g/m^3)	
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* (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

Technical Specifications

Model	Filter Type	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	KA, KB, KD, KE	20	1/2	232	6.1 x 3.4 x 14.1	7.5
F9	KA, KB, KC, KD, KE	30	3/4			
F16	KA, KB, KD, KE	55			1	6.5 x 3.9 x 15.4
F22	KA, KB, KD, KE	75	6.5 x 3.9 x 17.3			9.3
F26	KA, KB, KC, KD, KE	90	1-1/2		9.3 x 6.0 x 18.1	18.1
F46	KA, KB, KC, KD, KE	160			9.3 x 6.0 x 21.5	20.1
F83	KA, KB, KD, KE	290	2		9.3 x 6.0 x 29.4	23.6
F110	KA, KB, KD, KE	390				24.5
F142	KA, KB, KC, KD, KE	500				

* Other connection sizes available

Specifications are subject to change without notice.

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.



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.

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.



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