

**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.

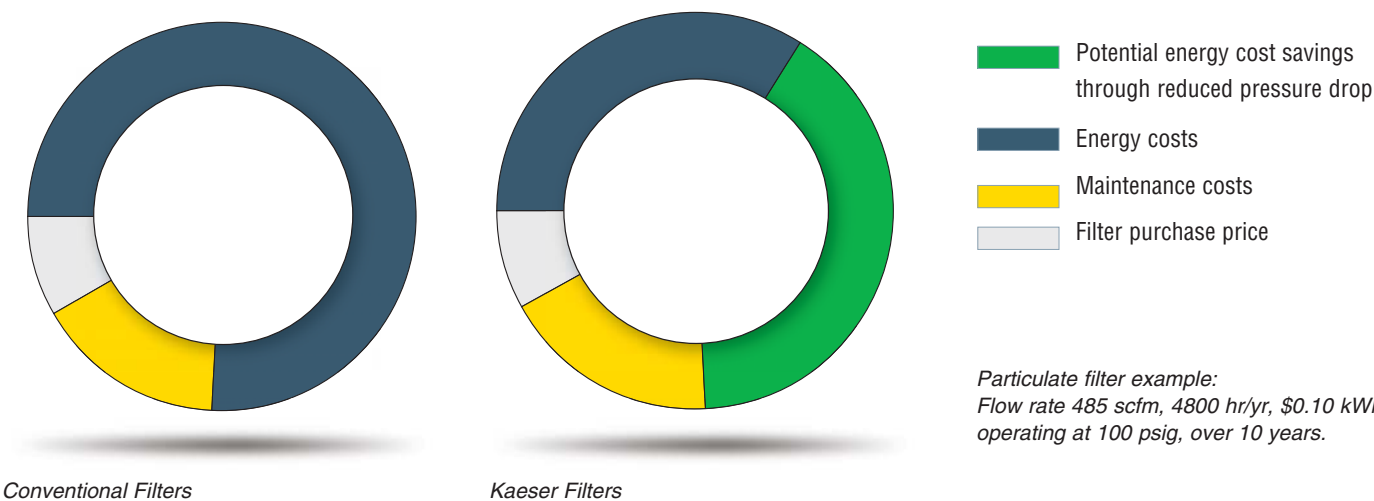
### Meeting your air quality requirements

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

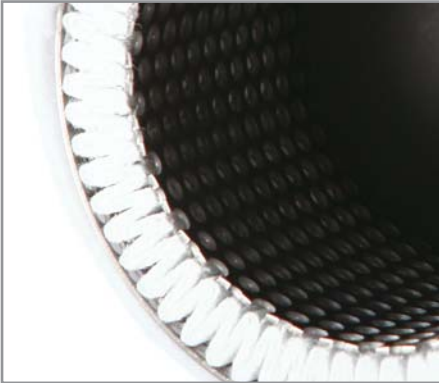
Engineered and developed using the latest innovations and manufacturing techniques, Kaeser filter housings are designed with larger flow areas to ensure the lowest pressure drop and provide easier installation, operation, and maintenance. The result is consistent product quality with minimized operating 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 <sup>1</sup> (Cyclone) Moisture Separator	KB <sup>2</sup> (Basic) Coalescing and Particulate	KE <sup>2</sup> (Extra Fine) Extra Coalescing and Particulate	KD (Dust) Particulate (Afterfilter)	KA (Adsorb) 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 <sup>3</sup>	10 mg/m <sup>3</sup>	-/-	-/-
Remaining aerosol content at outlet as per ISO 12500-1:06-2007	-/-	< 0.1 mg/m <sup>3</sup>	< 0.01 mg/m <sup>3</sup>	-/-	-/-
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



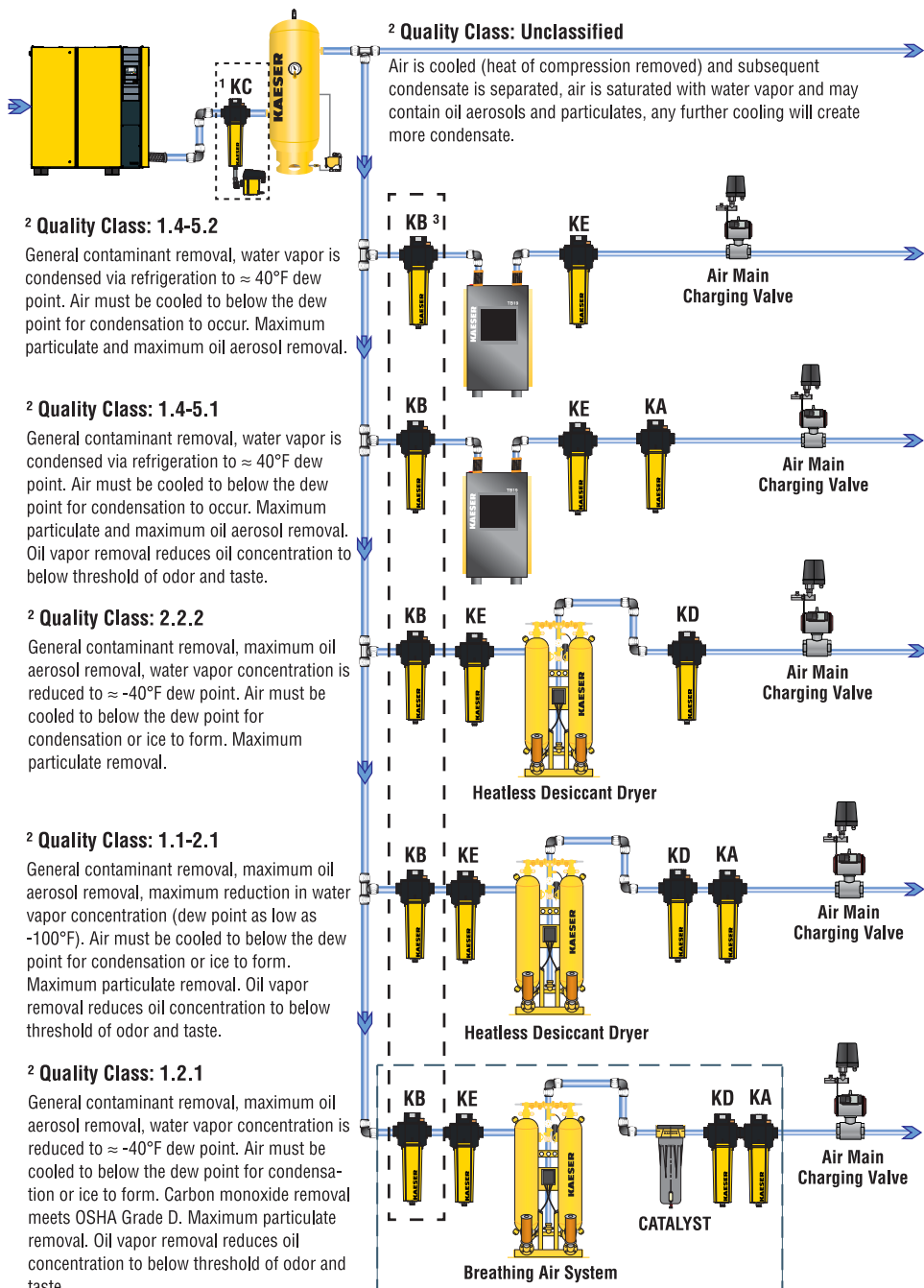
<sup>1</sup> Eco-Drain 31 is standard.

<sup>2</sup> 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.



### ISO 8573.1:2010

SOLID PARTICLES / DUST			
Class	Max. particle count per m <sup>3</sup> 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 <sup>3</sup> )		
6	0 < Cp ≤5		
7	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 <sup>3</sup> )	
7	Cw ≤0.5	
8	0.5 < Cw ≤5	
9	5 < Cw ≤10	
X	Cw > 10	

OIL		
Class	Total oil concentration* (liquid, aerosol, and vapor)	
	(mg/m <sup>3</sup> )	(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

<sup>1</sup> For compressors without an integrated moisture separator.

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

<sup>3</sup> KB not needed if non-corrosive tank and piping are used before dryer

# 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			6.5 x 3.9 x 15.4	8.8
F22	KA, KB, KD, KE	75	6.5 x 3.9 x 17.3			
F26	KA, KB, KC, KD, KE	90			9.5	
F46	KA, KB, KC, KD, KE	160	1-1/2			9.3 x 6.0 x 18.1
F83	KA, KB, KD, KE	290	2		9.3 x 6.0 x 21.5	20.1
F110	KA, KB, KD, KE	390			9.3 x 6.0 x 29.4	23.6
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.

## 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.



## 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.



**Built for a lifetime.™**



[www.kaeser.com](http://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 Jurica  
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

Certified Management Systems

