

Compressed Air Filters



Standard Features and Benefits



1 Delta P Slide Indicator

Ensures economical operation by changing color when filter element requires replacement. Fitted as standard on filters up to 60 scfm (excluding KVA).

2 Color Coded Elements

Allows easy identification. Elements are designed using the latest media innovations and manufacturing technology.

3 Internal Automatic Drain

Reliably discharges collected condensate (excluding KVA and KFS 250 and above).

4 Delta P Gauge

Large, easy-to-read dual gauge faces allow housings to be mounted in any flow direction. Fitted as standard on filters from 100 scfm and up (except KVA).

5 Modular Connections

Space-saving design allows housings to be connected in series without additional piping.

6 Liquid Level Indicator

Visually monitor liquid level and verify drain operation.

Modular Housings for Flows up to 780 scfm

- Manufactured from top quality aluminum and steel
- Epoxy powder coated (interior and exterior) for added durability and corrosion resistance
- All filter types fit same size housings
- 1/8 turn bayonet head to bowl connections for easy access (20 to 170 scfm)
- Threaded connection for 250 scfm and up
- Optimized air flow through housing minimizes pressure drop

- The tapered housing and non-turbulent lower filter zone prevents condensate from being picked up by the air flow
- Audible warning if disassembly attempted while housing under pressure
- Wall mounting brackets available

Enhanced Performance

- Latest filter media technology results in higher efficiencies and lower Delta P
- Additional filter types for extra critical applications
- 150°F maximum inlet temperature

- 250 psig maximum working pressure (pressure vessels, 225 psig)
- Push-on element for quick, reliable replacement
- Coalescing filters have new horizontal-web fiber structure
- Optimum filter efficiency even at low airflow of up to five percent of nominal flow
- Filter element seals to filter head
- Stainless steel support sleeves, oil and acid resistant coated collars and end caps

Global Standards

ISO 8573.1 was developed in 1992 by ISO (International Organization for Standardization) to help facility engineers specify compressed air quality globally with "Quality Classes" for solid particulates, humidity and oil. Quality classes provide an internationally accepted unit of measure. A typical pharmaceutical plant, for example, would have a compressed air specification of ISO Quality Class 1.2.1. This is equivalent to 0.1 micron particulate filtration, -40° F (-40°C) dew point, and 0.008 ppm (0.01 mg/m³) oil filtration.

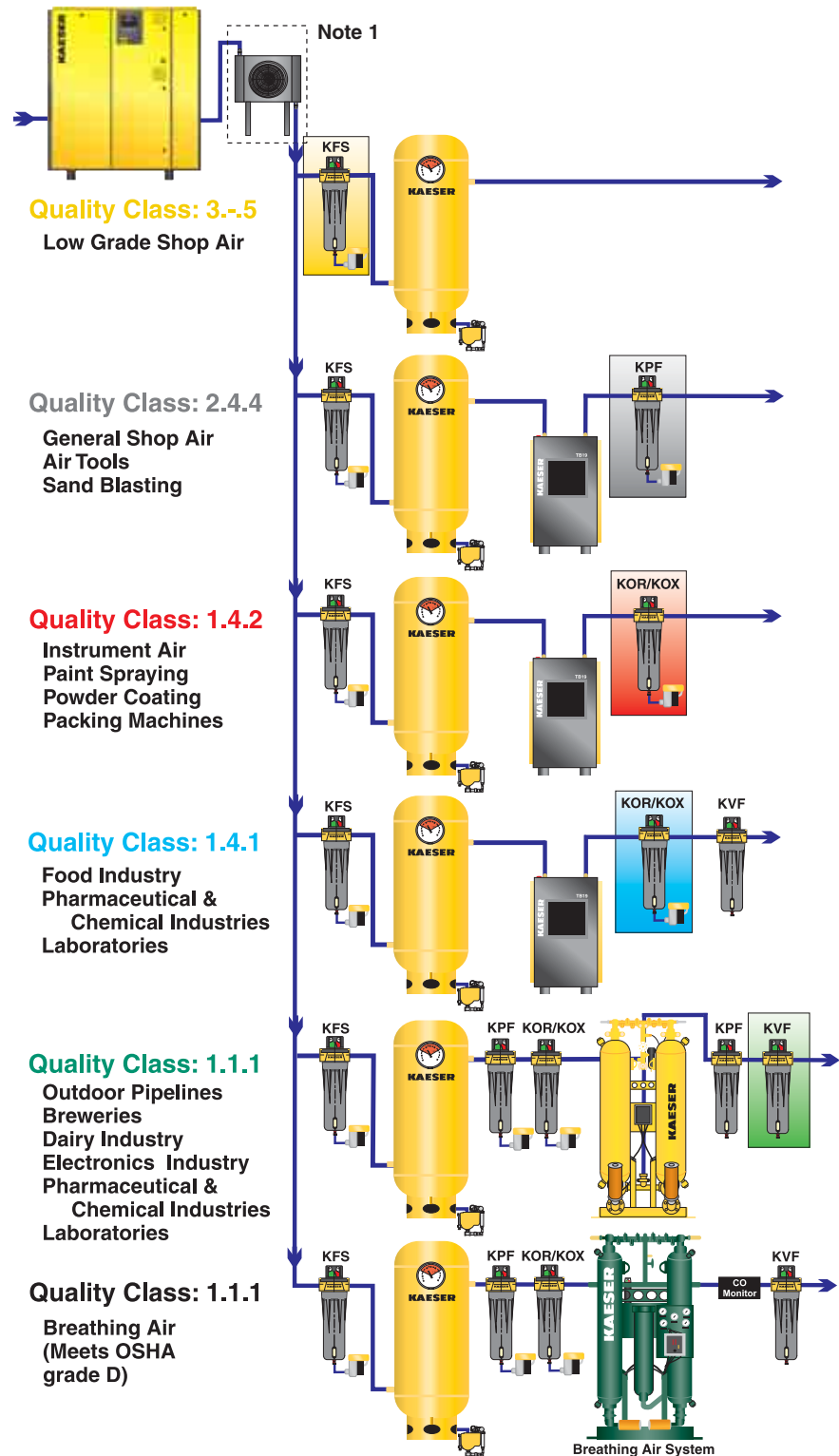
Quality Classes	SOLIDS Maximum Particle Size (microns)
0	as specified
1	.01
2	1
3	5
4	15
5	40
6	—

Quality Classes	MOISTURE Dew Point	
	°C	°F
0	as specified	
1	-70	-94
2	-40	-40
3	-20	-4
4	3	38
5	7	45
6	10	50

Quality Classes	OIL Liquid and Gas	
	mg/m ³	ppm _{w/w}
0	as specified	
1	0.01	0.008
2	0.1	0.08
3	1	0.8
4	5	4
5	>5	>4
6	—	—

Typical Air Treatment Configurations

ISO 8573.1 Quality Classes



Note 1: All Kaeser Rotary Screw Compressors have built-in aftercoolers. However, for equipment without an aftercooler or where the discharge temperature is 110°F or higher, an aftercooler should be positioned at the location shown.

KFS/KPF/KOR/KOX filter elements should be replaced at 10 psid (red area of Delta P gauge) or annually, whichever occurs first. KVF filter elements should be replaced after 1,000 hours of operation or annually, whichever occurs first. Kaeser recommends processing condensate through the Aquamat which safely and economically disposes of the environmentally threatening oil/water mixture. KPF is offered in a reverse flow version (KPF-RF) for cold regenerative desiccant dryers. Consult factory for specifications.

Engineering Data

KFS - Kaeser Filtered Separator



- Downstream of Aftercooler (shown)
- Liquid Removal - 99+% of water
 - Max. Liquid Loading - 25,000 ppm w/w
 - Solid Particle Removal - 3 microns
 - Oil Carry-Over - 5 ppm w/w
 - Pressure Drop: Dry-1 psi; Wet-1.5 psi

KPF - Kaeser Particulate Filter



- Downstream of Refrigerated Air Dryer (shown)
- Downstream of Heatless Desiccant Dryer
- Upstream of KOR/KOX
- Liquid Removal - 100% of water
 - Max. Liquid Loading - 2,000 ppm w/w
 - Solid Particle Removal - 1 micron
 - Oil Carry-Over - 1 ppm w/w
 - Pressure Drop: Dry-1 psi; Wet-2 psi

KOR - Kaeser Oil Removal Filter



- Downstream of Refrigerated Air Dryer (shown)
- Upstream of Desiccant Dryer
- Liquid Removal - 99.99+% of oil
 - Max. Liquid Loading - 1,000 ppm w/w
 - Solid Particle Removal - 0.01 micron
 - Oil Carry-Over - 0.01 ppm w/w
 - Pressure Drop: Dry-1 psi; Wet-3 psi

KOX - Kaeser Oil Removal eXtra Fine Filter



- Downstream of Refrigerated Air Dryer (shown)
- Upstream of Desiccant Dryer or KVA
- Liquid Removal - 99.999+% of oil
 - Max. Liquid Loading - 100 ppm w/w
 - Solid Particle Removal - 0.01 micron
 - Oil Carry-Over - 0.001 ppm w/w
 - Pressure Drop: Dry-2 psi; Wet-6 psi

KVF - Kaeser Vapor Adsorber



- Downstream of KOR/KOX & Desiccant Air Dryer (shown)
- Liquid Removal - 0%
 - Max. Liquid Loading - 0 ppm w/w
 - Solid Particle Removal - 0.01 micron
 - Vapor Carry-Over - 0.003 ppm w/w
 - Pressure Drop: Dry-1 psi; Wet-N/A

Model	Air Flow @ 100 psig (cfm)	Connection Size (in.)	Standard Features of Filters					Max. Working Pressure (psig)	Dimensions W x H (in.)	Weight (lbs.)
			KFS	KPF	KOR	KOX	KVF			
Modular Type Housing										
(Filter Type) - 20	20	1/2 NPTF	1	1	1	1	6	250	4 1/4 x 8 1/4	5
(Filter Type) - 35	35	1/2 NPTF	1	1	1	1	6		4 1/4 x 11 1/4	8
(Filter Type) - 60	60	1/2 NPTF	1	1	1	1	6		4 1/4 x 13 1/2	9
(Filter Type) - 100	100	1 NPTF	2	2	2	2	6		5 1/4 x 15 1/2	10
(Filter Type) - 170	170	1 NPTF	2	2	2	2	6		5 1/4 x 19 3/4	11
(Filter Type) - 250	250	1 1/2 NPTF	4	2	2	2	6		6 1/2 x 23	11
(Filter Type) - 375	375	1 1/2 NPTF	4	2	2	2	6		6 1/2 x 27 1/2	12
(Filter Type) - 485.2	485	2 NPTF	5	3	3	3	7		7 3/4 x 31 1/4	28
(Filter Type) - 485.2.5	485	2 1/2 NPTF	5	3	3	3	7		7 3/4 x 31 1/4	28
(Filter Type) - 625	625	2 1/2 NPTF	5	3	3	3	7		7 3/4 x 37	33
(Filter Type) - 780	780	2 1/2 NPTF	5	3	3	3	7	7 3/4 x 43	38	
Pressure Vessel										
(Filter Type) - 1000P	1000	3 NPTM	8	8	8	8	9	225	16 x 48	91
(Filter Type) - 1250P	1250	3 NPTM	8	8	8	8	9		16 x 48	91
(Filter Type) - 1875P	1875	3 NPTM	8	8	8	8	9		16 1/4 x 49	120
(Filter Type) - 2500P	2500	4 Flange	8	8	8	8	9		20 x 52 1/4	179
(Filter Type) - 3125P	3125	4 Flange	8	8	8	8	9		20 x 52 1/4	182
(Filter Type) - 5000P	5000	6 Flange	8	8	8	8	9		24 x 54 3/4	271
(Filter Type) - 6875P	6875	6 Flange	8	8	8	8	9		28 x 62 3/4	518
(Filter Type) - 8750P	8750	6 Flange	8	8	8	8	9		28 x 62 3/4	527
(Filter Type) - 11875P	11,875	8 Flange	8	8	8	8	9		33 x 69 1/4	709
(Filter Type) - 16250P	16,250	8 Flange	8	8	8	8	9		39 x 68	918
(Filter Type) - 21250P	21,250	10 Flange	8	8	8	8	9	46 x 71	1412	

- 1 - Internal Automatic Drain, Delta P Slide Indicator, Liquid Level Indicator.
- 2 - Internal Automatic Drain, Delta P Gauge, Liquid Level Indicator.
- 3 - Internal Automatic Drain, Delta P Gauge.
- 4 - Manual Drain, Delta P Gauge, Liquid Level Indicator
(For automatic draining, optional external drain is available).
- 5 - Manual Drain, Delta P Gauge (For automatic draining, optional external drain is available).
- 6 - Manual Drain, liquid Level Indicator (Drain trap not required).
- 7 - Manual Drain (Drain trap not required).
- 8 - Plugged Drain Port, Delta P Gauge & Installation Kit
(For automatic draining, optional external drain is available).
- 9 - Plugged Drain Port (Installation of a manual drain is recommended).

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.

Minimum Inlet Pressure (psig)	20	30	40	60	80	100	120	150	200	250
Correction Factor	0.30	0.39	0.48	0.65	0.82	1.00	1.17	1.43	1.87	2.31

Note: Maximum inlet temperature is 150°F.

Specifications are subject to change without notice.