KAESER COMPRESSORS

Air Filters

Filters

0.58 to 248 m³/min
up to 16 bar

KAESER COMPRESSORS

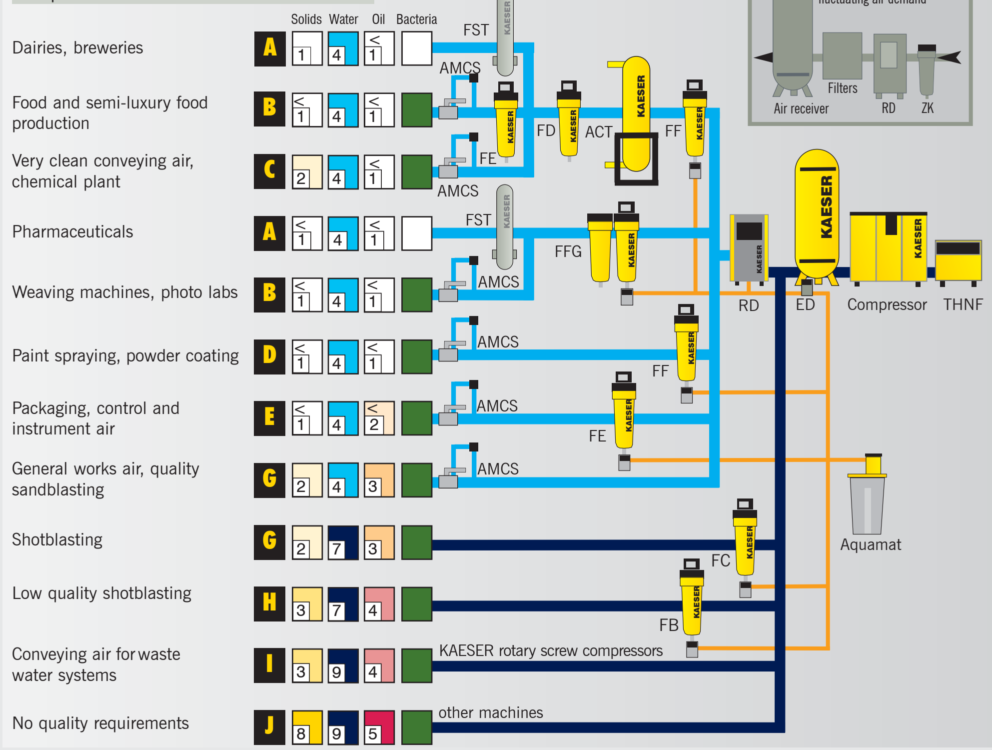
Why is it necessary to treat compressed air?

On average, a compressor sucks in up to 190 million particles of dirt, hydrocarbons, viruses and bacteria with every cubic metre of atmospheric air. The compressor itself can only remove the larger dirt particles and the majority of the contaminants remain in the compressed air. This means that for most applications careful treatment of the air is necessary:

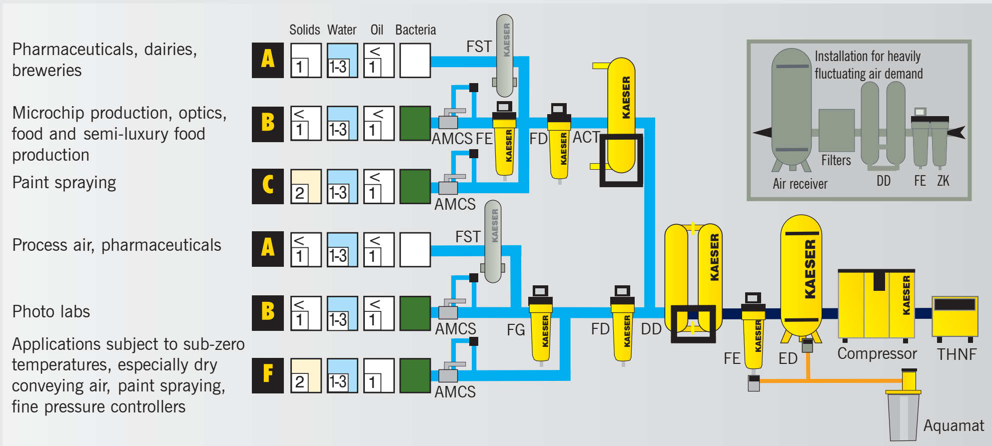
Choose the required grade of treatment according to your field of application:

Air treatment using a refrigeration dryer (+3 °C pressure dew point)

Examples: selection of treatment classes to ISO 8573-1



For air mains subject to sub-zero temperatures: treatment systems with desiccant dryers (pressure dew point to -70 °C)



Explanation:

THNF = bag filter
cleans dusty and highly contaminated intake air

ZK = centrifugal separator
removes condensate

ED = ECO Drain
electronic level-controlled condensate drain

FB = prefilter 3 µm
separates liquid droplets and solid particles > 3 µm, oil content ≤ 5 mg/m³

FC = prefilter 1 µm
separates oil droplets and solid particles > 1 µm, oil content ≤ 1 mg/m³

FD = particulate filter 1 µm
separates dust particles (attrition) > 1 µm

FE = microfilter 0.01 ppm
separates aerosol oils and solid particles > 0.01 µm, aerosol content ≤ 0.01 mg/m³

FF = microfilter 0.001 ppm
separates aerosol oils and solid particles > 0.01 µm, oil content ≤ 0.001 mg/m³

FG = activated carbon filter
for adsorption of oil vapours, oil vapour content ≤ 0.003 mg/m³

FFG = combination filter
comprising FF and FG

RD = refrigeration dryer
pressure dew point to +3 °C

DD = desiccant dryer
for compressed air drying; DC series - heatless regeneration, pressure dew point to -70 °C; DW, DN, DTL and DTW series - heat regeneration, pressure dew point to -40 °C

ACT = activated carbon adsorber
for adsorption of oil vapours, oil vapour content ≤ 0.003 mg/m³

FST = sterile filter
for bacteria-free air

Aquamat = condensate treatment system

AMCS = air-main charging system

Contaminants:

- + solids -
- + water -
- + oil -
- + bacteria -

Degree of filtration:

ISO 8573-1 Class	Solid particles: Max. no. of particles per m³ with size d (µm) ≤ 0.1	0.1 < d ≤ 0.5	0.5 < d ≤ 1.0	1.0 < d ≤ 5.0	µm	mg/m³	Humidity: Pressure dew point (x = liquid water in mg/m3)	Oil concentration: mg/m³
0	as specified by user							
1	–	100	1	0	–	–	≤ -70 °C	≤ 0.01
2	–	100000	1000	10	–	–	≤ -40 °C	≤ 0.1
3	–	–	10000	500	–	–	≤ -20 °C	≤ 1.0
4	–	–	–	1000	–	–	≤ +3 °C	≤ 5.0
5	–	–	–	20000	–	–	≤ +7 °C	–
6			–		≤ 5	≤ 5	≤ +10 °C	–
7			–		≤ 40	≤ 10	x ≤ 0.5	–
8			–		–	–	0.5 < x ≤ 5.0	–
9			–		–	–	5.0 < x ≤ 10.0	–

- **A** Aerosol oil ≤ 0.003 mg/m³, particle retention > 0.01 µm sterile, odourless and taste-free
- **B** Oil vapour content ≤ 0.003 mg/m³, particle retention > 0.01 µm
- **C** Oil vapour content ≤ 0.003 mg/m³, particle retention > 1 µm
- **D** Aerosol oil ≤ 0.001 mg/m³, particle retention > 0.01 µm
- **E** Aerosol oil ≤ 0.01 mg/m³, particle retention > 0.01 µm
- **F** Aerosol oil ≤ 0.01 mg/m³, particle retention > 1 µm
- **G** Aerosol oil ≤ 1 mg/m³, particle retention > 1 µm
- **H** Aerosol oil ≤ 5 mg/m³, particle retention > 3 µm
- **I** Aerosol oil ≤ 5 mg/m³, particle retention > 1 µm
- **J** Untreated

Clean, quality compressed air maximises air-tool service life, ensures that pneumatic machinery and control systems operate at the peak of their performance and keeps pipes & valves free from contaminants. It therefore not only reduces service, maintenance and repair costs, but can also reduce procurement costs.

Filters – For clean compressed air

Reliable Filtration

- **coalescence filters** with new, matrix filter-fibre structure
- **high filter efficiency** with minimal pressure loss and low operating costs
- **high efficiency even at low air volumes** of only five percent of nominal flow
- **reliable element-to-housing seal** prevents unfiltered air from bypassing the filter element

Long Service Life

- **durable, corrosion resistant epoxy coated** (inside and out) filter housing
- filter elements: stainless steel orifice tubes, **oil and acid resistant** coated sleeves and end caps, bound to media with special adhesive, **completely impervious** to chemicals
- high operating temperatures up to +66 °C

Comprehensive Range

- **choice of differential pressure indicators:**
  - analogue display
  - filter monitor for optimal monitoring (option)
- **choice of condensate drains:**
  - automatic internal drain, pilot controlled, pneumatically actuated - electronically controlled ECO Drain (D-Pack version)

Simple Maintenance

- **bayonet bowl to head connection** with safe 1/8-turn to open and close the housing (up to model F...-48)
- **audible warning** if the filter is opened under pressure
- **secure sealing** of the housing **via captive O-Ring**
- **plug-in filter elements** for quick, simple change

D-Pack Version – with ECO DRAIN (filter monitor and filter monitor box available as options)

The pressure differential indicator ...

... shows the actual pressure drop

The filter monitor ... (optional)

... indicates when filter change is required via:
- **preset operational parameters**
- **continuous measurement using intelligent** electronics
- easy-to-read LCD display, alarm LED
- digital display of pressure drop

The high performance filter element ...

... ... ensures reliable filtration with minimal pressure losses:
- **coalescence filter** with new matrix filter-fibre structure
- **high efficiency even at low air volumes** of only five percent of nominal flow
- **reliable element-to-housing seal prevents unfiltered air from bypassing the** filter element
- stainless steel orifice tubes, **oil & acid resistant** coated sleeves and end caps

The filter housing ...

... that lasts:
- **long service life** thanks to the epoxy resin coating inside and out (proven in over 1000 hours of salt contamination tests)
- **easy filter element** removal
- **minimal pressure drop** due to optimised air flow
- **the conical bowl and turbulence-free lower filter zone prevent condensate** from being carried along with the air flow
- **audible warning** if leakages occur or if the filter is opened under pressure

The shut-off valve ...

... allows maintenance of the condensate drain without interrupting air supplies

Condensate drainage with the ECO Drain ...

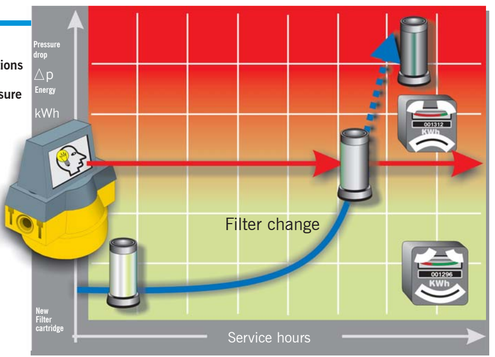
... is electronically level-controlled and fully automatic, which means:
- **no loss of air**
- **maximum reliability**

Filter monitor (option)

- **microprocessor-controlled LCD display**
- **comprehensive filter monitoring based on:**
  - operating time
  - differential pressure
  - operation efficiency: comparison of increasing energy requirement caused by filter clogging to a maximum value that is dependent on the operating conditions and which is calculated by the monitor
- **resulting in significant power savings**
- **'filter change' warning** with red LED and alarm contact
- **continuous measurement of pressure differential** to an accuracy of 0.025 bar via precision pressure transducer
- **Direct data input,** no separate programming device required

Intelligence to reduce power consumption

- **filter element service life determined by actual operating conditions**
- **continuous, precise evaluation of pressure drop** with masking of pressure peaks



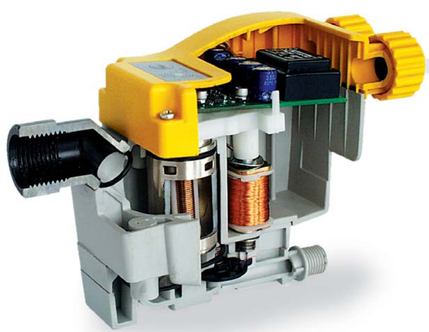
Enhanced reliability through remote monitoring

Filter Monitor Box

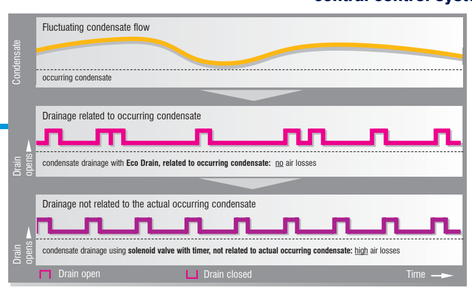
Visualisation / central control system

ECO Drain

- **non-wearing electronic level sensor** no moving parts
- **maximum reliability**, no sticking or clogging
- **no loss of air**
- test button
- **self-monitoring electronics** with automatic alarm sequence
- volt-free alarm contact
- LEDs for power supply and alarm
- AC and DC (50 / 60 Hz) versions available
- all controls and controller enclosure protected to IP 65



Maximum reliability No air loss



KAESER COMPRESSORS

Standard Version

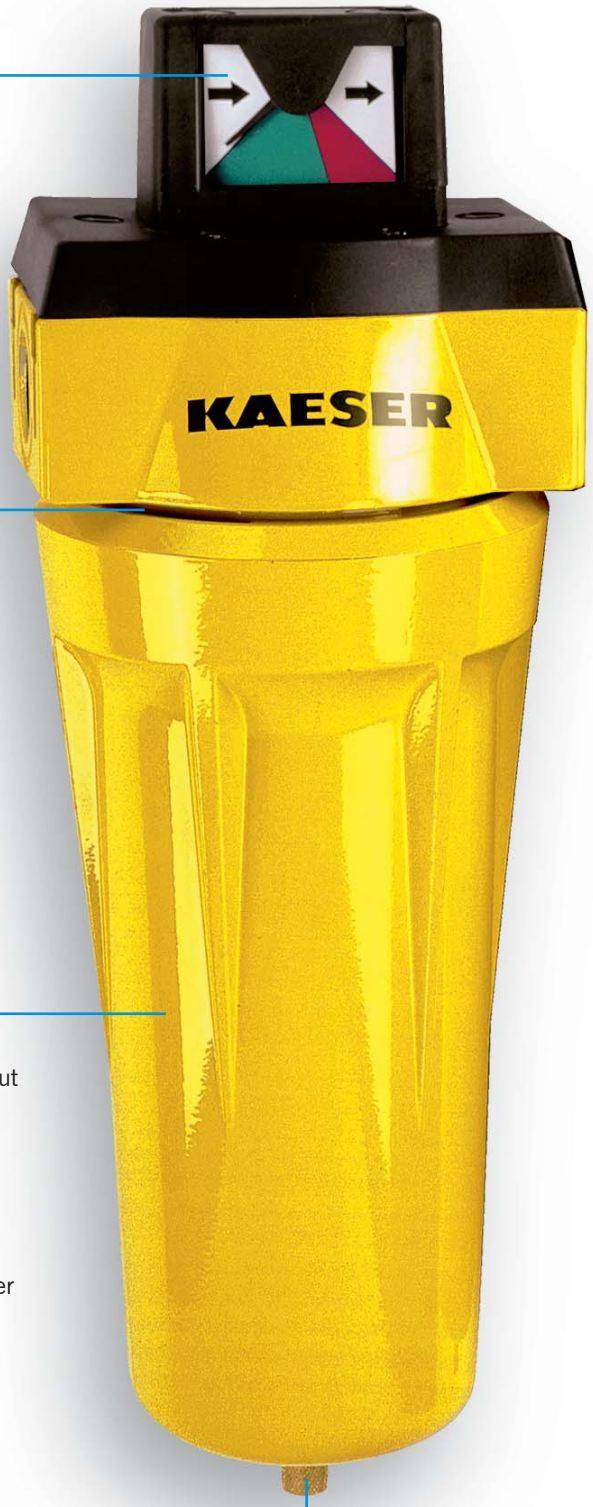
The pressure differential indicator ...

... shows the actual pressure drop.

The high performance filter element ...

... ensures reliable filtration with minimal pressure losses

- **coalescence filter** with new matrix filter-fibre structure
- **high efficiency even at low air volumes** of only five percent of nominal flow
- **reliable element-to-housing seal** prevents unfiltered air from bypassing the filter element
- stainless steel orifice tubes, **oil & acid resistant** coated sleeves and end caps



The filter housing ...

... that lasts:

- **long service life** thanks to the epoxy resin coating inside and out (proven in over 1000 hours of salt contamination tests)
- **easy filter element** removal
- **minimal pressure drop** due to optimised air flow
- **the conical bowl and turbulence-free lower filter zone prevent condensate** from being carried along with the air flow
- **audible warning** if leakages occur or if the filter is opened under pressure

Automatic condensate drain ...

... with float-controlled condensate drainage.

FB and FC Prefilters

Filter monitor (option)

D-Pack version

with automatic ECO Drain and pressure differential indicator

Standard Version

with pressure differential indicator and automatic condensate drain

FB filter element

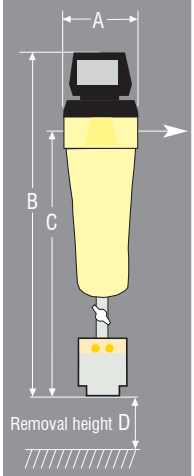
FC filter element

Filter model:	**FB prefilter 3 µm**
Particle retention:	**> 3 µm** Class 3 to ISO 8573-1 (2001)
Oil content:	**≤ 5 mg/m³** Class 4 to ISO 8573-1 (2001)
Pressure drop, when new:	0.07 bar
Max. inlet liquid load:	25000 mg/m³
Two-stage filtration, 1st stage:	2 stainless steel orifice tubes, initial separation up to 10 microns
2nd stage:	step structured fibre media up to 3 micron

Filter model:	**FC prefilter 1 µm**
Particle retention:	**> 1 µm** Class 2 to ISO 8573-1 (2001)
Oil content:	**≤ 1 mg/m³**
Class 3 to ISO 8573-1 (2001)	
Pressure drop, when new:	0.07 bar
Max. inlet liquid load:	2000 mg/m³
Two-stage filtration, 1st stage:	alternate fibreglass and particle filter layers
2nd stage:	multi-layered, epoxy bonded fibre media

Typical uses for FB and FC prefilters:

- particulate filter for dirt, rust, scale
- first stage filter in combination with microfilter



Models FB + FC	Airflow	Air connection	Removal height D	Standard Version						D-Pack version						Filter element		
	m³/min		mm	F B 3 µm	F C 1 µm	Dimensions mm A	B	C	Weight kg	FB	FC	Dimensions mm A	B	C	Weight kg	FB	FC	No.
	0.58	R 3/8	76	FB-6	FC-6	105	306	224	3.6	FB-6 D	FC-6 D	105	545	444	4.3	E-B-6	E-C-6	1
	1.00	R 1/2	76	FB-10	FC-10	105	306	224	3.7	FB-10 D	FC-10 D	105	545	444	4.4	E-B-10	E-C-10	1
	1.75	R 1/2	76	FB-18	FC-18	105	367	285	3.9	FB-18 D	FC-18 D	105	600	499	4.6	E-B-18	E-C-18	1
	2.83	R 3/4	89	FB-28	FC-28	133	389	298	4.4	FB-28 D	FC-28 D	133	650	540	5.1	E-B-28	E-C-28	1
	4.83	R 1	89	FB-48	FC-48	133	497	406	4.8	FB-48 D	FC-48 D	133	745	635	5.5	E-B-48	E-C-48	1
	7.10	R 1 1/2	102	FB-71	FC-71	164	579	482	4.6	FB-71 D	FC-71 D	164	826	710	5.3	E-B-48	E-C-71	1
	10.7	R 1 1/2	102	FB-107	FC-107	164	693	596	5.1	FB-107 D	FC-107 D	164	940	824	5.8	E-B-107	E-C-107	1
	13.8	R 2	102	FB-138	FC-138	194	789	681	12.7	FB-138 D	FC-138 D	194	1037	909	13.4	E-B-138	E-C-138	1
	17.7	R 2 1/2	102	FB-177	FC-177	194	935	827	15.0	FB-177 D	FC-177 D	194	1183	1055	15.7	E-B-177	E-C-177	1
	22.1	R 2 1/2	102	FB-221	FC-221	194	1091	983	17.2	FB-221 D	FC-221 D	194	1357	1230	17.9	E-B-221	E-C-221	1
	18.5	DN 80	610	FB-185	FC-185	350	1130	950	29.9	FB-185 D	FC-185 D	350	1270	1090	29.9	E-B-185	E-C-185	1
	28.3	DN 80	610	FB-283	FC-283	400	1205	1013	41.1	FB-283 D	FC-283 D	400	1290	1098	38.9	E-B-283	E-C-283	2
	35.4	DN 80	610	FB-354	FC-354	400	1205	1013	41.8	FB-354 D	FC-354 D	400	1290	1098	39.6	E-B-185	E-C-185	2
	52.6	DN 100	610	FB-526	FC-526	440	1240	1023	53.4	FB-526 D	FC-526 D	440	1330	1113	51.2	E-B-185	E-C-185	3
	70.8	DN 100	610	FB-708	FC-708	535	1255	1022	70.0	FB-708 D	FC-708 D	535	1350	1117	67.8	E-B-185	E-C-185	4
	88.5	DN 100	610	FB-885	FC-885	535	1255	1022	71.7	FB-885 D	FC-885 D	535	1350	1117	69.5	E-B-185	E-C-185	5
	142	DN 150	610	FB-1420	FC-1420	600	1355	1043	126.5	FB-1420 D	FC-1420 D	600	1490	1178	124.5	E-B-185	E-C-185	8
	195	DN 150	610	FB-1950	FC-1950	720	1520	1183	182.8	FB-1950 D	FC-1950 D	720	1540	1203	180.5	E-B-185	E-C-185	11
	248	DN 150	610	FB-2480	FC-2480	750	1540	1192	237.7	FB-2480 D	FC-2480 D	750	1560	1212	235.4	E-B-185	E-C-185	14

Airflow at 7 bar (g), referred to 1 bar (a) and 20 °C – max. working pressure 16 bar, max. operating temperature +66 °C, from size 185 upwards: 50 °C

Conversion factor *f* for other pressures

Working pressure bar	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Conversion factor *f*=	0.38	0.52	0.63	0.75	0.88	1.00	1.13	1.26	1.38	1.52	1.65	1.76	1.87	2.00	2.14

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FD Particulate Filter

Filter monitor (option)

Standard Version

with pressure differential indicator

Filter model:	**FD particulate filter**
Particle retention:	**> 1 µm**
	Class 2 n. ISO 8573-1 (2001)
Efficiency:	99,99999 %
Oil content:	**≤ 1 mg/m³**
	Class 3 to ISO 8573-1 (2001)
Pressure drop, when new:	0.07 bar
Max. inlet liquid load:	– (only used as a dust filter)
Two-stage filtration, 1st stage:	alternate fibreglass and particle filter layers
2nd stage:	multi-layered, epoxy bonded fibre media

FD filter element

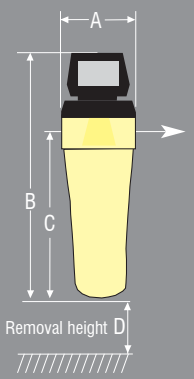
The **FD filter element** has the same two-stage filtration as the FC. However, the filter layers are arranged in reverse and the airflow is in the opposite direction, i.e. from the outside to the inside.
This arrangement results in increased filter surface area and enables extended service life when used as a dust filter.

Typical uses for the FD particulate filter:

- dust filter for solid particles
- filter downstream of desiccant dryers and activated carbon adsorbers

Note: Special FD-HT particulate filters must be used for air inlet temperatures between 66 °C and 150 °C.

FD and FD-HT filters are not fitted with condensate drains as standard.



FD filter	Airflow m³/min	Air connection	Removal height D mm	Standard Version Model	Dimensions mm A	B	C	Weight kg	Filter element Model FD	No.
	0.58	R 3/8	76	**FD-6**	105	306	224	3.5	E-D-6	1
	1.00	R 1/2	76	**FD-10**	105	306	224	3.6	E-D-10	1
	1.75	R 1/2	76	**FD-18**	105	367	285	3.8	E-D-18	1
	2.83	R 3/4	89	**FD-28**	133	389	298	4.3	E-D-28	1
	4.83	R 1	89	**FD-48**	133	497	406	4.7	E-D-48	1
	7.10	R 1 1/2	102	**FD-71**	164	579	482	4.5	E-D-71	1
	10.7	R 1 1/2	102	**FD-107**	164	693	596	5	E-D-107	1
	13.8	R 2	102	**FD-138**	194	789	681	12.6	E-D-138	1
	17.7	R 2 1/2	102	**FD-177**	194	935	827	14.9	E-D-177	1
	22.1	R 2 1/2	102	**FD-221**	194	1091	983	17.1	E-D-221	1
	18.5	DN 80	610	**FD-185**	350	1025	845	28.4	E-D-185	1
	28.3	DN 80	610	**FD-283**	400	1045	853	37.0	E-D-283	2
	35.4	DN 100	610	**FD-354**	400	1045	853	37.4	E-D-185	2
	52.6	DN 100	610	**FD-526**	440	1085	868	48.4	E-D-185	3
	70.8	DN 100	610	**FD-708**	535	1105	872	64.4	E-D-185	4
	88.5	DN 100	610	**FD-885**	535	1105	872	65.4	E-D-185	5
	142	DN 150	610	**FD-1420**	600	1215	903	118.4	E-D-185	8
	195	DN 150	610	**FD-1950**	720	1245	908	171.4	E-D-185	11
	248	DN 150	610	**FD-2480**	750	1265	917	224.4	E-D-185	14

Conversion factor *f* for other pressures

Airflow at 7 bar (g), referred to 1 bar (a) and 20 °C – max. working pressure 16 bar, max. operating temperature +66 °C, from size 185 upwards: 50 °C

Working pressure bar	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Conversion factor *f*=	0.38	0.52	0.63	0.75	0.88	1.00	1.13	1.26	1.38	1.52	1.65	1.76	1.87	2.00	2.14

FE, FF Microfilters

Filter monitor (option)

D-Pack version

with ECO Drain and pressure differential indicator option

Standard Version

with pressure differential indicator and automatic condensate drain

FE microfilter element

FF microfilter element

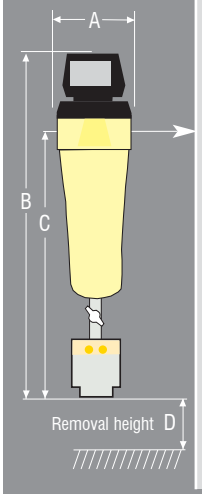
Filter model:	**FE microfilter 0.01 ppm**
Particle retention:	**>0.01 µm** better than Class 1 to ISO 8573-1 (2001)
Oil content:	**≤ 0.01 mg/m³** Class 2 to ISO 8573-1 (2001)
Pressure drop, when new:	0.07 bar
Max. inlet liquid load:	1 000 mg/m³
Two-stage filtration, 1st stage:	multiple fibre layers for larger particles
2nd stage:	multi-layered, epoxy bonded fibre media specially designed for fine aerosols

Filter model:	**FF microfilter 0.001 ppm**
Particle retention:	**>0.01 µm** better than Class 1 to ISO 8573-1 (2001)
Oil content:	**≤ 0.001 mg/m³**, therefore better than class 1 to ISO 8573-1 (2001)
Pressure drop, when new:	0.14 bar
Max. inlet liquid load:	100 mg/m³ (use downstream from FE filter or dryer)
Two-stage filtration, 1st stage:	coated closed-cell foam sleeve prefilter
2nd stage:	multi-layered, epoxy bonded fibre media specially designed for ultra-fine aerosols

Typical uses for FE-/FF microfilters:

- pneumatic controllers, measuring instruments, paint spray and powder coating plant
- prefilter for membrane dryers, desiccant dryers and activated carbon adsorber

Tip: fit your FE/FF microfilters at points where the compressed air is at its coolest.



FE + FF models	Airflow m³/min	Air connect-ion	Removal height D mm	Standard Version FE	Standard Version FF	Dimensions mm A	B	C	Weight kg	D-Pack version FE	D-Pack version FF	Dimensions mm A	B	C	Weight kg	Filter element FE	Filter element FF	No.
	0.58	R 3/8	76	**FE-6**	**FF-6**	105	306	224	3.6	**FE-6 D**	**FF-6 D**	105	545	444	4.3	E-E-6	E-F-6	1
	1.00	R 1/2	76	**FE-10**	**FF-10**	105	306	224	3.7	**FE-10 D**	**FF-10 D**	105	545	444	4.4	E-E-10	E-F-10	1
	1.75	R 1/2	76	**FE-18**	**FF-18**	105	367	285	3.9	**FE-18 D**	**FF-18 D**	105	600	499	4.6	E-E-18	E-F-18	1
	2.83	R 3/4	89	**FE-28**	**FF-28**	133	389	298	4.4	**FE-28 D**	**FF-28 D**	133	650	540	5.1	E-E-28	E-F-28	1
	4.83	R 1	89	**FE-48**	**FF-48**	133	497	406	4.8	**FE-48 D**	**FF-48 D**	133	745	635	5.5	E-E-48	E-F-48	1
	7.10	R 1 1/2	102	**FE-71**	**FF-71**	164	579	482	4.6	**FE-71 D**	**FF-71 D**	164	826	710	5.3	E-E-48	E-F-71	1
	10.7	R 1 1/2	102	**FE-107**	**FF-107**	164	693	596	5.1	**FE-107 D**	**FF-107 D**	164	940	824	5.8	E-E-107	E-F-107	1
	13.8	R 2	102	**FE-138**	**FF-138**	194	789	681	12.7	**FE-138 D**	**FF-138 D**	194	1037	909	13.4	E-E-138	E-F-138	1
	17.7	R 2 1/2	102	**FE-177**	**FF-177**	194	935	827	15.0	**FE-177 D**	**FF-177 D**	194	1183	1055	15.7	E-E-177	E-F-177	1
	22.1	R 2 1/2	102	**FE-221**	**FF-221**	194	1091	983	17.2	**FE-221 D**	**FF-221 D**	194	1357	1230	17.9	E-E-221	E-F-221	1
	18.5	DN 80	610	**FE-185**	**FF-185**	350	1130	950	29.3	**FE-185 D**	**FF-185 D**	350	1270	1090	29.3	E-E-185	E-F-185	1
	28.3	DN 80	610	**FE-283**	**FF-283**	400	1205	1013	40.1	**FE-283 D**	**FF-283 D**	400	1290	1098	37.9	E-E-283	E-F-283	2
	35.4	DN 80	610	**FE-354**	**FF-354**	400	1205	1013	40.5	**FE-354 D**	**FF-354 D**	400	1290	1098	38.3	E-E-185	E-F-185	2
	52.6	DN 100	610	**FE-526**	**FF-526**	440	1240	1023	51.5	**FE-526 D**	**FF-526 D**	440	1330	1113	49.3	E-E-185	E-F-185	3
	70.8	DN 100	610	**FE-708**	**FF-708**	535	1255	1022	66.7	**FE-708 D**	**FF-708 D**	535	1350	1117	64.5	E-E-185	E-F-185	4
	88.5	DN 100	610	**FE-885**	**FF-885**	535	1255	1022	67.7	**FE-885 D**	**FF-885 D**	535	1350	1117	65.5	E-E-185	E-F-185	5
	142	DN 150	610	**FE-1420**	**FF-1420**	600	1355	1043	121.5	**FE-1420 D**	**FF-1420 D**	600	1490	1178	119.5	E-E-185	E-F-185	8
	195	DN 150	610	**FE-1950**	**FF-1950**	720	1520	1183	175.9	**FE-1950 D**	**FF-1950 D**	720	1540	1203	173.6	E-E-185	E-F-185	11
	248	DN 150	610	**FE-2480**	**FF-2480**	750	1540	1192	228.9	**FE-2480 D**	**FF-2480 D**	750	1560	1212	226.6	E-E-185	E-F-185	14

Airflow at 7 bar (g), referred to 1 bar (a) and 20 °C – max. working pressure 16 bar, max. operating temperature +66 °C, from size 185 upwards: 50 °C

Conversion factor *f* for other pressures

Working pressure bar	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Conversion factor *f*=	0.38	0.52	0.63	0.75	0.88	1.00	1.13	1.26	1.38	1.52	1.65	1.76	1.87	2.00	2.14

KAESER COMPRESSORS

FFG Microfilter-Activated Carbon Combination Filter

Filter monitor (option)

D-Pack version

with ECO Drain and pressure differential indicator option

Standard Version

with pressure differential indicator and automatic condensate drain

Microfilter element

for separation of solid particles and oil aerosols (see FF microfilter for details)

Activated carbon filter element

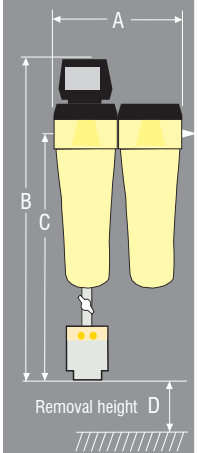
for adsorption of oil and hydrocarbon vapours, with after-filtration of particles

Filter model: **carbon**	**FFG microfilter activated combination filter**
Particle retention:	**> 0.01 µm** better than Class 1 to ISO 8573-1 (2001)
Oil content:	**≤ 0.001 mg/m³**, therefore better than Class 1 to ISO 8573-1 (2001)
Oil vapour content:	**≤ 0.003 mg/m³**, therefore better than Class 1 to ISO 8573-1 (2001) oil-free compressed air
Pressure drop, when new:	0.21 bar
Max. inlet liquid load:	100 mg/m³ (use downstream from FE filter or dryer)
Two-stage filtration, FF filter:	see FF microfilter for details
Two-stage filtration FG filter:	stabilized bed of fine activated carbon particles
1st stage:	with large surface area
2nd stage:	multiple layers of matrix blended fibre media with bonded microfine carbon particles, finest particle filtration

Typical uses for FFG combination filters:

- food and beverage industries, bottle-filling plants
- hospitals, pharmaceuticals, packaging, breathing air production

Tip: fit your FFG combination filter at points where the compressed air is at its coolest. This will considerably extend the life of the activated carbon element.



Model FFG	Air-flow m³/min	Air connection	Removal height D mm	Standard Version: Model	Dimensions mm A	B	C	Weight kg	D-Pack version: Model	Dimensions mm A	B	C	Weight kg	Filter element: 1st stage FF	2nd stage FG	No.
	0.58	R 3/8	76	**FFG-6**	210	306	224	7.1	**FFG-6 D**	210	545	444	7.8	E-F-6	E-G-6	1
	1.00	R 1/2	76	**FFG-10**	210	306	224	7.3	**FFG-10 D**	210	545	444	8	E-F-10	E-G-10	1
	1.75	R 1/2	76	**FFG-18**	210	367	285	7.7	**FFG-18 D**	210	600	499	8.4	E-F-18	E-G-18	1
	2.83	R 3/4	89	**FFG-28**	266	389	298	8.7	**FFG-28 D**	266	650	540	9.4	E-F-28	E-G-28	1
	4.83	R 1	89	**FFG-48**	266	497	406	9.5	**FFG-48 D**	266	745	635	10.2	E-F-48	E-G-48	1
	7.10	R 1 1/2	102	**FFG-71**	328	579	482	9.1	**FFG-71 D**	328	826	710	9.8	E-F-48	E-G-71	1
	10.7	R 1 1/2	102	**FFG-107**	328	693	596	10.1	**FFG-107 D**	328	940	824	10.8	E-F-107	E-G-107	1
	13.8	R 2	102	**FFG-138**	388	789	681	25.3	**FFG-138 D**	388	1037	909	26	E-F-138	E-G-138	1
	17.7	R 2 1/2	102	**FFG-177**	388	935	827	29.9	**FFG-177 D**	388	1183	1055	30.6	E-F-177	E-G-177	1
	22.1	R 2 1/2	102	**FFG-221**	388	1091	983	34.3	**FFG-221 D**	388	1357	1230	35	E-F-221	E-G-221	1
	18.5	DN 80	610	**FFG-185**	700	1130	950	58.6	**FFG-185 D**	700	1270	1090	58.6	E-F-185	E-G-185	1
	28.3	DN 80	610	**FFG-283**	800	1205	1013	78	**FFG-283 D**	800	1290	1098	75.8	E-F-283	E-G-283	2
	35.4	DN 100	610	**FFG-354**	800	1205	1013	79.3	**FFG-354 D**	800	1290	1098	77.1	E-F-185	E-G-185	2
	52.6	DN 100	610	**FFG-526**	880	1240	1023	101.9	**FFG-526 D**	880	1330	1113	99.7	E-F-185	E-G-185	3
	70.8	DN 100	610	**FFG-708**	1070	1255	1022	133.6	**FFG-708 D**	1070	1350	1117	131.4	E-F-185	E-G-185	4
	88.5	DN 100	610	**FFG-885**	1070	1255	1022	136.2	**FFG-885 D**	1070	1350	1117	134	E-F-185	E-G-185	5
	142	DN 150	610	**FFG-1420**	1200	1355	1043	244.6	**FFG-1420 D**	1200	1490	1178	242.6	E-F-185	E-G-185	8
	195	DN 150	610	**FFG-1950**	1440	1520	1183	353.7	**FFG-1950 D**	1440	1540	1203	351.4	E-F-185	E-G-185	11
	248	DN 150	610	**FFG-2480**	1500	1540	1192	461.3	**FFG-2480 D**	1500	1560	1212	459	E-F-185	E-G-185	14

Airflow at 7 bar (g), referred to 1 bar (a) and 20 °C – max. working pressure 16 bar, max. operating temperature +66 °C, from size 185 upwards: 50 °C

Conversion factor *f* for other pressures

Working pressure bar	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Conversion factor *f*=	0.38	0.52	0.63	0.75	0.88	1.00	1.13	1.26	1.38	1.52	1.65	1.76	1.87	2.00	2.14

FST Sterile Filter

For sterile air

The FST sterile filter is made of high quality stainless steel that prevents bacterial growth and corrosion. The upper and lower housings are fitted with BSP screw connections and plugs.
All filter elements are subjected to multiple testing in the factory to ensure unrivalled reliability.

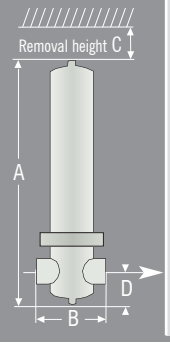
Filter model:	**FST sterile filter**
Bacteria retention:	LRV separation >7/cm² for 0.01 µm particle size (referred to T1 coliphage test bacteria)
Efficiency:	**100% sterile**
Operating temperature:	up to +200 °C
Pressure drop, when new:	0.12 bar
Max. permissible pressure drop:	5 bar
Filter medium:	borosilicate - free of adhesive agent (prefiltration, microfibre web)
Filter element construction:	2-stage, inner and outer stainless-steel support sleeves and end caps, sealed in silicon
Filter housing:	stainless steel, approved by TÜV (German Technical Inspection Authority)

FST filter element

The prefilter and microfibre web consist of borosilicate, which is free of adhesive agent.
Retention of bacteria and particles occurs throughout the whole filter volume. On average, over 100 sterilisation cycles are possible with saturated steam at 141 °C.

Typical uses for FST sterile filters:

- food and chemical industries
- packaging
- pharmaceuticals, hospitals



Model FST	Airflow m³/min	Air connection	Removal height C mm	Model	Dimensions in mm A	B	D	Weight kg	Filter element Model	No.
	1	R 1/4	90	**F 6 P-ST**	215	108	55	1.7	03/10 P-ST	1
	1.5	R 3/8	120	**F 9 P-ST**	243	108	55	1.9	04/10 P-ST	1
	2	R 1/2	120	**F 12 P-ST**	243	108	55	1.9	04/20 P-ST	1
	3	R 3/4	150	**F 18 P-ST**	266	125	55	2	05/20 P-ST	1
	4.5	R 1	150	**F 27 P-ST**	293	125	75	2.6	05/25 P-ST	1
	6	R1 1/4	200	**F 36 P-ST**	344	140	75	3	07/25 P-ST	1
	8	R1 1/2	200	**F 48 P-ST**	386	170	94	4.3	07/30 P-ST	1
	12	R 2	280	**F 72 P-ST**	460	170	94	4.8	10/30 P-ST	1
	18	R 2	450	**F 108 P-ST**	587	170	94	5.3	15/30 P-ST	1
	24	R2 1/2	580	**F 144 P-ST**	732	216	106	9	20/30 P-ST	1
	32	R 3	850	**F 192 P-ST**	987	216	106	10.8	30/30 P-ST	1
	48	R 3	850	**F 288 P-ST**	1026	240	119	16.2	30/50 P-ST	1

Airflow at 7 bar (g). referred to 1 bar (a) and 20 °C

Conversion factor *f* for other pressures

Working pressure bar	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Conversion factor *f*=	0.25	0.36	0.5	0.6	0.75	0.9	1	1.1	1.2	1.4	1.5	1.6	1.75	1.9	2.0	2.1

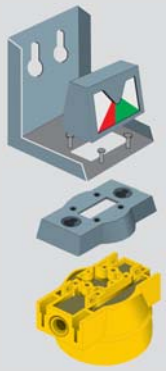
KAESER COMPRESSORS

Modular installation of ranges up to F...-221 Accessories

Wall bracket (optional)

Simple installation:

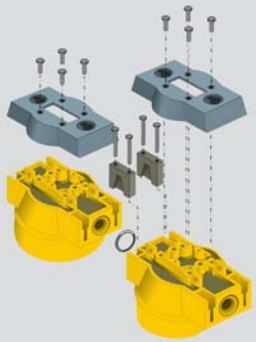
- remove pressure differential indicator, remove fixing screws
- secure the bracket to the wall
- use fixing screws to screw the housing to the bracket
- re-install the differential pressure indicator



Wall bracket installation

Modular Design

The specially designed housing allows various filters to be combined together in series without the need for additional piping.



Modular design ensures easy installation (image applies to models up to F...-48)

Filter Monitor Box

The Filter Monitor Box allows remote filter monitoring. It evaluates the signals from a filter monitor, as well as an ECO-Drain, and can pass messages to a central maintenance control system via two alarm contacts.

Group alarm (volt-free contact)

- Indication of the (time controlled) service interval for filter element service
- Indication of when filter change is due; based on microprocessor evaluated data
- Maximum differential pressure exceeded (two-minute delay)
- Condensate drain alarm

Safety alarm
(volt-free contact, in safety mode only)

- Maximum differential pressure exceeded (five-second delay)

The power supply for the filter monitor and ECO-Drain is provided by the Filter Monitor Box.

KAESER COMPRESSORS

Genuine KAESER filters

Scope of Supply

Filter housing containing ready to use filter element.
Filters available either as standard or D-Pack versions.

KAESER-Service

KAESER Service and Maintenance Contracts ensure even greater compressed air availability.

A variety of service plans and preventative maintenance agreements have been carefully created by highly qualified KAESER engineers to maintain your system at the peak of its performance.

Genuine KAESER replacement filter elements

Genuine KAESER replacement filter elements ensure reliable filtration with minimal pressure loss.

- **coalescence filter** with new matrix filter-fibre structure
- **high efficiency even at low air volumes** of only five percent of nominal flow
- **reliable element-to-housing seal prevents unfiltered air from bypassing the filter element**
- **stainless steel orifice tubes,** oil & acid resistant coated sleeves and end caps

KAESER replacement filter elements are also available for other housings.

LGA InterCert Certified QM-System ISO 9001:2000
LGA InterCert Certified EM-System ISO 14001

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