mattei®
BEST SOLUTIONS IN COMPRESSED AIR

COMPRESSED AIR FILTERS
MF

PURE AIR

GUARANTEED BY AN ENHANCED TECHNOLOGY

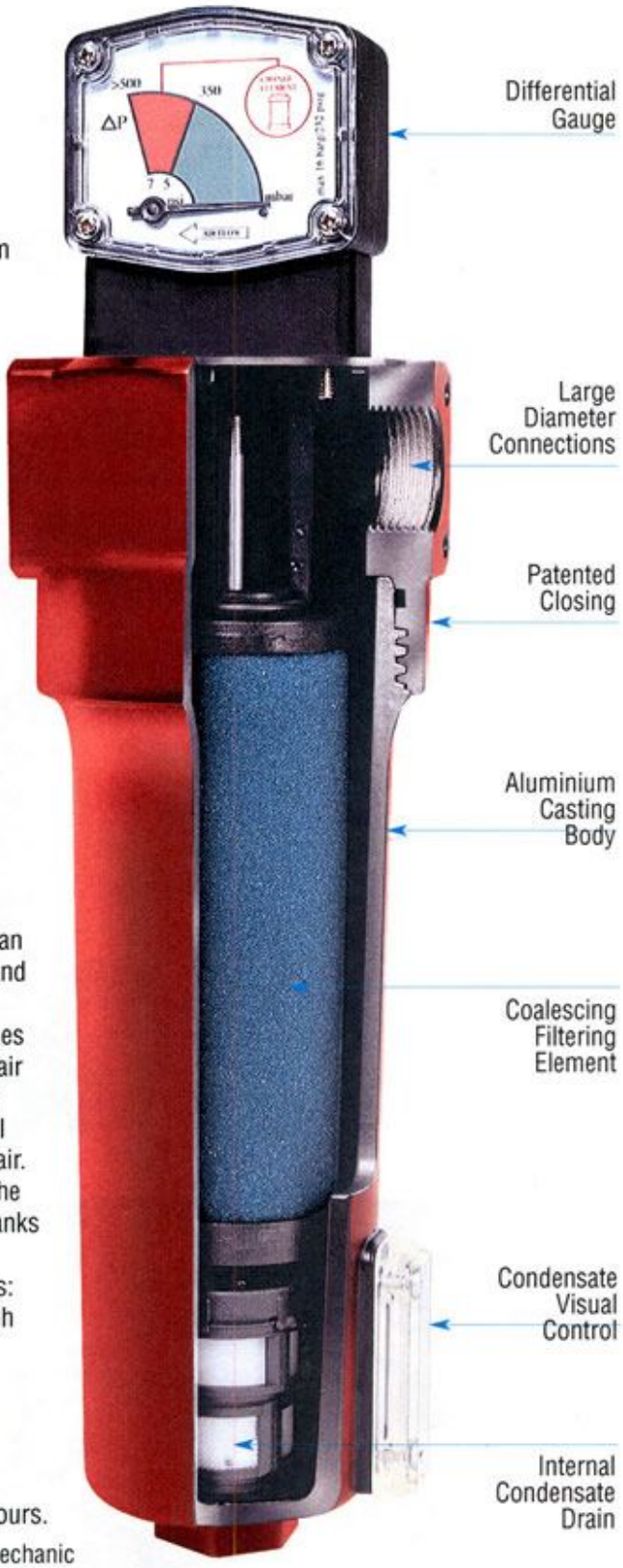
Due to the modern manufacturing processes compressed air is a safe, reliable and economic form of energy. Air must be treated to obtain quality air. Otherwise, the life of pneumatic tools and the quality of the finished products will be jeopardized. Two different types of contaminants may seriously affect the quality of the compressed air: atmospheric and plant pollution.

Regarding atmospheric pollution, a cubic metre of urban compressed air at 7 bar can contain one thousand million particles, including fine dust, combustion particles, gas and hydrocarbon vapour originating from industrial discharges. Plant contamination occurs because the compressors and the pipeline fittings can produce rust particles, wastes and lubricating oil sludge. Even "oil free" compressors have this problem, as they compress gases and oil vapours contained in the polluted atmosphere, that condensate in the air system.

Contaminants produce corrosive emulsions which can obstruct pipelines, thereby increasing load losses (and consequently increasing manufacturing costs) and damaging or blocking pneumatic tools and sometimes even plants. Mattei, a market leader in compressed air technology, supplies a wide range of high efficiency filters to eliminate impurities and contaminants in all industrial applications of compressed air. Particularly, Mattei filters ensure that the air is up to 100% technically clean, thanks to the use of specific materials. The available filters are as follows:

- prefilters to eliminate rough impurities;
- fine filters to eliminate micro-drops of liquid and powdered particles;
- activated carbon filters to eliminate oil odours and vapours.

The first two filters are of a mechanic and coalescing type, while the third is an adsorption type.



AIRPURE COMPRESSED AIR FILTRATION

GRADE Q
Ceramic Filter

This filter removes 99% of liquid and solid particles down to 5 micron. The typical use is basic protection, such us pre-filters, after coolers or centrifugal condensate separators, and to extend the life of filters fitted downstream. It can also be used to eliminate dust from adsorption dryers. Minimum/maximum working temperature: 1,5 to 65°, nominal pressure drop*: 0,2-0,25 bar.

GRADE P
Coalescing Pre-filter

This pre-filter removes 99% of solid particles down to 1 micron, with a maximum oil carry-over of 0,1 mg/m³ (at 20°C and 7 bar). This filter is particularly useful to remove large quantities of oil and can be installed as a pre-filter to the other higher efficiency filters. Minimum/maximum working temperature: 1,5 to 60°, nominal pressure drop*: 0,085 bar.

GRADE S
High Efficiency Coalescing Filter

This filter removes 99,9% of solid particles down to 0,01 micron with an oil carry-over of 0,01 mg/m³ (at 20°C and 7 bar). This type of filter is ideal for an effective oil carry-over removal. Typical applications for this grade are oil-free processes such as instrumentation, automation and process control. It can also be used as a pre-filter to adsorption dryers or active carbon filters. Minimum/maximum working temperature: 1,5 to 50°, nominal pressure drop*: 0,1 bar.

GRADE C
Active Carbon Filter

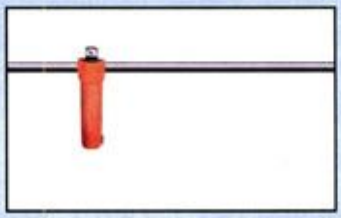
This filter is the final treatment of compressed air and is used to adsorb oil vapours and odours. It is typically installed after the S grade filter and reduces the total hydrocarbon content to less than 0,003 mg/m³. Minimum/maximum working temperature: 1,5 to 25°, nominal pressure drop*: 0,07 bar.

*The pressure drop is referred to the nominal air delivery. For lower air flows the pressure drop is reduced as a square function of the reduction in flow ratio.

APPLICATIONS

MF/Q

In industrial applications where high air quality is not essential; typical installations include blowing, glass peening and vacuum pumps, as pre-filter for further filtration and after centrifugal separators and adsorption dryers.
It removes 99% of liquid and solid particles down to 5 micron



MF/Q - REFRIGERANT DRYER - MF/P

Ideal for blowing, sandblasting, micronizers, pneumatic cylinders, packaging and painting plants, as well as pneumatic transportation.
It removes solid particles down to 1 micron.
Maximum oil carry-over 0,1 mg/m³.
Pressure dew point +3°C.

MF/Q - REFRIGERANT DRYER - MF/P - MF/S

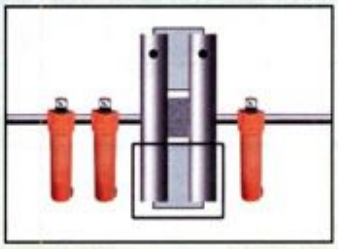
Suitable for pneumatic transportation, pneumatic tools operation, pneumatic control, instrumentation and packaging and painting plants..
It removes solid particles down to 0,01 micron.
Maximum oil carry-over 0,01 mg/m³.
Pressure dew point +3°C.

MF/Q - REFRIGERANT DRYER - MF/P - MF/S - MF/C

Ideal for oil odour and vapour free compressed air. Suitable for all the above applications as well as breweries, food and beverage plants, hospital applications, galvanization, packaging, bottling, decompression chamber, pharmaceutical and refrigeration industries, etc.
It removes solid particles down to 0,01 micron.
Maximum oil carry-over 0,003 mg/m³.
Pressure dew point +3°C.

MF/P - MF/S - ADSORPTION DRYER - MF/Q

Ideal for all the above applications with the addition of pneumatic controls, painting, pneumatic transportation, packaging, instrumentation or whenever a pressure dew point of –40°C is needed.
It removes solid particles down to 0,01 micron.
Maximum oil carry-over 0,01 mg/m³.
Pressure dew point - 40°C.



MF/P - MF/S - ADSORPTION DRYER - MF/Q - MF/C

Ideal for dry, odourless and technically oil free compressed air. Suitable in all oil free processes such as food & beverage industry, hospital applications, pharmaceutical processes, galvanization and laboratories.
Maximum oil carry-over 0,003 mg/m³.
Pressure dew point - 40°C.

MF RANGE

Model	Air Delivery m³/min	Pipe Connections	Dimensions mm A	B	C	Weight kg
MF 004	0,4	3/4″ BSP	267	89	24	1,2
MF 007	0,7	3/4″ BSP	267	89	24	1,2
MF 015	1,5	3/4″ BSP	267	89	24	1,2
MF 024	2,4	1 1/2″ BSP	366,5	109	33,5	2,4
MF 035	3,5	1 1/2″ BSP	366,5	109	33,5	2,4
MF 060	6	1 1/2″ BSP	513,5	109	33,5	3
MF 090	9	2″ BSP	550	150	40,5	4,8
MF 135	13,5	2″ BSP	550	150	41	5,2
MF 175	17,5	2″ BSP	928	150	41	6,5
MF 205	20,5	2″ BSP	928	150	41	6,5
MF 300	30	2 1/2″ BSP	733	188	56	13,5
MF 370	37	3″ BSP	933	188	56	16

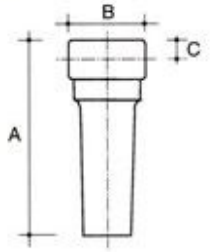
Available Filter Grade*: **Q/P/S/C**

*Example of filter selection: **MF 090 C**

Filter grade specification

Filter Model/Size

Performances refer to FAD at 20°C/1barA and to the following operating conditions: intake air at 25°C/60%RH, working pressure in bar, compressed air inlet temperature 35°, load losses 7kPa.



FLOW RATE CORRECTION FACTORS

Pressure bar(g)	1	3	5	7	9	11	13	15	16
	0,49	0,69	0,89	1	1,09	1,19	1,29	1,39	1,44

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Since 1994 Mattei operates with an UNI EN ISO 9001 Quality System Certification