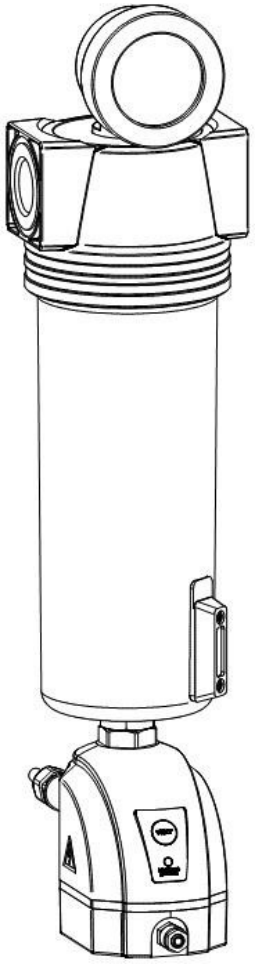
Installation and operating manual

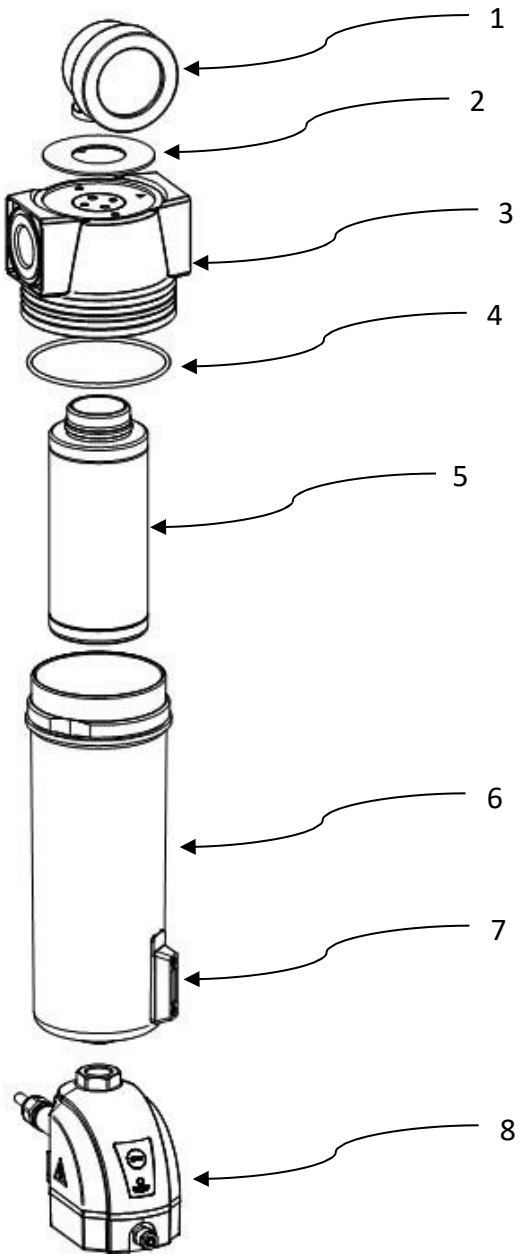
AMC compressed air filter



Please read the following instructions carefully before installing filter into service. Trouble free and safe operating of the filter can only be guaranteed if recommendations and conditions stated in this manual are respected.

CE

Components

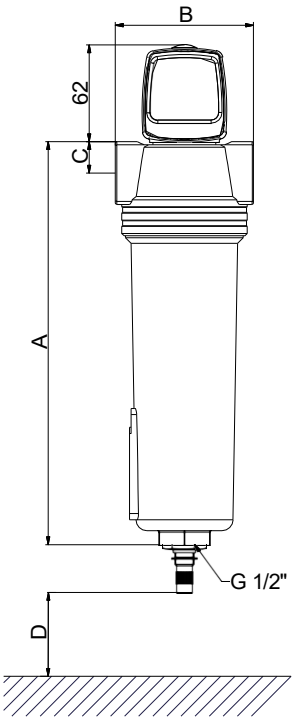


	Part
1	Pressure drop indicator (optional)
2	Head cover
3	Filter head
4	Housing sealing
5	Filter element
6	Filter bowl
7	Sight window (optional)
8	Condensate drain (optional)

Technical data

Filter Housing	Connections [inch]	Filter Element	FLOW CAPACITY [Nm³/h]	[scfm]	DIMENSIONS [mm] A	B	C	D	WEIGHT [kg]	Volume [l]
AMC-F72	3/8	AMEC-72	72	42	187	88	20	80	0,7	0,47
AMC-F96	1/2	AMEC-96	96	56	256	88	20	80	0,8	0,6
AMC-F150	1/2	AMEC-150	150	88	278	106	25	100	1,3	1,2
AMC-F216	3/4	AMEC-216	216	127	278	106	25	100	1,3	1,2
AMC-F282	1	AMEC-282	282	166	252	125	32	120	2,1	1,57
AMC-F360	1	AMEC-360	360	212	352	125	32	140	2,4	2,2
AMC-F432	1 ¼	AMEC-432	432	254	352	125	32	140	2,4	2,2
AMC-F510	1 ½	AMEC-510	510	300	450	125	32	160	3,2	3,0
AMC-F750	1 ½	AMEC-750	750	441	450	125	32	160	3,2	3,0
AMC-F888	2	AMEC-888	888	522	605	160	43	180	5,1	6,0
AMC-F1176	2	AMEC-1176	1176	692	605	160	43	180	5,1	6,0
AMC-F1440	2 ½	AMEC-1440	1440	847	685	160	43	200	6,3	6,5
AMC-F1968	3	AMEC-1968	1968	1158	800	240	60	300	12,9	19
AMC-F2760	3	AMEC-2760	2760	1624	800	240	60	300	12,9	19

Flow capacity at 7 bar(g), 20°C



Operating temperature	1,5 - 65 °C	35 - 149 °F
Operating pressure	0 - 20 bar(g)	0 - 290 psi

MATERIALS

Housing material	Aluminum
Fittings, Screws	Brass, Brass-zinc plated, Steel
Cover	ABS
Sealing	NBR
Corrosion protection	Anodized (optional)
Outside protection	Powder paint coated (Epoxi-polyester base)
Lubricant	Shell cassida grease RLS 2

CORRECTION FACTORS

To calculate the correct capacity of a given filter based on actual operating conditions, multiply the nominal flow capacity by the appropriate correction factor(s).
CORRECTED CAPACITY = NOMINAL FLOW CAPACITY x C_{OP}

[bar]	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
[psi]	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232	247	261	276	290
C_{OP}	0,38	0,5	0,63	0,75	0,88	1	1,13	1,25	1,38	1,50	1,63	1,75	1,88	2,00	2,13	2,25	2,38	2,50	2,63

PRESSURE EQUIPMENT DIRECTIVE PED 2014/68/EU (Fluid group 2)

AMC-F72 – AMC-F432	Not required
AMC-F510 – AMC-F1440	Category 1, Module A
AMC-F1968 – AMC-F2760	Category 2, Module H

There is Technical datasheet available. For additional technical specification, contact us.

Safety instructions

The relevant safety at work and accident prevention regulations, plus operating instructions, shall apply for operating the filter. The filter has been constructed in accordance with the generally recognized rules of engineering. It complies with the requirements of directive 2014/68/EU concerning pressure equipment.

Ensure that installation complies with local laws for operation and routine testing of pressure equipment at the place of installation.

Operator/user of the filter should make himself familiar with the function, installation and start-up of the unit. All the safety information is always intended to ensure your personal safety.

- Do not exceed max. operating pressure or operating temperature range (see data label).
- The permissible working temperatures and pressures for ad-on parts and filter elements are given under Technical data for those ad-ons. Maximum temperature and pressure for assembled system is the lowest of any individual part.
- It is necessary to ensure that the unit is equipped with the corresponding safety and test devices to prevent the permissible operating parameters from being exceeded.
- Filter has been designed for a primarily static pressure. Rapid changes of pressure are not allowed.
- Ensure that the filter is not subject to vibrations that could cause fatigue fractures.
- Filter is not to be subjected to mechanical stresses.
- The medium used may not have any corrosive components that could attack the materials of the filter in a way that is not permitted. Do not use the filter in hazardous areas with potentially explosive atmospheres.

- All installation and maintenance work on the filter may only be carried out by trained and experienced specialists.
- It is forbidden to carry out any kind of work on the filter and piping, including welding and constructional changes, etc.
- A pressure gauge, which shows the operational pressure, must be installed in the unit, respectively in the pipeline.
- Depressurize the system before carrying out the installation work. The unit must be installed vertically in the piping.
- Ensure that filter is installed without any stresses.
- Use original spare parts only.
- Use the device for appropriate purpose only.

Appropriate use

AMC filter housings have been developed for high efficient removal of solid particles, water, oil aerosols, hydrocarbons and odour vapours from compressed air systems. This appliance must be used only for the purpose for which it was specifically designed. All other uses are to be considered incorrect.

Specifically:

- filter is not intended for human breathing without proper additional equipment.
- filter can only be used for “GROUPE 2” fluids (PED 2014/68/EU).
- filter can not be used for explosive, toxic, flammable, corrosive and “GROUPE 1” fluids (PED 2014/68/EU).

Warning: internal corrosion can seriously reduce the safety of installation: check it during changing the cartridge.

The manufacturer cannot be held responsible for any damage resulting from improper, incorrect or unreasonable use.

Use genuine spare parts only. Any damage or malfunction caused by the use of ungenuine parts is not covered by Warranty or Product Liability.

Installation

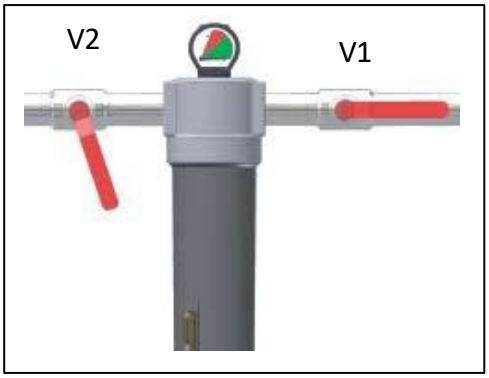
Operations should be performed only by qualified personnel. Never operate with instalation under pressure. The user is responsible to ensure that the filter will never operate at pressure exceeding the nominal values. Eventual over-pressure could be dangerous and hazardous to the operator and the equipment.

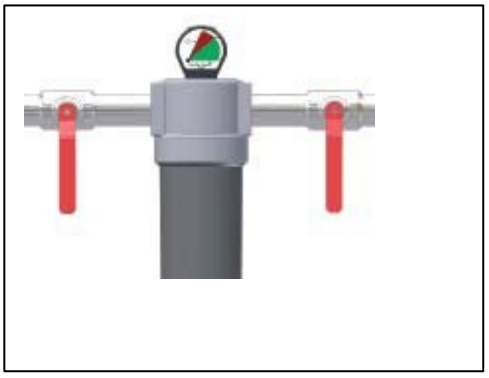
The filter assembly and installation procedures are as follows:

- If provided, install the pressure drop indicator or the Differential Pressure Gauge (optional) on the filter head.
- Connect the filter head to the compressed air piping and check that the airflow corresponds to the direction of the arrow positioned on the filter head cap.
- Clean accurately the piping and the filter head outlets, remove any shaving, slaver or scrap from tooling.
- Lubricate the O-ring and the sealing surfaces of the filter head and cartridge, use multipurpose grease (SILICONE FREE).
- Fit the filter cartridge on the filter head by screwing it in the housing. Tightness is ensured by one o-ring.
- Fit the filter bowl and tight it accurately.
- Filters must always be installed in a vertical position with sufficient space around. The minimum distance (D in the technical data table) has to be assured under the filter bowl, which is necessary for filter cartridge changing.
- Stick the adhesive label showing the month and year for the next filtering element change (max. one year) on the filter bowl.
- Slowly pressurize the installation and check it for air leakage.

Starting up

- Check that the operating data (pressure, temperature and flow-rate) do not exceed values on the specification plate.
- Close the on-off valve (V1) downstream of the filter, slowly open the on-off valve (V2) upstream to the filter, and let the air flow from the manual or automatic drain valve for a few minutes; close the drain valve and slowly open the on-off valve (V1) down-line from the filter.





Operation

- At least once a week check if condensate drain operates regularly.
- If installed, at least once a week check if pressure drop indicator or Differential Pressure Gauge is in the green area.

If a filter grade A is installed, check the good efficiency of the pre-filters, otherwise the presence of any oil and water aerosols make the absorption power of the filter void.

Maintenance

Filter elements are subject to wear. In order to maintain system efficiency, optimal performance and best air quality, these rules of proper maintenance should be followed:

- Replace filter elements P, R, M, S at least once per year or when pressure drop reaches 350mbar.
- A filter element must be changed after 6 months.
- B filter element can be cleaned with ultrasonic bath or with back flushing. Intervals of cleaning depend on application. If necessary replace filter element with new one.

- The housing O-ring can be damaged during filter element change. To prevent air leakage and malfunction replace housing O-ring if necessary. For replacement contact manufacturer.
- Damaged components are to be replaced by new ones. If a marked degree of damage is found, the entire filter is to be replaced.
- Filter has been designed for a life of 10 years in normal operating environment. After 10 years periodical checks of filter integrity are strongly recommended for safe operation.
- Carry out a check for leaks once the maintenance work has been finished.

Warranty exclusion

The guarantee shall be void if:

- The operating instructions were not followed with respect to initial commissioning and maintenance.
- The unit was not operated properly and appropriately.
- The unit was operated when it was clearly defective.
- Non-original spare parts or replacement parts were used.
- The unit was not operated within the permissible technical parameters.
- Unauthorised constructional changes were made to the unit or if parts of the unit that may not be opened were dismantled.