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Magnetic dirt separator ADS 160

Art.-No 77 160 00

WARNING!



The product may only be mounted, commissioned and dismantled by qualified, specially trained staff.

Changes and modifications carried out by unauthorized persons may result in danger and are prohibited for safety reasons.

The dirt separator is equipped with a magnetic element. People with pacemakers are advised to maintain a safe distance from the device. Attention should also be paid to electronic equipment installed near the device. The magnetic element of the separator may cause interference.

Risk of burns from hot medium - see the section on MAINTENANCE.

APPLICATION

Magnetic dirt separator ADS 160 is designed for installation in systems where there is continuous circulation of the medium. It is used to remove solid impurities that can cause damage to system components. It can be used in installations where the working medium is water or mixtures of water and glycol with a glycol concentration not exceeding 50%.

TECHNICAL DATA

Parameter	Value
Medium temperature	max 90°C
Medium pressure	max 3 bar
Glycol concentration	max 50%
Kvs	6,9 m³/h
Recommended flow	max 2,1 m³/h
Magnet power	1,4 T (14 000 Gs)
Housing material	PA66 (poliamid)
Connection material	brass
Filtration mesh material	stainless steel
Filtration mesh size	500 µm oraz 800 µm
Sealing material	EPDM

DESCRIPTION OF THE DEVICE/SCOPE OF DELIVERY

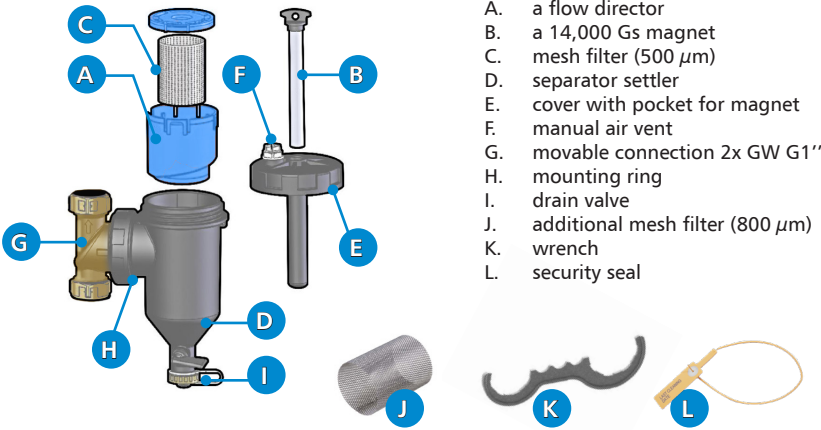


Fig. 1 Construction of the magnetic dirt separator ADS 160

INSTALLATION

Danger! Leave at least 150 mm of free space from the top edge of the separator to allow maintenance.

The ADS 160 dirt separator should be mounted on the return line to the heat/cold source, to intercept solid contaminants that can cause damage to the heat/cold source, as well as to the circulation pumps. The separator can be mounted on vertical pipes (Fig. 2), horizontal pipes (Fig. 3), as well as on diagonal sections (Fig. 4). The separator's drain valve should always face downward. The arrow on the connection housing indicates the direction of flow from the system to the heat/cold source. Use the included wrench to change the position of the connection. To simplify maintenance, we recommend installing a shut-off valve before and after the separator. After installing the separator and opening the shut-off valves, unscrew the manual air vent, using a flathead screwdriver, to get rid of the accumulated air.

The separator is factory-equipped with a mesh filter with a mesh size of 500 µm.

Such filter accuracy is recommended for new installations. For modernized installations, 2-stage filtration is recommended. The first stage is to filter the installation with a mesh filter with 500 µm mesh size for about one month. After this time, unscrew the lid (using the wrench included in the kit) and replace the existing filter with a 800 µm mesh filter supplied in the kit.

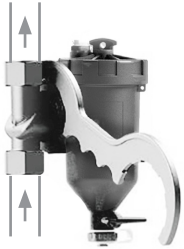


Fig. 2 Installation of the separator ADS 160 on the vertical line

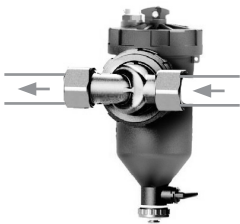


Fig. 3 Installation of the separator ADS 160 on the horizontal line

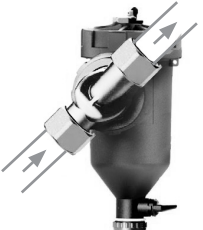


Fig. 4 Installation of the separator ADS 160 on the diagonal line

SECURITY SEAL

The seal protects the magnet from unauthorized removal. It also allows to record the date of the last maintenance work.

Fig. 5 ADS 160 separator with installed security seal



DIMENSIONS

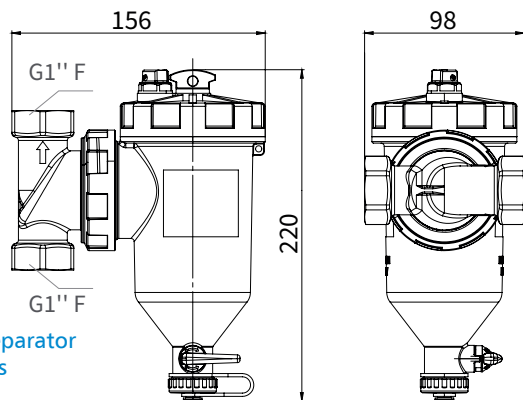


Fig. 6 ADS 160 separator dimensions

OPERATION PRINCIPLE

The medium, returning from the installation, is put into a vortex motion as it enters the separator. As a result, the medium flows along a cyclone-like path, which facilitates the separation and settlement of contaminants in the lower part of the device (Fig. 7). Metallic contaminants (e.g., rust particles, metal filings) are then attracted by the built-in magnet (Fig. 8). The remaining non-metallic particles are effectively retained by the filter mesh (Fig. 9). The cleaned medium is directed to the heat/cold source.

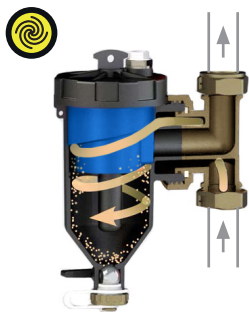


Fig. 7 Putting the medium in a vortex motion

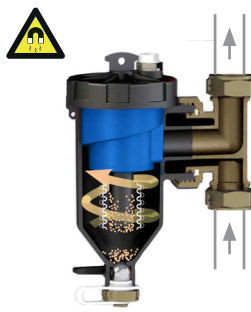


Fig. 8 Attraction of contaminants by the magnet

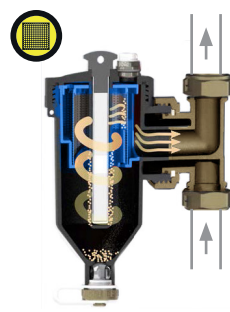


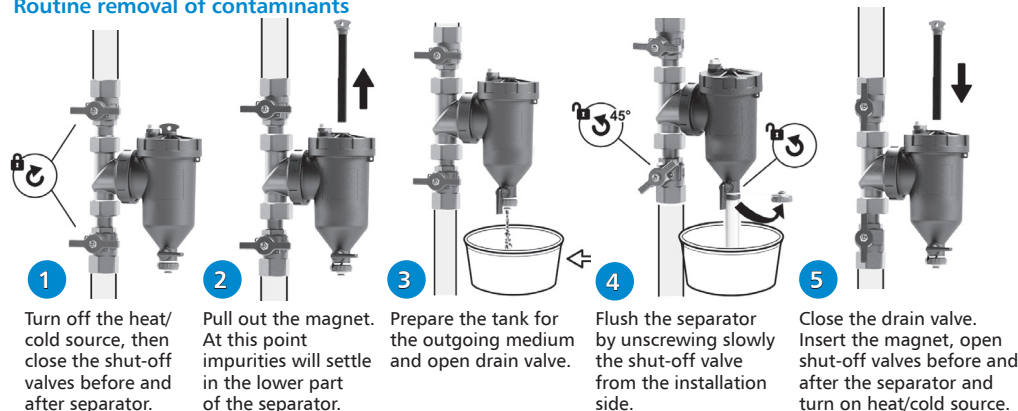
Fig. 9 Deposition of dirt on the filter mesh

MAINTENANCE

Danger! Maintenance operations should be carried out only after the system has cooled down completely. Otherwise, burns can occur with hot medium.

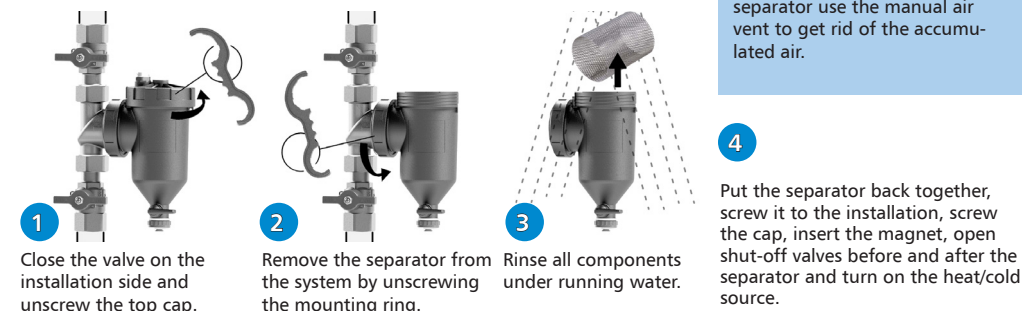
Frequency of routine cleaning of the separator depends on the degree of contamination of the medium. However, a complete cleaning of the separator along with a tightness check of the connections is recommended to be performed at least once a year.

Routine removal of contaminants



Full cleaning of the separator

Perform separator cleaning routine steps 1 through 4, then:



After each cleaning of the separator use the manual air vent to get rid of the accumulated air.

APPROVALS AND CERTIFICATES

The product is subject to the Pressure Equipment Directive 2014/68/EU and in accordance with Article 4.3 (sound engineering practice) is not marked with the CE marking.

DECOMMISSIONING, DISPOSAL

1. Dismount the product.
2. To protect the environment, this product must not be disposed of together with normal household waste. Dispose of the product in accordance with the local directives and guidelines. Magnetic dirt separator ADS 160 consist of materials that can be recycled.

WARRANTY

Product warranty in accordance with the general conditions of sale and delivery.

CUSTOMER SATISFACTION

Customer satisfaction is our prime objective. Please contact us if you have any questions or problems concerning our product: zok@afribo.pl, tel. 32 330 33 55.