



# AFRISO

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## Compact magnetic dirt separator ADS 110

### NOTE!

The product may only be used if you have fully read and understood these operating instructions. The manual is also available on the AFRISO websites in the Internet.

### WARNING!

Dirt separator ADS 110 may only be installed, commissioned, and dismantled by trained personnel.

Changes and modifications carried out by unauthorised persons may cause danger and are prohibited for safety reasons.



Dirt separator is equipped with a magnetic element. People using a pacemaker are advised to maintain a safe distance from the device. It is also necessary to mind the electronic equipment installed near the device. The magnetic insert of the separator may cause electromagnetic interference.

Risk of scalding by hot medium – see the MAINTENANCE section.

### APPLICATION

Compact magnetic dirt separator ADS 110 is designed for installation in central heating systems. It is used for the continuous removal of solid impurities that can cause damage to system components. It can be used in systems with continuous circulation of the medium, where the working medium is water or a mix of water and glycol with a glycol concentration not exceeding 50%.

### PREDICTABLE INCORRECT APPLICATION

Do not use the ADS 110 dirt separator in the following cases and with the following media:

- a mix of water and glycol with a glycol concentration greater than 50%, vapour, oil, petrol, drinking water;
- for safety-related purposes;
- under conditions exceeding the maximum permissible parameters of pressure and temperature of the medium.

## CONSTRUCTION



- A. Stainless steel filter mesh
- B. Magnet
- C. Dirt collector
- D. Polyamide body
- E. Shut-off valve, 2x nut G $\frac{3}{4}$ "  
(connection from the system side)
- F. G $\frac{3}{4}$ " F plug
- G. Half-screw, 2x nut G $\frac{3}{4}$ "  
(connection from the heat source side)

Fig. 1. Compact magnetic dirt separator ADS 110

## MOUNTING

The ADS 110 dirt separator should be installed on the return pipe to the heat source in order to capture solid contaminants that could damage the heat source and circulation pumps. The separator can be installed on horizontal pipes (Fig. 2), vertical pipes (Fig. 3), as well as in an angled position (Fig. 4). The G $\frac{3}{4}$ " shut-off valve should be installed on the system side, while the G $\frac{3}{4}$ " half-screw should be installed on the heat source side. In order to facilitate maintenance, it is recommended to install an additional shut-off valve on the pipe from the separator to the heat source.

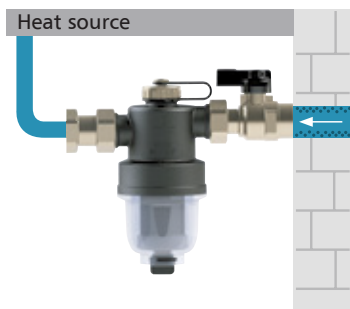


Fig. 2. Installation of the ADS 110 separator on a horizontal pipe

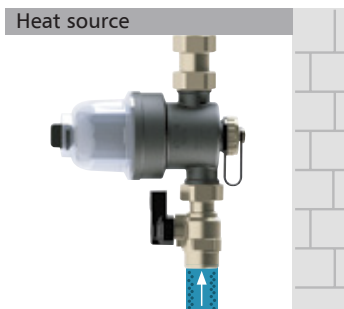


Fig. 3. Installation of the ADS 110 separator on a vertical pipe

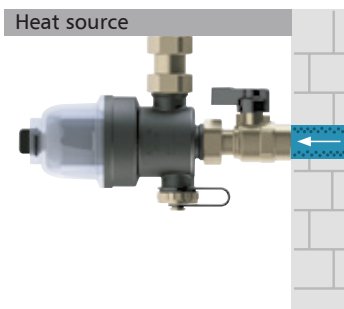


Fig. 4. Angular installation of the ADS 110 dirt separator

## DIMENSIONS [mm]

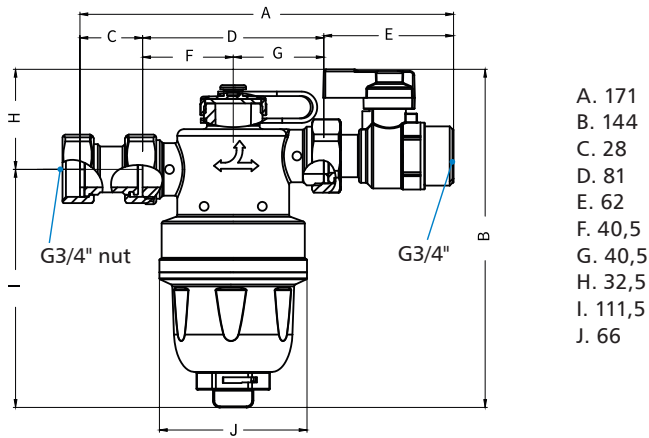


Fig. 5. Dimensions of the ADS 110 compact magnetic dirt separator

## OPERATION

The medium returning from the system flows into the separator and is directed into the filter mesh. In the first stage, metallic impurities (e.g. rust particles, metal filings) are attracted by a magnet (Fig. 6). The remaining dirt is settled on the filter mesh (Fig. 7). The purified medium is then directed to the connection on the heat source side.

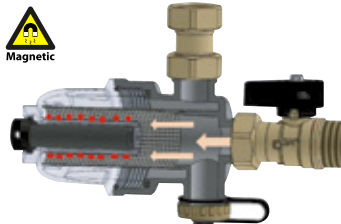


Fig. 6. Attraction of dirt by a magnet in the ADS 110 separator

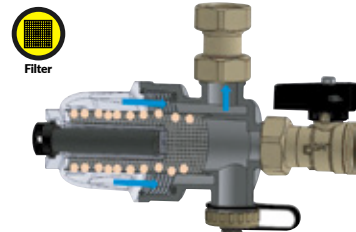


Fig. 7. Dirt settling on the filter mesh in the ADS 110 separator

## TECHNICAL DATA

Parameter / part	Value / material
Medium temperature	max. 90°C
Operating pressure	max. 3 bar
Glycol concentration in the system	max. 50%
Kvs	5,2 m³/h
Recommended flow rate	max. 1,6 m³/h
Magnet power	1,2 T (12 000 Gs)
Housing material	PA66 (polyamide)
Filter mesh material	AISI 304 stainless steel
Sealing material	EPDM
Mesh size of the filter mesh	800 µm

## MAINTENANCE

**CAUTION!** Maintenance work should only be carried out after the system has cooled down completely. Otherwise, there is a risk of burns from the hot medium.

The ADS 100 compact magnetic dirt separator requires periodic maintenance. Periodically (at least once a year), check the tightness of the connections, while the frequency of cleaning the separator depends on the degree of pollution of the medium. To remove accumulated dirt, proceed as follows:

1. Close the shut-off valve on the separator.



Fig. 8. ADS 110 dirt separator with closed shut-off valve

2. Unscrew the plug and empty the separator.



Fig. 9. ADS 110 dirt separator with closed shut-off valve and unscrewed plug

3. Using a 29 mm wrench, unscrew the separator dirt collector and empty any remaining working medium.



Fig. 10. ADS 110 dirt separator emptied of medium and with dirt collector unscrewed

4. Unscrew the magnet (rotate 90° counter-clockwise) and rinse the filter mesh and separator dirt collector under running water to remove any impurities.

Fig. 11. Dirt collector, magnet and mesh filter of the ADS 100 dirt separator



5. Check the condition of the seals; if damaged, replace with new ones.

6. Screw the magnet back in, insert the mesh, screw the dirt collector back on, open the valve on the separator.

## APPROVALS AND CERTIFICATES

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

## DECOMMISSIONING, DISPOSAL

1. Dismount the product.
2. Dispose of the product according to local directives and guidelines.

The product is built from recyclable materials.

If you have any questions or problems with disposal, please contact the appropriate distributor or manufacturer's point.

## WARRANTY

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

## CUSTOMER SATISFACTION

For AFRISO customer satisfaction is paramount. If you have any questions, suggestions or product problems, please contact us.