

# MAG

## Magnetite/Air Separator

# TTM MAG 110

## Magnetite and dirt separator with (air) deaeration

### Installation, operating and maintenance instructions



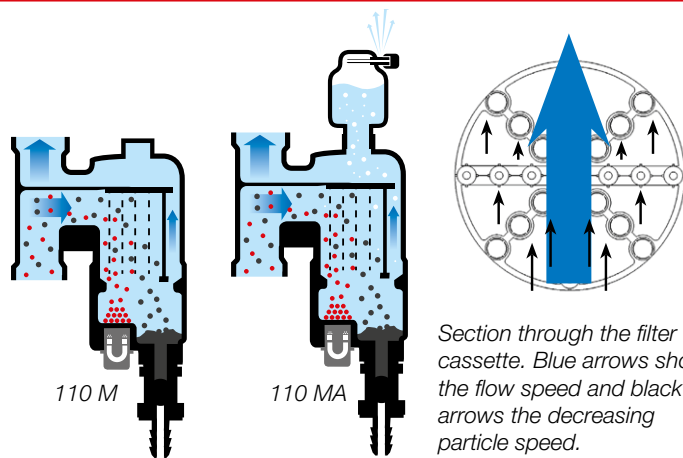
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## Function

TTM MAG 110 magnetite and dirt separator with deaeration effectively removes particles (magnetic and non-magnetic), dirt and free air/microbubbles during continuous operation from the system fluid in heating and cooling systems.

Particles and dirt are separated from the system fluid through a patented filter cassette, which effectively collects particles and drives them down into a particle trap. The magnetite is collected using a powerful magnetic rod placed in the bottom of the housing.

TTM MAG 110 MA is also equipped with an air deaerator with reducing the flow speed in the housing, bubbles are then released from the flow and can rise upwards. The air is regularly released when the air pressure rises.



Section through the filter cassette. Blue arrows show the flow speed and black arrows the decreasing particle speed.

## Installation

Check that TTM MAG 110 M/MA has not been damaged during delivery and that the unit is whole. Report any transport damage immediately.

TTM MAG 110 can be connected either vertically or horizontally. The separator should always be installed vertically.

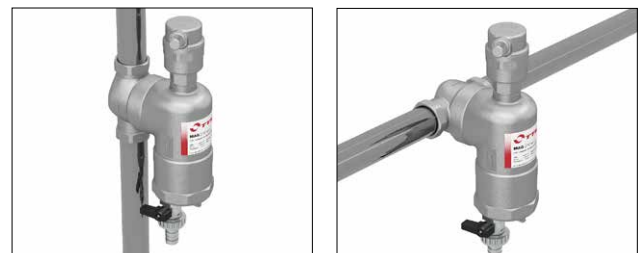
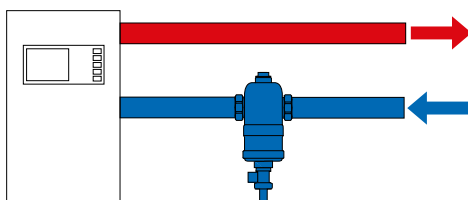
### Connection

The separators should be connected using the appropriate adapter depending on the model. The different versions have connections as stated below:

Model	Connection
MAG 110 M/MA 20	G $\frac{3}{4}$ " int.
MAG 110 M/MA 22	22 CU
MAG 110 M/MA 25	G1" int.
MAG 110 M/MA 28	28 CU

### Installation

TTM MAG 110 is installed on the return line in heating and cooling systems before vital system components such as heat exchangers, boilers, pumps, chillers etc.



1. Cut the copper pipe perpendicular and check that the pipe is free of longitudinal scratches and burrs.
2. Stainless, zinc electroplated and hardened steel pipes are sanded around the pipe end with abrasive cloth (not longitudinal sanding).
3. Insert the pipe end fully into the connection.
4. Tighten the union nut with a spanner.
5. Test pressurise and check water tightness. Counteract stress corrosion by loosening the nut and then lightly retightening it.

A support sleeve should be used for soft and semi-hard copper pipe.

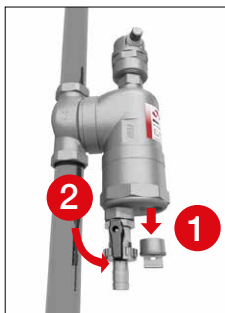
Maintenance



Due to the installed magnet, people with pacemakers and similar devices should remain at a safe distance from the product. Care should also be taken when positioning electrical products, as these can be disrupted or damaged by the magnetic field.

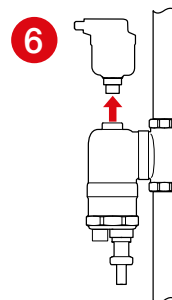
TTM MAG 110 M/MA requires regular cleaning.

1. Remove the magnet by undoing the screw and then drawing out the magnet (1).
2. Open the drain tap (2) in the bottom and empty the collected particles and dirt into a bottle or similar.



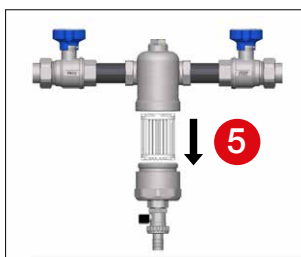
**Dismantling the air deaerator (TTM MAG 110 MA)**

1. Fully switch off the water flow before and after the separator (3).
2. Unscrew the air deaerator (anti-clockwise) and allow to cool (6).



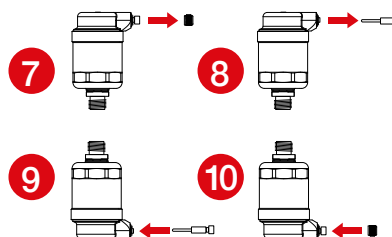
**Dismantling the separator housing**

1. Fully switch off the water flow before and after the separator (3).
2. Unscrew the lower part of the housing using a plumber's wrench (4).
3. Remove the filter cassette (5).



**In the case of leakage in the air deaerator**

1. Dismantle the air deaerator according to the instructions (3, 6).
2. Unscrew the vent cap (7).
3. Unscrew the vent insert (8) with a 4 mm allen key.
4. Clean or replace the vent insert.
5. Turn the vent upside down and install the insert (9).
6. Reassemble the vent cap (10).
7. Reassemble the air deaerator.



If the air deaerator leaks fluid, it needs to be cleaned or replaced.

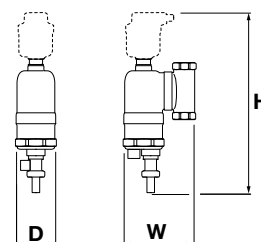
Technical data

**Separator housing**

Upper plug: .....CW617N Brass  
 Lower tap: .....CW617N Brass  
 O ring: .....EPDM  
 Filter cartridge: .....Nylon 6FV  
 Nominal pressure: .....10 bar  
 Housing material: .....CB753S Brass

**Air deaerator (TTM MAG 110 MA only)**

Nominal pressure: .....10 bar  
 Housing material: .....CB753S Brass  
 Article number: .....U2010226



Model	Connection	Pressure class	Temperature °C	Material (housing)	Max flow		Dimensions (mm)			Art. no.
					(l/s)	(m³/h)	W x H x D			
MAG 110 M 20	G3/4" inv.	PN10	0 – +110	Brass	1.4	1.8*	139 x 204 x 61			510 581
MAG 110 M 22	22 CU	PN10	0 – +110	Brass	1.4	1.6*	139 x 204 x 61			513 162
MAG 110 M 25	G1" inv.	PN10	0 – +110	Brass	1.4	2.9*	146 x 204 x 61			510 598
MAG 110 M 28	28 CU	PN10	0 – +110	Brass	1.4	2.6*	146 x 204 x 61			513 179
MAG 110 MA 20	G3/4" inv.	PN10	0 – +110	Brass	1.4	1.8*	139 x 261 x 61			510 604
MAG 110 MA 22	22 CU	PN10	0 – +110	Brass	1.4	1.6*	139 x 261 x 61			513 186
MAG 110 MA 25	G1" inv.	PN10	0 – +110	Brass	1.4	2.9*	146 x 261 x 61			510 611
MAG 110 MA 28	28 CU	PN10	0 – +110	Brass	1.4	2.6*	146 x 204 x 61			513 193

\*) Max flow in standard pipe.