



# TM MAG PLUS – ADJUSTABLE MAGNETIC DIRT SEPARATOR ART. 3141



## PLUS

- Double filtering cyclonic action;
- Complete removal of impurities;
- Possible to install in any position;
- Self-cleaning function;
- Complete with air-vent valve;
- Magnet in neodymium 14.000 GAUSS;
- Guarantees cleaning and efficiency of the plant;
- Prevents corrosive phenomena;
- Spacious accumulation chamber for the dosage of additives.

## DESCRIPTION

Tiemme magnetic dirt separator **Art.3141 TM MAG PLUS** guarantees an efficient impurity removal, mainly made up of sand and rust, usually present in climatization circuits. Through its efficient and constant action the magnetic filters gather all the impurities present in the plant, not allowing them to circulate inside it, thereby avoiding the ruining and damaging of the other components making up the system, especially pumps and heat exchangers.

The constant passage of the fluid through the filter during the normal functioning of the plant in which it is installed gradually brings to a complete dirt removal. Magnetic filters clean the flow in the system thanks to the combined action of stainless steel filtering net and neodymium magnets.

## PRODUCT RANGE

Code	Diameters
315 0032	3/4"
315 0038	1"

## MANUFACTURING SPECIFICATIONS

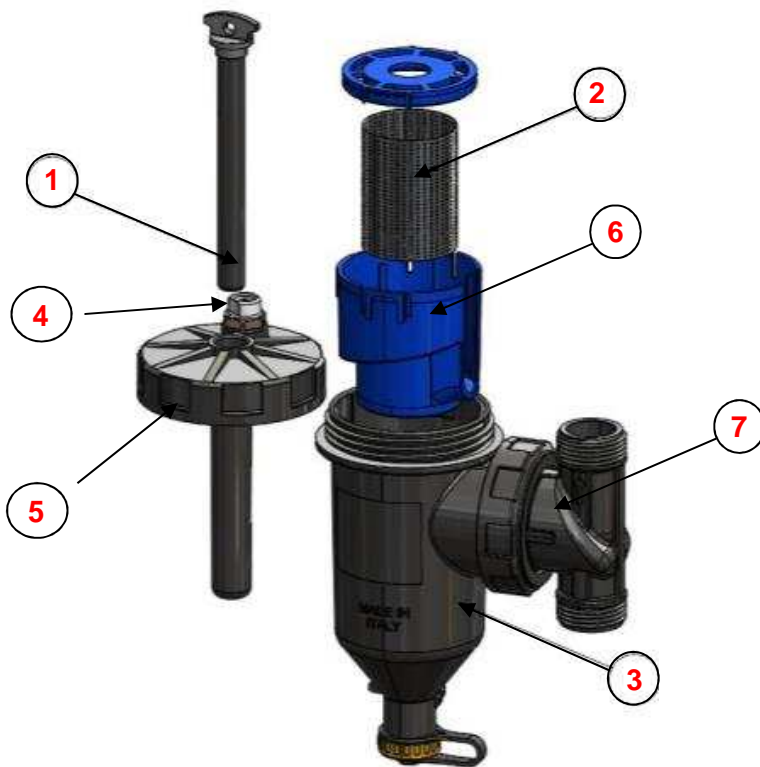
Manufacturing specifications	Values
Body – Cyclonic insert – locking ring	PA66 + FV 30%
Filtering cartridge	STAINLESS STEEL AISI 304
O-Rings	Peroxide EPDM
Ball valve	Brass CW617N – En12164
Magnets	Neodymium 14.000 GAUSS



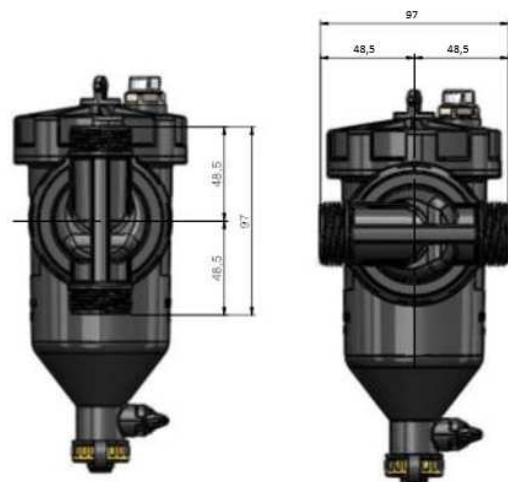
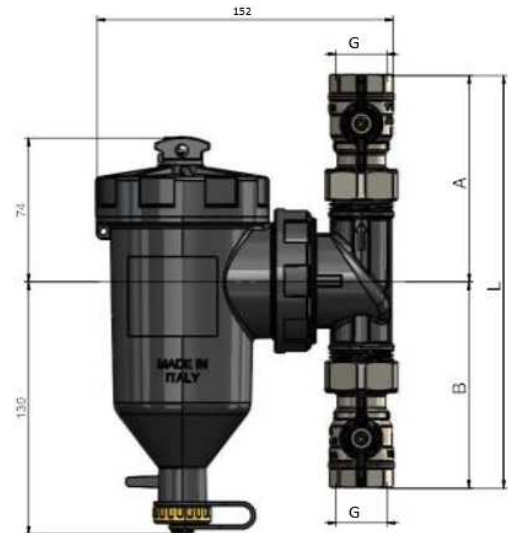
## TECHNICAL SPECIFICATIONS

Technical specifications	Unit measure	Values
Maximum working temperature	°C	90
Maximum working pressure	bar	3
Filtration degree 1 <sup>st</sup> cleaning	µm	500
Filtration degree 2 <sup>nd</sup> cleaning	µm	800
Employed fluids	-	Water, glycolate solutions max 50%
Threaded connections	-	Female UNI ISO 228

## DIMENSIONS



1. Internal removable magnet 14.000 GAUSS
2. Stainless steel filtrating cartridge
3. High resistance technopolymer body
4. Air-vent valve
5. Upper cap
6. Cyclonic insert
7. T connection



Code	G	A (mm)	B (mm)	L (mm)
<b>315 0032</b>	3/4"	106	106	212
<b>315 0038</b>	1"	111	111	222



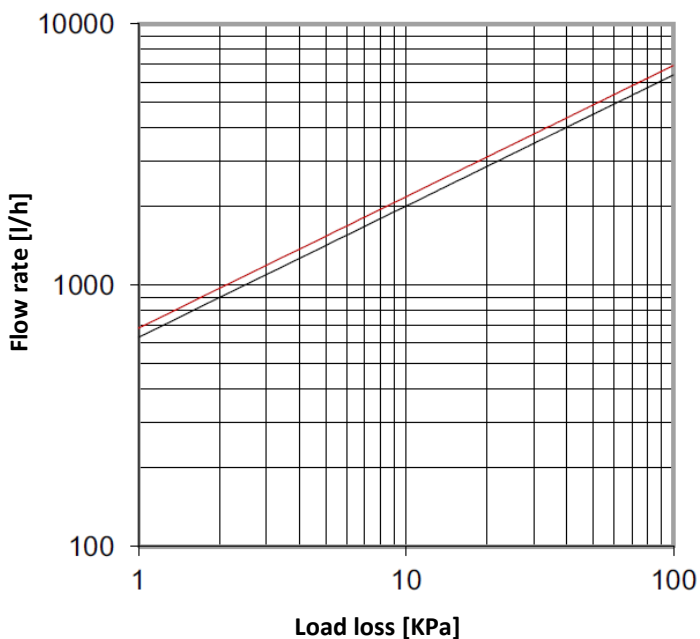
## OPERATION

Tiemme **Art.3141 TM MAG PLUS** magnetic dirt separator combines an efficient cyclonic action for separating debris with a double filtering process, first magnetically then mechanically. The special patented internal insert has been studied to direct the flow in an actual vortex so as to favor a first consistent depuration before the strong action of the magnet and of the filtering cartridge. Shapes and materials have been carefully selected to ensure performance, resistance and duration in time. The spacious chamber allows to exploit the device for dosage of additives in the hydraulic circuit.



The compact dimensions and the turning fitting make it suitable for installation in any plant configuration. The device is equipped with a manual air-vent valve and draining valve with a spacious accumulation chamber that allows to reduce the draining frequency. The high filtering performances remain efficient through time.

## FLUID-DYNAMIC FEATURES



— Load loss curve dirt separator without filter Kv 6.9

— Load loss curve dirt separator with a 500/800 µm Kv 6.3 filter

It is advised to limit the speed of the fluid to approx. 1-1,2 m/s upon the device connections. For a general indication of the suggested flow rates, please refer to the below table.

Code	Connection	m <sup>3</sup> /h
315 0032	3/4" – DN20	1,3
315 0038	1" – DN25	1,3

## HOW TO INSTALL

**Tiemme Art.3141 TM MAG PLUS** dirt separator can be installed on horizontal, vertical or oblique pipes thanks to the rotating fitting and to the locking ring connecting it to the pipe.



Horizontal position

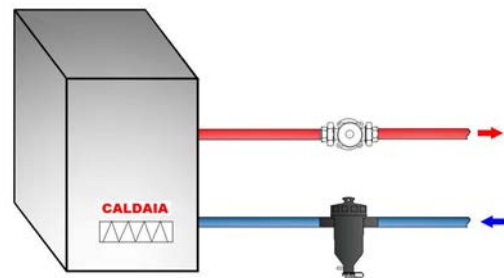


Vertical position



Oblique position

1. TM MAG PLUS is to be installed preferably on the generator return pipe. In case of considerably dirty water a 500  $\mu\text{m}$  net filter is advised to clean the system. Following the cleaning, the thin net should be substituted with a standard 800  $\mu\text{m}$  one. The dirt separator should preferably be installed before the pump so it won't thrust directly into the device.



2. To loosen or tighten the rotating ring and the cap always use the supplied wrench.



3. The air accumulated in the device may be purged by using the air-vent valve situated on the upper cap.



## MAINTENANCE GUIDE

**Warning.** Before carrying out any inspection, cleaning or maintenance operation, turn off the generator, close the shut-off ball valves on both sides of the separator and wait for the components to cool.

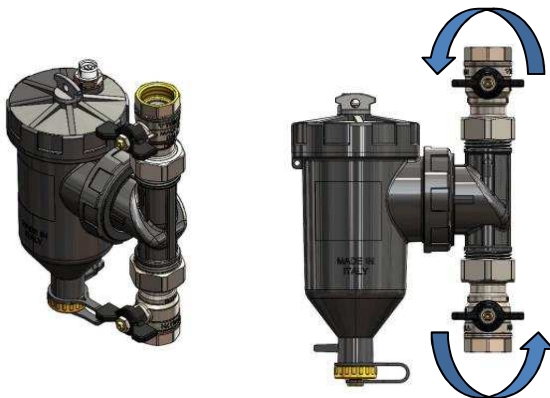


Pericolo di ustione

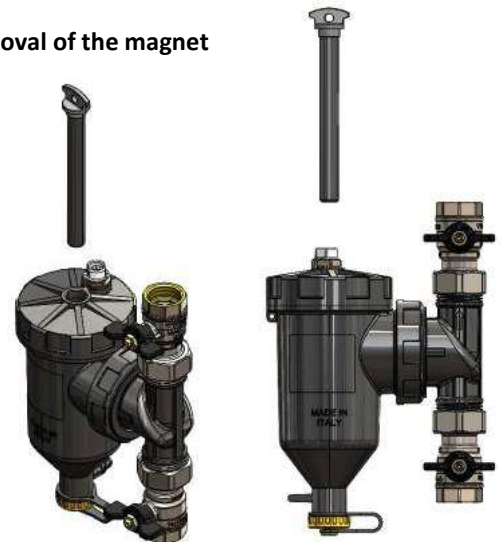
To clean the device, proceed as follows:

1. Close the shut-off ball valves installed both before and after the separator.
2. Extract the magnet: this way the debris may detach and deposit on the bottom of the accumulation chamber.
3. Unscrew the cap of the lower draining valve.
4. Connect a draining pipe to the drain valve or use a container.
5. Open the draining valve by turning the handle.
6. Slightly open the shut-off valve installed before the device so as to allow the flow of the cleaning water and the elimination of debris,
7. After draining, close the shut-off valve before the device and the draining valve, remove the pipe or the container, then screw the lower cap back on.
8. Reposition the magnetic insert in its allocated spot and open the shut-off valves again.

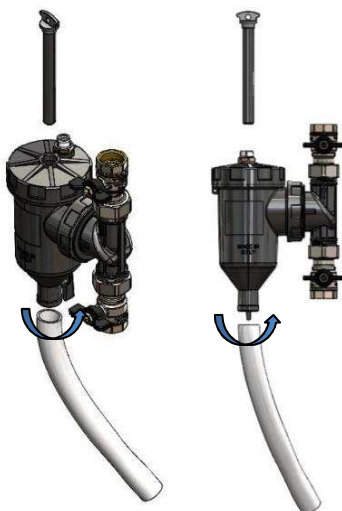
### 1-Closing of the shut-off valves



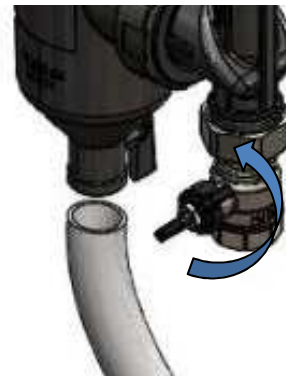
### 2-Removal of the magnet



### 3-4-5-Opening of the draining valve

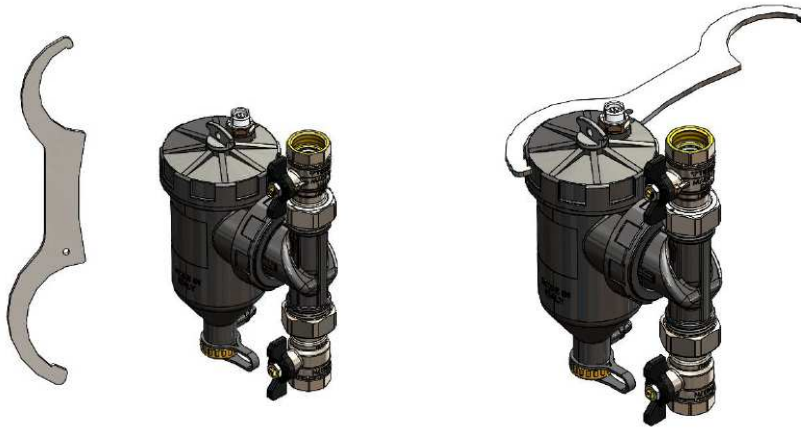


### 6- Opening of the shut-off valve before the device and washing of the internal components



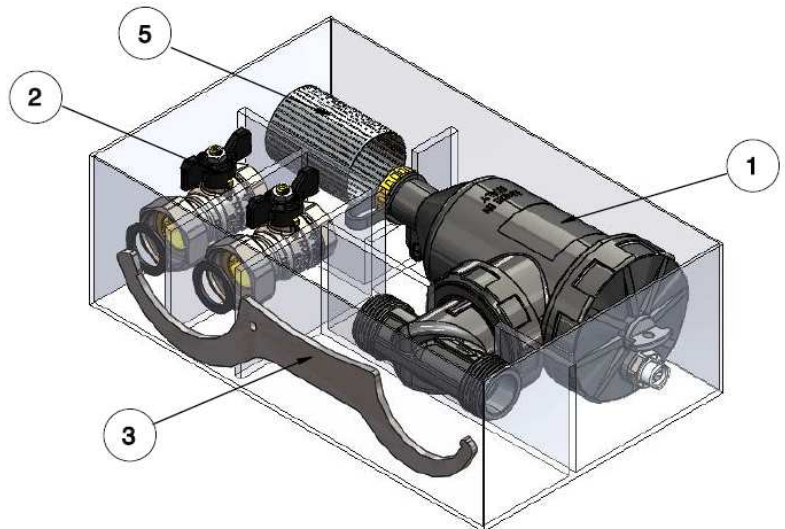


It is possible to completely loosen the upper cap through the supplied wrench in order to completely inspect the dirt separator or to replace the filter cartridge



### PACKAGE CONTENTS

- 1) Dirt separator
- 2) 2 shut-off ball valves
- 3) Double wrench
- 4) First passage filter cartridge 500 µm
- 5) Standard maintenance filter cartridge 800 µm



### ITEMS SPECIFICATIONS

**Art.3141** – Threefold effect magnetic dirt separator **TM MAG PLUS**: cyclonic action guaranteed by internal insert, designed to direct the fluid from the boiler to maximize the slowdown and depositing of the debris; subsequent removal of particles deriving from iron by means of a neodymium magnetic bar, magnetic fields 14000 G; mechanical filtration by cartridge with net structure 800 µm. First passage filter with 500-µm net structure included. Internal components completely inspectionable and washable. Large accumulation chamber of 362 cm<sup>3</sup>. Manual air-vent valve. Draining ball valve with opening handle and cap. Rotating "T" fitting for installation on pipes in different positions. Installation possible horizontally, vertically and oblique orientation. Wrench for locking sleeve and upper cap included. Loop on magnetic insert, sealing hose clamp supplied. Materials: body, cyclonic insert and locking sleeve of PA66 + FV 30%; polyarylamide "T" joint; stainless steel AISI 304 filtrating cartridge; peroxide EPDM seals. Compatible fluids: water; water + glycol max 50%. Recommended maximum flow rate: TBD. Maximum pressure: 3 bar. Operating temperature: 0–90 °C.

### CERTIFICATIONS



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