- *Removes all impurities*
- *Self-cleaning*
- *Excellent hydraulic properties*
- *Installation on piping VERTICAL – HORIZONTAL – DIAGONAL*
- *Extends boiler lifespan*
- *Fights corrosion*
- *Maintains optimum system efficiency*
- *Limited overall dimensions*

PRODUCTION RANGE

Code	Size	Connection	Kw [m³/h]
3491.05.00	3/4"	FF UNI-EN-ISO 228	9.50
3491.06.00	1"		10.30

ACCESSORIES

Code		Description
37.03.60		Deaerator automatic air venting valve with protective cap. Connection G 3/8"
2343.05.00		Connector for cleaning/washing system.

DESCRIPTION

The **DIRTERM UP, self-cleaning adjustable dirt separator** represents the best solution to solve plant problems due to particle pollution, **especially rust and sand, that form due to corrosion and fouling** during the normal operation of a system.

OPERATING PRINCIPLE:

The filter collects all the impurities present in the system, preventing them from circulating within it, thus avoiding wear and damage of various components that form the system.

The impurities stopped by the filter are deposited on its bottom as long as the opening of the specific discharge valve allows for their expulsion.

USE:

It is advised to install the dirt separator on the circuit, at the inlet of the boiler (plant return pipe), in order to protect it from any impurities in the system, especially during the start-up phase.

It is important to **follow the direction indicated by the ARROW** on the body to ensure better performance of the filtering action.

The jointed part ensures total installation versatility for assembly on the following pipes:
- **VERTICAL**
- **HORIZONTAL**
- **DIAGONAL**

CONSTRUCTION FEATURES

- Diverter body: Nickel-plated brass GCuZn38Pb2
- Cartridge body: Nickel-plated brass GCuZn38Pb2
- Locking ring: Nickel-plated brass CW617N UNI EN 1216
- Elastic ring: C85 Galvanised
- Filtering cartridge: AISI 304
- Hydraulic seals: EPDM + PEROX

TECHNICAL FEATURES

- Compatible fluid: Water, Water + Glycol
- Max. operating pressure: 10 bar
- Operating temperature: 0 to +110°C
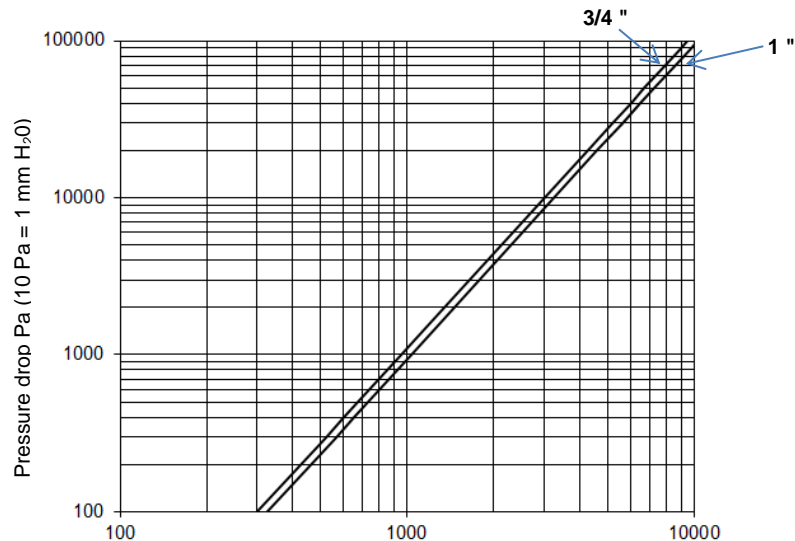- Max. temperature: 130°C

DIMENSIONAL FEATURES
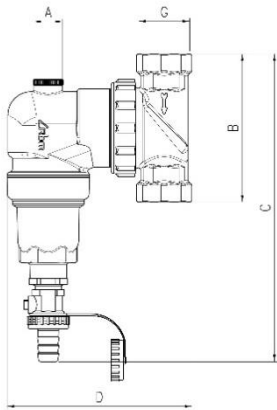
Code	Size	A	B [mm]	C [mm]	D [mm]
3491.05.00	G 3/4"	G 3/8"	104	216	127
3491.06.00	G 1"	G 3/8"	104	216	127

FLUID DYNAMICS FEATURES

Pressure drop diagram

Q = Flow rate

| Code	Size	Kw [m³/h]
3491.05.00	G 3/4"	9.50
3491.06.00	G 1"	10.30

OPERATING PRINCIPLE

By going through a set path, the fluid is forced to cross the mesh of the cartridge and enter the filtration chamber where all the residues and debris are blocked.

First of all, the sudden cross-section variation (the filtering chamber has a much greater diameter than the conduit) slows down the fluid motion and, consequently, the entrainment rate of the particles suspended in it. The particles collide with the mesh of the filter cartridge and then slow down.

At this point, the heavier particles fall downwards due to gravity, which prevails over the entrainment force; **this way, all non-magnetic contaminants (algae, sludge, sand, etc.) present in the system are removed.**

The stainless steel cartridge, thanks to its particular spiral shape and its mesh with a very high degree of filtration, does not offer resistance to the passage of the fluid (low pressure drops) and encourages a helical motion that makes the impurities go towards the bottom.

FILTERING CARTRIDGE

FILTRATION CHAMBER
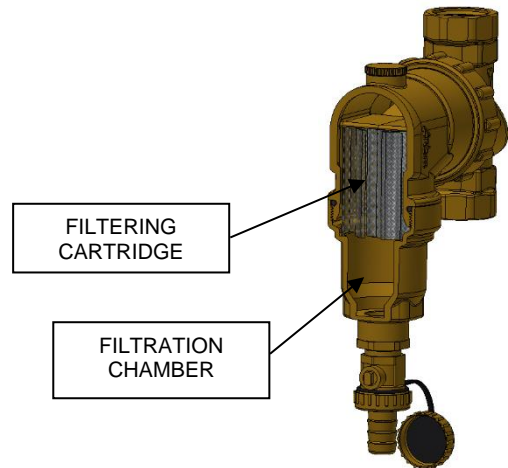
INSTALLATION

It is advised to install the dirt separator on the circuit, at the inlet of the boiler, in order to protect it from any impurities in the system, especially during the start-up phase.

It is important to **follow the direction indicated by the arrow** on the body to ensure better performance of the filtering action.

Directional Arrow

The dirt separator must be installed with the **impurity discharge valve facing downwards**.

The jointed part allows installation on:
- VERTICAL
- HORIZONTAL
- DIAGONAL

The sealing between the jointed part and the rest of the body depends on the strength with which the adjustment ring nut is tightened. This because it is a telescopic sealing, and not a head sealing.
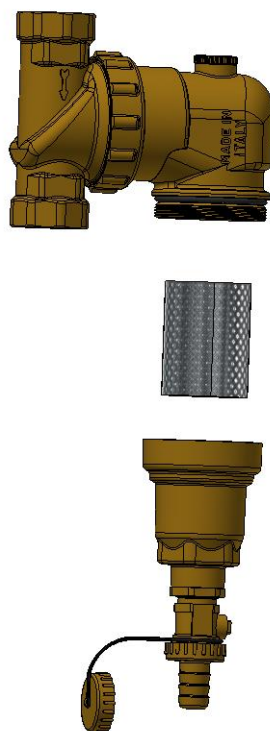
Connection G 3/8"

The top part of the filter is provided with a female G 3/8" connection that is used to install the automatic air venting valve RBM code **37.03.60**
THIS CAN BE USED TO CONTINUOUSLY ELIMINATE THE AIR WHICH HAS NOT BEEN EXPELLED DURING FILLING, or microbubbles that are formed as a result of processes occurring during normal system operation.

Adjustment ring nut
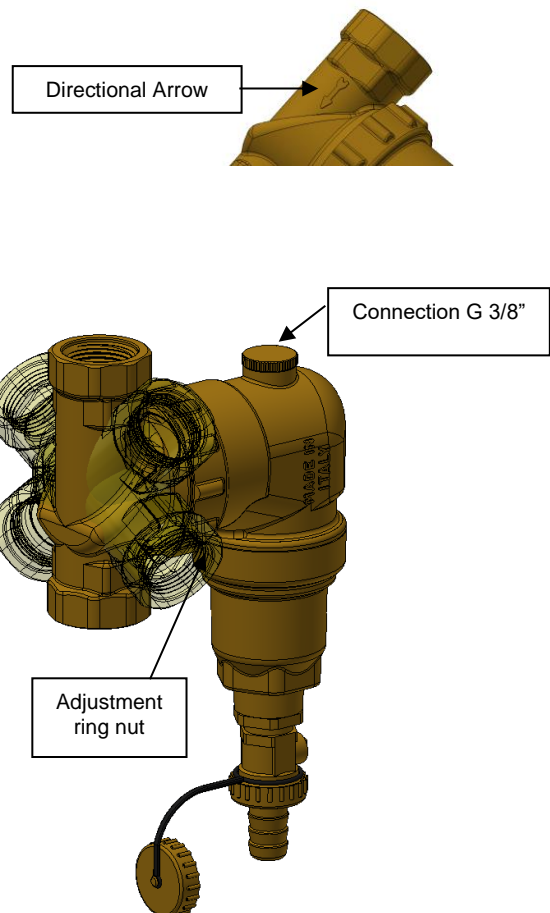
FILTERING CARTRIDGE CLEANING:

The large chamber built for separating impurities and the choice to use a large-mesh steel filter, prevent the filter from getting clogged. In case of large impurities, it is still possible to clean the cartridge by removing the accumulation cap.

FILTER PURGING:

Filter purging can be performed with the system running, acting on the ball valve provided with hose connection.

IT IS IMPORTANT TO PERFORM THE PURGE OPERATION AT LEAST ONCE A YEAR.

IN CASE OF FIRST APPLICATION, PERFORM THE FIRST PURGE AFTER A MONTH.