SALUS CONTROLS

MAG DEFENDER

5 YEAR WARRANTY

Full Flow Magnetic Filter

Models: MD22A

OPERATION MANUAL

In the SALUS MD22A box:

INTRODUCTION

Today, high efficiency boilers offer excellent performance for heating systems, however this performance can be eroded significantly if little attention is given to the cleanliness of the complete central heating system. Historically the majority of systems suffer from iron oxide contamination, which takes the form of sludge deposits which are caused by corrosion of the heating system.

The iron oxide particles vary in size and the sub-micron particles are present in the system fluid continuously during system operation. The oxide particles can cause premature failure of valves and pumps and boiler efficiency is reduced dramatically as the particles contaminate the boilers heat exchanger, and the complete system pipework.

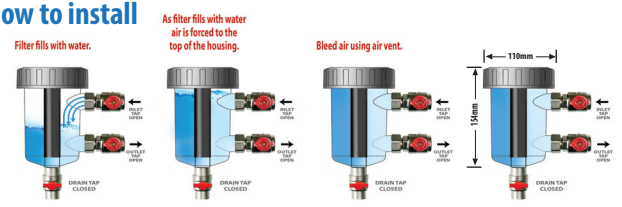
The SALUS Mag Defender offers system protection and increased efficiency, as it has been designed to remove the suspended iron oxide particles without reducing flow rate through the system.

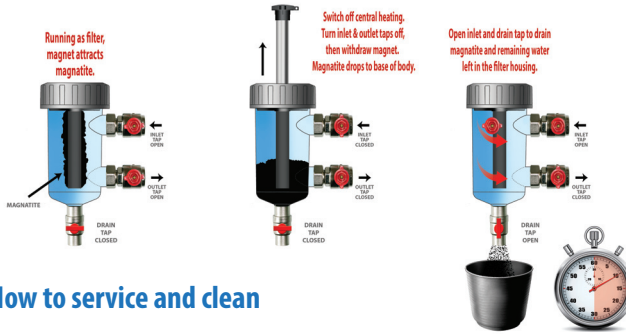
Installation is simple; isolation valves rotate 360º so a number of location options can be facilitated.

An added advantage to installers is the bottom mounted valve for servicing. Once isolated the bottom valve allows the easy discharge of contaminants. The main body is 500mL, which allows the installer to add the correct amount of corrosion inhibitor when the isolation valves are closed.

QUICK REFERENCE GUIDE

How to install

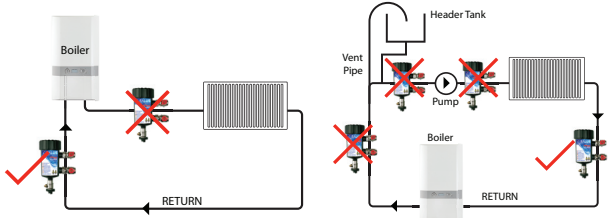




How to service and clean

INSTALLATION

In order to achieve the best protection for the boiler, it is recommended that the Mag Defender is fitted after the last radiator before the boiler.



In determining a suitable location for installation, it is important to ensure you allow adequate access for servicing.

The following instructions are designed to assist engineers in the safe and effective installation and servicing of the SALUS Mag Defender and should be followed at all times. Any queries arising from either installation or servicing, contact SALUS Controls direct on 01226 323961.

Dos:

- Install the filler upright to enable the device to be fully evacuated of air during commissioning. Pipe runs are vertical, horizontal or any angle in between. The inlet and outlet can also be swapped to suit.
- Where the device is fitted to the metallic building structure earth-bonding continuity is required around the device. All bonding connections must be accessible and labelled "Safety Electrical Connection - Do Not Remove"

Don'ts:

- Magnets may affect or interfere with sensitive mechanical and electronic instruments such as heart pacemakers, computers/magnetic media and watches. Always keep magnets at least 300mm (1ft) away from such equipment.
- NEVER close the INLET or OUTLET isolation valves, or UNDO the lid when the pump is running!
- Don't fit the device too close to the boiler, allow at least 1m.

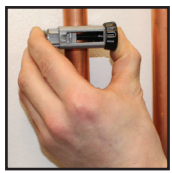
Release system pressure then drain the pipe run where the device is to be located (it may be necessary to drain the whole system). When installing below a boiler or other object, allow 250mm clearance from the top of the canister to beneath the object, to enable the lid assembly to be removed when servicing.

The device has been designed to facilitate various inlet and outlet configurations. Most configurations will require Elbows. For soldering we recommend 28x Yorkshire Solder Ring Elbow YP1222mm (code08290), or for compression we recommend 2 Yorkshire copper KS61522mm (code 61124K) and the fitting instructions (which follow) are based around dimensions of these elbows. For clarity the recommended solder and compression fittings require the same dimension of cutout.

Vertical pipe run: Measure and mark a 110mm section for a 22mm unit, as shown below. Remove this marked section using a pipe cutter as shown. Now create 64mm and 106mm of 22mm copper pipe to attach between the respective elbow and compression fitting on the inlet/outlet. Tip: Reuse the cut out section.

Horizontal pipe runs: Measure and mark 73mm section and remove the marked section with a rotary tube cutter. Create 64mm and 134mm lengths of 22mm copper pip to attach between the respective elbow and compression fitting on the inlet/outlet. **Tip:** Reuse the cut out section.

1. Prepare the pipe and fittings, lubricate the olives and connect the valves on the pipe work, only hand tighten the connections at first.



2 Now Loosen off the valve flange nuts and insert the rubber washers provided. (There are 2 supplied with this product).

3 Fit the drain valve assembly to the bottom of the Mag Defender making sure the outlet is at the front of the assembly and being careful not to overtighten as this may cause damage.

4 Loosely secure the Mag Defender to the valves.

5 Grip the Mag Defender and tighten the compression fittings being careful not to over tighten as this may cause damage.

NOTE: Drain valve closed

6 Now the heating system is ready to be filled, ensure the inlet and outlet valves are both in the open position, with the drain valve in the closed position, and then run the central heating system.

7 Bleed through top air vent, bleed the MD22A again after the system has reached temperature. Take care as the water may be hot.

Always service (see page 8) the filter before leaving the premises. The Mag Defender spanner can be left with the customer.

SERVICING

1. Important – Before carrying out any servicing work, turn off electrical supply to the boiler and let the water cool down to a safe working temperature. Using the Mag Defender spanner provided turn both isolation valves to the OFF position.

2. Remove magnet and put in a safe place.

3 After approximately 30 seconds, remove drain valve cap and use to open drain valve. Have bucket or pipe connection ready to collect debris.

4 Open inlet to flush out debris.

5 Once all debris has been flushed re-insert the magnet.

6 Close drain valve using drain cap, ensure the cap is alligned correctly so the valve is fully closed.

7 Open outlet.

8 Replace cap on drain valve and run the central heating system. Bleed air through air vent if required.

CHEMICAL DOSING

1. After step 4 in servicing, close inlet valve.

2. Close drain valve using drain cap, ensure the cap is alligned correctly so the valve is fully closed.

3. Replace cap on drain valve.

4 Using the MAG Defender spanner provided, carefully unscrew the lid.

5 Remove magnet cover and rinse under tap if required.

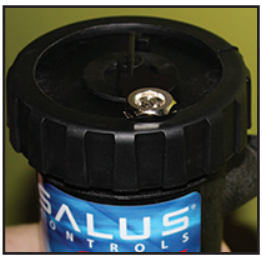
6 Pour a bottle of water treatment corrosion and scale inhibitor, we suggest SALUS Inhibitor. The canister will hold 500ml.

7 Re-insert magnet cover.

8 Now replace the lid onto the canister and tighten with the Mag Defender spanner. (Do not over tighten).

9 Re-insert magnet.

10 Open the isolation valves and start the heating system.



11 Bleed through top air vent, bleed the MD22A again after the system has reached temperature. Take care as the water will be hot.

Always service the filter before leaving the premises. The Mag Defender spanner can be left with the customer.

IMPORTANT

Ensure that the Standard Electrical Best Practice guidelines are followed when installing Mag Defender. A copy of these guidelines can be found at www.hse.gov.uk/electricity.

The inlet and outlet on the Mag Defender are reversible and there is no flow restriction.

Following installation, don't forget to complete the warranty card. Alternatively, complete the registration online at www.salus-tech.com.

Faulty components must be returned under the SALUS warranty process.

NOTES

QUESTIONS AND ANSWERS

Q Where can I fit the Mag Defender?

A In order to achieve the best protection for the boiler, it is recommended that the Mag Defender is fitted between the last radiator and the boiler (see diagram on Page 3).

Q Which connection on the Mag Defender is the flow and which is the return?

A The inlet and outlet on Mag Defender are reversible and there is no flow restriction.

Q How often do I service the Mag Defender?

A Servicing is required once a year with the annual boiler service.

Q Can I use chemicals with the Mag Defender?

A Yes, you can use any chemical on the market with Mag Defender, however we recommend you use SALUS LX products with the Mag Defender.

Q How long will the Mag Defender last?

A Mag Defender has been developed to last for the lifetime of the boiler, normally ten years. It provides continuous protection and comes with a five year warranty.

Q How do I isolate the valves?

A Simply turn the valves to the marked OFF position using the spanner provided. Important: Remember to switch off the electrical supply to the boiler when servicing the Mag Defender.

Q Will the Mag Defender affect my pacemaker?

A As with all magnetic products, if you have a pacemaker caution should be taken when handling the Mag Defender at all times. When the Mag Defender is installed, the magnetic field outside the canister is approximately one tenth of an average fridge magnet.

WARRANTY

SALUS Controls warrants that this product will be free from any defect in materials or workmanship, and shall perform in accordance with its specification, for a period of five years from the date of installation. SALUS Controls sole liability for breach of this warranty will be (at its option) to repair or replace the defective product.

Customer Name: .....

Customer Address: .....

.....

..... Post Code: .....

Tel No: ..... Email: .....

Engineers Company: .....

Tel No: ..... Email: .....

Instalation Date: .....

Engineers Name: .....

Engineers Signature: .....

For more products in the SALUS range visit...

www.salus-tech.com

Specification and contents

Also Supplied:

Mag Defender Spanner
Instruction manual including warranty form

www.salus-tech.com

Sales: Email: sales@salus-tech.com Tel: 01226 323961
Technical: Email: tech@salus-tech.com Tel: 01226 323961

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