

## CombiMag | Magnetic Power Flushing Filter



- \* 11,000 gauss of magnetic power.
- \* Increases power flushing efficiency.
- \* Reduces time taken to power flush a system.
- \* Prevents re-circulation of debris through the boiler.
- \* Minimises water consumption during power flushing.
- \* Reduces black iron oxide discharged to waste.
- \* Transparent cylinder gives visible indication of system contamination and the need to clean magnet.
- \* By-pass enables filter to be cleaned without interrupting power flush process.

## CombiMag | Increases Speed & Efficiency of Power Flushing

Power flushing is the fastest and most effective means of cleansing sludge and corrosion debris from central heating systems, utilising a high flow of water to loosen and ultimately expel the debris, usually containing large quantities of black iron oxide, from the system.

Clear water is forced through a system, pushing debris ahead of it, and this continues until the dump water finally runs clear. This may take a considerable time.

The **CombiMag** power flush filter has been developed to quickly remove circulating black iron oxide contamination from the flushing water, using the power of a rare earth magnet to capture magnetic iron oxides from the water flow.

The **CombiMag** filter is installed in line with any power flushing pump. The cyclone construction directs contaminated water through a powerful magnetic field, such that even the smallest of particles are retained on the central magnet, from which they may be easily cleaned during and after power flushing.

Collected debris, which may otherwise lead to blockages in small bore pipework, is prevented from re-entering the heating system. The rapid removal of debris from the flushing water prevents saturation of the cleaning solution with black sludge, leading to a more effective power flush.

The time savings on every job when using the **CombiMag** power flush filter will rapidly cover its cost, reducing the job time and consequent disruption for householders.

The increased efficiency of power flushing when using a **CombiMag** filter reduces heating costs and results in a more efficient heating system.

The debris retained on the magnet is an impressive visual aid. It demonstrates to householders what has been removed from the system, confirms the need for the power flush, and demonstrates that the clean has been professionally carried out



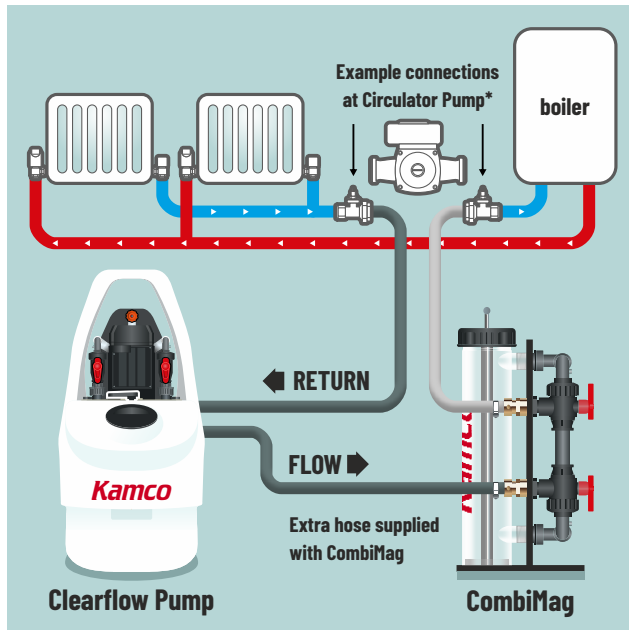
Supplied with protective tool case

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## CombiMag | Operating Instructions



\*Flow and return may be connected at circulator pump connectors or using the Kamco CP2 Pump Head Adapter, or at many alternative points in the system.

The power flushing pump can circulate the system water in either direction by operation of the flow reversing lever. However we suggest that the initial set-up is such that the **CombiMag** filter is installed before the boiler to offer the boiler a higher level of protection in the early stages of the power flush.

- 1 Place the **CombiMag** power flushing filter adjacent to the power flushing pump on a suitable drip tray.
- 2 Select the required direction of flow and position the pump flow reverser lever in that direction.
- 3 Install the filter on the flow from the flushing pump using the short (1 ½ metre) hose supplied. Connect the flow to the lower connection on the filter.
- 4 Using the power flushing pump standard flow and return hoses connect both the pump and the top connection on the **CombiMag** to the heating system.
- 5 Both **CombiMag** three-port valves should be in the CIRCULATE position.

### OPERATION DURING POWER FLUSH

- 1 Turn on the power flushing pump and immediately check all connections, and the top of the **CombiMag** cylinder for leaks.
- 2 After initial circulation for approximately ten minutes, turn both three-port valves 180° into the BYPASS position.
- 3 Remove the securing ring from the top of the cylinder and, gripping the handle firmly, carefully lift out the magnet.

**Note: the magnet is very powerful and is strongly attracted to steel surfaces. Take care not to trap fingers and avoid contact with sensitive equipment.**

- 4 Inspect the magnet for collected deposits and, if necessary, clean as follows:
- 5 Grip the cylinder lid and handle with one hand. Whilst wearing disposable gloves, grip and slide the magnetite sludge down and off the magnet (see pictures below).

**Note: It is advisable to only remove a proportion of the deposits with each stroke, starting at the lower end of the magnet, rather than all at the same time. Clean the end of the magnet.**

- 6 Collect the sludge in a suitable container for later disposal.
- 7 Re-assemble the **CombiMag** ensuring that the magnet locates within the circular recess at the base of the cylinder, and turn both three-port valves back into the CIRCULATE position.
- 8 Repeat the inspection and cleaning procedure as required during the flushing process.

### CLEANING THE MAGNET

It is not necessary to remove all deposits during the intermediate cleans whilst power flushing. However, to ensure a long life the magnet should be thoroughly cleaned and dried at the end of each job.

**CAUTION - The CombiMag contains a strong magnet and generates a very powerful magnetic field. When removed from the cylinder, keep away from electronic equipment, watches, mobile phones, credit cards etc.**

#### TECHNICAL DATA

Strength of magnet:	11,000 gauss	Weight of unit:	4.95 kg
Length of magnet:	400mm	Overall height:	475mm
Magnet surface area:	201 sq cm	Overall width:	215mm
		Overall depth:	245mm

