

TF1 SIGMA FILTER with Valves

A precision-engineered, sealed in-line system filter made from a composite polymer. This market leading, high-performance filter is available with quality valves and slip socket connections, which is an industry first. The TF1 Sigma Filter offers the ultimate in installer choice.

- Pressure tested, sealed unit
- High capacity and compact design
- Ideal for use in restricted spaces
- Easy to install – fits on horizontal and vertical pipework orientation. The filter can operate at a 45° angle
- Fast and easy to clean via drain valve
- Unique action, capturing a range of magnetic and non-magnetic debris
- Will not block or restrict flow
- Durable and robust construction, made from a high quality glass reinforced engineering polymer
- Powerful neodymium magnet assembly
- Quality valves and slip socket connection options
- Available in 22mm & 28mm versions
- As with all magnetic products, if you have an implanted cardiac device extra caution should be taken at all times when handling any magnetic filter



Product Specifications

- Maximum operating temperature: 90°C
- Maximum operating pressure: 5 bar (73psi) – [Tested in laboratory to 10 bar (145psi)]
- Maximum flow rate: up to 50 L/min
- Magnetic characteristics: Powerful neodymium magnetic assembly
- Drain valve characteristics: Easy to install with multiple orientation capability
- Filter material:

| | |
|------------------|--|
| Filter Body | – Glass filled, engineering polymer |
| Manifold | – Glass filled engineering polymer / nickel plated brass |
| Drain Valve | – Nickel plated brass |
| Isolation Valves | – Nickel plated brass |
| Circlip | – Stainless Steel |
| Seals & Washers | – EPDM |
- Capture rate: Up to 100% of system contaminates

Warranty

The TF1 Sigma Filter comes with a 10-year warranty.



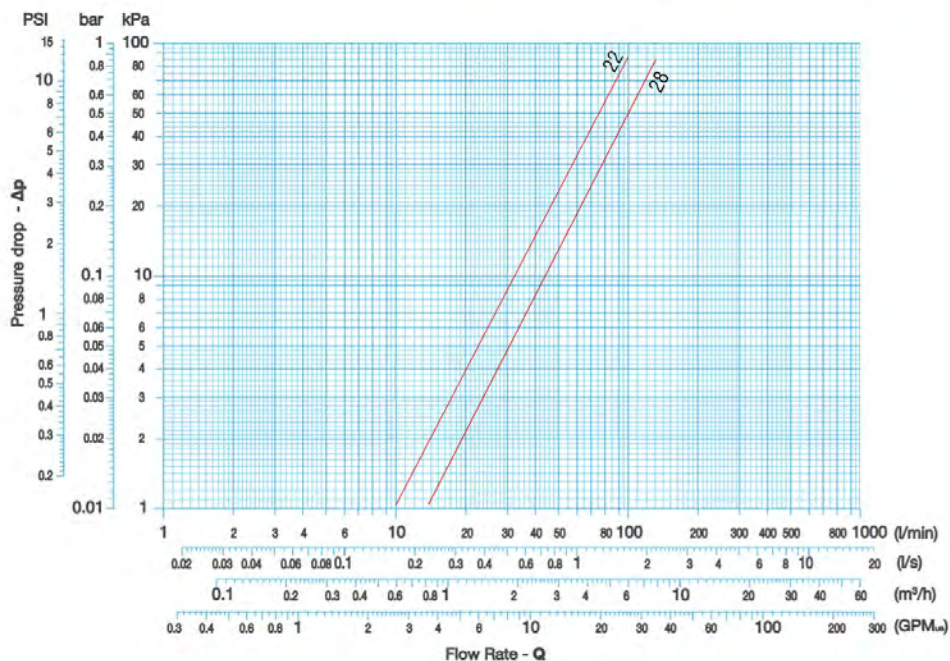
Designed for use with specified fluids

- Water
- Inhibited Glycol Solutions (maximum percentage of Glycol 50%)
- Fernox Chemical Range / System Additives

Operating principles - How the filter works combining magnetic and Hydronic Particle Separation (HPS)

- Contaminated water enters the filter via the manifold, carrying a variety of system debris and particulate matter held in suspension. This debris, including ferrous impurities such as Magnetite, moves through the manifold and into the main body of the filter.
- Due to the engineered flow characteristics created within the filter by the Hydronic Particle Separator, water is forced downwards, which helps to disrupt any dirt particles held in suspension. These particles then settle in the designated area of low flow at the base of the filter for easy removal.
- The dynamic flow of the water within the filter also allows ferrous impurities to be captured by the high- powered magnet assembly.
- Water is directed to pass over the magnet sheath and around the HPS, before exiting via the manifold. As a result, system debris cannot escape from the filter and is either trapped in the area of low flow, or captured by the powerful, neodymium magnet to allow clean water to exit the filter.
- Any dirt collected within the filter can be discharged by removing the magnet from the sheath and opening the drain valve. This procedure is shown in the cleaning guide.

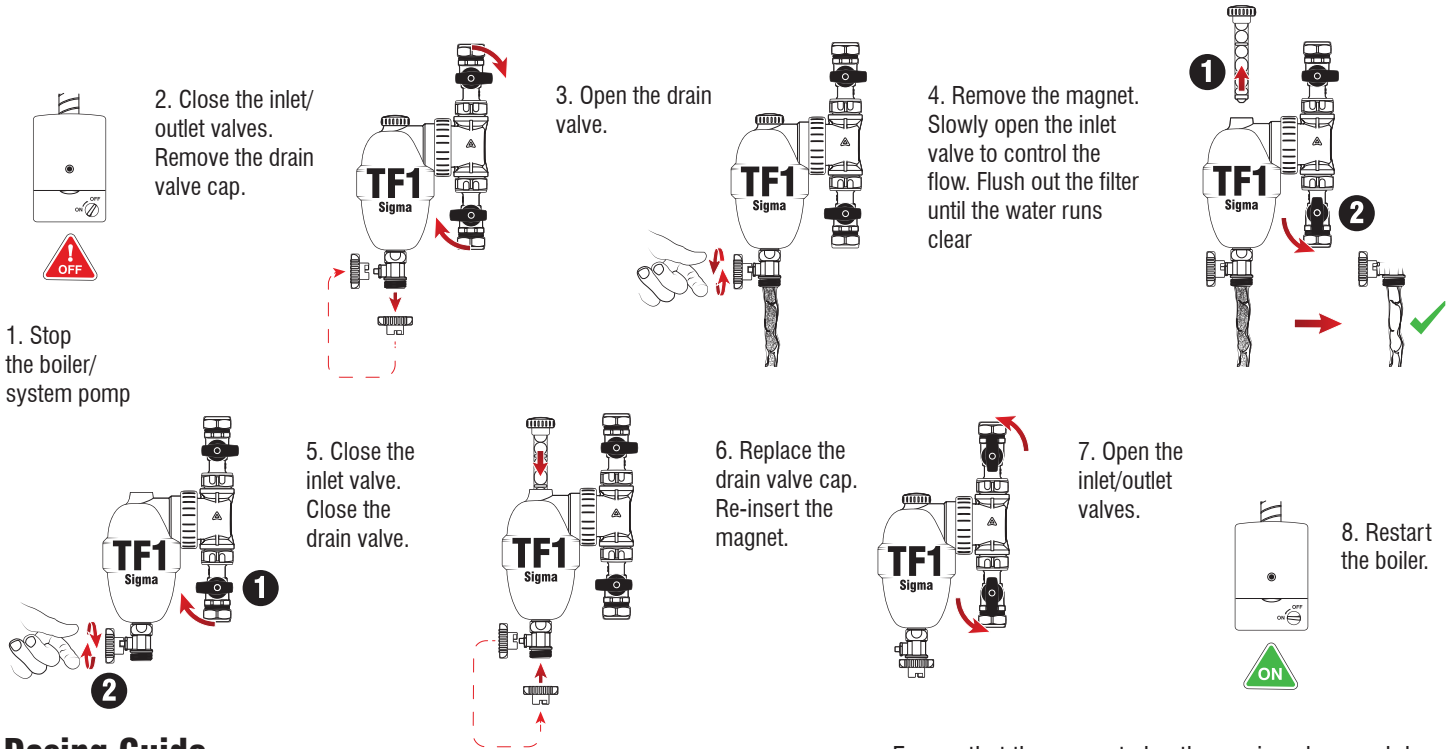
Pressure Loss Data



Installation Instructions

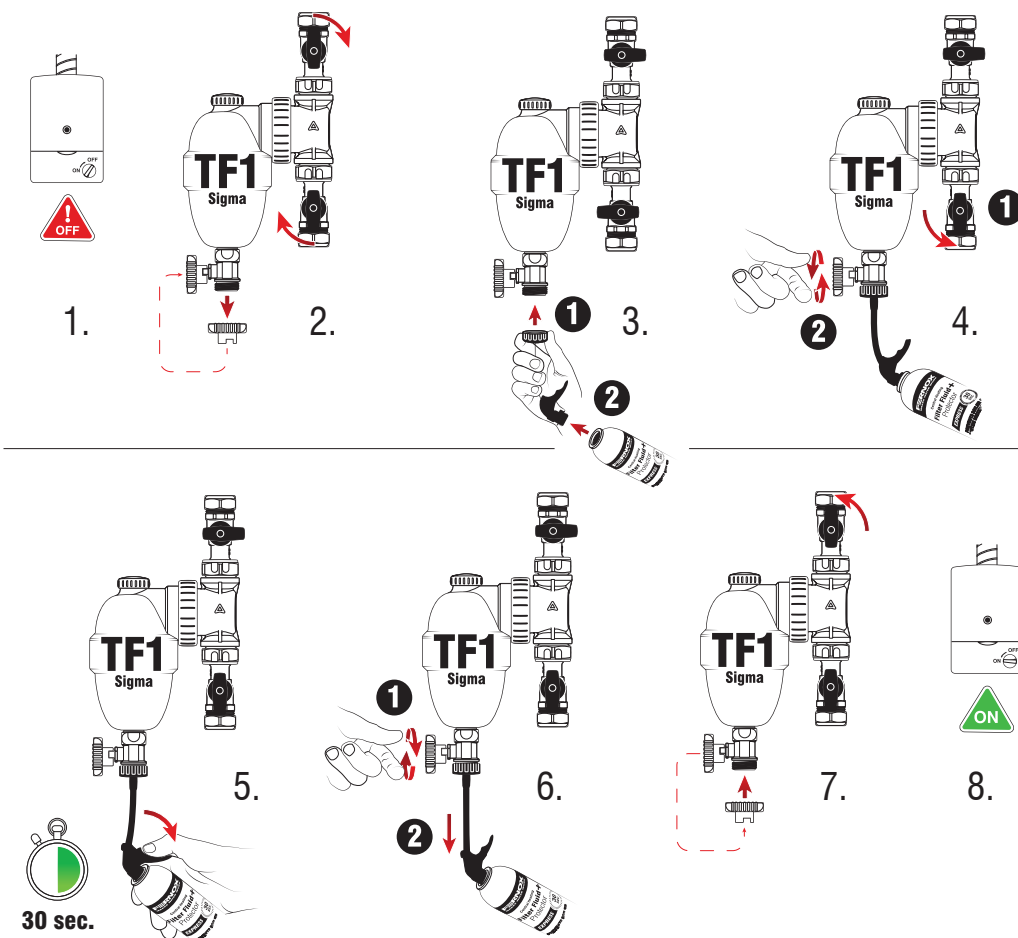
The TF1 Sigma Filter can be installed on vertical or horizontal pipework, in accordance with the flow direction indicated by the arrow on the manifold. Ideally the filter should be fitted on the return to the boiler, and can be installed at up to 45° from the vertical position if space or head height is restricted.

Cleaning Guide



Dosing Guide

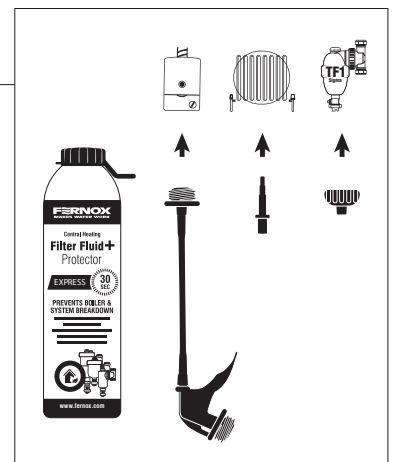
Ensure that the magnet sheath remains clean and dry.



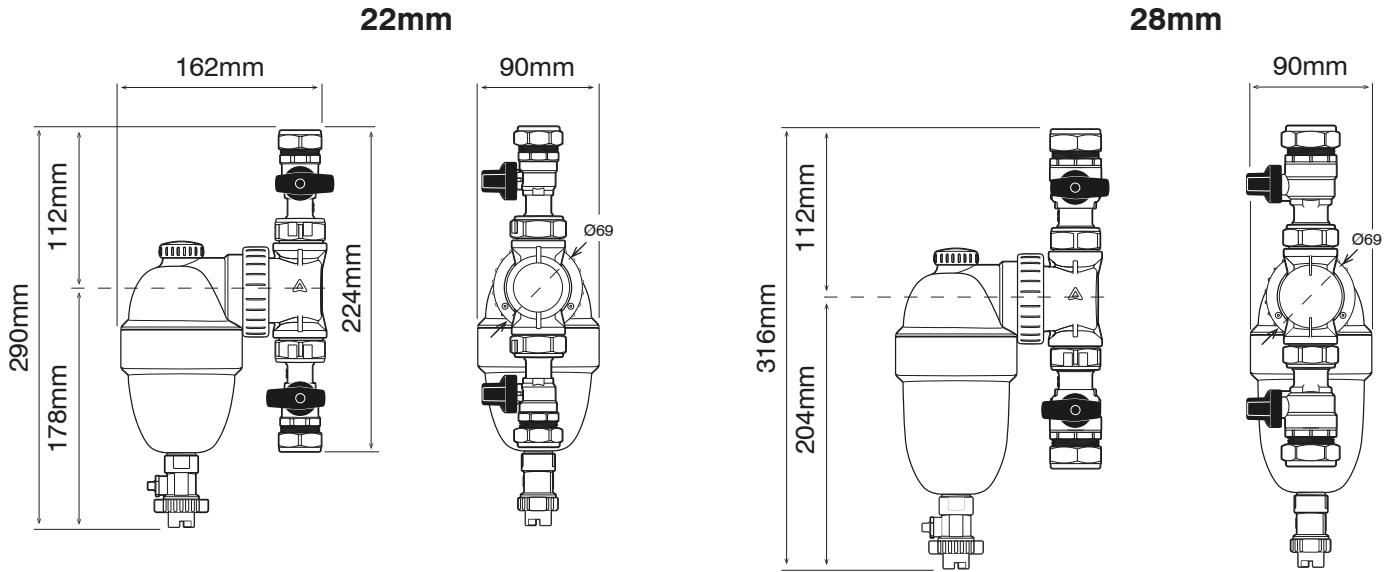
Easy dosing of Fernox Express products via a TF1 Filter with valves.

Note: If the filter contains magnetite or sludge, flush it clean with water before dosing. Refer to the cleaning guide instructions.

Caution: Hot surface.



TF1 Sigma Dimensions



Construction Details

Engineered Polymer – The TF1 Sigma Filter is constructed from a high strength engineering polymer, suitable for heating and cooling system applications. The glass reinforced polymer has good hydrolysis resistance, as well as high resistance to strain and abrasion. The polymer is compatible with glycols and additives used in central heating systems.

Low pressure loss – The TF1 Sigma Filter has been designed to ensure there is minimal pressure head loss in addition to maintaining a high collection efficiency. The internal HPS, magnet assembly and area of low flow have all been engineered to allow the filter to capture a range of system contaminants, whilst not impacting the rest of the heating system.

High quality components – The TF1 Sigma Filter utilises a range of high quality component parts that ensure the filter offers optimum performance. All valves are designed to allow users to operate them easily by hand, whilst also providing a secure connection to the system and a robust service point. The magnet is made using a premium grade of neodymium, enabling a high efficiency capture rate, as well as a robust filtration medium that will ensure a continued and consistent level of collection.

Application

Designed to be installed close to the wall, the filter can be easily fitted into either horizontal or vertical pipework in both flow directions.

Inhibitor usage guidelines

A TF1 Sigma Filter will protect the boiler from the damaging effects of circulating corrosion debris, which has collected in the system as a result of a chemical reaction when water comes into contact with mixed metals used within a heating and cooling system. Note: to prevent further corrosion from taking place a quality inhibitor should be used in combination with the TF1 Sigma Filter. In circumstances where demineralised or softened water is present a quality inhibitor must be used.

Product Codes

- TF1 Sigma Filter 22mm valve – 62415
- TF1 Sigma Filter 22mm slip socket – 62414
- TF1 Sigma Filter 28mm valve – 62417
- TF1 Sigma Filter Installer Pack 22mm slip socket – 62416

Packaging, Handling and Storage

Individually packaged with instructions included. No special storage requirements.

Spare parts available from Fernox: **Tel: +44 (0) 330 100 7750 Email: sales@fernox.com**