

## Neutralising Filters

Model Numbers: EXFN7, EXFN9, EXFN12,  
ETFN7, ETFN9, ETFN12,  
EAFN7, EAFN9, EAFN12



Neutrafil is safe to use



### Applications

- drinking water
- process water

### Benefits of Microlene's Neutralising Filters

Microlene's neutralising filters correct low pH corrosive water.

Neutralising filtration involves the use of a sacrificial media to react with corrosive carbon dioxide present in the water from bores and in rain water stored in plastic, glass fibre or stainless steel tanks.

Dissolved carbon dioxide (CO<sub>2</sub>) depresses the pH of the water (typically to 5.8 – 6.5) so it is corrosive to all metals. This results in green stains on whiteware (particularly under the hot taps) and possibly rapid destruction of the hot water cylinder. The green stains are copper oxide, the copper equivalent of rust.

#### THE SOLUTION

Use a bed of either standard fill of faster dissolving Neutrafil Akdolite sacrificial media, or the optional slower dissolving calcite (when limited pH correction required) in a pressure vessel installed between the bore or water tank and the property. Referred to as neutralising filtration the process involves the gradual dissolving of the granular media to neutralise the CO<sub>2</sub>, raising the pH and dramatically reducing the corrosion problem.

The Neutrafil media is made of dolomite limestone granules which has a very high surface area. This means that a relatively small amount of the media – typically 15-30kg – will neutralise typical household or farm flow rates.

The media very slowly dissolves and therefore is required to be topped up to the original level (typically 2-3kg) every few months.

The exact rise in pH achieved is dependent on water chemistry, the initial pH, flow rate and the amount of media present but Neutrafil does offer a safe, chemical free and reliable method of correcting the corrosion problem, with no risk of chemical exposure or overdosing.

It is important to note that the neutralising media is not intended to act as a sediment filter but used in the conventional manner, the media is backwashed and therefore has some limited capacity for the removal of sediment and iron. This applies to ETFN and EAFN versions. Fluidised bed EXFN versions cannot be backwashed and are not suitable for sediment removal and in fact are not filters in the conventional sense at all. The presence of sediment or iron does not mean that EXFN models should not be used but that the neutraliser will not reduce the level of these contaminants. A further description of the various models is given below. While the flow rates shown are typical it is essential that a water analysis is carried out to ensure that the correct unit is selected.

Technical data on following pages >

# Microlene Neutralising Filtration

## EXFN – FLUIDISED BED UNITS

The EXFN neutralisers use a fluidised media bed. This means that with no backwashing facility these units are the most economical on the market as no backwash valving is required, nor is electricity.

## ETFN AND EAFN - BACKWASHING UNITS

These models operate in conventional filtration mode and therefore require backwashing. This removes trapped dirt but most importantly reclassifies the media bed avoiding compaction and channelling. Backwashing should be done at least weekly. ETFN versions are backwashed by manually turning a valve, EAFN models backwash automatically at pre-set times and require electricity.

## LARGE SCALE TREATMENT

Higher flow rates can be treated by more than one unit or larger models from the Freeflo range. On a large scale it may be more appropriate to dose Soda Ash by metering pump but as this is a caustic chemical it is not recommended for domestic use.



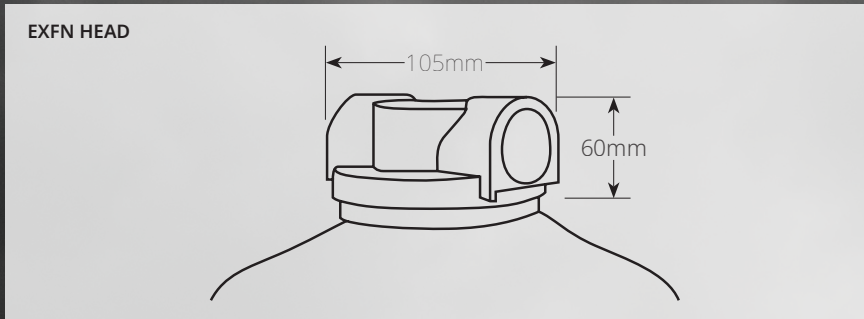
EXFN "no backwash" head



ETFN manual backwash valve



EAFN autowash valve



## SPECIFICATIONS

| Type   | Function  | Dimensions |            | Max Service Flow Rate l/min | Backwash Flow Rate l/min | Min/Max Operating Pressure kPa | Inlet/Outlet mm | Shipping Weight kg |
|--------|-----------|------------|------------|-----------------------------|--------------------------|--------------------------------|-----------------|--------------------|
|        |           | Inches     | mm         |                             |                          |                                |                 |                    |
| EXFN7  | Upflow    | 7 x 35     | 178 x 889  | 10 – 20                     | -                        | 140 – 690                      | 25 (F)          | 25                 |
| EXFN9  | Upflow    | 9 x 35     | 229 x 889  | 20 – 40                     | -                        | 140 – 690                      | 25 (F)          | 52                 |
| EXFN12 | Upflow    | 12 x 52    | 305 x 1320 | 40 – 70                     | -                        | 140 – 690                      | 25 (F)          | 67                 |
| ETFN7  | Manual    | 7 x 35     | 178 x 889  | 10 – 20                     | 10                       | 140 – 690                      | 25 (F)          | 25                 |
| ETFN9  | Manual    | 9 x 35     | 229 x 889  | 20 – 40                     | 16                       | 140 – 690                      | 25 (F)          | 52                 |
| ETFN12 | Manual    | 12 x 52    | 305 x 1320 | 40 – 70                     | 25                       | 140 – 690                      | 25 (F)          | 67                 |
| EAFN7  | Automatic | 7 x 35     | 178 x 889  | 10 – 20                     | 10                       | 140 – 690                      | 25 (M)          | 27                 |
| EAFN9  | Automatic | 9 x 35     | 229 x 889  | 20 – 40                     | 16                       | 140 – 690                      | 25 (M)          | 54                 |
| EAFN12 | Automatic | 12 x 52    | 305 x 1320 | 40 – 70                     | 25                       | 210 – 690                      | 25 (M)          | 69                 |

Operating Parameters: Water Temp: 5-50°C/Water pH: Above 5.0/Suspended solids: max 50mg/L/Free of Hydrocarbons

**WARNING:** A Pressure Reduction Valve should be installed in areas of high water pressure (above 690kPa)

**WARNING:** A water hammer arrestor should be installed if water hammer prevails.

FAILURE TO OBSERVE WARNING WILL VOID WARRANTY



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