



FILTRATION

- FILTERS SUSPENDED SOLIDS
- REMOVES IRON AND MANGANESE
- NEUTRALIZES AGGRESSIVE CARBON DIOXIDE
- MANUAL OR AUTOMATIC PLANTS
- MODULES WITH DIFFERENT TYPES OF COATINGS
- STANDARD MODULES UP TO FLOW RATES OF 100 M<sup>3</sup>/H
- SPACE SAVING INSTALLATION
- REQUIRES LESS CIVIL ENGINEERING THAN GRAVITY FILTERING PLANTS

# PRESSURE FILTERS, TYPES TF/TFB



## COMPLETE WATER SUPPLY PLANTS

## WATER SUPPLY PLANTS

In a complete water supply plant the filter fillings, filter size and ancillary equipment are dimensioned according to the composition of the raw water and the needed flow rate. EUROWATER makes water analysis as well as dimensioning of water supply plants with pressure filters.

#### DRINKING WATER TREATMENT

The requirements to the quality of drinking water are stipulated in national legislation. The limits for the contents of suspended solids, iron, manganese and agressive carbon dioxide can be reached through treatment in a EUROWATER pressure filter.

#### EUROWATER PRESSURE FILTERS

The pressure filters types TF/TFB offer a broad range of variations according to operation, coating and design pressure. Through a similar design of the vessels for manually operated pressure filters, type TF, and automatically operated pressure filters, type TFB, a future automatization of a manual pressure filter is relatively simple.

#### WORKING PRINCIPLE

By aeration of the raw water iron and manganese precipitate enabling them to be collected on the filter media together with the mechanical impurities. The filter media are rinsed at regular intervals. The interval between the rinses depends on raw water impurity and water consumption.

#### **AERATION UNIT**

The aeration equipment consists of a compressor unit with or without pressure tanks.

#### **RINSE PROGRAM**

The rinse of the filter is optimized first with an air blow followed by a water rinse. The air blow is performed with an air blower and loosens the collected impurities from the filter media, thus making the subsequent water rinse more efficient. Normally clean water is used as rinse water for the pressure filter. It is supplied from the clean-water reservoir by a rinse pump. When after approximately 20 minutes the pinse program has been completed the plant is ready to go into operation again.

#### IRON AND MANGANESE REMOVAL

The filter media for iron removal have an excellent filtering efficiency. The filter media are easy to rinse and last for many years. For manganese removal a manganese treated catalytic filter medium is used.

#### NEUTRALIZATION

For neutralization a special filter medium that neutralizes the aggressive carbon dioxide in the raw water is used. Resulting from the neutralization, a protective layer is established on the inner surfaces of the plumbing system, protecting against chemical corrosion. Filter media are consumed during removal of carbon dioxide, thus making refilling necessary at regular intervals.

- FOR INDUSTRIAL WATER SUPPLIES
- FOR MUNICIPAL AND PRIVATE WATERWORKS
- MORE THAN FIFTY YEARS OF EXPERIENCE WITH MANUFACTURE, CONSULTANCY, AND PROJECTING



## AUTOMATIC PRESSURE FILTER TYPE TFB

### PRESSURE FILTER

The pressure filter consists of a filter tank with valve system and necessary arma-ture. At the inside the filter is equipped with an automatic air vent and a distributor plate with corrosion-resistant distributors. The standard version of the tank is outside sandblasted and coated effectively with primer and plastic enamel.

#### **PIPE SYSTEM**

The pipe system is equipped with pneumatically regulated valves and is adjusted to the filter size and the installation conditions.

#### **CONTROL PANEL**

The control panel of the system is a fully electronic, 12 V, control unit. It comprises a rinse program section and a time control unit. The panel is designed to control up to four filter tanks.

#### PANEL SETTING

The control panel can be set to rinse at the days and hours at which it is desirable to backwash the filter. Potential free sig-nals are available from the control panel. In case of increased water consumption or increased raw water impurity, the plant is easily reprogrammed without application of tools.



#### **TF 5 CONTROL PANEL**

An advanced control panel with a large number of built-in control functions. Among other things the panel has ad-justable programs for both air blow and water rinse. The panel can control raw water pump, compressor, air blower and rinse water pump.

## **SPECIFICATIONS**

| Module<br>TF/TFB | Dimensions <sup>1</sup><br>One-tank unit |             |              | Dimensions <sup>1</sup><br>Two-tank unit |             |              | Pipe<br>system | Weight <sup>2</sup> |
|------------------|--|-------------|--------------|--|-------------|--------------|----------------|---------------------|
|                  | Width<br>mm                              | Depth<br>mm | Height<br>mm | Width<br>mm                              | Depth<br>mm | Height<br>mm | DN             | approx. kg          |
| 10               | 1900                                     | 2200        | 3000         | 3300                                     | 2200        | 3000         | 65             | 3030                |
| 12               | 2000                                     | 2300        | 3000         | 3500                                     | 2300        | 3000         | 65             | 3475                |
| 14               | 2100                                     | 2400        | 3000         | 3700                                     | 2400        | 3000         | 65             | 4230                |
| 17               | 2200                                     | 2500        | 3100         | 4000                                     | 2500        | 3100         | 80             | 5180                |
| 20               | 2300                                     | 2600        | 3100         | 4200                                     | 2600        | 3100         | 80             | 6080                |
| 25               | 2500                                     | 2800        | 3100         | 4600                                     | 2800        | 3100         | 80             | 7950                |
| 30               | 2600                                     | 2900        | 3200         | 4800                                     | 2900        | 3200         | 100            | 9080                |
| 35               | 2700                                     | 3000        | 3200         | 5000                                     | 3000        | 3200         | 100            | 10200               |
| 40               | 2800                                     | 3100        | 3200         | 5200                                     | 3100        | 3200         | 100            | 11435               |
| 50               | 3200                                     | 3400        | 3300         | 5900                                     | 3400        | 3300         | 125            | 16030               |
| 60               | 3400                                     | 3600        | 3400         | 6300                                     | 3600        | 3400         | 125            | 19255               |
| 75               | 3600                                     | 3800        | 3500         | 6800                                     | 3800        | 3500         | 150            | 22940               |
| 100              | 4000                                     | 4200        | 3600         | 7600                                     | 4200        | 3600         | 150            | 31855               |

required space for installation inclusive of normal free space.
weight inclusive of filter media and water.

## SPECIAL APPLICATIONS

**OTHER APPLICATIONS** EUROWATER pressure filters, types TF/TFB, have many possible applications and can be supplied in special versions for many different tasks. Our technicians are at your service with advice and dimensioning.

#### SURFACE TREATMENT

Many filtering projects imply heavy demands on the resistance to corrosion. EUROWATER offers a range of coatings that can stand aggressive media and high temperatures. This makes our pressure filter program applicable to a vast number of tasks.

#### **MULTI-LAYER FILTER**

A pressure filter with hydroanthracite and sand filling. Hydroanthracite has a large receptivity and the underlying sand layer functions as secondary filter. The filter is especially suited to collect flocculated and mucous particles.

#### **CARBON FILTER**

A pressure filter with activated carbon for removal of chlorine and collection of organic substances.

- FILTRATION IN COOLING AND HOT-WATER SYSTEMS
- FINAL FILTRATION OF INDUSTRIAL AND MUNICIPAL WASTE WATER
- RECYCLING OF PROCESS WATER
- DECHLORINATION OF WATER
- FILTRATION OF SEA WATER
- OTHER SPECIAL APPLICATIONS



EUROWATER pressure filter built into a container.



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