

# AMIAD "TAF" FILTER SERIES

2" - 3" Automatic electric filters for flow rates up to 50 m<sup>3</sup>/h; 220 USgpm

**An innovative self-cleaning filter, constructed of high quality plastic; suitable for a large variety of applications.**

## Features:

- For flow rates up to 50 m<sup>3</sup>/h, 220 USgpm
- Minimal water wasted during flush cycle. Less than 1%
- Flushing according to pressure differential and/or according to time. Option for continuous flushing.
- Unique drive mechanism.
- Low power consumption.
- No interruption of downstream flow during flushing.
- Filtration degrees from 500 to 10 micron.
- Electronically monitored cleaning with flexible control options.
- Applications: Water supply systems, cooling water, waste water;  
in: Plastic industry, mining, water treatment, turf irrigation, agriculture, etc.



# How does the "TAF" filter work ?

The "TAF" is a sophisticated yet easy-to-operate automatic electric filter, with a self-cleaning mechanism driven by an electric motor. The filter is designed to work with various types of screens in filtration degrees from 500 to 10 micron, and is available in 2", and 3" inlet/outlet diameter.

## Filtering process:

The water enters through the inlet pipe into the screen area and flows through the screen from inside out. The "filtration cake" accumulates on the screen surface and causes head loss to develop.

## Self-cleaning process:

The TAF will start the self-cleaning process either when the pressure differential across the screen reaches a pre-set value or after a predetermined lapse of time.

The fine screen filter element is cleaned by the suction scanner whose nozzles spiral across the inner surface of the screen. The filtration cake is "vacuumed" from the screen and expelled out the exhaust valve.

The scanner's spiral motion is achieved by a drive unit mounted to a bi-directional continuous worm shaft. The exhaust valve is activated for the duration of the cleaning cycle by a 3-way solenoid.

Filtered water continues to flow downstream during the flush cycle, which takes approximately 16 seconds.

## Control system:

The control system comprises a Pressure differential switch (PDS), solenoid valve and a flushing controller.

The PDS senses the pressure differential across the screen and when it reaches 0.5 bar (7 psi) it sends a signal to the electronic controller. The controller activates the motor and the solenoid valve for the timed duration of the flushing cycle.

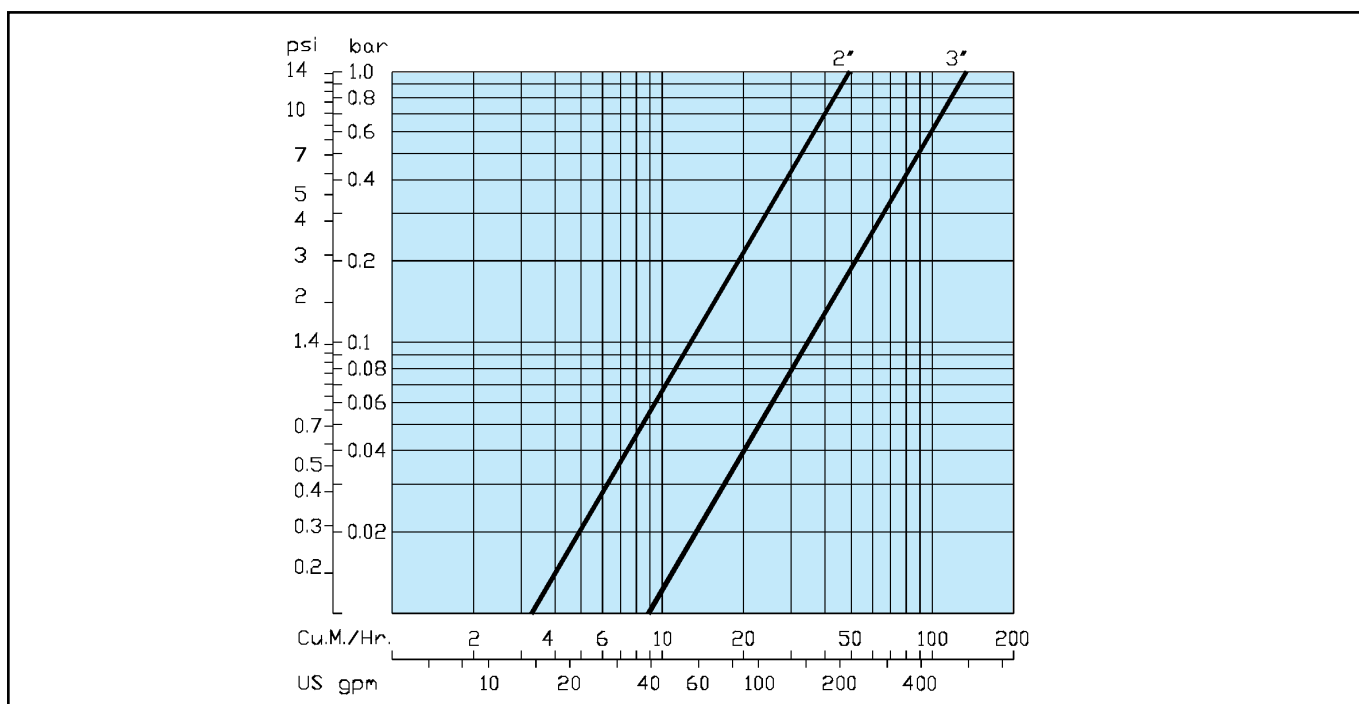
## Initiation of self-cleaning:

The filter will begin the self-cleaning process under any one of the following conditions:

1. PDS - Pressure differential across the screen.
2. Manually pressing the push button located in the controller box.
3. Timed intervals set by controller DIP switches.

The filter is available with 2 different element sizes: 2" with 465 cm<sup>2</sup> (72 in<sup>2</sup>) or 2"-Super and 3" with 700 cm<sup>2</sup> (108 in<sup>2</sup>). The "super" feature allows longer intervals between cleaning cycles and is highly recommended for use with poor water quality.

## Pressure loss graphs



# Technical specifications

## General

	2"	2"-Super	3"	
Maximum flow rate	25 m <sup>3</sup> /hr (110 USgpm)	25 m <sup>3</sup> /hr (110 USgpm)	50 m <sup>3</sup> /hr (220 USgpm)	Consult manufacturer for optimum flow depending on filtration degree & water quality.
Min. working pressure	1.5 bar (22 psi)			Or lower if pressure is increased for flushing.
Max. working pressure	8 bar (120 psi)			
Filter area	465 cm <sup>2</sup> (72 in <sup>2</sup> )	700 cm <sup>2</sup> (110 in <sup>2</sup> )	700 cm <sup>2</sup> (110 in <sup>2</sup> )	
Inlet/Outlet diameter	2"/50 mm	2"/50 mm	3"/80 mm	Threads (2", 3"): BSP or NPT Flanges (3"): Standard as per request
Max. working temperature	60°C (140°F)			
Weight	11.6 kg (25.6 lb)	12.4 kg (24.3 lb)	13.0 kg (28.7 lb)	

## Flushing data

Exhaust valve	40 mm (1 1/2")			
Flushing cycle time	16 seconds			
Wasted water per cycle	18 liter (4.7 USgallon)	25 liter (6.6 USgallon)	25 liter (6.6 USgallon)	
Minimum flow for flushing	4 m <sup>3</sup> /h (18 USgpm)	5.7 m <sup>3</sup> /h (25 USgpm)	5.7 m <sup>3</sup> /h (25 USgpm)	at 1.5 bar = 22 psi
Flushing criteria	Differential pressure of 0.5 bar (7 psi), time intervals and manual operation			

## Control and electricity

Rated operation voltage	220 V - Single phase. 110 V upon request
Electric motor	15 Watt, 50 / 60 Hz, Gear output 48 / 58 R.P.M.
Current consumption	0.18 A
Control voltage	24 VAC

## Construction materials

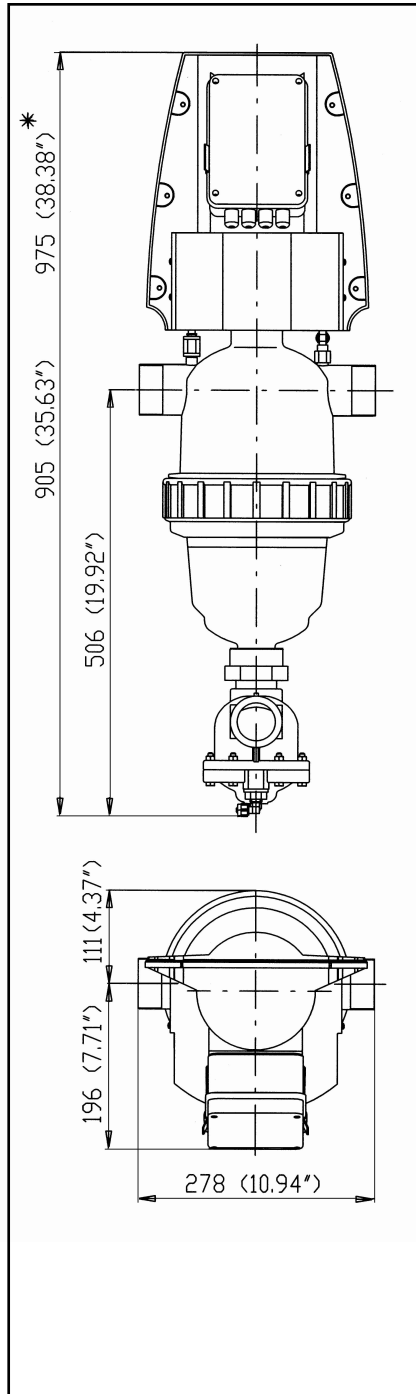
Filter housing and lid	PA+GF
Screens	St.St. 316 weavewire screen with Polycarbonate construction
Cleaning mechanism	PVC, Delarin
Exhaust valve	Plastic, Natural rubber
Seals	NBR
Control	Brass, Stainless steel, PE, PP

## Standard filtration degrees

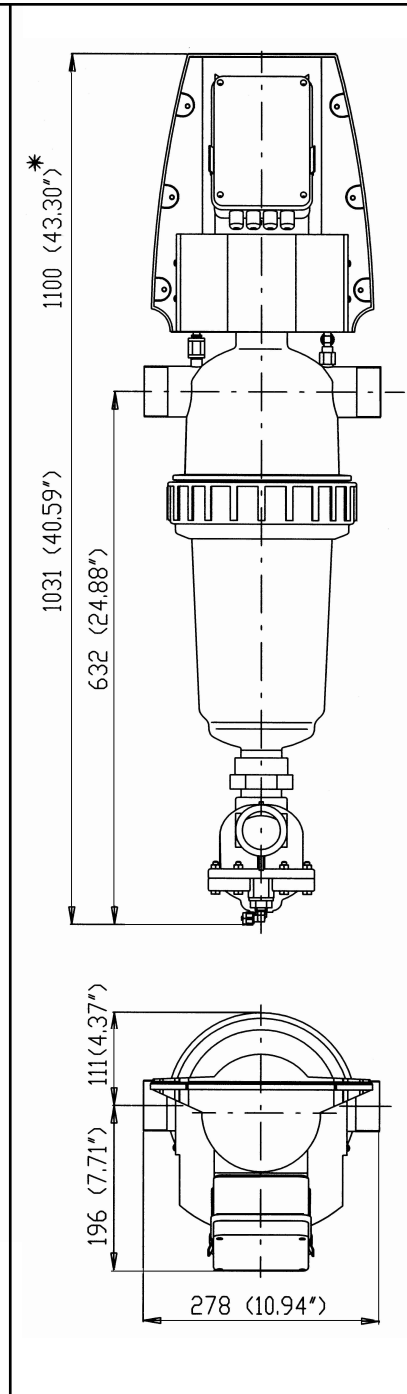
	Stainless steel screen								
micron	500	300	200	130	100	80	50	25	10
mm	0.5	0.3	0.2	0.13	0.1	0.08	0.05	0.02	0.01
mesh	30	50	75	120	155	200	300	450	600

# Dimensional drawings

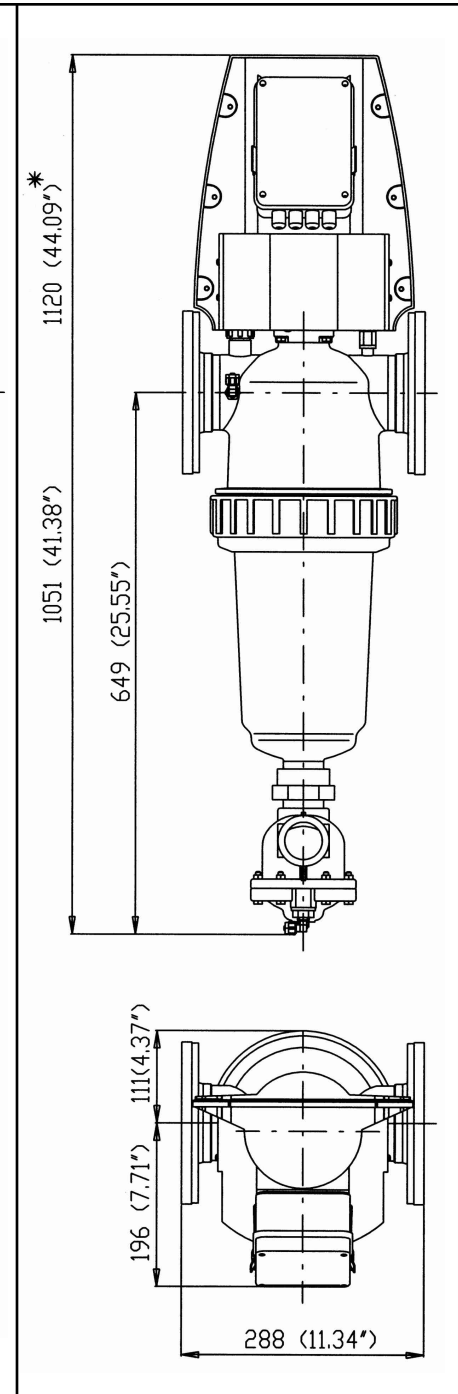
## 2" TAF



## 2"-Super TAF



## 3" TAF, Flanges

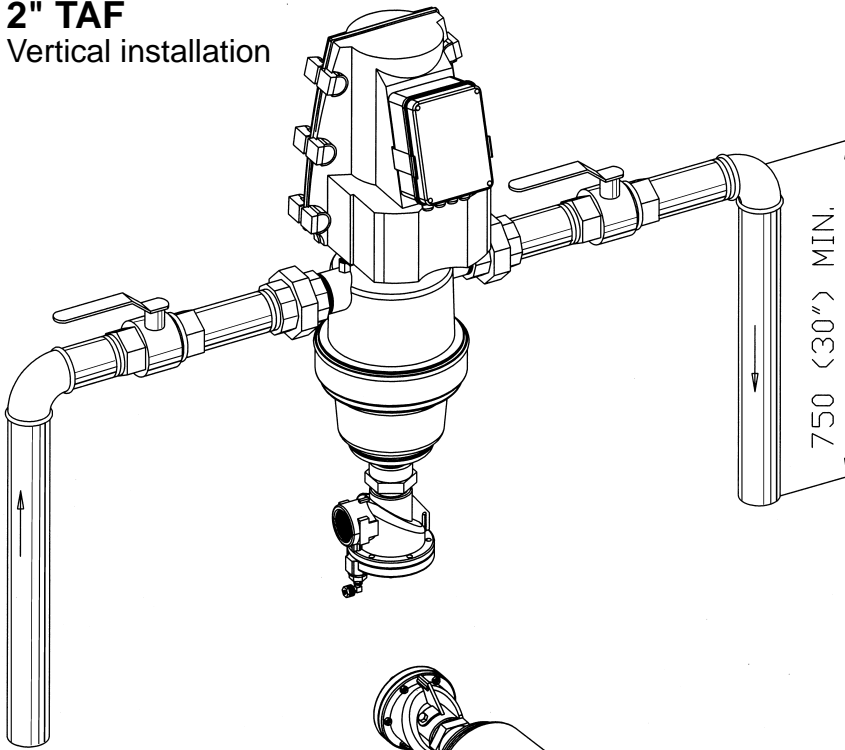


\* Distance required to open the filter.

# Suggested installations

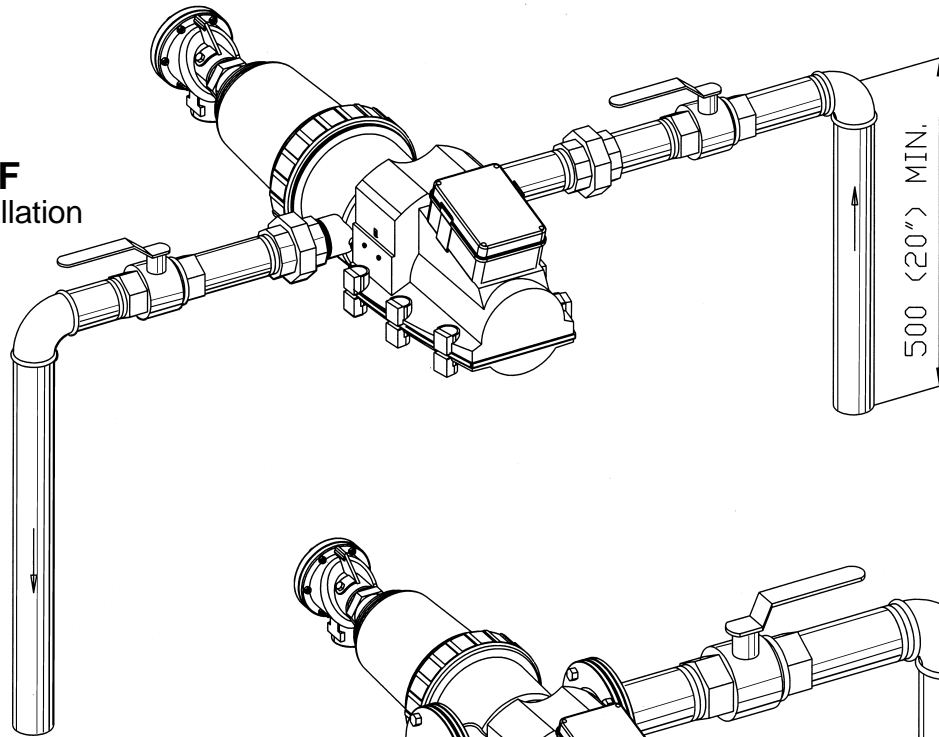
## 2" TAF

Vertical installation



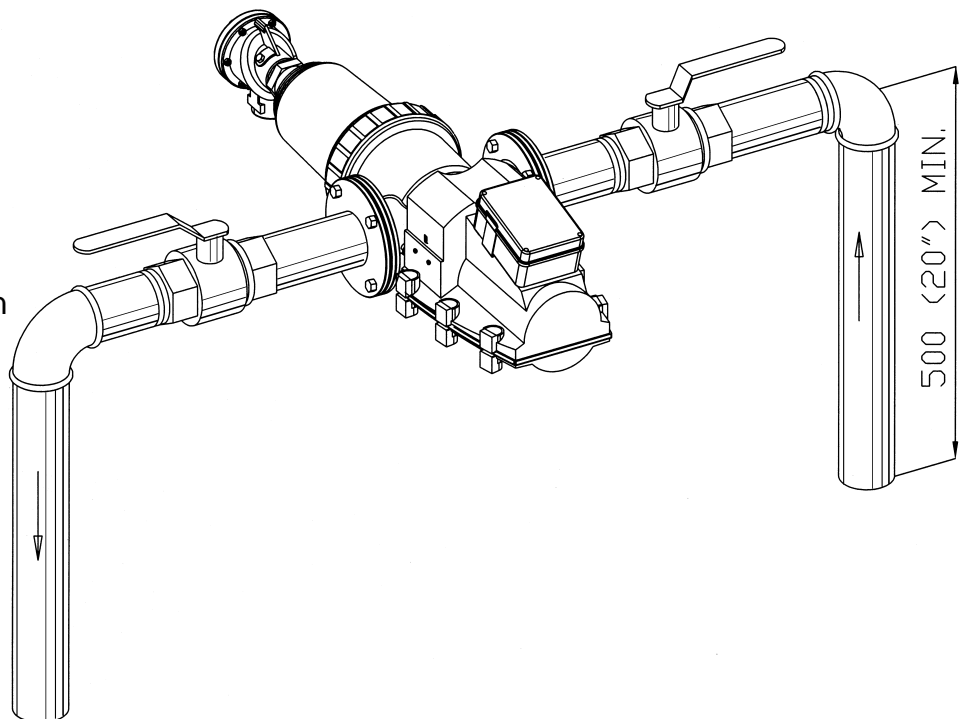
## 2"-Super TAF

Horizontal installation



## 3" TAF, Flanges

Horizontal installation



# Typical applications



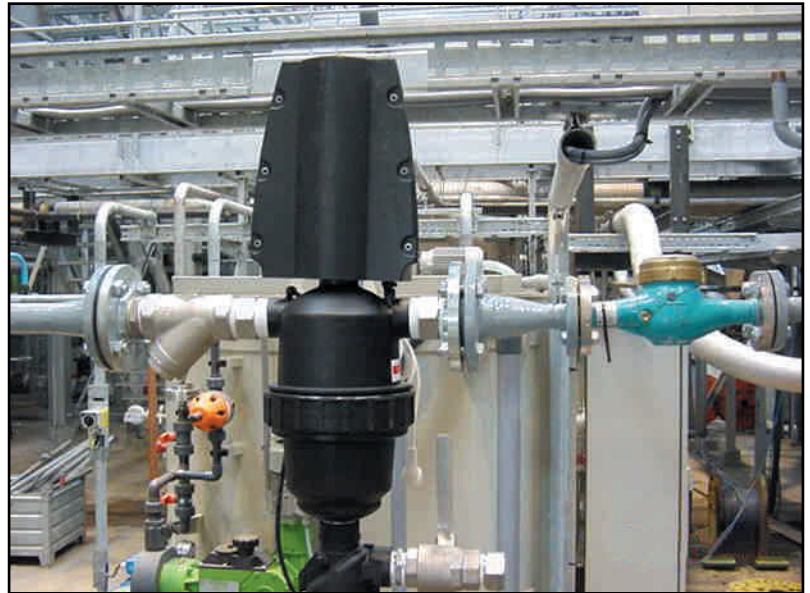
Drip irrigation of reservoir water - ISRAEL



Prefiltration of water treatment plant. Recirculating water at a green house - ISRAEL



Intake water for hot springs SPA - SOUTH AFRICA



Wastewater treatment at a Biogas power plant - HOLLAND



**amiad** filtration systems

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AMIAD products undergo constant monitoring for quality control. The manufacturer reserves the right to incorporate changes and improvements in the product without prior notice.

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