

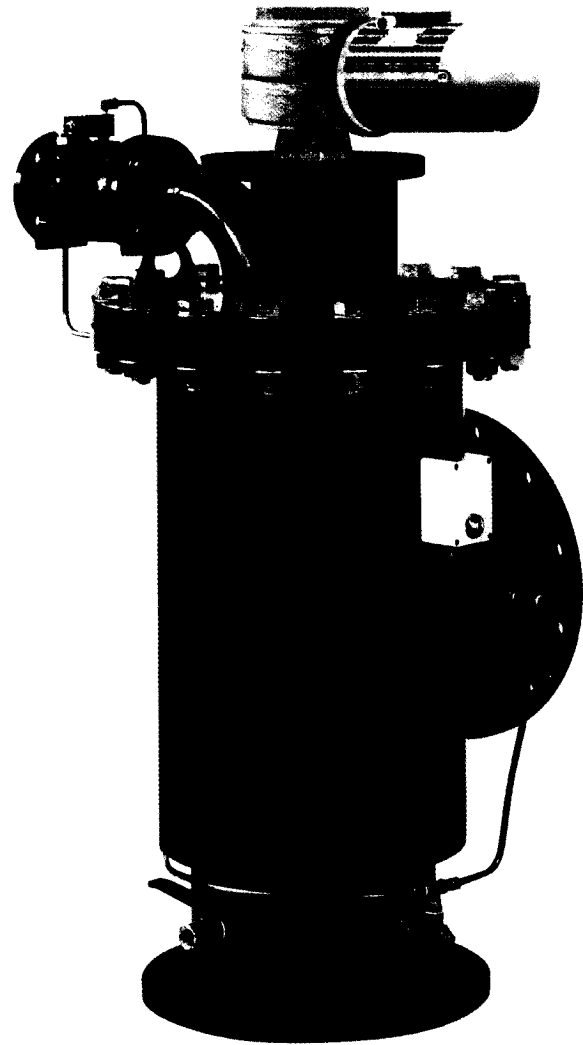
# AMIAD "ABF-L" FILTERS

**Automatic Brush Filters — 8" to 14" for flow rates up to 700 m<sup>3</sup>/hr**

- Reduce maintenance costs on downstream equipment.
- Wide range of filtration degrees:  
From 3500 to 200 micron.
- Simple cleaning method:  
Stainless Steel Brushes.
- Large filter area: 6000 cm<sup>2</sup>;  
930 in<sup>2</sup>.
- Corrosive resistant:  
Phosphate pre-treated,  
polyester steel housing.  
*Also available on request:*
  - Seawater coating
  - Stainless steel housing
- No interruption of flow during flushing.
- Minimal wasted water:  
Less than 1% of the total flow.
- Suitable for high load filtration requirements and heavy-duty conditions.

- Applications:
  - Cooling towers
  - Steel mills
  - Paper mills
  - Food processing
  - Mining
  - Irrigation

- For use with a wide range of water sources:
  - Reservoirs
  - Sewage
  - Rivers
  - Canals
  - Lakes
  - Industrial wastes



The ABF-L filter is a heavy-duty "inline" filter which has a built-in automatic self-cleaning feature. The filter is designed to achieve filtration in the range of 3500 micron to 200 micron.

The ABF-L is designed for a maximum flow rate of 700 cu. m/hr. (3100 USgpm) for a single filter unit, in standard sizes from 8" to 14".

### Filtering Process:

The water flows through the cylindrical filter element inside out, creating minimum pressure loss. During accumulating of filtration cake on the inner surface of the screen, pressure loss is created accordingly.

### Cleaning Process

When the pressure drop between the inlet and the outlet of the filter reaches 0.5 bar (7 psi), cleaning of the filtration cylinder is operated automatically. This operation consists of opening an exhaust valve located on the housing lid and starting the electric motor which revolves two stainless steel brushes on the inside of the filtration cylinder.

The particles trapped on the cylinder are dislodged by the revolving brushes and flushed out through the open exhaust valve.

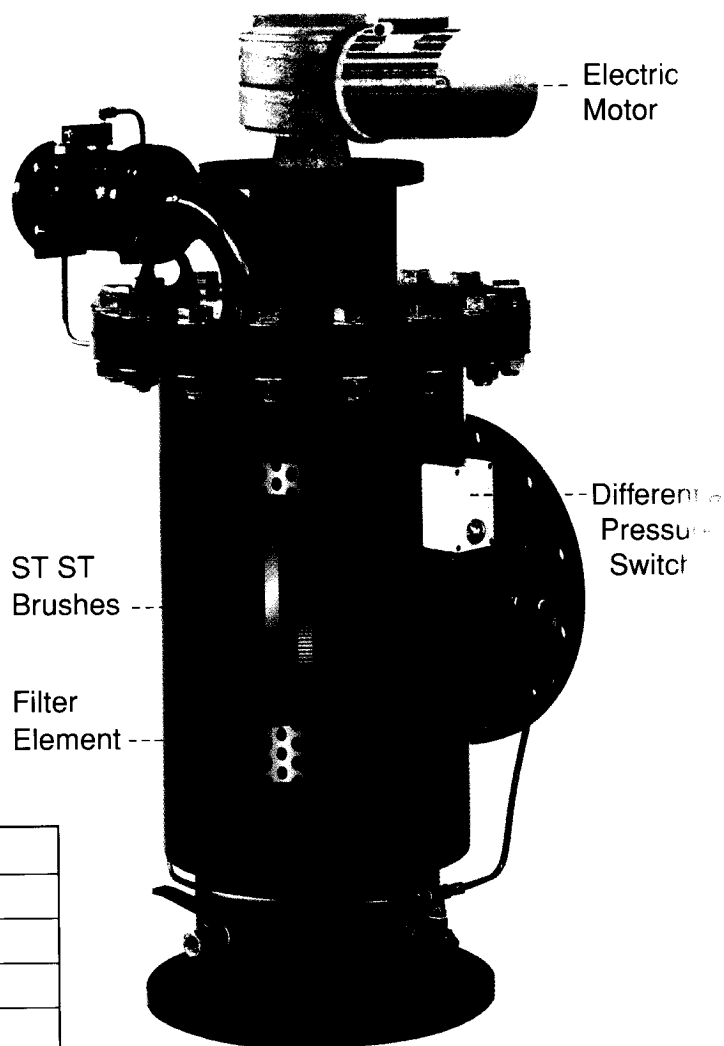
The cleaning operation duration is 15 seconds. The service flow of the filtered water is continuous during the cleaning cycle.

A colored display on the Pressostat shows the relative degree of the filter cake buildup.

### Control System:

The differential pressure switch transmits an electric signal to the electric control board when the pressure differential across the screen reaches the pre-set value. The control board activates the motor and opens the exhaust valve.

If, due to some fault, the pressure drop over the filter is not eliminated by the cleaning, the interval between successive cleaning operations is limited by the control board to a minimum of five minutes.



### Control Board Features

Power indicator lamp	Types A & B
Manual test switch	Types A & B
PD fault relay	Type B only
Motor fault relay	Type B only
Flush cycle selector	Pressure differential and/or adjustable timer, or continuous flush
Degree of protection	[NEMA 4 (IP 55)]
Input voltage	220/440V AC, 3 Ph, 60 Hz (110/220V AC, 1 Ph, 60 Hz available)
Transformer output voltage	24V AC (24V DC upon request)
Dimensions	9.75"H x 13.75"W x 7"D
Optional UL and CUL available	Additional Cost

# Technical Specifications

Maximum flow rate	700 cu. m/hr. = 3100 USgpm (Consult manufacturer for optimum flow according to filtration degree and water quality)
Filter area	6000 sq. cm = 930 sq. in
Inlet/outlet diameter	200mm = 8", 250mm = 10", 300mm = 12", 350mm = 14"
Maximum working temperature	70°C = 160°F
Gross weight	8": 213 kg = 470 lb      10": 228 kg = 503 lb 12": 237 kg = 523 lb      14": 260 kg = 573 lb
Filter screen	Stainless Steel 316. 3500 – 200 micron
Type of screen	Perforated Stainless Steel 3500 – 800 micron or Wedgewire 800 – 200 micron
Minimum working pressure	1 bar/ 15 psi
Maximum working pressure	10 bar/ 150 psi (or 16 bar/ 240 upon special request)
Flushing valve*	Standard: 50mm = 2" or 80mm = 3" if pressure lower than 2.5 bar (35 psi)
Flushing time	15 seconds
Flushing water per cycle	220 liter at 4 bar = 53 gallon at 60 psi
Minimum flow for flushing	50 cu. m/hr at 1 bar = 220 USgpm

\* Flush line minimum 3", maximum length 50 ft. without consulting factory.

## Power Consumption

Electric motor	1/2 HP 21 Output RPM			
	Voltage Rates		Current consumption	
Standard operation	380V	50Hz	3 phase	1.5 amp
	440V	60Hz	3 phase	1.5 amp
Upon request	575V	60Hz	3 phase	1.5 amp
	220V	60Hz	3 phase	2.5 amp
	220V	50Hz	1 phase	4.0 amp
	12V	DC		28.0 amp
Control voltage	24V AC (12V DC upon request)			

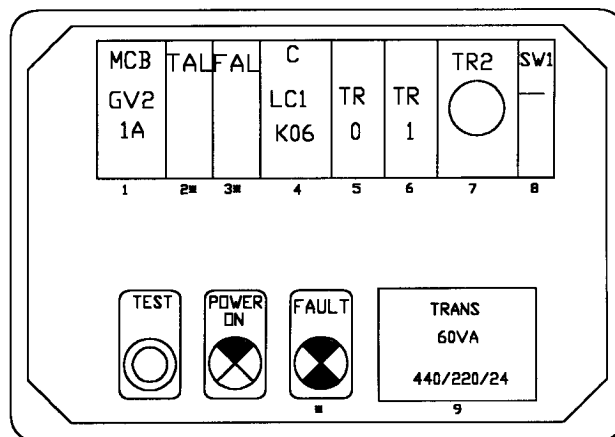
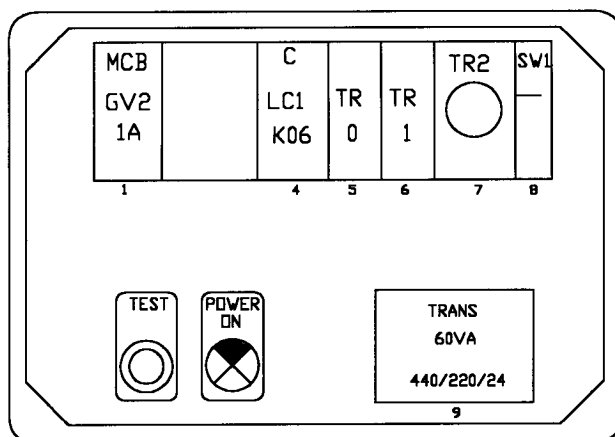
## Construction Materials

Filter housing and lid	Epoxy-coated Carbon Steel 37-2 (Stainless Steel and Rubber Coating available on request)
Screen	Stainless Steel 316
Cleaning mechanism	Stainless Steel 316, PVC, Delrin
Flushing valves	Epoxy-coated, Cast Iron
Seals	Synthetic and Natural Rubber, Teflon
Control system	Brass, Copper, Delrin, Stainless Steel

## Type A

## Control Panels

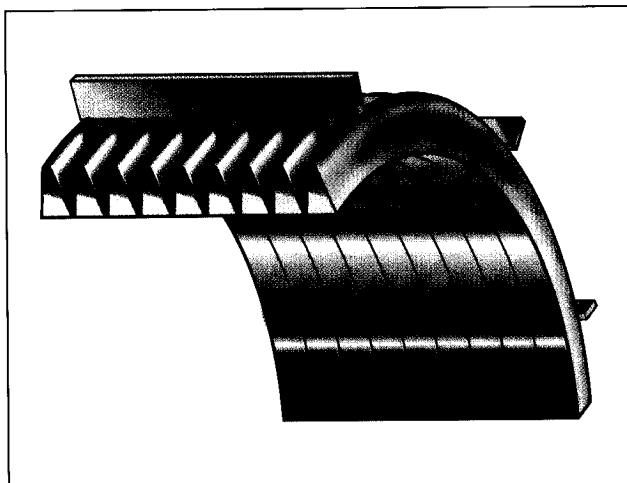
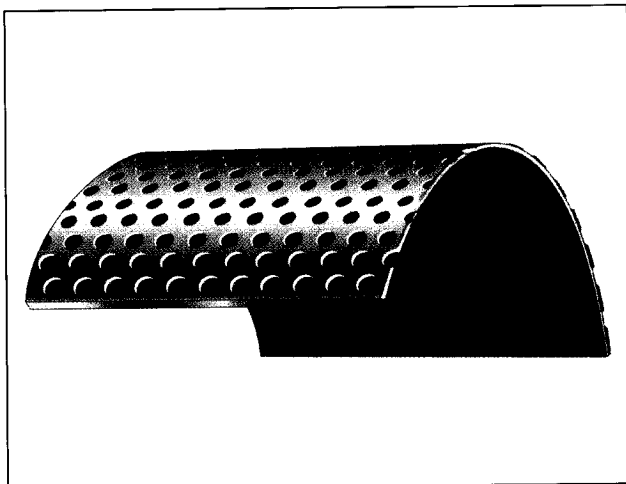
## Type B



1 = Circuit Breaker    \*2 = PD Fault Relay    \*3 = Motor Fault Relay    4 = Contactor    5 = PD – Delay Time  
6 = Flushing Duration Time    7 = Flushing Interval Time    8 = Flushing Time –on/off    9 = Control Voltage Xfmr

\*Type B panel only

# Standard Filtration Degrees



**Perforated Stainless Steel Screen**

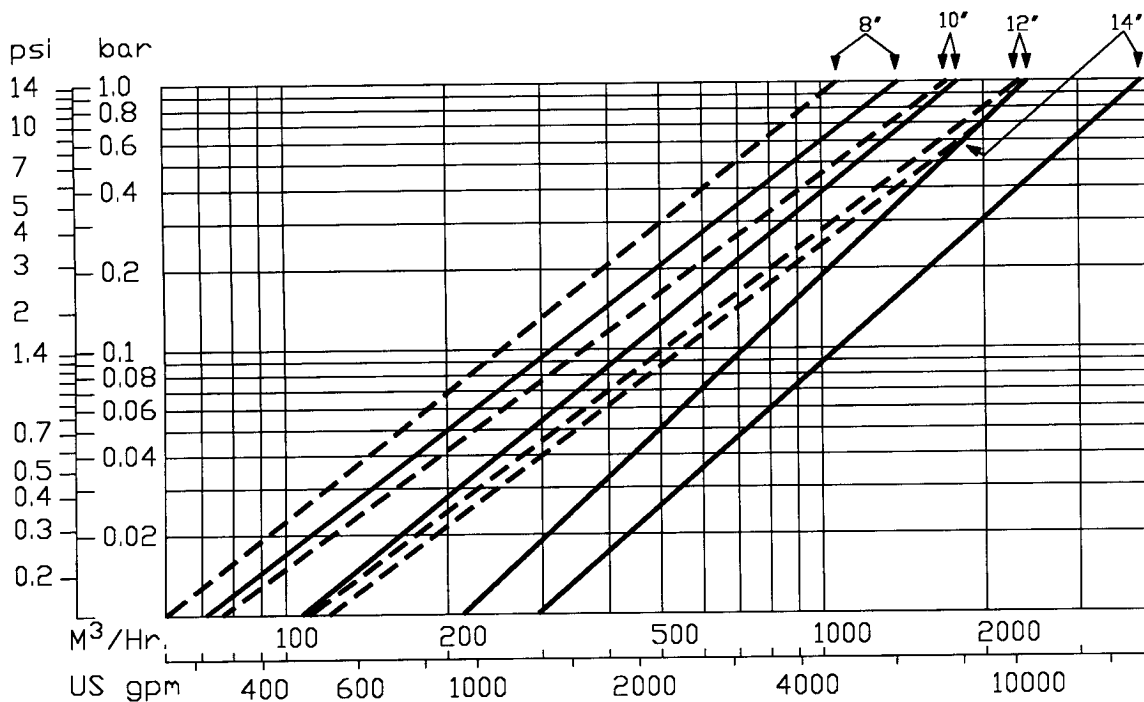
micron	3500	2500	1500	800
mm	3.5	2.5	1.5	0.8
mesh	4	6	10	20

**Wedgewire Screen**

micron	800	500	300	200
mm	0.8	0.5	0.3	0.2
mesh	20	30	50	80

For special applications, also available 130 micron.

## Pressure Loss Graph



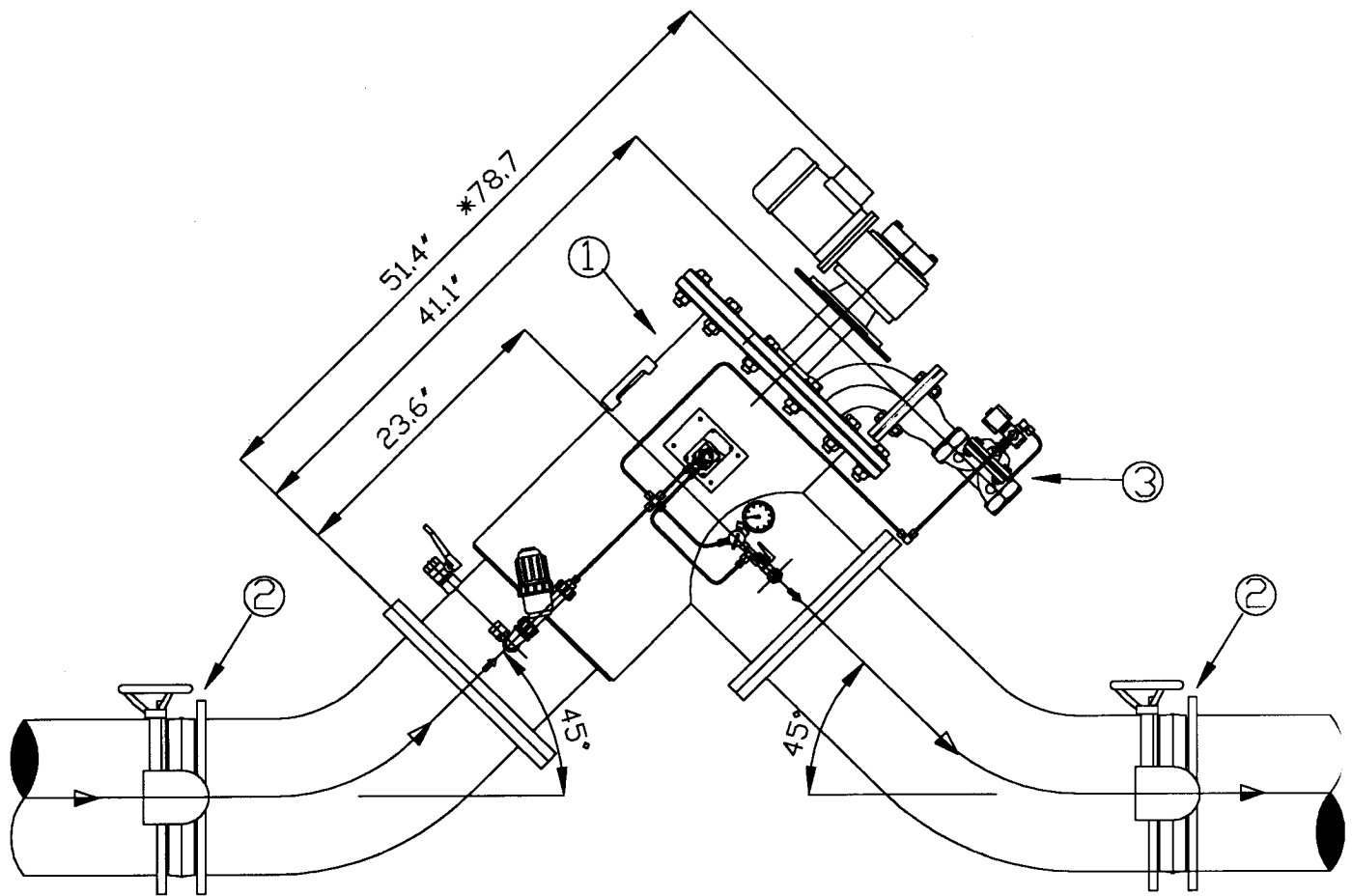
Measured with:

(2.5mm —————)

Perforated St. St. screen

(0.2mm - - - - -)

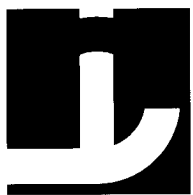
Wedgewire screen



## ABF-L 45° without bypass configuration:

1. ABF-L Filter
2. Inlet/Outlet valve
3. 3" Exhaust valve

\* Approximate height required for maintenance



**amiad** filtration systems



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



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