

AMIAD "ABF-L" FILTER SERIES

8" - 14" Automatic Brush Filters for flow rates up to 1000 m³/h (4400 USgpm)

Two models available: ABF-6,000 and ABF-10,000

- Reduce maintenance costs on down stream equipment.
- Wide range of filtration degrees: From 3500 to 200 micron.
- Simple cleaning method: Stainless steel brushes.
- Large filter area: 6000 cm² (930 in²) and 10000 cm² (1550 in²)
- No interruption of downstream flow during flushing.
- Corrosive resistant: Phosphate pretreated, polyester steel housing. Also available on request: Various coating options, rubber lining or stainless steel housing.
- Minimal wasted water: Less than 1% of the total flow.
- Suitable for high load of suspended solids and heavy duty conditions.
- Applications: Water supply systems, cooling water, waste water, process water.

in: Steel industries, pulp and paper, chemical industries, plastic industries, mining, irrigation, etc.



How do the ABF-L filters work ?

The ABF-L are heavy duty filters, which have built-in automatic self-cleaning features to maintain and clean the filter screen during operation. The filters are designed to achieve filtration from 3500 to 200 micron. The ABF-L filters are available with inlet and outlet ranging from 200 to 350 mm (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 differential between the inlet and the outlet of the filter reaches a preset value, 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 turns 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.

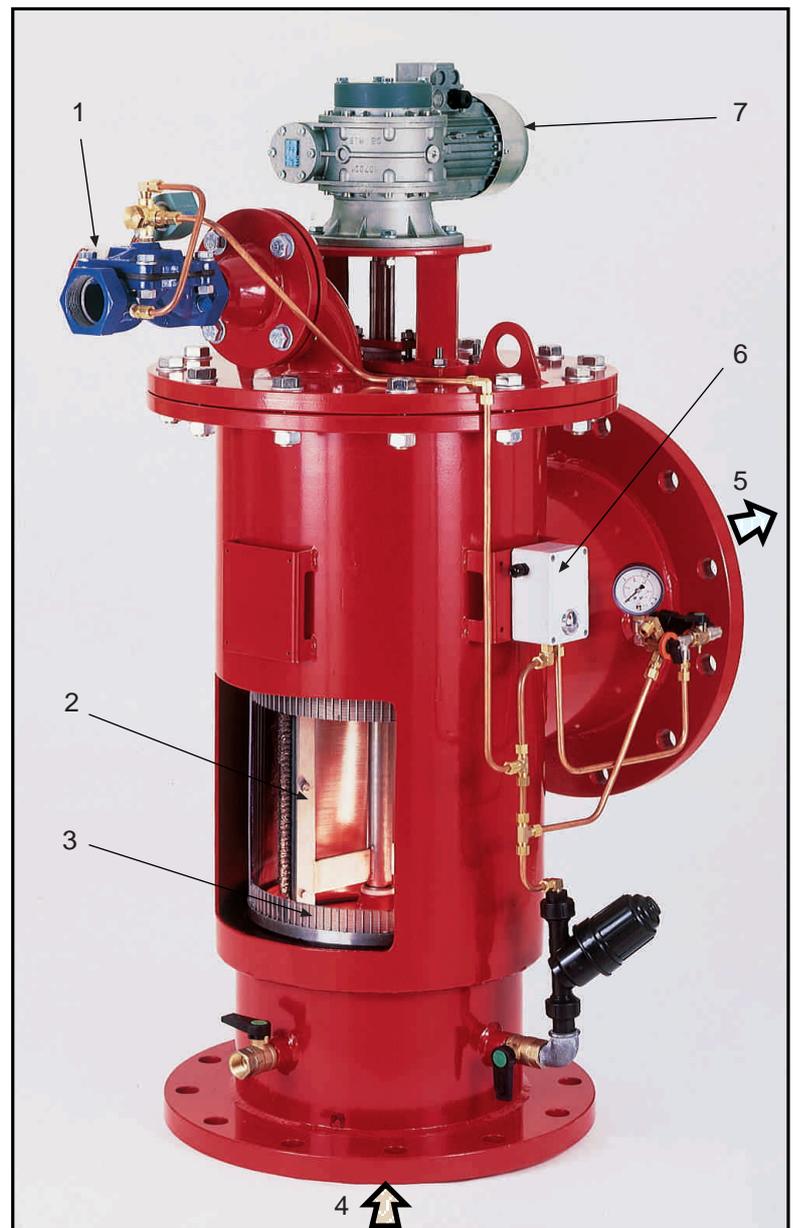
The cleaning operation duration is 15-30 seconds. The service flow of the filtered water is continuous during the cleaning cycle.

Control system:

The ABF-L filter is equipped with a pressure differential switch that transmits an electric signal to the control board, which initiates the flushing cycle. A solenoid operated the exhaust valve by means of a hydraulic command or compressed air.

Features:

Flushing according to pressure differential and/or according to time. An alarm or an alternative reaction in malfunction mode (open a bypass, shut-off a pump, operate an alarm signal in control room, etc.) Can easily be integrated into existing central control systems.



1. Exhaust valve
2. St. St. brushes
3. Filter screen
4. Inlet
5. Outlet
6. Differential pressure switch
7. Electric motor

Technical specifications

General

	ABF-6,000	ABF-10,000	
Maximum flow rate	700 m ³ /h (3100 USgpm)	1000 m ³ /h (4400 USgpm)	Consult manufacturer for optimum flow according to filtration degree and water quality
Min. working pressure	2 bar (30 psi)		1 bar (15 psi) with suitable exhaust valve on request
Max. working pressure	10 bar (150 psi)		16 bar (240 psi) on request
Filter area	6000 cm ² (930 in ²)	10000 cm ² (1550 in ²)	
Inlet/Outlet diameter	200, 250, 300 & 350 mm (8", 10", 12" & 14")		
Filter housing diameter	400 mm (16")	500 mm (20")	
Max. working temp.	60°C (146°F)		
Weight	200 mm (8")	213 kg (470 lb.)	310 kg (680 lb.)
	250 mm (10")	228 kg (503 lb.)	325 kg (715 lb.)
	300 mm (12")	237 kg (523 lb.)	350 kg (770 lb.)
	350 mm (14")	260 kg (573 lb.)	380 kg (840 lb.)
Filter screen	Perforated screen 800 - 3500 micron		
	Wedgewire screen 200 - 800 micron		

Flushing data

Exhaust valve	50 mm (2")	80 mm (3")	
Flushing cycle time	15-30 seconds		
Flushing water per cycle	200 liter (53 gallon)	300 liter (80 gallon)	at 4 bar (60 psi)
Minimum flow for flushing	50 m ³ /h (220 USgpm)	70 m ³ /h (310 USgpm)	

Control and electricity

Electric motor	3/4 HP	1.0 HP	14 - 18 Output R.P.M
Rated operation voltage	3 phase, 380V 50 Hz, or 220/440V 60 Hz		Other voltages are available on request
Control voltage	24V AC		24V DC on request

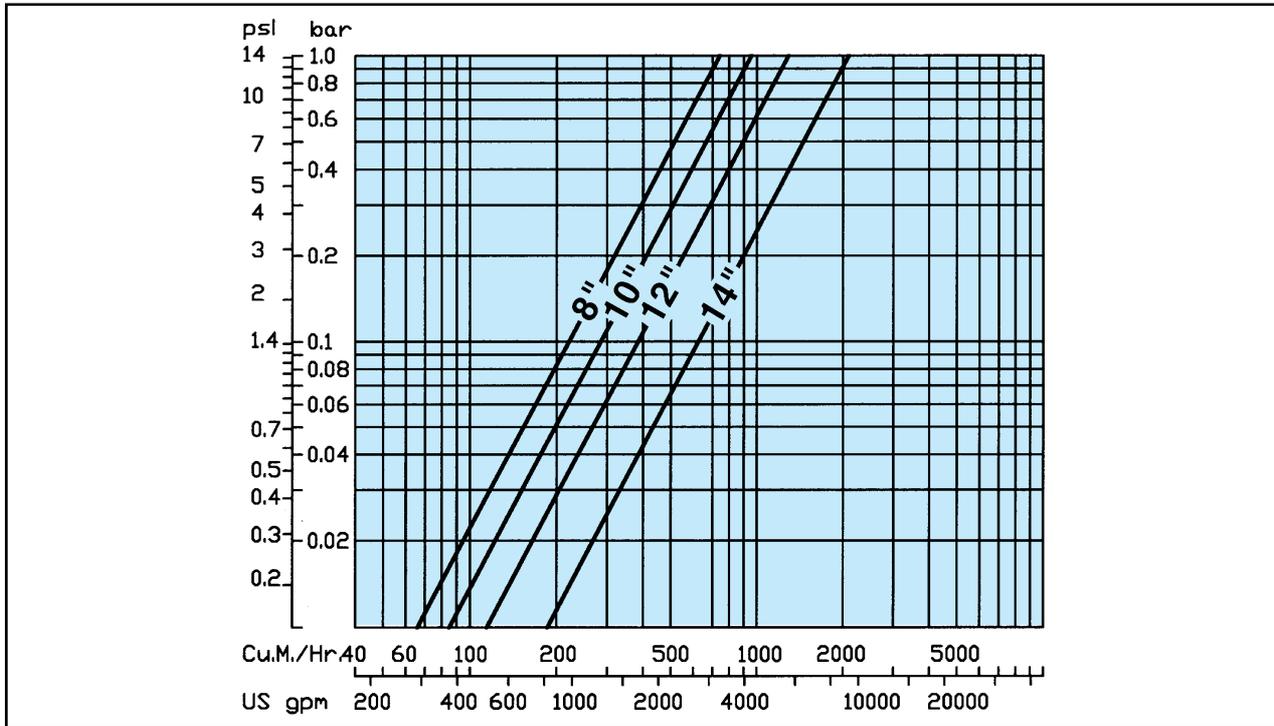
Construction materials*

Filter housing and lid	Epoxy-coated carbon Steel 37-2
Screen	Stainless steel 316L
Cleaning mechanism	Stainless steel 316, PVC and Delarin
Exhaust valve	Epoxy-coated cast iron
Seals	Nitrile rubber, Natural rubber, Teflon
Control system	Brass, Stainless Steel, nylon

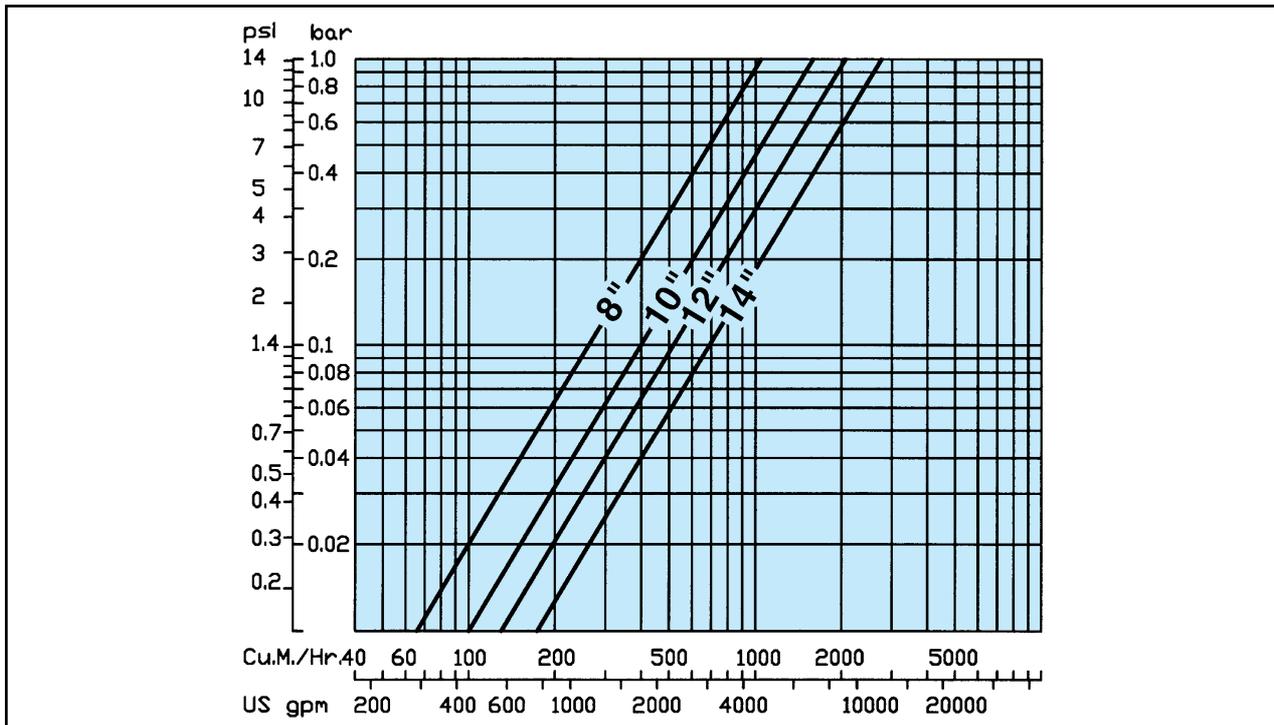
*Other construction materials are available on request. Please check with the manufacturer.

Pressure loss graphs

ABF- 6,000



ABF- 10,000

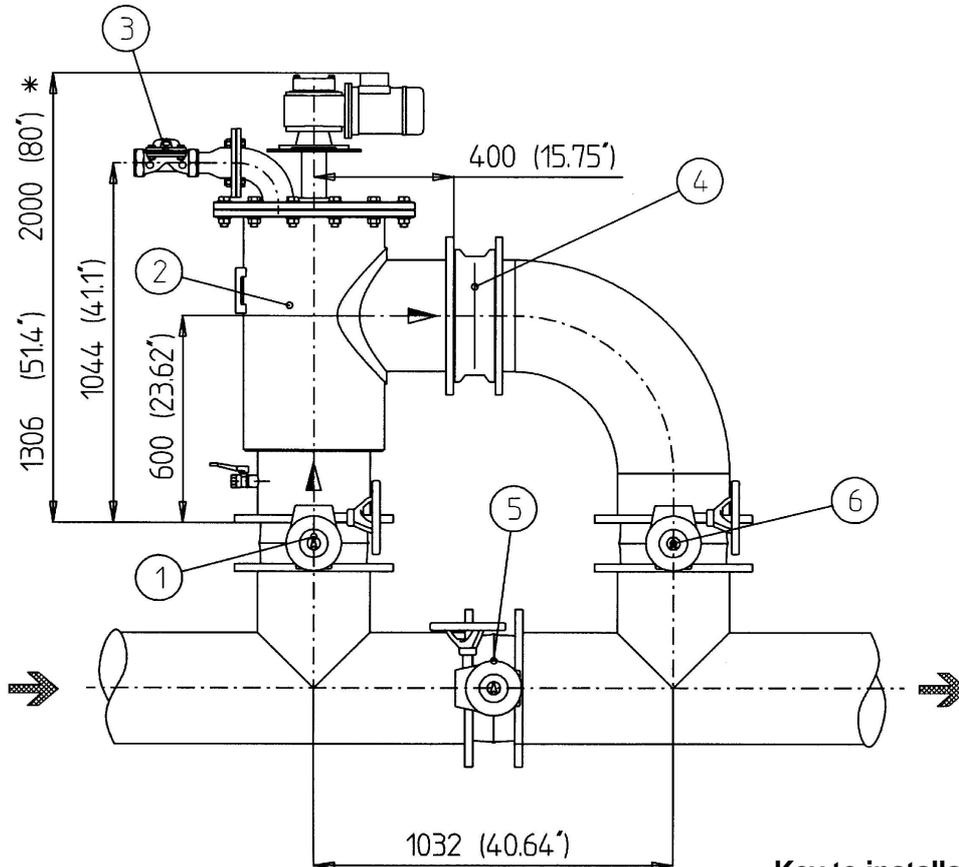


Filtration degrees available

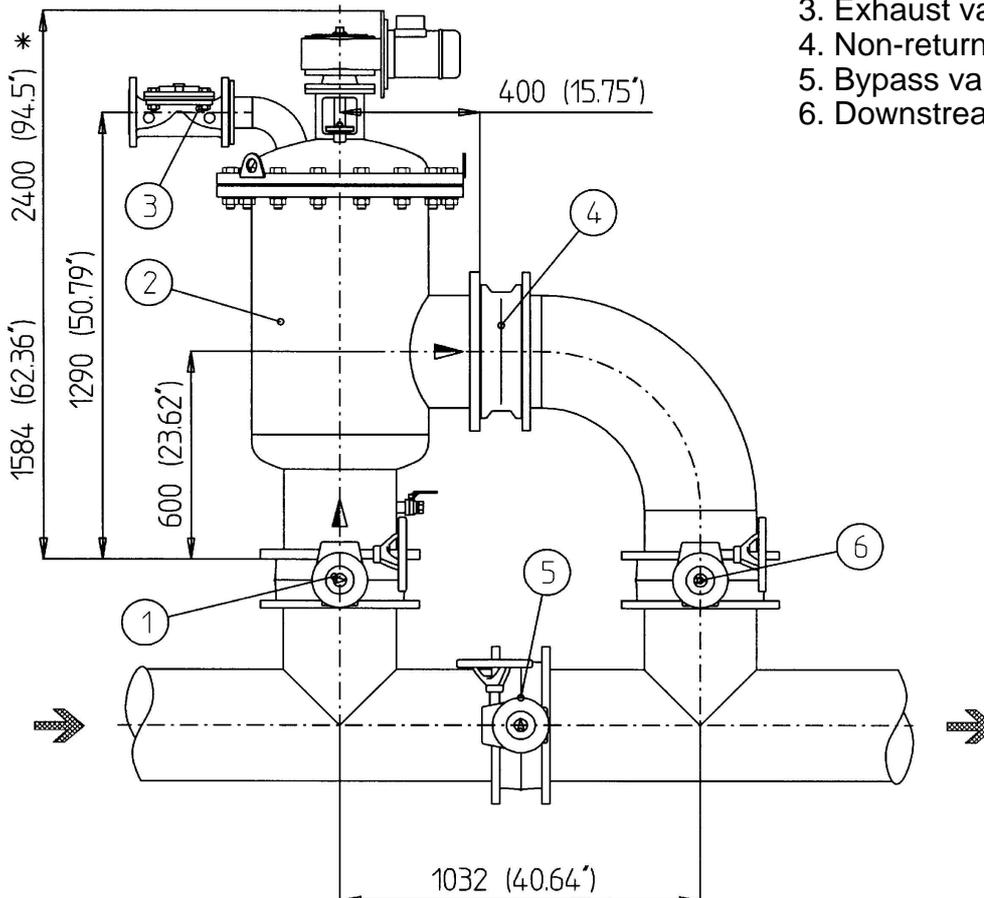
	Perforated screen				Wedgewire screen			
micron	3500	2500	1500	800	800	500	300	200
mm	3.5	2.5	1.5	0.8	0.8	0.5	0.3	0.2
mesh	4	6	10	20	20	30	50	80

Recommended installations

ABF-6,000



ABF-10,000



Key to installation drawings:

Dimensions in mm (inch)

1. Inlet butterfly valve
2. ABF-L filter
3. Exhaust valve
4. Non-return check valve
5. Bypass valve
6. Downstream valve

Typical applications



River water for plastic factory, SLOVENIA



Potato starch manufacturer, Lüchow - GERMANY



Pharmaceutical industry, Haifa Bay, ISRAEL



Cooling water in steel industry - CHINA



Canal water irrigation, Upper Galilee - ISRAEL



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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