

ABFT Series

Heavy duty, High Flow,
In-Line Automatic Filters
for High Dirt Loads



flowrates

up to 5,700 m³/h
25,100 gpm

filtration degrees

10,000-200
micron

inlet/outlet diameters

up to DN900
36"

minimum operating
pressure

1 bar
15 psi

Features:

- Heavy duty filter for high flow rates and high dirt loads of suspended solids
- Special design for removal of large particles
- Carbon steel and stainless steel manufacturing material options. Special alloys upon request
- No interruption of downstream flow during flushing
- Availability of standard vessels for fresh, corrosive, and sea water applications
- Available in ASME Section VIII Division 1 design with "U" Stamp
- Exceptionally high filtration area and flow per vessel
- ASME/Exd/Exe design, available on request
- Self lubricating bearings
- **Applications:** Membrane Protection, Municipal Water, Industrial Water, Irrigation, Oil&Gas and Seawater Intakes

Contact us by email: service@irrigationglobal.com

How Do ABFT Filters Work

General

Amiad ABFT Automatic Filters are first-rate solutions to protect the main process lines from heavy dirt loads and large particles. Amiad ABFT Series consists of heavy duty filters with an electric self-cleaning mechanism. The ABFT Series is available for flow rates from 25 m³/h / 110 gpm up to 5,700 m³/h / 25,000 gpm per vessel, with filtration elements ranging from 200-10,000 micron, with inlet/outlet flanges available up to DN900/36" diameter.

The Filtering Process

Raw water enters the inside of patented "cross screen" cylinder from the filter's inlet and flows through the screen to the filter's outlet. The gradual dirt building up on the inner screen surface causes a filter cake to develop with a corresponding increase in the pressure differential across the screen. A pressure differential switch senses the pressure differential when it reaches the preset value or after a preset time has elapsed, and the cleaning process begins.

The Self-Cleaning Process

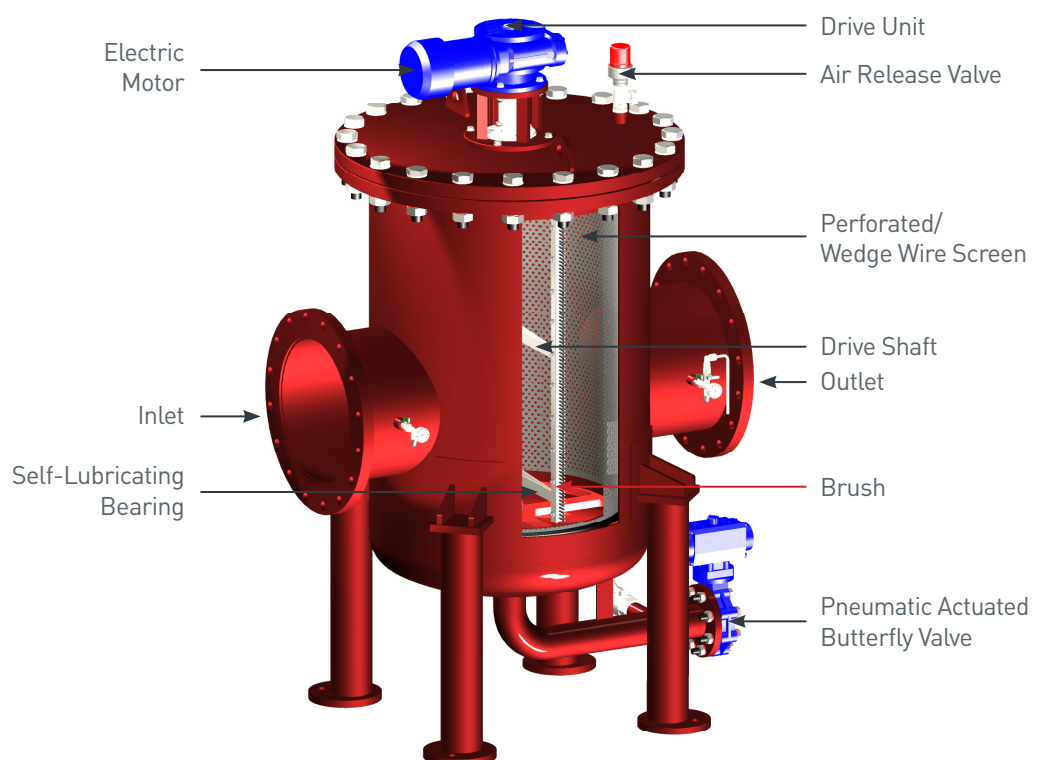
Cleaning of the filter is carried out by a brush system. The exhaust valve opens and the drive unit starts to rotate the stainless steel/nylon brushes, which sweep the inner surface of the cylindrical screen. The particles trapped on the screen are dislodged by the brushes and flushed out the exhaust valve. During the self-cleaning process, filtered water continues to flow.

The Control System

The control system operates with a switch that senses the pressure differential across the screen and sends a signal to the control board when it reaches a pre-defined value (usually 0.5 bar/7 psi), or when the predefined time elapsed; then, the control board initiates the self-cleaning process.

The self-cleaning cycle is initiated as a result of any of the following:

- Receiving a signal from the pressure differential switch
- Time interval parameter set at control board
- Manual start



ABFT 3.1K /4.5K /7.25K /12K /16K

Technical Specifications

Filter Type	ABFT 3.1K	ABFT 4.5K	ABFT 7.25K	ABFT 12K	ABFT 16K
General Data					
Maximum flow rate*	80 m ³ /h 352 gpm	160 m ³ /h 704 gpm	440 m ³ /h 1,937 gpm	800 m ³ /h 3,522 gpm	1,700 m ³ /h 7,485 gpm
Inlet/outlet diameter**	DN80, DN100 3", 4"	DN125, DN150 5", 6"	DN200, DN250 8", 10"	DN300, DN350 12", 14"	DN400, DN450 16", 18"
Filter area***	3,100 cm ² 481 in ²	4,500 cm ² 698 in ²	7,250 cm ² 1,124 in ²	12,000 cm ² 1,860 in ²	16,000 cm ² 2,480 in ²
Design Pressure:	10 bar/150 psi 16 bar/240psi Upon Request				
Minimum working pressure	1.0 bar/15 psi				
Maximum allowed DP	3.5 bar/50 psi				
Weight [empty]	185 kg 408 lb	210 kg 463 lb	350 kg 772 lb	580 kg 1,279 lb	910 kg 2,006 lb

* Consult Amiad for optimum flow depending on filtration degree & water quality.

** Flange standards as per request.

*** Perforated or wedge-wire, depends on Filtration Degree.

Flushing Data					
Flush valve	DN40 1.5"		DN50 2"	DN65 2.5"	DN80 3"
Flush flow:	15 m ³ /h 66 gpm		20 m ³ /h 88 gpm	30 m ³ /hr 132 gpm	50 m ³ /h 220 gpm
Flush time	15 sec			25 sec	
Flush volume	63 liter 17 gallon		83 liter 22 gallon	208 liter 55 gallon	347 liter 92 gallon

Control and electricity				
Electric motor*	0.37 kW		0.55 kW	0.75 kW
Control voltage*	24VAC			
Rated operation voltage	230-480 VAC, 3 phase 50/60 HZ			

* Other options upon request

Construction Materials	
Filter housing & lid	Epoxy Coated Carbon Steel
Screen	St.St. 316L (Super Duplex Optional)
Cleaning mechanism, Brush frames and brushes	St.St. 316, PVC, Nylon
Exhaust valve	Epoxy coated cast iron, natural rubber or EPDM
Seals	Synthetic rubber, NBR

* Other construction materials & coatings for corrosive use, are available upon request.

Standard Filtration Degrees:

316 or Super Duplex Stainless Steel											
Perforated Filtration Element								Wedge-Wire Filtration Element			
micron	5,000	3,500	3,000	2,500	2,000	1,500	1,000	800	500	300	200
mm	5.0	3.5	3.0	2.5	2.0	1.5	1.0	0.8	0.5	0.3	0.2

Ask a proposal: Heavy duty, High Flow, In-Line Automatic Filters for High Dirt Loads

ABFT 22K /30K /42K /50K /60K

Technical Specifications

Filter Type	ABFT 22K	ABFT 30K	ABFT 42K	ABFT 50K	ABFT 60K
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General Data					
Maximum flow rate*	2,000 m ³ /h 8,800 gpm	2,600 m ³ /h 11,500 gpm	3,700 m ³ /h 16,300 gpm	4,500 m ³ /h 19,800 gpm	5,700 m ³ /h 25,100 gpm
Inlet/outlet diameter**	DN500 20"	DN600 24"	DN700 28"	DN800 32"	DN900 36"
Filter area***	22,000 cm ² 3,410 in ²	30,000 cm ² 4,650 in ²	42,000 cm ² 6,510 in ²	50,000 cm ² 7,750 in ²	60,000 cm ² 9,300 in ²
Design Pressure:	10 bar/150 psi 16 bar/240 psi Upon Request				
Minimum working pressure	1.0 bar/15 psi				
Maximum allowed DP	3.5 bar/50 psi				
Weight [empty]	1,680 kg 3,700 lb	1,900 kg 4,200 lb	2,980 kg 6,570 lb	3,250 kg 7,165 lb	3,600 kg 7,940 lb

* Consult Amiad for optimum flow depending on filtration degree & water quality.

** Flange standards as per request.

*** Perforated or wedge-wire, depends on Filtration Degree.

Flushing Data		
Flush valve	DN100 4"	DN150 6"
Flush flow:	70 m ³ /h 308 gpm	140 m ³ /h 616 gpm
Flush time	45 sec	
Flush volume	875 liter 231 gallon	1,750 liter 462 gallon

Control and electricity		
Electric motor	1.5 kW	2.2 kW
Control voltage	24VAC	
Rated operation voltage	230-480 VAC, 3 phase 50/60 HZ	

* Other voltages upon request

Construction Materials	
Filter housing & lid	Epoxy Coated Carbon Steel
Screen	St.St. 316L (Super Duplex Optional)
Cleaning mechanism, Brush frames and brushes	St.St. 316, PVC, Nylon
Exhaust valve	Epoxy coated cast iron, natural rubber or EPDM
Seals	Synthetic rubber, NBR

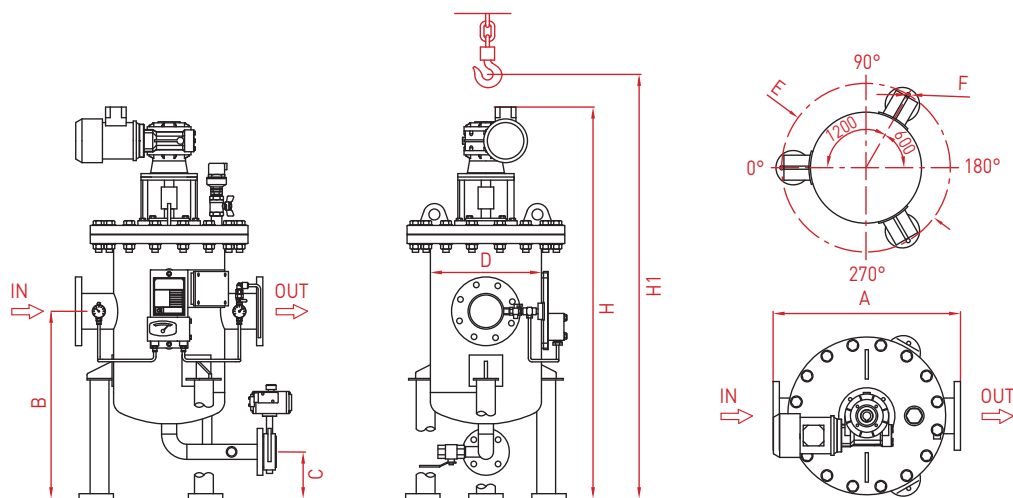
* Other construction materials & coatings for corrosive use, are available upon request.

Standard Filtration Degrees:

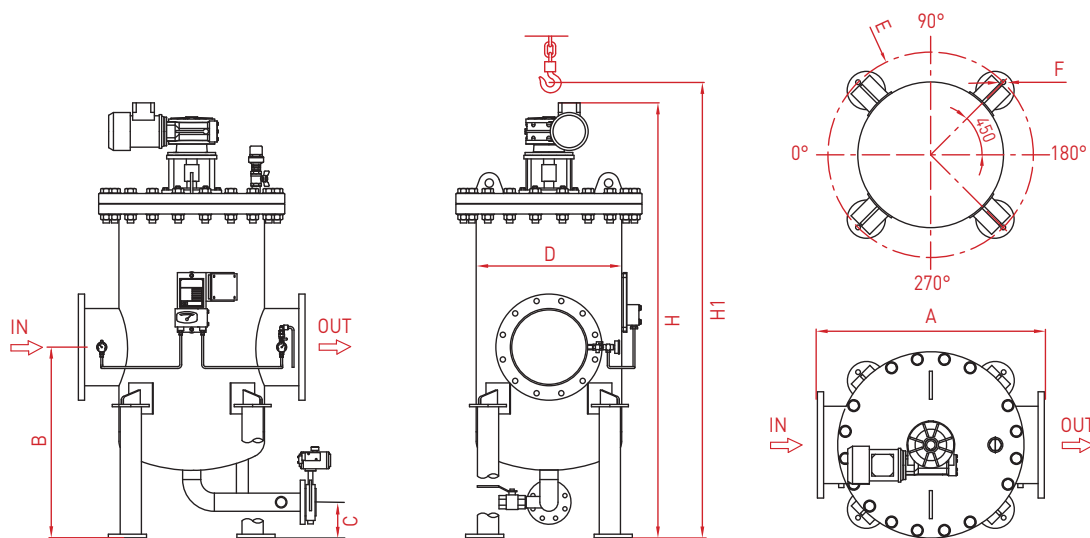
316 or Super Duplex Stainless Steel											
Perforated Filtration Element								Wedge-Wire Filtration Element			
micron	5,000	3,500	3,000	2,500	2,000	1,500	1,000	800	500	300	200
mm	5.0	3.5	3.0	2.5	2.0	1.5	1.0	0.8	0.5	0.3	0.2

More info: Heavy duty, High Flow, In-Line Automatic Filters for High Dirt Loads

ABFT 3.1K /4.5K /7.25K (DRG 1)



ABFT 12K /16K /22K /30K /42K /50K /60K (DRG 2)



	ABFT 3.1K	ABFT 4.5K	ABFT 7.25K	ABFT 12K	ABFT 16K	ABFT 22K	ABFT 30K	ABFT 42K	ABFT 50K	ABFT 60K
A	600 mm 23.6"	650 mm 25.6"	800 mm 31.5"	950 mm 37.4"	1,200 mm 47.2"	1,500 mm 59.1"	1,600 mm 63.0"	2,000 mm 78.7"	2,000 mm 78.7"	2,100 mm 82.7"
B	600 mm 23.6"	660 mm 26"	730 mm 28.7"	800 mm 31.5"	900 mm 35.4"	1,100 mm 43.3"	1,230 mm 46.4"	1,430 mm 56.3"	1,430 mm 56.3"	1,800 mm 70.9"
C	150 mm 5.9"	150 mm 5.9"	150 mm 5.9"	150 mm 5.9"	150 mm 5.9"	200 mm 7.9"	200 mm 7.9"	200 mm 7.9"	200 mm 7.9"	270 mm 10.6"
D	356 mm 14.0"	356 mm 14.0"	457 mm 18.0"	610 mm 24.0"	762 mm 30.0"	1,066 mm 42.0"	1,118 mm 44.0"	1,470 mm 57.9"	1,470 mm 57.9"	1,600 mm 63.0"
E	540 mm 21.3"	540 mm 21.3"	642 mm 25.3"	860 mm 33.9"	1,070 mm 42.1"	1,390 mm 45.7"	1,440 mm 56.7"	1,800 mm 70.9"	1,800 mm 70.9"	1,810 mm 71.3"
F	13 mm 0.5"	13 mm 0.5"	13 mm 0.5"	20 mm 0.8"	20 mm 0.8"	25 mm 1.0"	25 mm 1.0"	25 mm 1.0"	25 mm 1.0"	22 mm 0.9"
H	1,255 mm 49.4"	1,475 mm 58.1"	1,605 mm 63.2"	1,824 mm 71.8"	1,978 mm 77.9"	2,240 mm 88.2"	2,540 mm 100.0"	2,793 mm 110.0"	3,093 mm 121.8"	3,168 mm 124.7"
H1	1,455 mm 57.3"	1,825 mm 72.0"	2,055 mm 81.0"	2,374 mm 93.5"	2,678 mm 105.4"	3,190 mm 125.6"	3,490 mm 137.4"	3,743 mm 147.4"	4,293 mm 169.0"	4,368 mm 179.0"
DRG	1	1	1	2	2	2	2	2	2	2

Orders: Heavy duty, High Flow, In-Line Automatic Filters for High Dirt Loads