

"SAF" FILTER SERIES



The automatic self-cleaning filter series that is suitable for more applications than ever.



INDUSTRY



IRRIGATION



MUNICIPAL

- ▶ For flow rates up to 1760 gpm
- ▶ Uses less than 1 percent of flow water for cleaning
- ▶ Provides fine filtration degrees from 800 - 10 micron



AMIAD FILTRATION SYSTEMS

HOW THE "SAF" FILTERS WORK

The SAF is a series of sophisticated, yet easy-to-operate, automatic filters, with a self-cleaning mechanism driven by an electric motor. The SAF is designed to work with various screen types, filtration degrees from 800 to 10 micron, and is available in inlet/outlet diameters of 2"-10".

Water enters through the inlet pipe into the pre-screen from the outside-in and then travels through the main screen from the inside-out. The pre-screen is designed to protect the cleaning mechanism from large particles. The main screen removes debris larger than the micron rating of the screen from the water. The debris accumulates on the main screen and creates a "filter cake", which causes a pressure differential to develop across the fine screen.

Self-cleaning process:

The SAF filter starts the self-cleaning process when the pressure differential across the screen reaches a pre-set value or a pre-determined lapse of time. Cleaning of the filter's fine screen is carried out by the suction scanner which rotates in a spiral motion while vacuuming the filter cake from the screen and expelling it out through the exhaust valve. During the self-cleaning process, which takes 15 to 40 seconds, filtered water continues to flow downstream.

Control system:

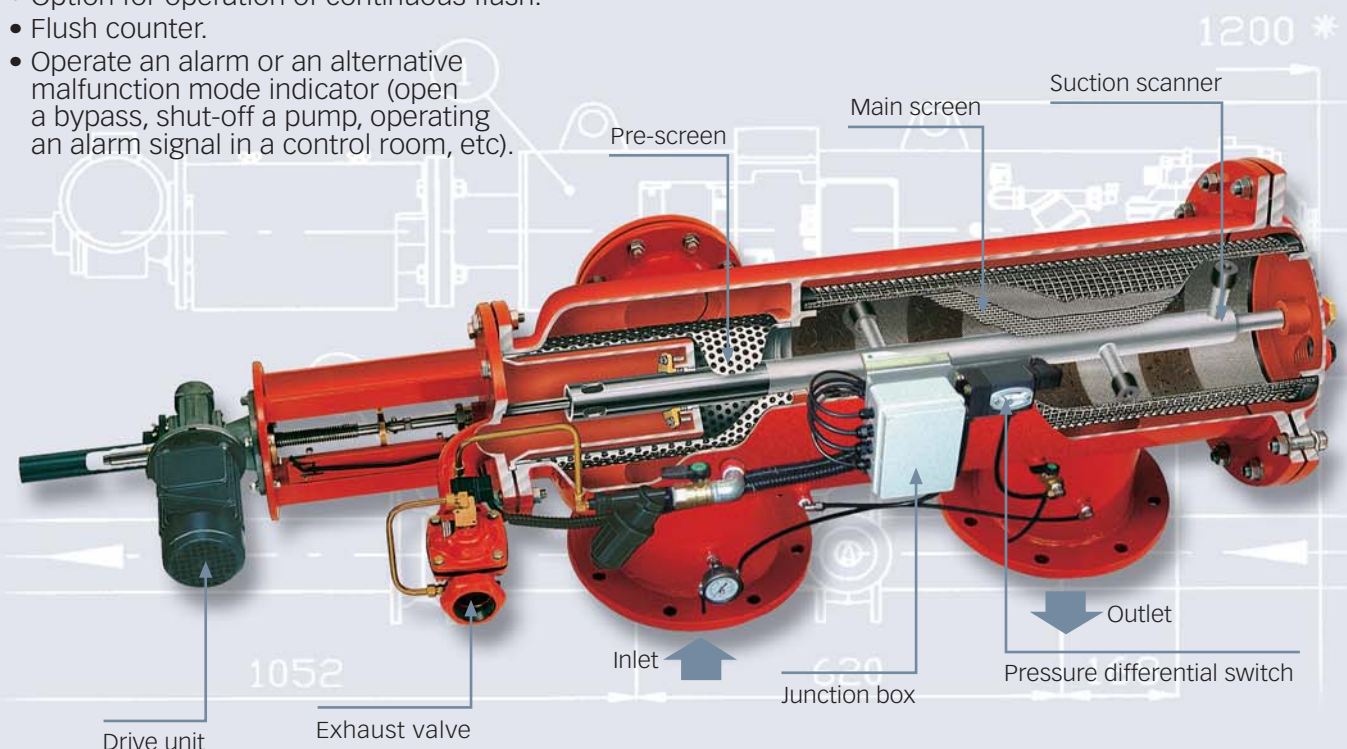
Two types of control boards are available for the SAF filters: PLC and Relay.

Features:

- Flush according to pressure differential and/or according to time.
- Option for operation of continuous flush.
- Flush counter.
- Operate an alarm or an alternative malfunction mode indicator (open a bypass, shut-off a pump, operating an alarm signal in a control room, etc).

The "SAF" advantages:

- **Filtration Element:** Using Amiad's proprietary four-layer, "floating" screen technology, the SAF screens offer a larger effective filtration area than competitive filters which improves their ability to trap and sustain suspended solids, extends the duration between flush intervals, improves back flush efficiency, and overall increase the filters' long term durability.
- **Cleaning Mechanism:** The SAF Suction Scanner cleaning mechanism offers the highest back flush velocity per square inch of any available filter on the market. This superior performance ensures the filter element will be 100 percent clean following each flush with a minimal waste of water.
- **Low Maintenance:** The SAF series streamlined automatic, self-cleaning design lowers filter operator maintenance time and cost and provides a simple-to-follow maintenance plan.
- **Customer Support:** With more than 40 years of experience in designing, manufacturing and distributing global water filtration systems, Amiad offers customers an unprecedented sales and technical knowledge base. Additionally, its network of sales and technical representatives located throughout North America, guarantees customers timely responses and personal attention.



TECHNICAL SPECIFICATIONS

General

Filter type	SAF-1500	SAF-3000	SAF-4500	SAF-6000	
Maximum flow rate [gpm]	350	660	1100	1760	Consult manufacturer for optimum flow depending on filtration degree & water quality.
Min. working pressure [psi]	30	30	30	30	Pressure requirements depend on multiple factors. Please consult manufacturer.
Max. working pressure [psi]	150	150	150	150	225 psi upon request.
Filter area [in ²]	233	465	690	930	
Inlet/Outlet diameter [inch]	2", 3", 4"	3", 4", 6"	4", 6", 8"	6", 8", 10"	Flange standards as per request.
Housing diameter [in]	10	10	10	14	
Max. working temp. [°F]	120	120	140	140	200°F upon request.
Weight (Av.) [lb]	190	245	345	550	
Volume (Av.) [gal]	9	15	21	34	

Flushing data

Exhaust valve [inch]	2"	2"	2"	2"	
Flushing cycle time [sec.]	15	20	20	25	
Flushed water per cycle [gal]	7	17	22	46	at 30 psi
Min. flow for flushing [gpm]	26	48	65	110	at 30 psi

Control and electricity

Electric motor [HP]	1/4	1/4	1/4	1/3	
Control voltage [V]	24 AC				12V or 24V DC upon request.
Rated operation voltage	3 phase, 220 / 380 / 440V 50/60Hz option 1 phase, 110/220V				12V or 24V upon request.
Current consumption [Amp.]	0.6	0.6	0.6	0.8	With 3 phase 380/440V

Construction materials*

Filter housing	Epoxy-coated Carbon steel 37-2		
Filter lid	SMC polyester	Epoxy-coated Carbon steel 37-2	
Screens	Four-layer Weave Wire stainless steel 316L		
Cleaning mechanism	Stainless steel 316L, Acetal		
Exhaust valve	Epoxy-coated cast iron, Natural rubber		
Seals	Synthetic rubber, Teflon		
Control	Aluminum, Stainless steel, PVC, Nylon		

*Amiad offers a variety of construction materials. Consult manufacturer for specifications.

Standard filtration degrees

	Weave Wire stainless steel screen									
micron	800	500	300	200	130	100	80	50	25	10
mm	0.8	0.5	0.3	0.2	0.13	0.1	0.08	0.05	0.02	0.01
mesh	20	30	50	75	120	155	200	300	450	600

SUGGESTED INSTALLATIONS

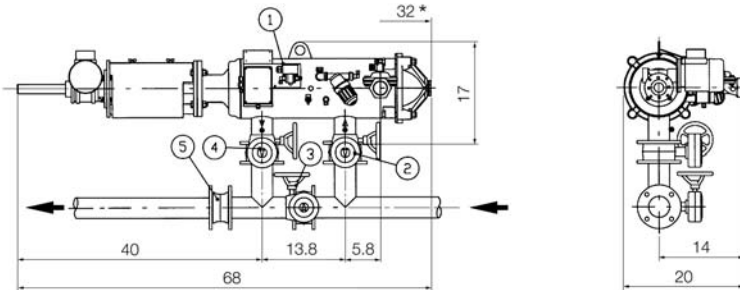
SAF-1500

Key to installation drawings:
(Dimensions in inch)

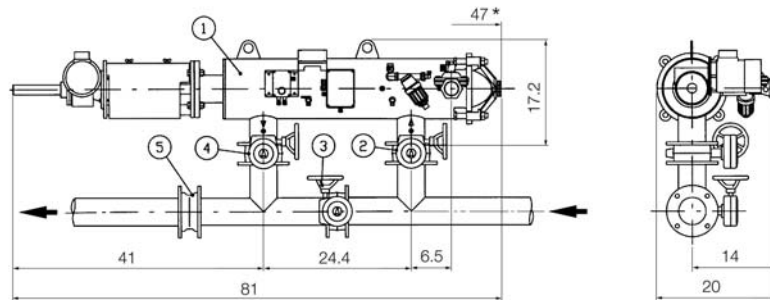
1. SAF Filter
2. Inlet butterfly valve
3. Bypass valve
4. Downstream valve
5. Non-return check valve

★ Minimum length for opening

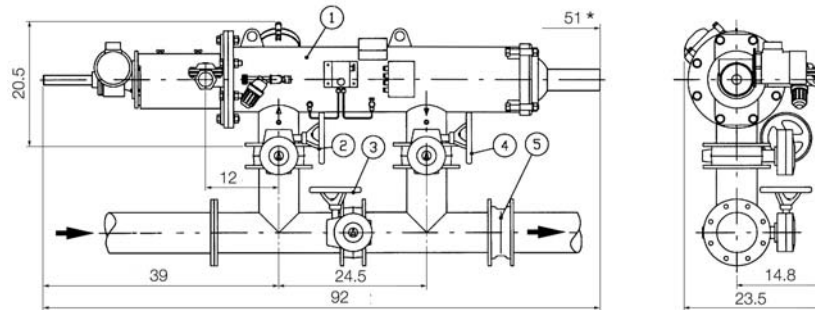
- Manifold and valves supplied separately.
- Dimensions are for reference only and may change per filter model and application. Contact manufacturer for certified drawings.



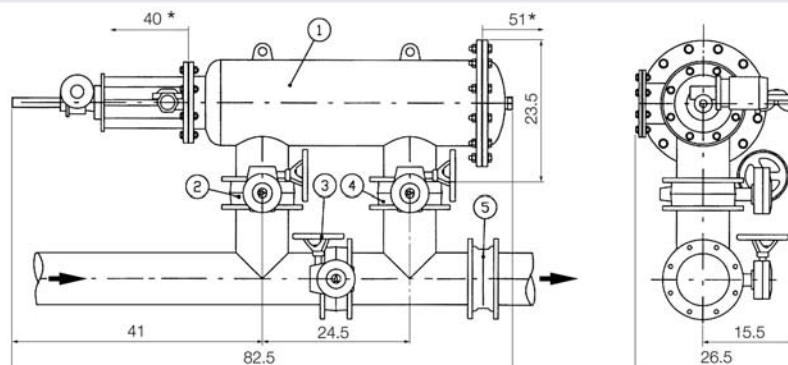
SAF-3000



SAF-4500

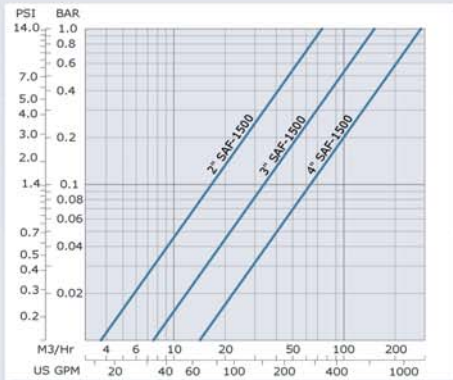


SAF-6000

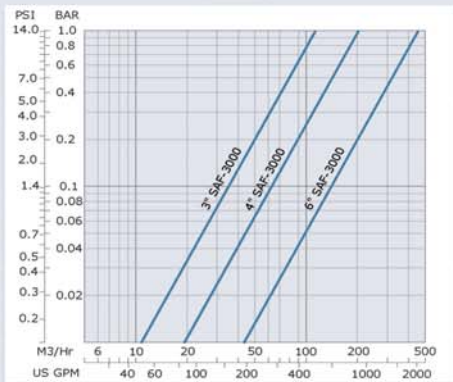


PRESSURE LOSS GRAPHS

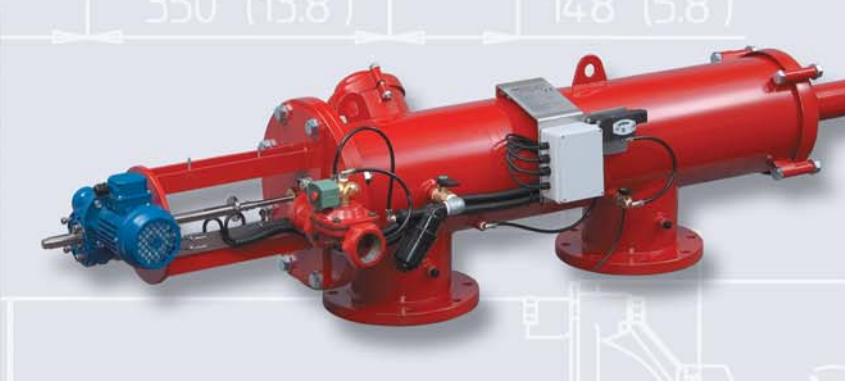
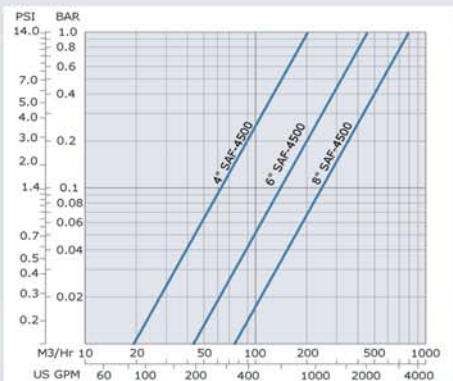
SAF-1500



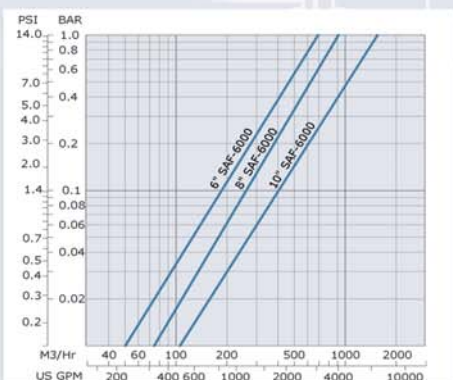
SAF-3000



SAF-4500



SAF-6000



SELECTED WORLDWIDE APPLICATIONS



▲ Drinking water supply, 1320 gpm, 200µm. City of Modesto, CA, USA



▲ Service water, 2400 gpm, 200µm. East Bay Municipal Utility District, CA, USA



▲ Drip irrigation, 2650 gpm. Tumut River Orchards, Queensland, Australia



▲ Main stream cooling water, 3000 gpm, 100µm. Plastic Profiles manuf. Troisdorf, Germany



▲ Intake water, 4400 gpm, 50µm. Hallertau, Germany



▲ Paint processing, 200 gpm, 10µm. Aircraft manuf. Seattle, USA



▲ Drip irrigation, 1500 gpm. Mondavi Vineyards, CA, USA



▲ Process water, 880 gpm, 25µm. Paper manuf. Washington, USA



▲ Pre-filtration to water treatment, 2650 gpm, 200µm. Steel manifold. France



▲ Cooling tower, 45 gpm, 25µm. LAX International Airport, CA. USA



▲ Pre-filtration to UF membranes, 2200 gpm, 130µm. Conthey, Switzerland



▲ Drip irrigation, 660 gpm. Date plantation, Kfar-Rupin, Israel



▲ Turf irrigation, 400 gpm, 100µm. WWTP Nahariah, Israel



▲ Pre-filtration for UV, 400 gpm, 25µm. Greenhouse, Holland



▲ Pre-filtration to RO, 200 gpm, 10µm. Chemical plant, Germany



In an increasingly crowded world, the need for clean water concerns everyone involved in sustaining our quality of life. Society and economy cannot exist without water; because water is life.

For more than 40 years, Amiad has helped meet this need by developing a comprehensive line of exceptionally efficient, automatic, self-cleaning filters and manual filters for use in industry, municipalities, and irrigation. Amiad provides solutions in more than 66 countries, with seven subsidiaries and sales offices. Amiad's pledge to the filtration industry is to continue providing innovative and dependable systems, quality service and reliable customer support.

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