



K-FLOW Engineering

Filtration & Separation

ABF

**Automatic
Self-cleaning
Strainer**



TYPE: ABF

FEATURES

Automatic self-cleaning

Without interruption of the filtration process.

Removes large and small particles.

Fabricated strainer in any metal.

Minimum water wasted during flushing—Less than 1% of total flow (to compare with media filter)

Connection arrangements to suit any application requirements.

Self adjusting scraper-strainer action.

Does not use backwash system or clean water for contaminant removal.

Automatic operation, self-cleaning with practically no maintenance.

Wedge wire screen internal axial design, particle that can be removed by axial flushing.

Maximum pressure drop 0.5 kg/cm² .

ASME section VIII, Div. 1, code stamped available.

TYPICAL APPLICATIONS

River and lake water intakes.

Cooling system for the bearing of hydro-turbine
Cooling tower side stream

Filtration

Cooling water to power plants and chemical processes.

Wastewater from textile mills, laundries and other contaminated effluents.

Heavy slurries from power plants.

Sea water to LNG terminals.

Water to spraying systems.

Black liquor to burners.

OPTIONS

A. 220V, 380V, 460V, 3 PH, 60 Hz.

B. Disconnect switch, door interlocked.

C. Control of other filtration system components, such as pumps, filter presses, automatic valves, associated controls, etc, all to be incorporated into a single ABF control system.

D. PLC control of the complete system as above.

E. Pneumatic interface for valve actuation or other pneumatic items included in the above.

F. Control of isolation hydraulic valves and flushing solenoid valves associated with waste collector systems attached to the self-cleaning strainer.

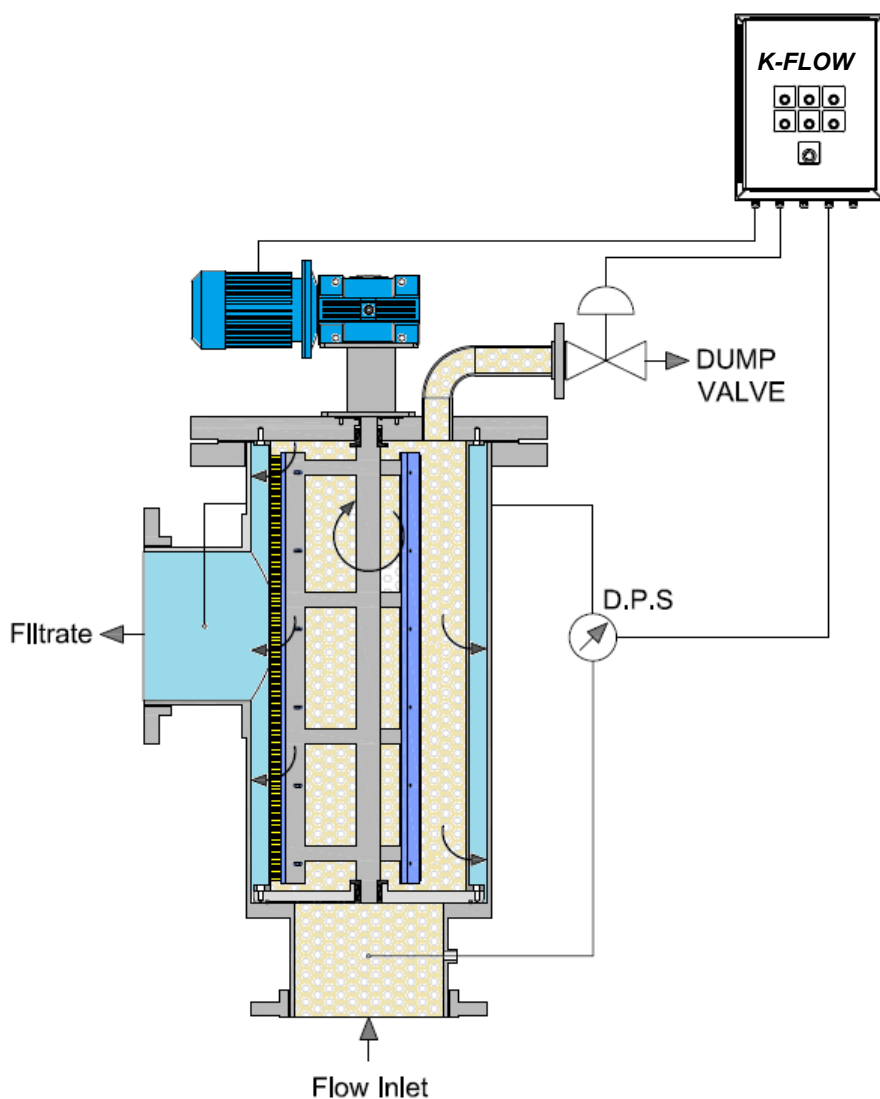
G. Control of vacuum pumps in the drain line for ABF Self-cleaning Strainers installed on the suction side of main system pumps.

MAJOR COMPONENTS OF THE SYSTEM

1. Control panel enclosure, IP 56, 67 with terminal block, indicating lights and selector switch. The panel is installed on the strainer or supplied separately for remote installation.
2. Fused circuit and magnetic starter with overload for the rotary motor.
3. Adjustable cycle timer for the scraper motor and blow down valve operation.
4. Differential pressure switch for the motor operation.
5. Back-Flushing valve, electrically or pneumatically actuated.
6. Integral audible and visual alarm circuit with contacts for remote supervision.

AUTOMATIC CONTROL SYSTEMS

The ABF Automatic Self-cleaning Strainer are supplied with a control system suitable for the application and incorporating the flexibility of field adjustments.



ABF Automatic self-cleaning scraper Strainers can remove both large and small particles from dirty or contaminated fluid flows.

The ABF design is particularly suitable for large particles because it uses dirty water for the blow down cycle. The particle size is not limited by the cleaning suction arm inlet or the size of the backwash outlet opening, common limitations of backwash-type units.

Rotating the brushes to the inside surface of the screen, dislodging foreign matter which is then flushed away with dirty liquid by automatic or periodic blow down .

There are three models of ABF Automatic Self-cleaning Strainers:

Model: ABF-Z
Side inlet and side outlet at different level.

Model : ABF- I
Side inlet and side outlet At the same level.

Model : ABF-L
Bottom inlet and side outlet .
ABF are fabricated units. Standard materials for body and cover are carbon steel, stainless steel 304 or stainless steel 316L.

Rotor types available are in one or more sections brushes, in stainless steel or Nylon which are self adjusting for efficient cleaning. Worm-type rotors are also available.

Perforated metal, mesh or wedge-wire screens are provided depending on the application.

An electric motor with an associated gear train drives the rotor shaft. A timer programs the operation of the brush motor and off the flushing valve. A differential pressure switch is standard on all units and will override the programmed operation if the pressure drop across the selected setting value. Visual and audible alarms are incorporated in the control panel of the unit.

Because of their construction, durability and flexibility, ABF Automatic Self-cleaning Strainers are a cost-effective solution to a wide range of demanding filtration applications.

TECHNICAL SPECIFICATIONS

Size (inch)	4	6	8	10	12	14	16	18	20	24
M3/H	80	150	300	400	600	900	1100	1250	2200	3300

Min, working pressure	1 bar					15 Psi		
Max. working pressure	16 bar					250 Psi		
Filter area	2800, 5500, 7500, 15000 CM2							
Connection	ANSI 150LB, JIS 10K OR PN16							
Max. working temp.	80 °C							176 °F
Filtration Rating	micron	1500	800	500	300	200	100	Stainless steel 316
	mm	1.5	0.8	0.5	0.3	0.2	0.1	
	mesh	6	20	30	50	80	150	
Type of Screen	100~150 μm							

FLUSHING DATA

Exhaust valve	50mm	2"	or 3" if pressure lower than 2.5 bar
Flushing cycle time	15 seconds	15 seconds	
Flushing water per cycle	200L	53 Gallon	at 4 bar (60 Psi)
Min, flow for flushing	50 m3/H	220 us GPM	

Electric Motor	3/4 HP/ 14 out put R.P.M.
Rated operation Voltage	3 phase / 220 / 380 / 460V, 50 /60HZ
Upon request	24V DC / 12V DC
Control voltage	24VAC (24V DC upon request)

Filter housing and Cover	Carbon steel (Epoxy Coated) stainless steel 304 , 316L , super Duplex UNS 32205
Screen	Stainless steel 316L / 317 L / Monel / Uranus 52 N , Titanium
Cleaning mechanism	Stainless steel 304 , 316 , UNS 32205L
Exhaust valve	Epoxy coated cast iron, stainless steel CF8 (304) , CF8M (316 L) , GRP
Seals	NBR, EPDM, VITON
Control system	Stainless steel 304 , 316 L , GRP

Weather proof	NEMA 1, 12 or 4
Explosion proof	NEMA CL.1, DIV.2 Gr. B,C, & D.