



HELPING YOU SOLVE ALL FILTRATION CHALLENGES



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Self-cleaning Filter

The AAL-AC Series Automatic Self-Cleaning Filter is a high-efficiency screen filtration system designed for continuous operation. Cleaning is automatically initiated based on differential pressure or preset time intervals, allowing effective backwashing without interrupting system flow.

With high filtration accuracy, thorough cleaning performance, and stable long-term operation, the AAL-AC series provides reliable protection for downstream equipment while reducing maintenance frequency and overall operating costs. It is widely applied in industrial water treatment, wastewater processes, heat exchange systems, and membrane pretreatment applications, especially under high-flow and heavily contaminated conditions.



AAL Self-cleaning Filter

Working Principle

Filtration: The fluid enters through the inlet and flows out through the fine gaps of the wedge-shaped filter element. Impurities and particles are easily trapped on the filter surface. As these particles accumulate, a pressure difference is generated across the filter.

Cleaning: When the pressure difference between the inlet and outlet reaches 1.2 kg/cm² (adjustable), the filter's backwashing system automatically activates. The operation is controlled by a differential pressure controller mounted on the unit, an electric drain valve, and a motor-driven rotating stainless steel cleaning brush. The impurities are easily removed by the brush and discharged through the drain valve. The backwashing process lasts about 60 seconds (adjustable), and continuous flow is maintained during cleaning.

Features

1. Fully Automatic Online Cleaning

An integrated electric self-cleaning system activates automatically based on differential pressure or timer control, minimizing manual intervention and downtime.

2. Compact Linear Design

The space-saving linear structure allows flexible installation and easy integration into skid-mounted units or retrofit projects.

3. High-Precision Wedge Wire Screen

Equipped with a high-strength stainless steel wedge wire screen, offering filtration accuracy from 20 to 3000 microns while maintaining excellent flow capacity.

4. Brush-Type or Scraper-Type Mechanical Cleaning Options

Depending on the media characteristics and operating conditions, the filter can be equipped with either a stainless steel brush-type or scraper-type mechanical cleaning mechanism. Both designs feature robust construction and high wear resistance, ensuring effective removal of contaminants and reliable long-term performance.

5. Continuous Flow During Cleaning

Filtration continues uninterrupted during the cleaning cycle, maintaining stable system operation without flow disruption.

6. Minimal Backwash Water Consumption

Backwash water usage is extremely low, accounting for less than 1% of the total system flow.

7. Designed for High Flow and Heavy Contamination

Engineered to handle large flow rates and high levels of suspended solids, making it suitable for demanding industrial applications.

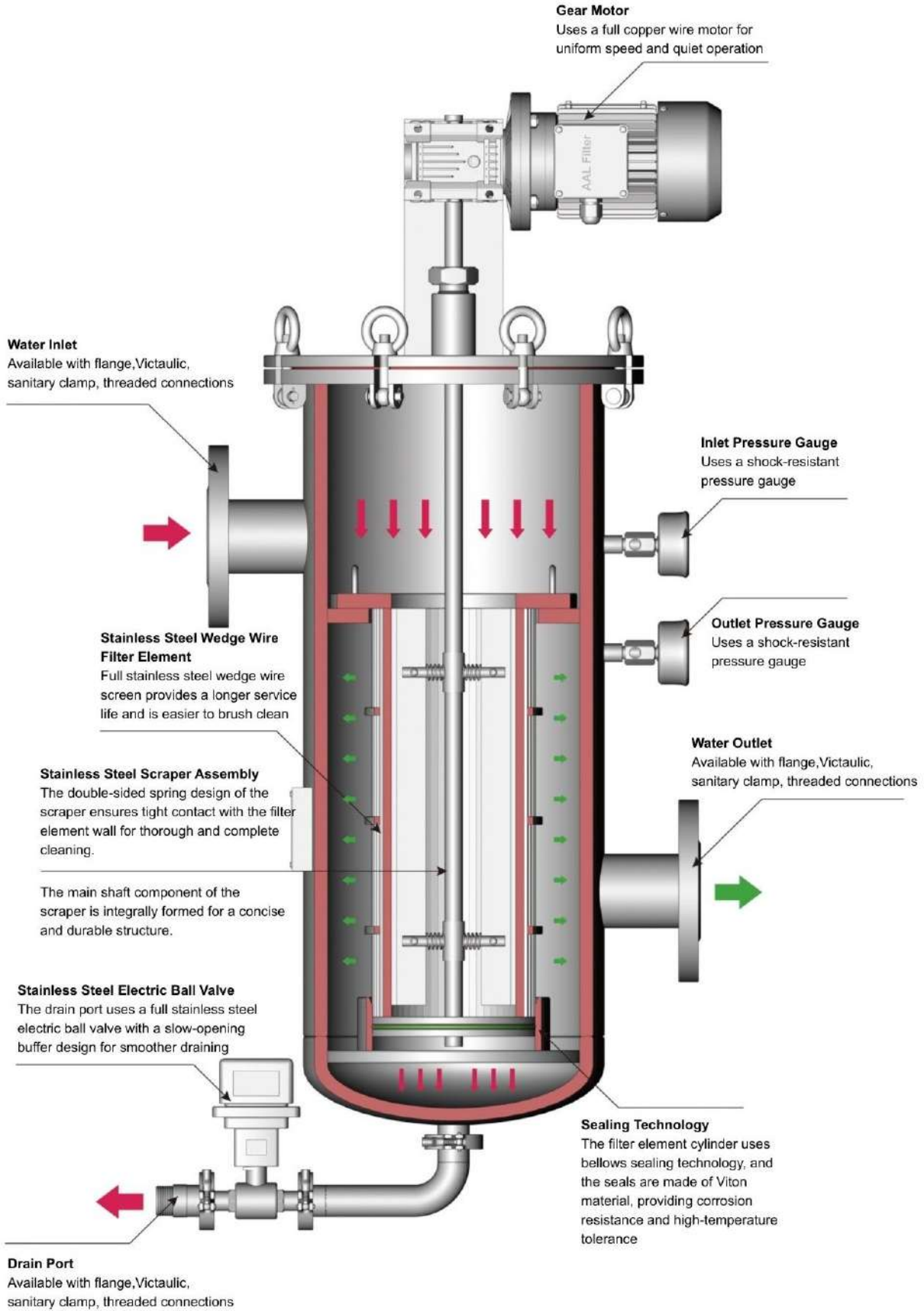
Applications

- Industrial cooling water filtration
- UF / RO membrane system pretreatment
- Process water in petrochemical, metallurgy, power plants, and paper industries
- Liquid pretreatment in food & beverage and pharmaceutical industries
- Municipal water supply and seawater desalination pretreatment



AAL Floor-Mounted Self-cleaning Filter

Structural Diagram



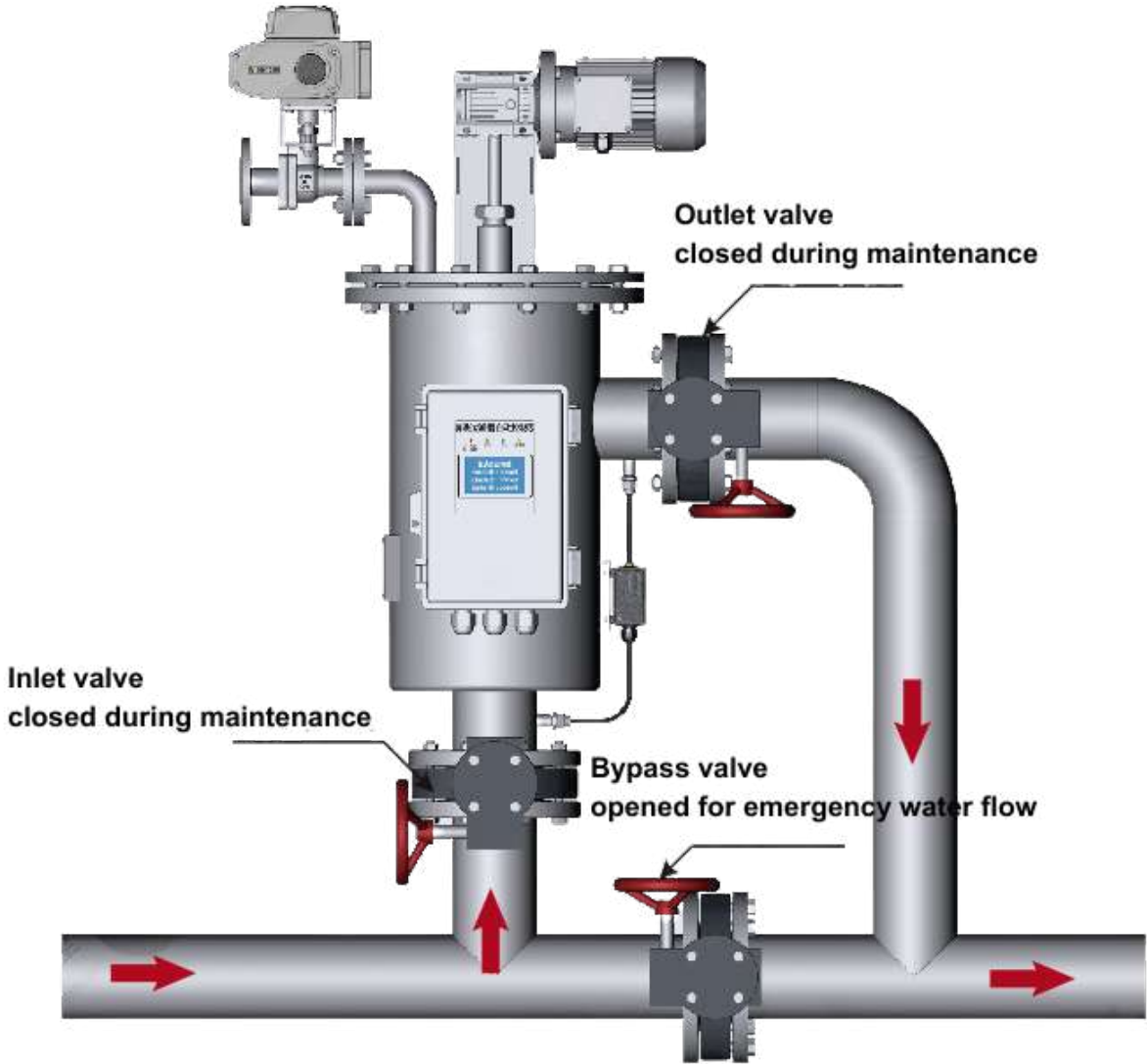


AAL Angle-Type Self-cleaning Filter

The AAL Angle-Type Self-Cleaning Filter features a vertical cylindrical design and is fixed directly onto the pipeline, offering a compact footprint and efficient space utilization. Its streamlined structure makes it especially suitable for installations with limited space.

Designed for high filtration efficiency and easy maintenance, the filter allows flexible disassembly and convenient servicing with minimal system disruption, making it a reliable automatic filtration solution for industrial water treatment and process water applications.

Angle-Type Self-Cleaning Filter Installation Diagram





AAL Horizontal Self-cleaning Filter

Technical Parameters

AAL Horizontal Self-cleaning Filter		
Item	Specification	Description
Flow Rate	20–3000 m ³ /h	Final selection depends on filtration accuracy and contamination level; please consult us
Minimum Operating Pressure	0.2 MPa(g)	
Working Pressure	1.6 MPa(g)	Custom design available upon request
Inlet / Outlet Size	DN50–DN700	
Maximum Operating Temperature	80 °C	High-temperature versions available
Filtration Rating	100–3000 μm	
Screen Material	SS304 / SS316L	Customizable upon request
Housing Material	Carbon steel / SS304 / SS316L	Customizable according to operating conditions
Motor Power	0.37–1.1 kW	
Power Supply	380 V / 50 Hz / 3-phase	Other voltages available
Backwash Flow Rate	< 1% of total flow	
Backwash Duration	15 seconds (adjustable)	Adjustable based on site conditions
Backwash Differential Pressure	0.5 kg/cm ² (adjustable)	Adjustable based on site conditions



AAL Precision Automatic Backwash Filter

The AAL Precision Automatic Backwash Filter is a high-efficiency, fully automated solid-liquid separation device equipped with multiple stainless steel filter elements (304/316L). It ensures effective removal of suspended solids and impurities from water or process liquids. With automatic self-cleaning capability, the system performs backwashing without interrupting filtration, making it ideal for industrial applications requiring high precision, reliability, and continuous operation. The precision automatic backwash filter has replaced many traditional cartridge filter housings and bag filter housings. It not only improves filtration efficiency but also significantly reduces labor costs.

Working Principle

The liquid enters the filter housing and is evenly distributed across multiple metal filter elements. Impurities are trapped on the outer surface of the filter elements, while the clean liquid passes through and exits via the outlet.

When differential pressure reaches a preset value, the control system initiates the backwash cycle: each filter element is flushed in sequence by high-pressure reverse water flow, and accumulated particles are discharged through the drain outlet. The entire cleaning process is automatic, efficient, and requires no shutdown.

Features

1. High-Precision Filtration

Designed with multiple stainless steel filter elements, providing filtration accuracy from 10 to 200 microns for demanding applications.

2. Fully Automatic Backwash Operation

Dual control by differential pressure and timer enables fully automatic online backwashing with stable and reliable performance.

3. Uninterrupted Flow During Backwash

Filtration continues during the backwash cycle, ensuring a continuous and stable water supply.

4. Durable and Washable Filter Elements

Stainless steel wedge wire or sintered mesh filter elements offer excellent durability, reusability, and extended service life.

5. Low Operating and Maintenance Costs

No frequent replacement of consumables is required, significantly reducing long-term operating expenses.

6. Smart Control System (Optional)

Optional PLC and HMI allow remote monitoring, data logging, and integration with plant control systems.

Applications

- Industrial cooling water filtration
- UF / RO membrane system pretreatment
- Process water in petrochemical, metallurgy, power plants, and paper industries
- Liquid pretreatment in food & beverage and pharmaceutical industries
- Municipal water supply and seawater desalination pretreatment



AAL Precision Automatic Backwash Filter

Technical Parameters

AAL Precision Automatic Backwash Filter	
Item	Specification
Filtration rating	10–200 μm
Working pressure	0.3–1.6 MPa
Flow capacity	20–3000 m³/h
Material	Carbon steel / SS304 / SS316L (Customizable according to operating conditions)
Cleaning Mode	Automatic backwash (DP, timer, or manual)
Drainage mode	automatic / manual
Inlet/Outlet size	DN40 / 50 / 65 / 80 / 100 / 125 / 150 / 200 / 250 / 300 / 350 / 400 / 450
Drain outlet size	DN25 / 50 / 80
Power Supply	380 V / 50 Hz / 3-phase(Other voltages available)
Surface treatment	Carbon steel (CS): anti-corrosion painting Stainless steel: sandblasting (default), polishing
Housing Material	Carbon steel, Stainless steel 304 / 316L
Filter Element	Stainless steel wedge wire or sintered mesh





AALFilter

Helping You Solve All Filtration Challenges

Reliable Filtration | Efficient Performance

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