

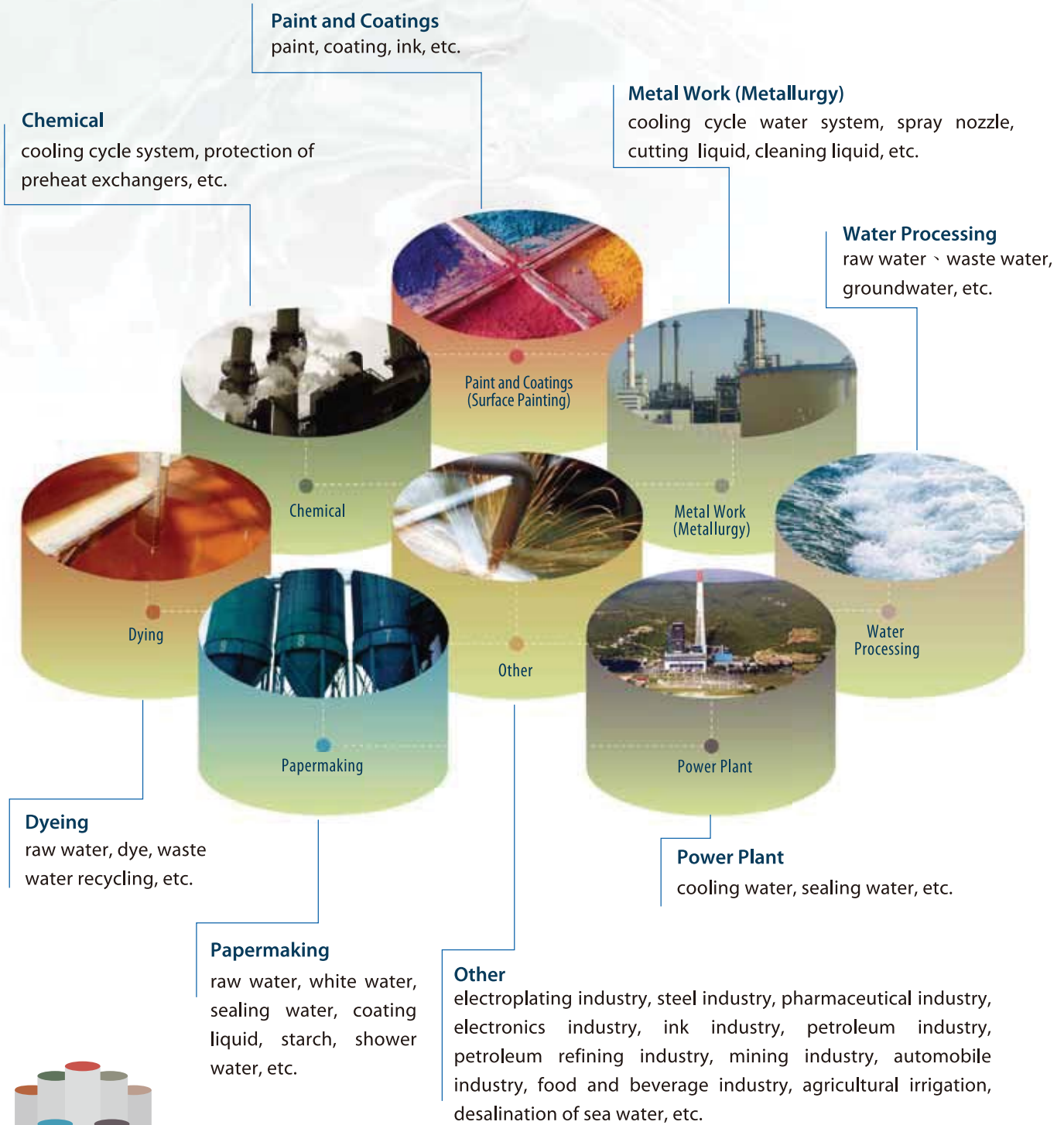


Provide The Best Filtration Solutions

Automatic Filter



Application





「About FILAD」

➤ About the Filter

The technology of filtering appeared very early in history of civilization, and changing with the times has played a vital role in the fields of mining, papermaking, chemistry, environmental protection, dyeing, the food industry, and the rapidly developing electronic manufacturing industry.

➤ Filtration Adviser – FILAD

For the last twenty years we have been gaining experience with designing and manufacturing filters, and in 2005 we officially established the FILAD Filtration Industry Corporation, and created a whole new brand called “FILAD”. After many years of hard work we have succeeded in breaking into the international market. We pay complete attention to the special needs of all industries to make available the best planning, manufacturing, sales, training and after sales service available to industries including the food industry, papermaking, electronics, electroplate, dyeing and finishing, mining, chemical engineering, energy, biochemistry, and environmental protection, etc.

At FILAD we combine the field of “filtration” with an “adviser” role to get the name “FILAD”, which shows our ambition to become the leading expert in the global field of filters, and also provide the all industries of the global markets with top quality filter plans and techniques. The corporate emblem of FILAD shows two droplets of water side by side forming an “F” which stands for FILAD brand name of FILAD, the continuation of the sphere is symbolic of our corporate vision for sustainable development, the white band in the center stands for the purity that we hope to provide the filter technology, emphasizing the message that at FILAD we are dedicated to the work of recycling and bringing about a cleaner environment.

➤ Our Corporate Concept

Using the lowest cost to attain the highest possible benefit has always been the goal for any business, however FILAD is not just manufacturing company that provides equipment, we also have a mission to help our clients to quickly and efficiently solve their filtering problems, and provide a way for our clients to maximize their product efficiency. We hope to be the “Filtration Consultant” of our clients, not only providing top quality filter processing equipment, but also providing customized service for our clients of every industry, designing specialized customized solutions, creating the maximum opportunity to create benefits for our clients.



PLC

Automatic Backwash Filter



PLC AUTOMATIC BACKWASH FILTER

Features

- **High processing amount :**
With multi-tube design you can adjust the combination of the filters to suit your actual processing needs.
- **Backwash function :**
We use both Timer and pressure differential detection to automatically clean the screens.
- **Constantly filtering :**
Because of the multi-tube system, you can backwash one by one and do not need to turn off the whole system when using the backwash function.
- **Fully automatic control system :**
By using the PLC program controls and man machine interface, the system can work automatically after setting.
- **Highly labor-saving :**
There is no need to have workers operate and monitor. Simple operation process makes you save large amount on labor cost.
- **Easy to maintain :**
It is automatic cleaning designed. All you have to do is to clean and maintain the machine body regularly.

PLC

Automatic Backwash Filter



■ ■ ■ PLC Introduce

We choose the design of inside backwash which can make the whole system filter constantly without being affected by the backwashing, and maintain the high filtration efficiency.

In the multi-tube system, there is a set of backup screen. Under normal conditions, the backup screen shares the filtering workload. When the backwash function starts, it can be used for backwash process. The design of backwash is to clean the screen one by one and backwash with the clean liquid which has already

been filtered in the system. When backwashing, only one screen is cleaned and the others still work to maintain constant filtering.

“Timer control” and “pressure differential detection” are two mechanisms to start the backwash system. When the timer or the pressure difference reaches a certain measurement, the PLC automatic control system will start backwash process and clean the screens one by one. It can keep the cleanliness of the screen and maintain high filtration efficiency.

PLC

Automatic Backwash Filter



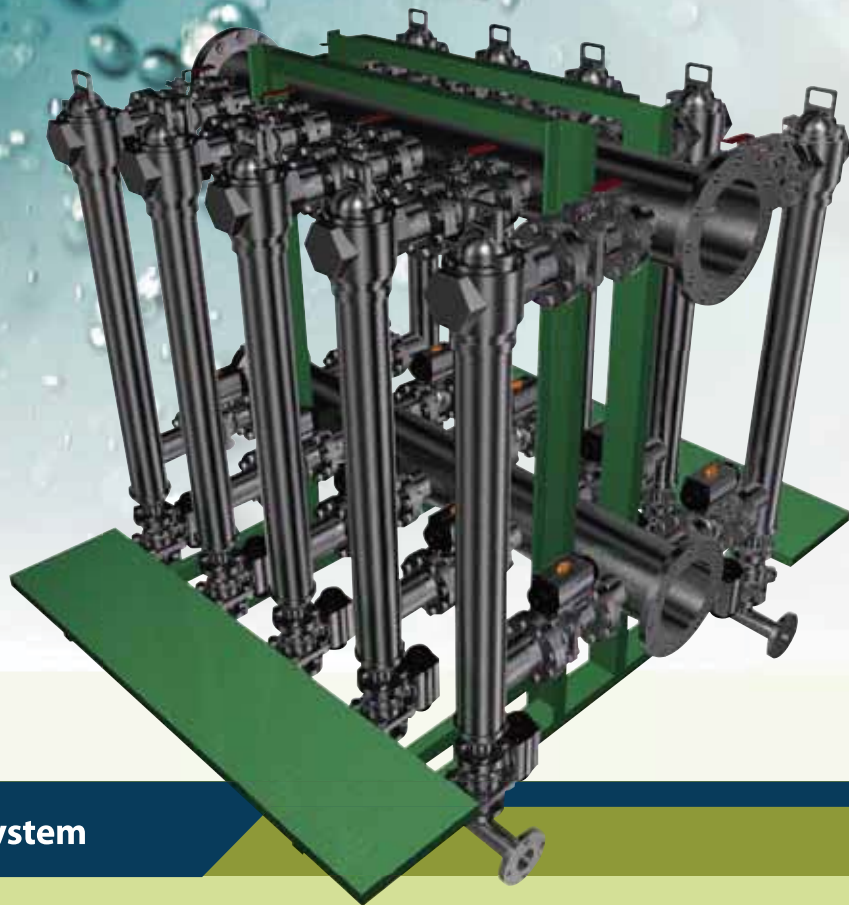
PLC AUTOMATIC BACKWASH FILTER

- **Fast removable upper lid :**
It's easy to use and maintain. Pull the tenon and turn it to 90° to remove the upper lid.
- **Electric controlled pneumatic ball valve set :**
They are installed at the inlet and discharge tube of each filter. Using the PLC control system to carry out the backwash process.
- **PLC control system :**
The man machine interface works with the PLC program which uses the Timer and the pressure differential detection device to carry out the backwash process. Through operating the control plate, you can start the entirely backwashing or any single filter backwashing. It is easy to operate and practical.
- **Manual ball valves :**
They are installed at the outlet of each filter and help to maintain the equipment.

- **Single filter :**
The whole system is assembled by the CJS single filters. It is fast to install and uninstall and easy to maintain.
- **Support bracket :**
It is used to support and fix the whole equipment and makes the equipment safe, steady and durable.
- **Working platform :**
It is convenient for workers to operate and maintain the equipment.
- **Pressure gauge and the pressure differential detection device :**
You can see the data of the inlet pressure, outlet pressure and pressure difference. It shows the pressure condition of the whole system.
- **Inlet tube :**
It is the inlet of unfiltered liquid and located at the bottom of the equipment.
- **Outlet tube :**
It is the outlet of filtered liquid and located on the top of the equipment.
- **Discharge tube :**
It is the outlet of impurities and backwashing liquid and controlled by the use of discharge valve.
- **Blind Flange :**
In order to lower the cost of installation for clients, there are blind flanges installed at the in-outlets of each filter.

PLC

Automatic Backwash Filter



■ ■ ■ Inside Backwash System

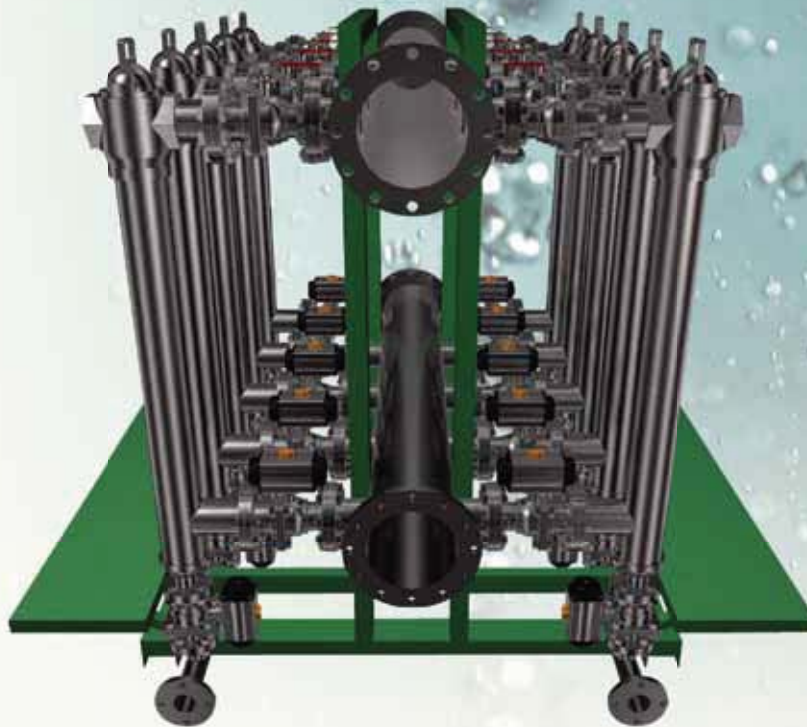
The unfiltered liquid enters through the inlet at the bottom of the equipment and is distributed evenly to each filter. After constantly filtering, the impurities accumulate on the surface of the screens, and the pressure difference increases gradually. When the pressure difference reaches 0.5~1.5bar, the system will automatically start to backwash. During the backwash process, only one filter stops filtering each time. The system closes the inlet valve and opens the discharge valve, and the backwash liquid enters from the outlet into the inside screen in the opposite direction, washes the impurities off the screen and discharges them through the discharge valve. The backwash time for

each filter will only take 3~8 seconds, and after all the filters being cleaned, the pressure difference will return to 0.05~0.4 bar.

The backwash system starts by (1) "Pressure Differential Detection" and (2) "Timer Control". These two mechanisms always work correspondently. The pressure differential detection works according to the clogging condition of screen, and the Timer control works regularly. Both of them work together to make up a perfect backwash system.

PLC

Automatic Backwash Filter



■ The Reference Table of The In-outlet Size Selection for Clean Water

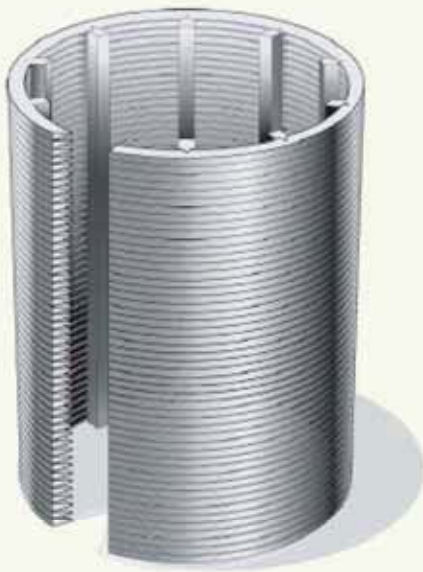
In-Outlet Size A(B)	32	40	50A	65A	80A	100A	125A	150A	200A	250A	300A
The Processing Amount (ℓ/min) (flow speed : 1 m/sec)	56	75	117	217	301	529	783	1131	1960	3038	4352

■ The Table of Single Filter Flow Amount (ℓ/min)

Screen Size Diameter × Length (mm)	Screen Slot											
	450 mesh 0.025	300 mesh 0.050	200 mesh 0.075	150 mesh 0.100	120 mesh 0.125	100 mesh 0.150	80 mesh 0.175	75 mesh 0.200	60 mesh 0.250	50 mesh 0.300	45 mesh 0.350	40 mesh 0.400
ø85×1000-12S	145	290	422	554	677	792	924	1000	1221	1419	1584	1742
ø85×1000-18S	96	193	281	369	451	528	616	666	814	946	1056	1161
ø85×1000-22S	80	161	234	307	376	440	513	555	678	788	880	967

- 12S steel wire 1mm is suitable for the working pressure under 10kg/cm²
- 18S steel wire 1.5mm is suitable for the working pressure between 10 and 30kg/cm²
- 22S steel wire 1.8mm is suitable for the working pressure above 30kg/cm²

Wedge Wire Screen



A Comparison of Filtration Condition



An explanation of the stainless steel wedge wire screens

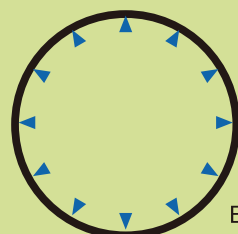
Our screens reflect the exquisite manufacturing technique from Europe. The stainless steel wedge wire screen is welded structures with the support profiles being rods in the axial direction of the tube and surface profiles spirally wound around the support profiles. We greatly exceed the performance of traditional screens with qualities of high opening rates, high pressure capability, and high wear-resistance.

Our screen is made with European great precision. The surface of our screen has perfect roundness, and the filtration effect is better than other products'.

Features

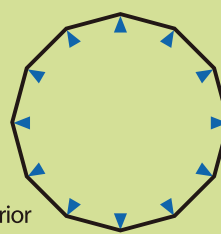
- **Not easily clogged :**
The continuous slot formed by the stainless steel V-shaped surface wires ensures a two-point contact between the impurities and the slot, which minimizes clogging.
- **High opening rate :**
The opening rate of our screens is higher by 30% than the traditional screens.
- **High precision :**
The exquisite manufacturing technique from Europe and perfect machining reflect high level of accuracy.
- **Strong construction :**
Slot tubes are welded structures with the support profiles being rods in the axial direction of the tube and surface profiles spirally wound around the support profiles. For most applications, the wedge wire screen is self-supporting, because of the welding at each intersection.
- **Easy to clean :**
The V-shaped surface wires allow easy cleaning by mechanical scraping or backwashing.

A comparison of FILAD screens with other brands'



Perfect roundness (FILAD products)

Excellent ← → Inferior



Inferior roundness (Other brands)

「Customization」

- Inside scraper filter – Elastic whirling device



▪ Partical Picture



- In-outlet assemblage with teeth type flange



▪ Partical Picture



- Customized connection



- Testing machines for laboratory



■ ■ ■ Provide The Best Filtration Solutions

FILAD hopes to become the “Filtration Consultant” of our clients. Our philosophy is to solve our clients’ filtration problems; therefore, we provide not only standard filtering equipments but also customized service for all different industries. Standard filtering equipments are easy to be purchased, installed, operated and very popular in the market, but the best way to solve clients’ problems and special requests is customized equipments.

Customization is no longer high-priced and an unreachable dream. FILAD has gained 20-year manufacturing, designing and practical testing experience,

so that we can manufacture various equipments rapidly. We design a flexible and adjustable manufacturing process, which uses a shorter producing line and process. We can manufacture filtering equipments with various specifications, high quality and special functions, and they can satisfy our clients in different industries.

FILAD has professional manufacturing ability and experience. We promise to provide the high quality of products and service. Also, we create the maximum benefits and profits for our clients.

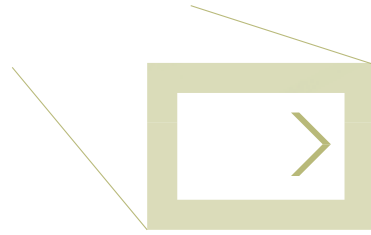
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