



••• 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.

CJD Double Filter



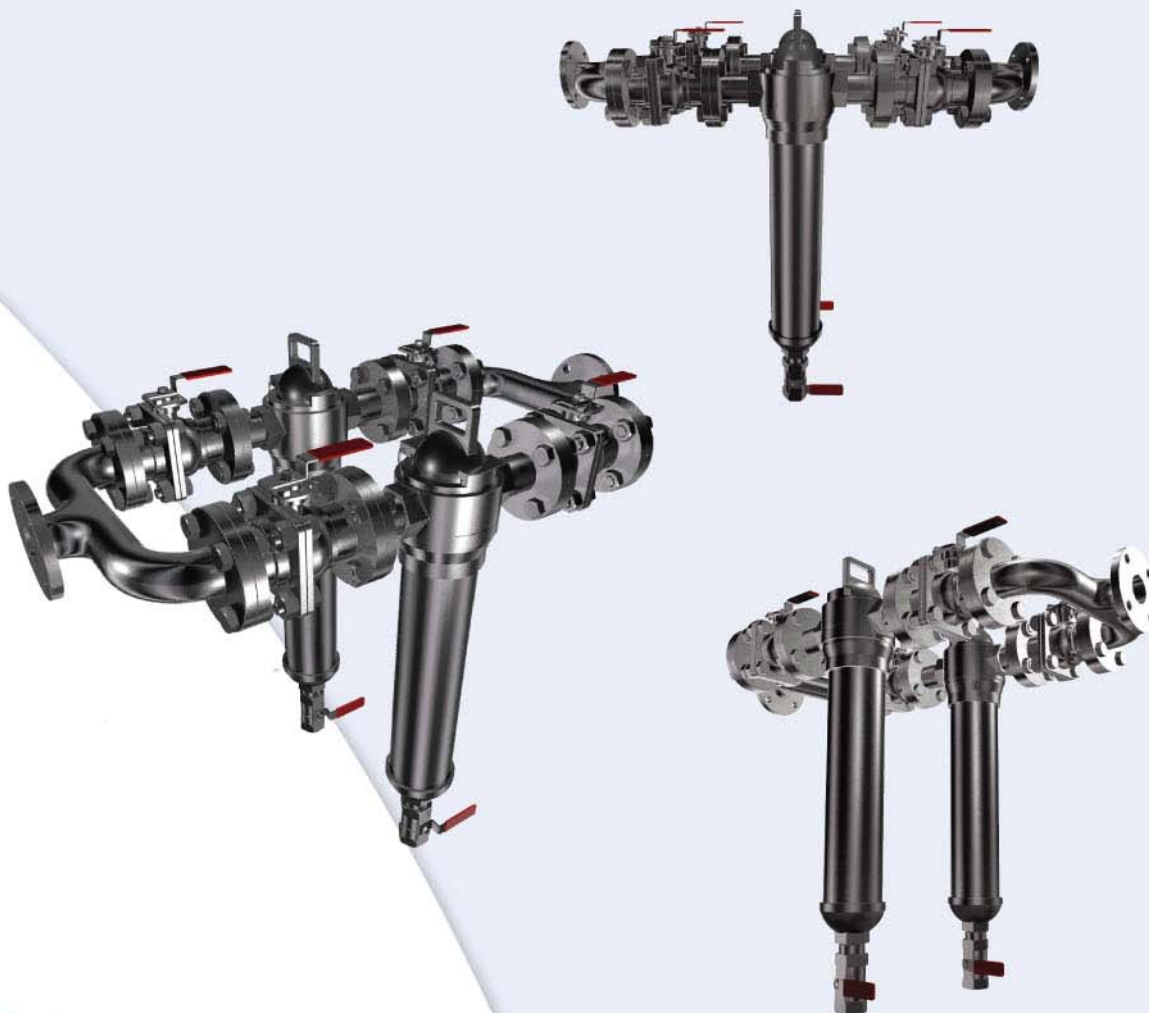
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●●● CJD DOUBLE FILTER

Continuing on the CJS single filter use of variable combinations, when using manual filters of a single set design, it is necessary to turn off the whole system to clean the screen, which will inevitably affect the work efficiency. In order to solve this problem and provide a more convenient product, we introduce the CJD Double Filter.

Making parallel connection of 2 sets of CJS single filter, the processing amount is designed to work in a "One in use, one in backup" system. Under normal

filtering conditions on 1 set of CJS single filter process, but when the filter in use is found clogged or decreased capacity, you should turn it off and turn on the other one in backup in order to present the best effect. After turning on the backup filter, you can replace the clogged filter screen and clean it. Through the repeating procedure, it can achieve the constant filtration.



• Features

- **Fast installation and uninstallation :**

All you need to do is to install the in-outlet; the installation process is designed to be practical and convenient.

- **Constant filtering :**

Using the "one in use, one in backup" design, it is able to maintain a constant filtering process.

- **Various options :**

We can provide different choices of specifications or customized manufactured products to meet the needs of your processing amount.

- **Easy to clean :**

Open the lid of the filter, pull out the screen and clean it.

- **High practicality :**

With the needs of the constant filtering process, it is not necessary to use the automatic function; therefore, this manual type can greatly reduce costs.



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.

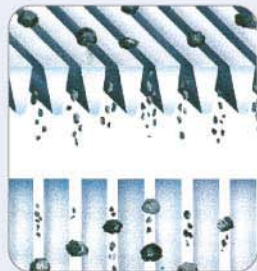


Wedge wire screen

Manual Filter



WEDGE WIRE SCREEN



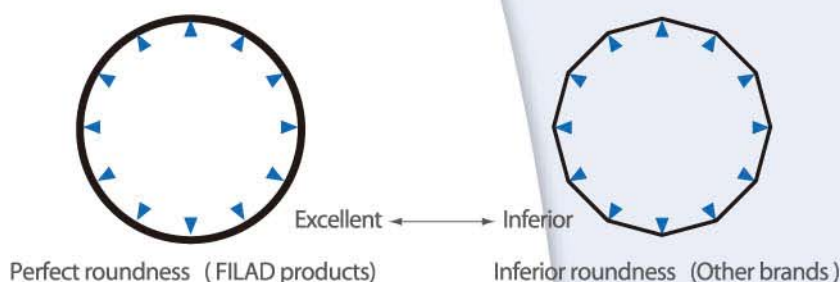
A Comparison of Filtration Condition

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'.

A comparison of FILAD screens with other brands'



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.

Wedge wire screen

••• The Table of Stainless Steel Wedge Wire Screen

Mesh Number	Wire Diameter	Opening Area (mm ²)
300	0.0381	29.7
200	0.0533	33.6
150	0.066	37.4
120	0.09398	30.7
100	0.1143	30.3
80	0.1397	31.4
60	0.1905	30.5
50	0.1905	35.1
40	0.254	36.0
30	0.3048	40.8
20	0.3556	52.0
18	0.4318	48.3
16	0.4064	55.4
14	0.508	51.0
12	0.5842	51.8
10	0.635	56.3

ØA Outside Diameter	ØB Inside Diameter	L Length
50	40	Adjustable to clients' needs
85	76.2	

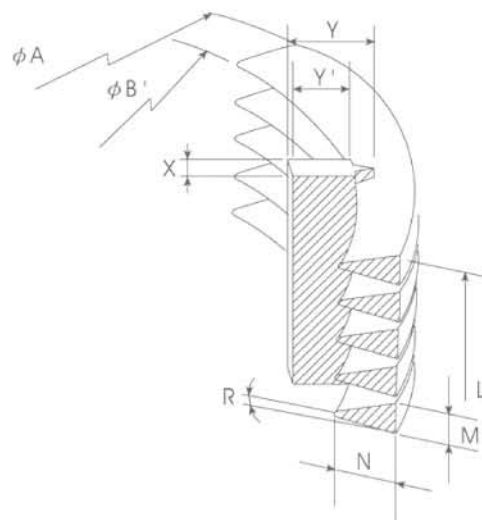
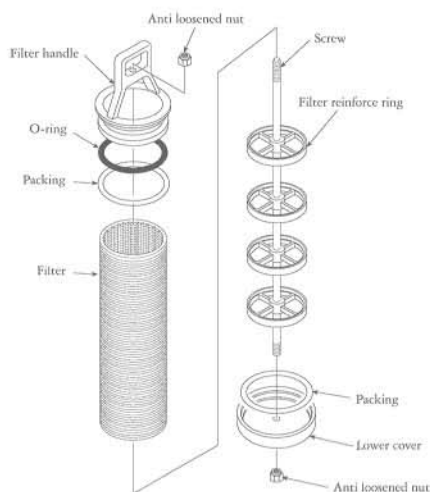
• Specifications of Surface Profiles (Unit : mm)

Model	12S	18S	22S
M	1	1.5	1.8
N	2	2.5	3.7
R	10°	12°	10°

• Specifications of Support Profiles (Unit : mm)

Model	Q25	Q35
X	2	3
Y	3	5
Y'	2	3.5

••• The Structural Drawing of Wedge Wire Screen





The Table of Wedge Wire Screen Flow Amount

Manual Filter



••• The Table of Screen Mesh and Slot Comparison

Japanese National Industrial Standard		FILAD Manufacturing Specifications		Tyler Standard	
Mesh Number	Slot (mm)	Mesh Number	Slot (mm)	Mesh Number	Slot (mm)
37	0.037	400	0.037	400	0.037
44	0.044	325	0.044	325	0.044
53	0.053	270	0.053	270	0.053
62	0.062	230	0.062	250	0.061
74	0.074	200	0.074	200	0.074
88	0.088	170	0.088	180	0.088
105	0.105	140	0.105	150	0.104
125	0.125	120	0.125	115	0.124
149	0.149	100	0.149	100	0.147
177	0.177	80	0.177	80	0.175
210	0.210	70	0.210	65	0.208
250	0.250	60	0.250	60	0.246
297	0.297	50	0.297	48	0.295
350	0.350	45	0.350	42	0.351
420	0.420	40	0.420	35	0.417
500	0.500	35	0.500	32	0.495
590	0.590	30	0.590	28	0.589
710	0.710	25	0.710	24	0.701
840	0.840	20	0.840	20	0.833
1000	1.000	18	1.000	16	0.991
1190	1.190	16	1.190	14	1.166
1410	1.410	14	1.140	12	1.397
1680	1.580	12	1.580	10	1.651
2000	2.000	10	2.000	9	1.981
2380	2.380	8	2.380	8	2.362
2630	2.630	7	2.830	7	2.794
3360	3.360	6	3.350	6	3.327
4000	4.000	5	4.000	5	3.962
4760	4.760	4	4.760	4	4.699
5600	5.600	3½	5.000	3½	5.613



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The Table of Wedge Wire Screen Flow Amount

• • • Selection of Flow Amount and Wedge Wire Screen

• A. 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

• B. The Table of Wedge Wire Screen Flow Amount (ℓ/min)

In-Outlet Size	Screen Diameter × Length (mm)	Screen Slot (mm)											
		450 mesh 0.025	300 mesh 0.05	200 mesh 0.075	150 mesh 0.10	120 mesh 0.125	100 mesh 0.15	80 mesh 0.175	75 mesh 0.20	60 mesh 0.25	50 mesh 0.30	45 mesh 0.35	40 mesh 0.40
25	Ø85×300-12S	44	88	128	168	205	240	280	300	370	430	480	528
	Ø85×300-18S	29	58	85	112	136	160	186	200	246	286	320	352
	Ø85×300-22S	24	49	71	93	114	133	155	166	205	238	266	293
32	Ø85×450-12S	66	132	192	252	308	360	420	450	550	645	720	792
	Ø85×450-18S	44	88	128	168	205	240	280	300	366	430	480	528
	Ø85×450-22S	36	73	106	140	171	200	233	250	305	358	400	440
40	Ø85×500-12S	73	147	213	280	342	400	468	500	618	718	802	882
	Ø85×500-18S	48	98	142	186	228	266	312	333	412	478	534	588
	Ø85×500-22S	40	81	118	155	190	222	260	277	343	399	445	490
50	Ø85×600-12S	88	176	256	336	410	480	560	600	740	860	960	1056
	Ø85×600-18S	58	117	170	224	273	320	373	400	493	573	640	704
	Ø85×600-22S	49	97	142	186	227	266	311	333	411	477	533	586
65	Ø85×900-12S	132	264	384	504	615	728	840	900	1110	1290	1440	1584
	Ø85×900-18S	88	176	256	336	410	485	560	600	740	860	960	1056
	Ø85×900-22S	73	146	213	280	341	404	466	500	616	716	800	880
85	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
100	Ø85×1000-22S	80	161	234	307	376	440	513	555	678	788	880	967

- In-outlet size of 1" · 1 ¼" · 1 ½" · 2" is suitable for Ø85×300 ~ Ø85×600 °
- In-outlet size of 2" · 2 ½" · 3" is suitable for Ø85×600 ~ Ø85×1000 °
- In-outlet size of 3" · 4" is suitable for Ø85×900 ~ Ø85×1000 °

Table B is calculated according to the length of screen and the opening area. Considering the safety factor, the actual time of use takes into account the most suitable combination of the tube size in Table A and the width of the surface profiles (12S, 18S, 22S) in Table B.

The table of CJS Single Filter's flow amount is calculated in constantly operating for 24hrs. Therefore, after using for a period of time, it can still maintain filtering capability of 50% and extend the time of filtering (but there is an exception under unusual condition).



Wedge Wire

Screen and Mesh Times Selections

Manual Filter



••• Wedge Wire Screen Working Pressure Selections

- 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

••• The Table of Wedge Wire Screen Usage Times Explanation

Spray Nozzle	Main Usages	Example of Screen Selection	Selection (mm)	Mesh	Effect	Frequency of Cleaning
Needle-shaped Nozzle 	Papermaking : Felt, mould cylinder and fourdrinier cleaning. Other Industries : Car, machine and other equipments cleaning.	$\varnothing 1\text{mm} \div 6 \text{ Times} = 0.166\text{mm}$	0.15	100	○	○
		$\varnothing 1\text{mm} \div 8 \text{ Times} = 0.125\text{mm}$	0.125	120	◎	○
		$\varnothing 1\text{mm} \div 10 \text{ Times} = 0.106\text{mm}$	0.10	150	◎	△
		$\varnothing 1\text{mm} \div 12 \text{ Times} = 0.083\text{mm}$	0.075	200	◎	△
Fan-shaped Nozzle 	Papermaking : Felt and mould cylinder cleaning.	$\varnothing 1\text{mm} \varnothing \div 3 \text{ Times} = 0.33\text{mm}$	0.30	50	△	○
		$\varnothing 1\text{mm} \varnothing \div 4 \text{ Times} = 0.25\text{mm}$	0.25	60	○	○
		$\varnothing 1\text{mm} \varnothing \div 5 \text{ Times} = 0.20\text{mm}$	0.20	75	◎	△
Trim Shower 	Papermaking : Trim shower, mould cylinder and felt cleaning. Other Industries : Car and machine cleaning.	$\varnothing 1\text{mm} \div 6 \text{ Times} = 0.166\text{mm}$	0.175	80	△	○
		$\varnothing 0.6\text{mm} \div 6 \text{ Times} = 0.10\text{mm}$	0.10	150	○	○
		$\varnothing 0.6\text{mm} \div 8 \text{ Times} = 0.075\text{mm}$	0.075	200	◎	○
		$\varnothing 0.6\text{mm} \div 10 \text{ Times} = 0.06\text{mm}$	0.05	300	◎	△

- The effect of screen filtration △ Barely adequate ○ Good ◎ Excellent

(◎ Excellent : The effect is perfect, but the cost is high and the frequency of cleaning also increases. You can consider using the automatic filtration.)

- Frequency of cleaning △ Too many times ○ Acceptable



Provide the Best Filtration Solutions



Cleaning and Maintenance of Wedge Wire Screen



• Picture 1



• Picture 2



• Picture 3



• Picture 4

• • • Instruction

Picture 1 : Pull the tenon.

Picture 2 : Hold the handle of the upper lid and turn left or right to 90°, then remove the lid.

Picture 3 : Take out the screen and check the clogging condition.

Picture 4 : Use a steel brush to remove all impurities off the screen surface and flush the screen with high-pressure clean water. Then put it back after it dries.

If industrial waste water contains the fibers that can be corrupted (for example, the white water recycling process of the papermaking industry contains the long and short fibers of wood pulp), you can use nitric acid or other weak corrosive chemical solvents to soak the screen. After the fibers on the screen surface have been corrupted, you can use a high-pressure clean water to clean them, and then the screen can be used again.

These impurities on the screen surface are formed by filtering all kinds of recycled water such as clean water, white water, etc. You can remove the impurities with a steel brush

and then flush them by using high-pressure clean water. If you are not able to clean up all impurities, you can use the cleanser for stainless steel only. You can spread the cleanser on the dirty area of the screen surface. After 5 minutes, you can wipe the screen surface and flush the remains away with clean water. If the filtered liquid is certain and there is a cleanser for it only, you can clean the screen by following the cleanser's directions. Remember to make sure that the cleanser won't damage the screen before using it.

Cleaning the screen regularly or up to the clogging condition can extend the screen's life span and avoid decreasing processing amount caused by clogging. In addition, the clogging will increase the flow speed and cause high-speed friction. As the result, the slot size will be out of ordinary, and that will reduce the filtration efficiency and quality.

Application

Manual Filter | Application



Chemical

cooling cycle system, protection of preheat exchangers, etc.

Paint and Coatings

paint, coating, ink, etc.

Metal Work (Metallurgy)

cooling cycle water system, spray nozzle, cutting liquid, cleaning liquid, etc.

Water Processing

raw water, waste water, groundwater, etc.

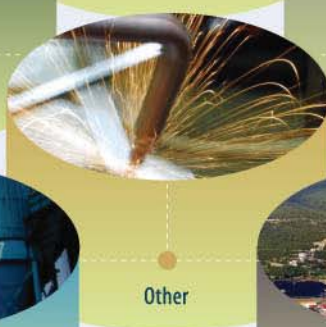


Dyeing

Chemical

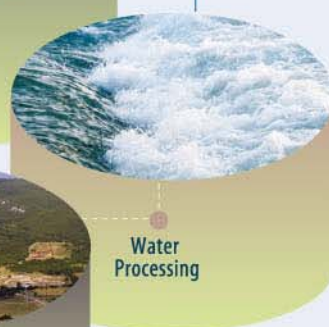


Paint and Coatings
(Surface Painting)



Metal Work
(Metallurgy)

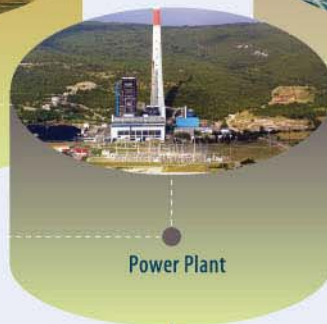
Other



Water
Processing



Papermaking



Power Plant

Dyeing

raw water, dye, waste water recycling, etc.

Papermaking

raw water, white water, sealing water, coating liquid, starch, shower water, etc.

Other

electroplating industry, steel industry, pharmaceutical industry, electronics industry, ink industry, petroleum industry, petroleum refining industry, mining industry, automobile industry, food and beverage industry, agricultural irrigation, desalination of sea water, etc.



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