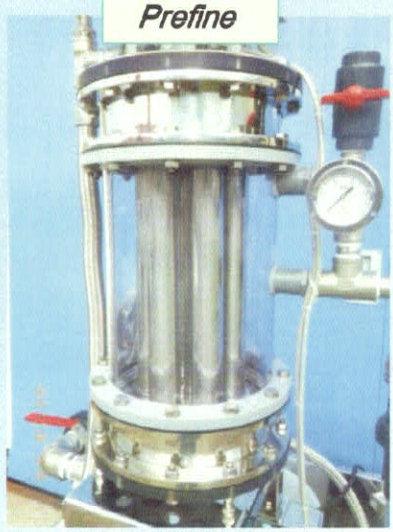
The Super Micro Slits will open up new possibilities!

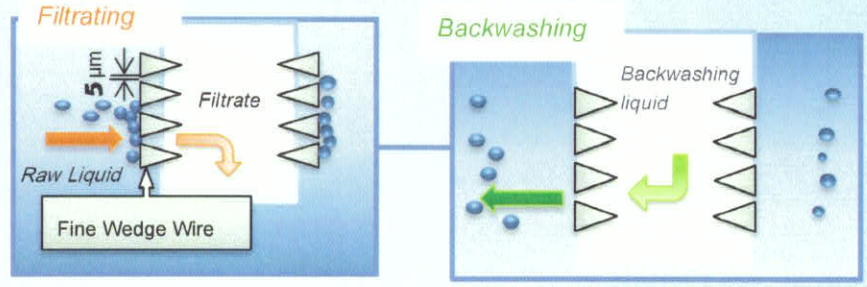
Example of strainer built-in products

Prefine



High precision(5μm Order) AutoFilter *with 6 cylinders (dia.42.7) installed*

- Utilization of surface filtration's merit
  Backwashing for preventing clogging is made effective by using "Fine Wedge" wire screen on a surface filtration basis.
- Ultimate simple structure
  The rotary disk-type selector valves installed on the top and the bottom of the equipment backwash each cylindrical strainer one by one.
- Continuous operation without interruption of filtration is possible.

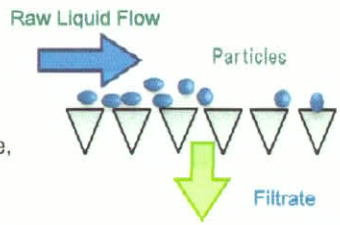


Applications of Inertial Filtration

"Fine Wedge" materializes the Products!

Features of Inertial Filtration

- Filtration is made when raw liquid flows across the slits between wedge-shaped wires. The resultant effect is that the screen is hardly clogged, since particles skim over the screen surface by inertial force.
- Even if particles remain on the screen surface, they can be easily washed off.

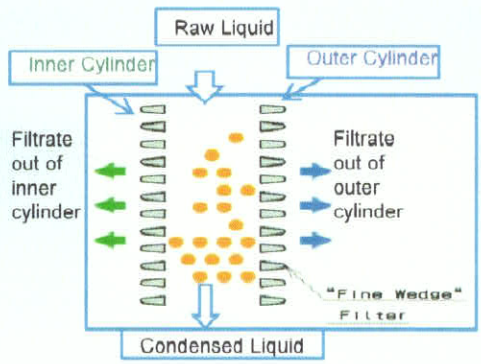


FineArc-60

Pressure injection-Type 60degree Arc Screen

Finecular

Bi-cylindrical Structure Inertial Filtrator
10μm and upward (Backwashing is not needed.)

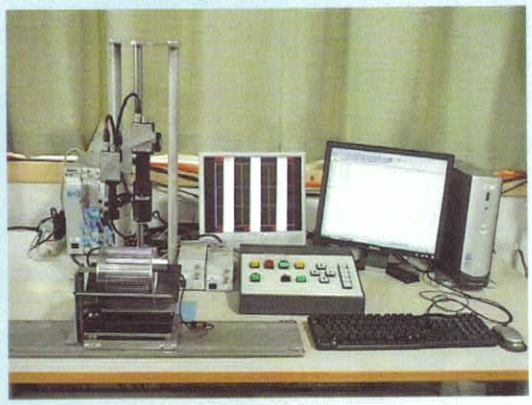


- Slot width: 20 ~ 50μm
- The screen can separate fine solid on the order of dozens of microns from liquid.
- Application: preliminary processing in advance of various fine filtration equipment, recovery of resin powder, resist film and chemical plant's various particles, recovery of sludge and grindstone particles in the coolant and others.
- Processing capacity: 35m³/h with slit width 30μm and nozzle discharge speed 10m/s.

- Filtration is made by adopting 'Fine Wedge' filter for an outer cylinder and an inner cylinder and letting raw liquid run between them at a high velocity.
- By utilizing inertial filtration the equipment will work uninterruptedly without backwashing for a long period.
- The closed circulation system prevents evaporation, odor leaks and contamination.

QUALITY CONTROL

Slit Measuring



Slit Measuring Device (Automatic measuring by a high-precision camera)

Example of 5μm order slit measuring dia.48.6 50F

Result of slit measuring (unit: μm)

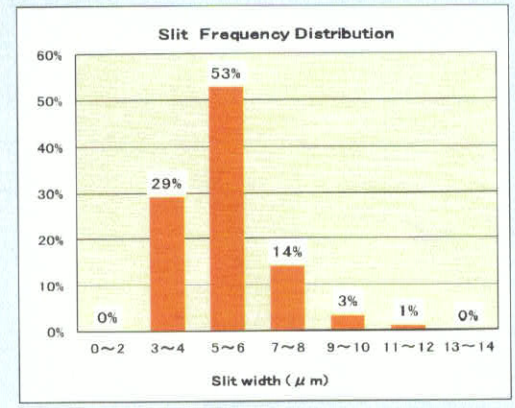
Number of data 93

Min.= 3

Max.= 11

Ave.= 5.5

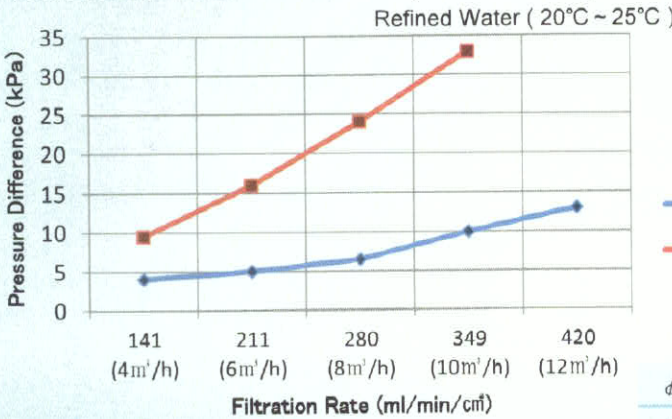
St.Dev= 1.5



For reference ; JIS G3556 Industrial Woven Wire Cloths
'Allowance of slits'
Nominal size 26μm、Max. +25μm、Ave. ±40μm

'FINE WEDGE' PRODUCT INFORMATION

(50Ax250L) Pressure Loss Data (for reference)

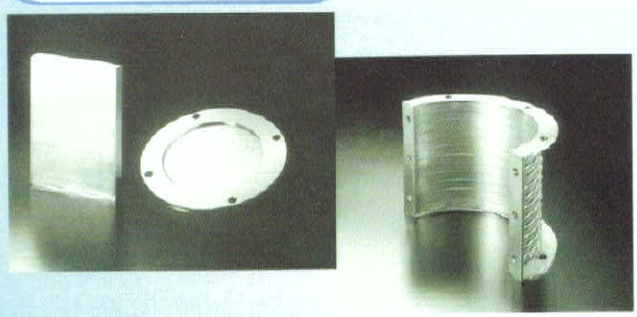


Cylindrical Strainer Parts

φ27.2 (20A)	φ51.0 (-)	φ101.6 (90A)
φ34.0 (25A)	φ60.5 (50A)	φ114.3 (100A)
φ42.7 (32A)	φ76.3 (65A)	〃
φ48.6 (40A)	φ89.1 (80A)	φ400

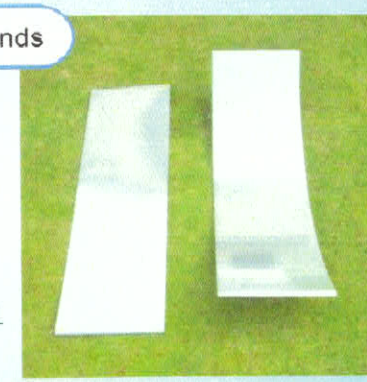
※The dimeter may change slightly depending on the applicable wire type.
※Please ask us for other sizes.

Various Screen Parts



※The material can be formed into various shapes according to each purpose.

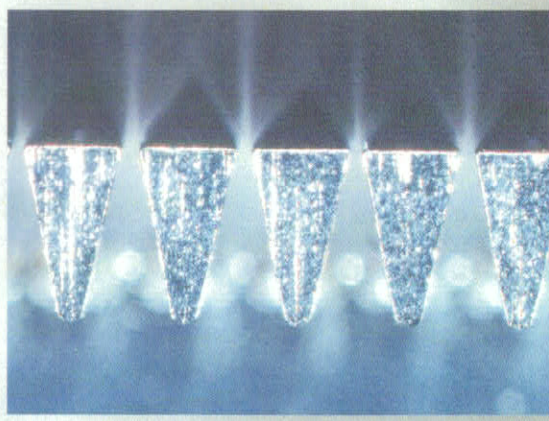
Sieve Bends



※Reference size
600Wx1600L

FINE WEDGE

Technical Product Information



The world's top-level technology realizes 5 micron order slits!

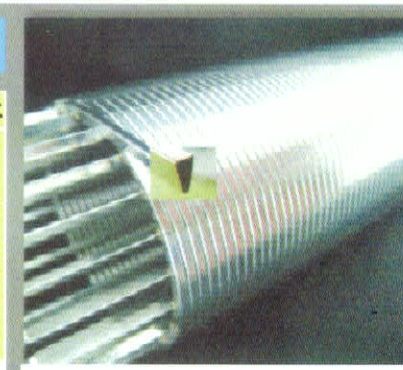
Properties of "Fine Wedge" wire products:

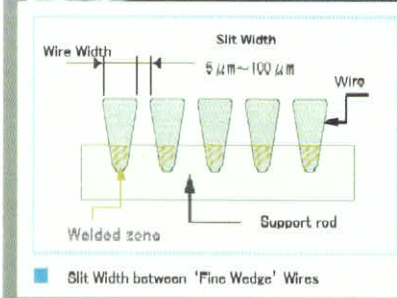
- High strength and durability give a long operating life.
- Design is available flexibly according to each purpose.
- Easy maintenance.

Section width of 'Fine Wedge' wire and Screen Opening Ratio

Wire Code		11CF	75F	50F	35CF	25CF
Wire Width (mm)		1.0	0.75	0.5	0.35	0.25
Material : SUS316L						
Slit Width	50μm	4.8%	6.3%	9.1%	12.5%	
	30μm	2.9%	3.8%	5.7%	7.9%	
	20μm	2.0%	2.6%	3.8%	5.4%	
	15μm	1.5%	2.0%	2.9%	4.1%	
	10μm	1.0%	1.3%	2.0%	2.8%	
	5μm	0.5%	0.7%	1.0%	1.4%	

Screen Opening Ratio = Slit Width/(Wire Width + Slit Width)





Slit Width between 'Fine Wedge' Wires

TOYO SCREEN