



# LEVIATHAN SERIES

AUTOMATIC BRUSH FILTERS



Up to **8,000 m<sup>3</sup>/h**  
Max. Flow Rate

**200-6,000 µm**  
Filtration Degree

**100%**  
Screen Cleaning

**Less than 1%**  
Backwash Water  
Consumption

**1 bar (14.7 psi)**  
Min. Operating Pressure

Up to **80,000 cm<sup>2</sup>**  
Filter Area

**AD 2000 PV**  
Design Code

Max. Temp  
**60°C**

**ENGINEERED FILTRATION.**

**Filtersafe**



# ENGINEERED FILTRATION

With over three decades of experience in automatic water filtration, Filtersafe filters are equipped not only with state-of-the-art patented technology, but also the know-how to successfully integrate our solutions in industrial water applications.

Filtersafe filters can deal with the most challenging filtration solutions. That's why we are one of the top global suppliers for process automation worldwide.

- o Oil & Gas Sectors
- o Power & Energy Sector
- o Water Reclamation & Desalination
- o Municipal Water Treatment
- o High-End Agriculture
- o Other Industrial Needs



High-End Agricultural Project



Skid Packages

## Reliable Filtration Durable Filters

Filtersafe brings you unrivaled value, effectiveness and durability. Our filters effectively remove high volumes of TSS and organic matter. We are able to manufacture filtration systems in skid format, and can also supply with stand-by functionality for:

### Typical Installations Includes:

- o Prefiltration for cooling tower water
- o Intake water from surface water for irrigation
- o Mining
- o Metallurgical industries
- o Aquaculture & Fish ponds
- o Wastewater treatment plants
- o Seawater filtration

With several global support hubs and two strategically placed manufacturing facilities, Filtersafe provides fast and reliable service in presale and post sale situations.



Pre-Treatment Project

## LEVIATHAN SERIES

- ✓ Multi-Purpose Filtration Solution. Optimized for industrial, municipal and agricultural applications.
- ✓ Huge filtration area in small footprint.
- ✓ Minimal line pressure needed for operation.
- ✓ Continual operation - No down time when flushing.
- ✓ Robust design with a single moving part means minimal maintenance.
- ✓ Highly effective cleaning with over 99.2% Recovery Rate and full screen recovery.
- ✓ P.V. Design according to: AD2000 Merkblatt.
- ✓ Rubber lining on request!



### Custom Features:

- Skid Mounting - for plug & play and mobility.
- Rubber Line - for seawater and chemical applications
- Horizontal Orientation - for customized installations
- ATEX & IECEx hazardous area compliance upon request

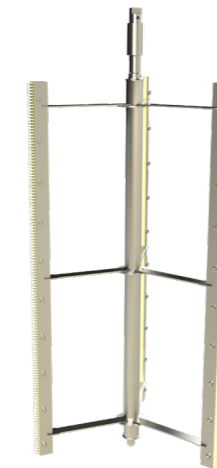
### International and National Design Codes Compatibility

Filtersafe builds when required to ASME & PED standards and can comply with any international specifications or requirements.

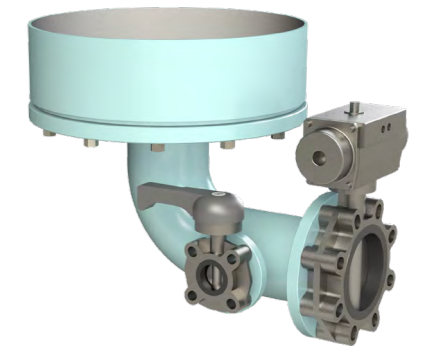
### Elegant and Robust Design



Durable Screen Design



A Single Moving Part



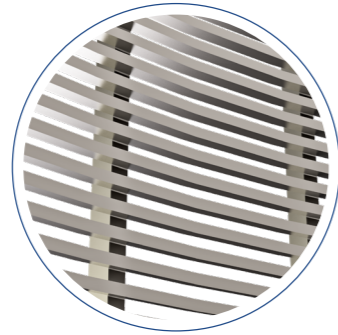
Lower Chamber Traps Heavy Particles

# OUR TECHNOLOGY

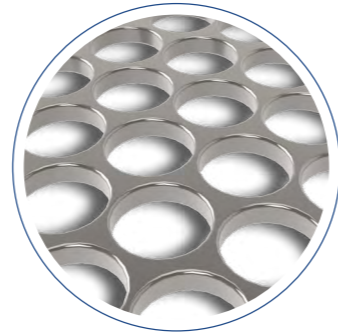
The Filtersafe Leviathan Automatic Brush filters are reliable filters that work hard for you, designed for near zero maintenance. The filters are available with either wedge-wire or perforated screens. Both options use a heavy-duty, highly-durable brush for cleaning high loads of suspended solids with continuous operation.



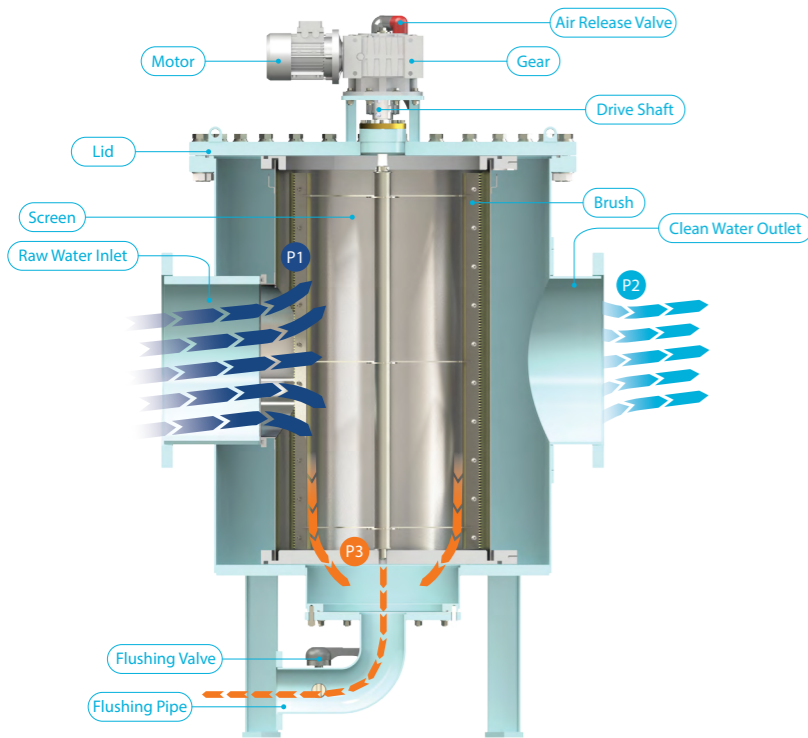
Brush Filter Cleaning



Wedgewire Screen



Perforated Screen



### Cleans while in operation:

1. The wedge-wire or perforated screen traps solids and dirt.
2. As sediments and particles are trapped, pressure differential between the inlet and the outlet triggers the cleaning process.
3. The brushes rotate and removes all captured particles on the screen surface towards the open flushing valve.
4. The filter returns to its original state.

P1	Inlet pressure
P2	Outlet pressure
P3	Discharge pressure

$P1 - P2 = \Delta P$  across the screen

$P1 - P3 =$  Pressure difference at the discharge point shall be at least 1 (bar)

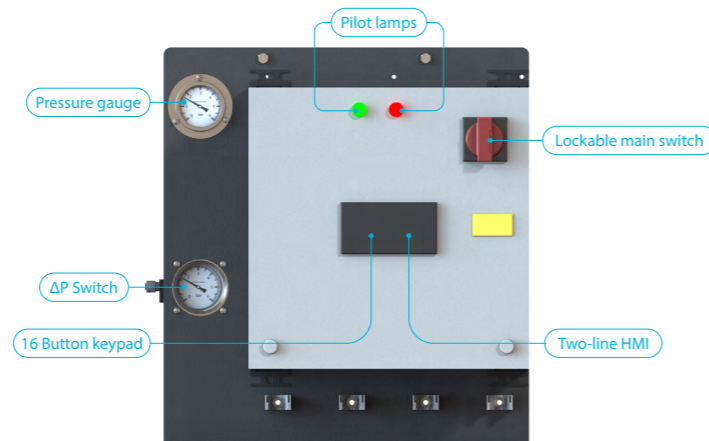
### Main features for control board

- The power and control board, made with a high quality of design and materials.
- Siemens LOGO PLC-based control board or Unitronics based controller, with easy operation method.
- Useful hard-wire interface for customer monitoring and operation.

### Optional

- Modbus TCP (Ethernet) communication interface for detailed system monitoring.
- Two analog input for system pressure operation and monitoring.

\* Advanced control boards are available upon request.



# LEVIATHAN SERIES

## Automatic Brush Filters | Technical Specifications

### 1 | GENERAL DATA

	LEVIATHAN 120 #LEV0120	LEVIATHAN 200 #LEV0200	LEVIATHAN 300 #LEV0300	LEVIATHAN 400 #LEV0400	LEVIATHAN 500 #LEV0500	LEVIATHAN 600 #LEV0600	LEVIATHAN 700 #LEV0700	LEVIATHAN 800 #LEV0800
Max Capacity** (m <sup>3</sup> /hr.)	1,080	1,800	2,700	3,600	4,500	5,400	6,300	7,200
Inlet/Outlet (Flanged)	14"	20"	24"	28"	32"	36"	By request	
Configuration	Online				Inline			
Filtration Degrees	200-6,000 μm							
Cleaning Mechanism	Nylon Brush, type dependent on application*							
Min. Pressure	1 bar							
Pressure Rating	10 bar*							
Design Code	AD 2,000 PV Design code*							
Power Supply	380-480 AC							
Weight (Dry) kg	470	1,340	2,300	2,300	3,410	3,610	Contact us for more information	
Weight (Wet) kg	740	2,300	4,200	4,500	6,160	6,940	Contact us for more information	

### 2 | OPERATION

	35 m <sup>3</sup> /h	45 m <sup>3</sup> /h	70 m <sup>3</sup> /h	125 m <sup>3</sup> /h	125 m <sup>3</sup> /h	125 m <sup>3</sup> /h	
Min. Flush Flow Rate	35 m <sup>3</sup> /h	45 m <sup>3</sup> /h	70 m <sup>3</sup> /h	125 m <sup>3</sup> /h	125 m <sup>3</sup> /h	125 m <sup>3</sup> /h	
Min. Flush Volume (@ 1bar)	0.25 m <sup>3</sup>	0.32 m <sup>3</sup>	0.88 m <sup>3</sup>	1.57 m <sup>3</sup>	1.57 m <sup>3</sup>	1.57 m <sup>3</sup>	Contact us for more information
Flush Duration	25 sec.	25 sec.	45 sec.	45 sec.	45 sec.	45 sec.	
Flushing (Flanged)	3"	4"	6"	6"	6"	6"	Customized

### 3 | SCREEN DATA

	12,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000
Screen Area (cm <sup>2</sup> )	12,000	20,000	30,000	40,000	50,000	60,000	70,000	80,000
Filtration Medium	Wedge wire or Perforated, 1 layer							
Screen Material	316L, 904L, SDSS							

### 4 | CONTROL & ELECTRICITY

	0.55 KW (0.75HP)	1.1 KW (1.5HP)	1.5 KW (2HP)	1.5 KW (2HP)	2.2 KW (3HP)	2.2 KW (3HP)	Customized
Motor	0.55 KW (0.75HP)	1.1 KW (1.5HP)	1.5 KW (2HP)	1.5 KW (2HP)	2.2 KW (3HP)	2.2 KW (3HP)	Customized
Controller Type	Siemens PLC with HMI						
Control Voltage	24VDC						

### 5 | CONSTRUCTION MATERIALS

Body	Carbon steel
Internal Finish	Epoxy coating*
External Finish	Epoxy base coat + Polyurethane (Munsell 7.5 BG 7/2)
Internals	316L, composite materials
Seals	NBR/EPDM

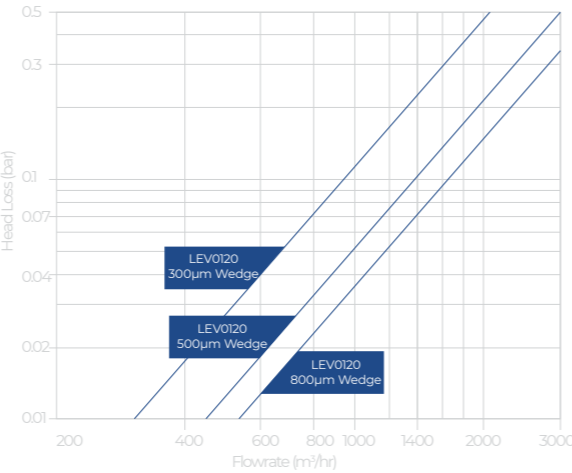
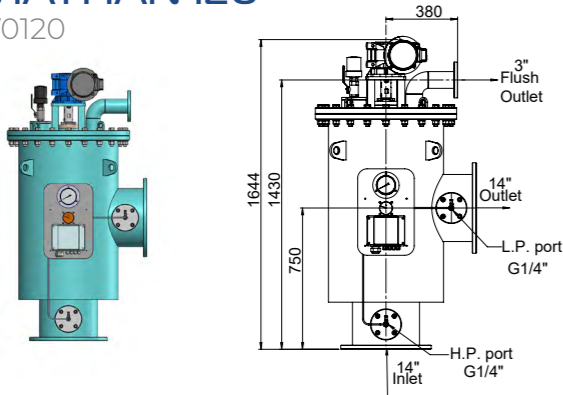
\*Other Equipment, Materials, Coatings, & Design Codes (including ASME) available upon request - According to any national or international standard.  
\*\*Dependent on filtration degree and water quality. Contact us for more information.

# LEVIATHAN SERIES

Automatic Brush Filters | Dimensions and Headloss

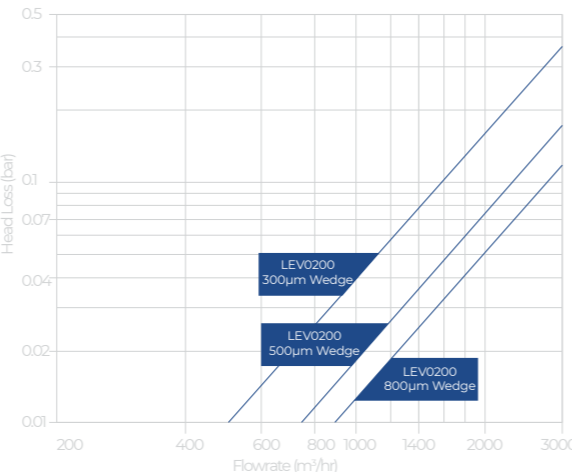
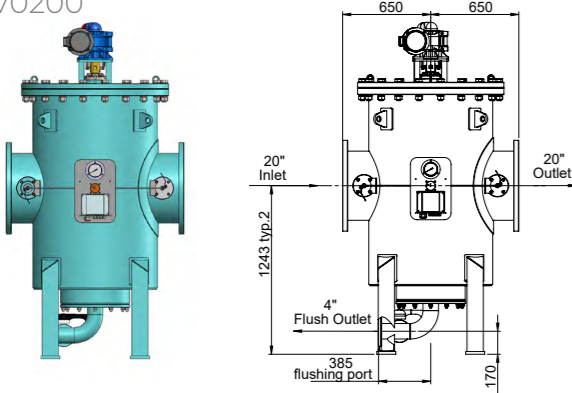
## LEVIATHAN 120

#LEV0120



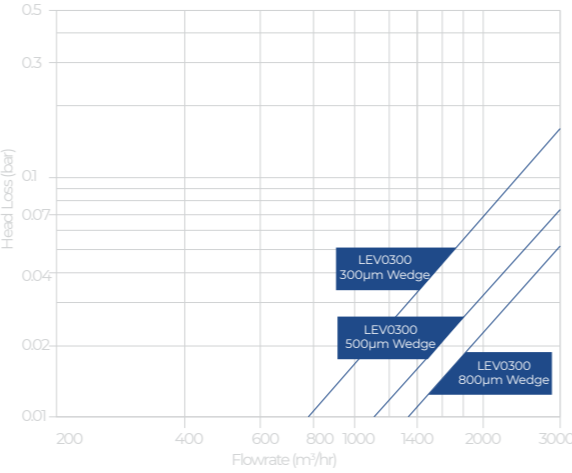
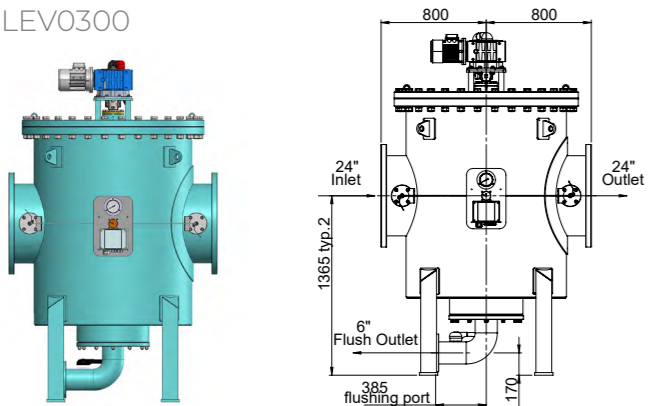
## LEVIATHAN 200

#LEV0200



## LEVIATHAN 300

#LEV0300

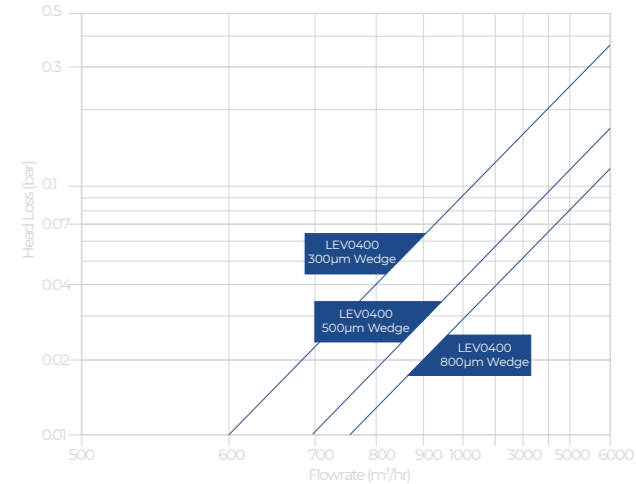
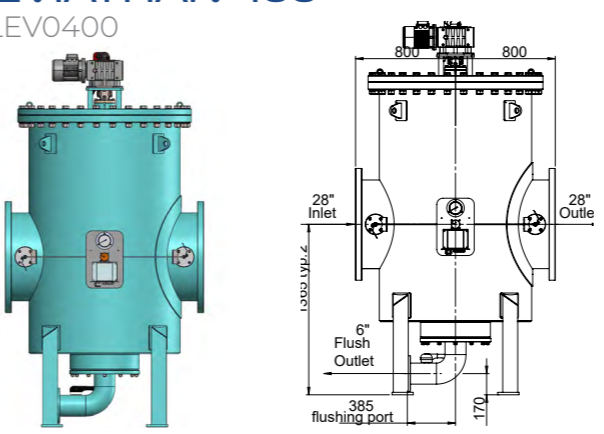


# LEVIATHAN SERIES

Automatic Brush Filters | Dimensions and Headloss

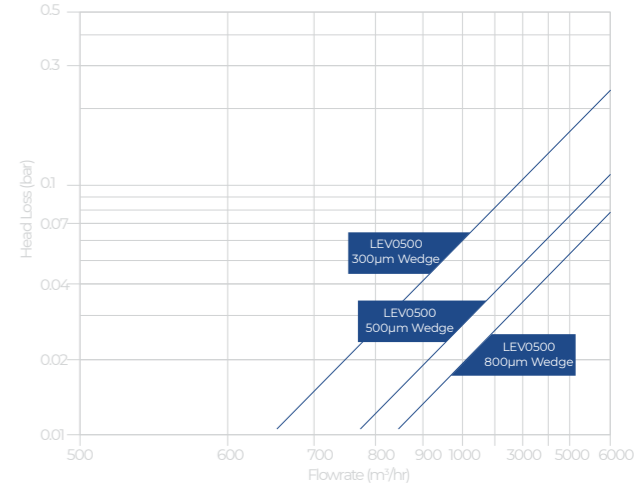
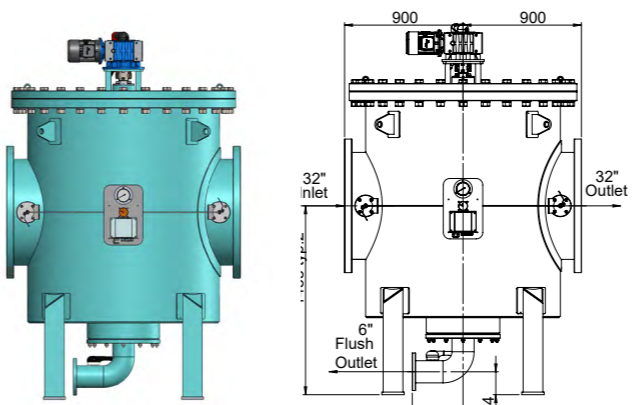
## LEVIATHAN 400

#LEV0400



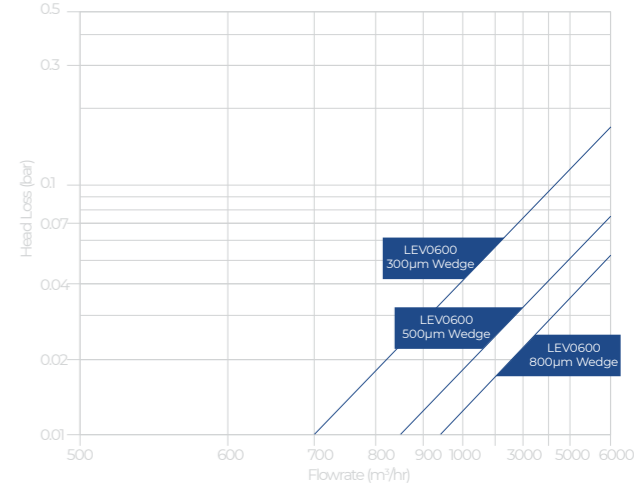
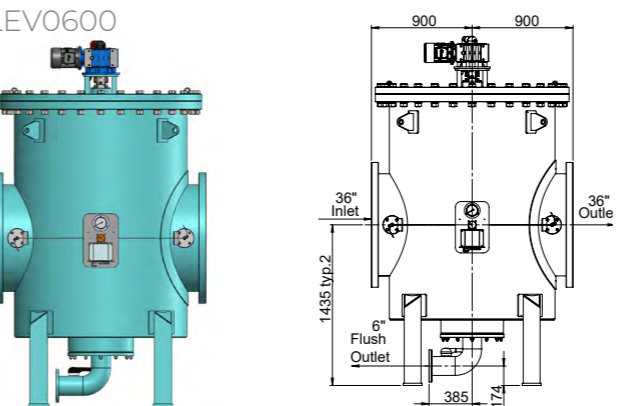
## LEVIATHAN 500

#LEV0500



## LEVIATHAN 600

#LEV0600



## LEVIATHAN 700

#LEV0700

## LEVIATHAN 800

#LEV0800

Contact us at [sales@filtersafe.net](mailto:sales@filtersafe.net) for more information



## ● OUR HEADQUARTERS

Our flagship factory. The 4,000 m<sup>2</sup> building contains our regional sales offices, R&D facilities and manufacturing and assembly plant. The facility is capable of handling very large volumes of production with an incredibly fast lead time.

[sales@filtersafe.net](mailto:sales@filtersafe.net)

## ASIA

### ● HONG KONG

Our Hong Kong manufacturing and assembly plant produces our entire line of products to the region, and is supported by a world-class steel fabrication facility.

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## OCEANIA

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● Filtersafe Offices

● Filtersafe Manufacturing Facilities



[www.filtersafe.net](http://www.filtersafe.net)



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