

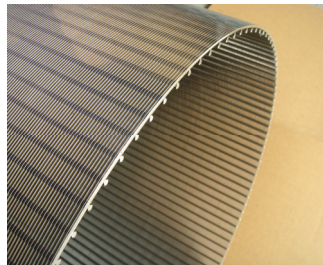


廃水処理装置および製品



Ecologix's EcoSieve self-cleaning triangular wedge wire screen was introduced more than 25 years ago and has evolved to become one of the most efficient and reliable rotary screens available.

The EcoSieve rotary drum screen system has a heavy duty, corrosion-resistant stainless steel chassis with drum screen. There continues to be many EcoSieve screens in the market operating after ten or more years of service.

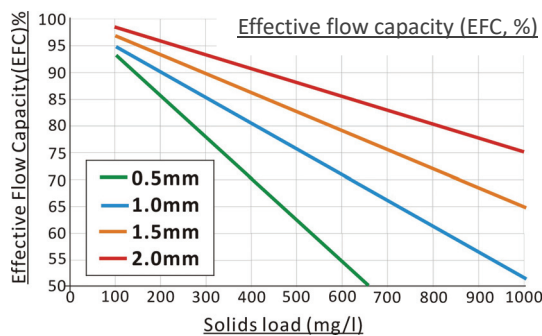


Applications:

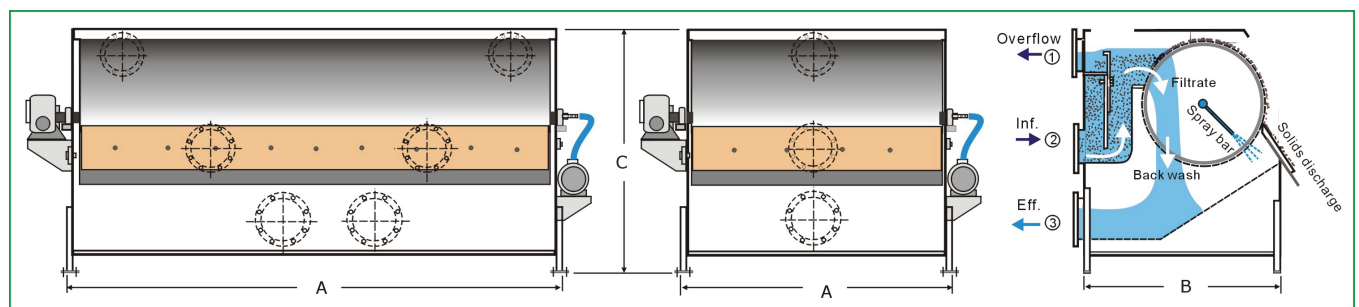
- Fruit and vegetables processing
- Snack and frozen food processing
- Brewing and winemaking processing
- Chemical processing
- Municipal waste treatment plant
- Industrial waste treatment plant

EcoSieve™ offering the following benefits:

- Triangular(V-shaped) wedge wire screen design
- Separating and Self-Cleaning same step
- Provide long years and trouble-free service.
- Automatic operation, requires little operator attention



Operation: Influent enters through a U-style head box where high flow velocities are minimized. The influent, with suspended solids, flows under a baffle and then upward and is evenly distributed across the length of the screen cylinder. The screen is constructed of stainless steel wedge wire which can effectively handle grease, discrete solids without blinding. The nature action of wastewater cascading through the screen creates a powerful backwash which results in a continuously clean screen surface. Solids captured on the face of the screen are removed by a tensioned doctor blade or rotation rigid-rubber blade. An internal water spray bar system to clean the screen. The spray bar is located within inches of the inside cylinder surface to insure maximum cleaning efficiency.



EcoSieve™ Dimensions and Technical Data

Screen slot Inches mm	Flow rate,m³/h(*)			Screen size mm		Dimensions			Drive motor	Spray pump	Flange, JIS 10K			Weight	
	0.04	0.06	0.12			A	B	C			Over.	INF	EFF	Empty	Oper.
	1.0	1.5	3.0	Dia.	Length	mm	mm	mm	kW	kW	①	②	③	kgs	kgs
RS 625-12	86	107	148	625	305	460	1220	1400	0.18	0.33	4"	4"	6"	250	425
RS 625-24	172	217	281	625	609	767	1220	1400	0.37	0.33	4"	6"	8"	350	699
RS 625-36	253	324	422	625	914	1070	1220	1400	0.37	0.75	6"	8"	10"	480	1005
RS 625-48	334	430	559	625	1,219	1375	1220	1400	0.55	0.75	8"	10"	12"	590	1335
RS 625-72	510	657	846	625	1,828	1985	1220	1400	0.55	1.10	10"	10"	12"	710	1830
RS 915-72	730	970	1350	915	1829	1985	1520	1800	0.75	1.10	4"x2	10"x2	12"x2	965	2565
RS 915-84	860	1140	1590	915	2134	2292	1520	1800	1.10	1.50	4"x2	12"x2	14"x2	1090	2930
RS 915-118	1200	1600	2240	915	2985	3157	1520	1800	1.10	1.50	6"x2	14"x2	18"x2	1245	3920

(*) Theoretical: Calculated with clean water

■ Ecologix reserves the right to alter technical data and/or to modify the product without previous notice.

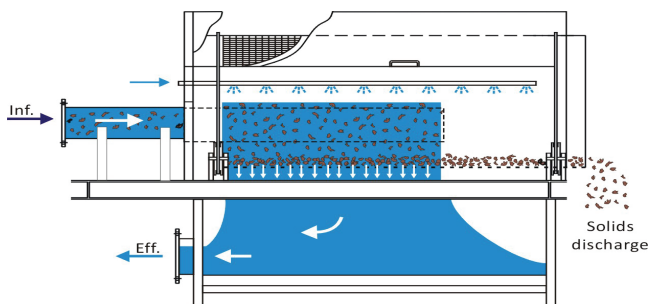
EcoSep™

Internally-Fed Rotary Drum Screen

The EcoSep™ is a rotary screen for liquid/solid separation consisting of a SUS 304 cylindrical “V” shape wedge wire screen or drilled hole screen with inner solid discharge blades arranged in a helicoids pattern. The screen cylinder features a drive and a discharge end and is driven by a gear motor, chain, and sprockets, while supported by turn-on wheels mounted on a base frame. A dual-discharge weir internally feeds the screen. Splash guards and top cover enclose the screen while liquid is discharged through the base.

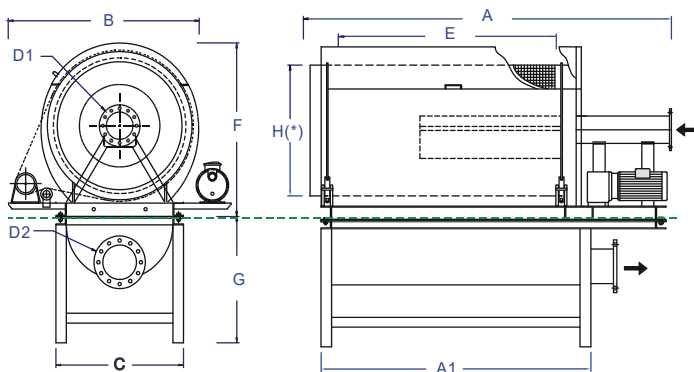


Operation: EcoSep Drum Screens consist of a perforated drum with external fixed strong ring, which transports the separated particles out of the drum. The drum rotates on trunnion wheels and is driven by a gear motor. Incoming liquid is fed into the drum through an inlet pipe, which distributes the water over a large area of the drum's interior. During passage through the drum, the liquid is screened through the drum's perforations and collects in the trough underneath. Separated particles are transported out of the drum through the screenings outlet. Dewatering continues throughout transport in the drum. To prevent clogging of the unit's perforations, all drum screens are fitted with a spray header with spray nozzles.



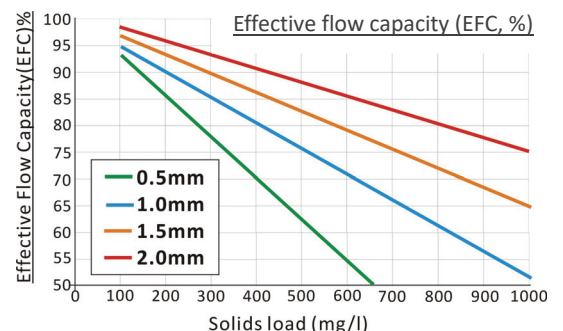
Benefits

- Triangular (V-shaped) wedge wire screen design
- Double spray bar design
- Wide range of industrial applications
- Low capital and operation cost
- Provides long years of reliable, trouble free service
- Auto. operation requires little operator attention



Applications

- Slaughterhouses, Meat-packing industry
- Poultry, Fisheries, Dairy industry
- Rendering, Gelatin manufacturing
- Sugar mills, Citrus fruit processing
- Canneries, Wineries, Breweries, Beverages
- Paper mills, Textile mills, Mining
- Municipal wastewater pre-treatment



EcoSep™ Dimensions and Technical Data

Screen opening(mm)					Dimensions(cm)								Motor(Hp)	
Model	0.5	1.0	1.5	2.0									Drum motor	Jet pump
	Flow rate,m³/h(*)				A/A1	B	C	D1	D2	E	F	G		
RF-0608-WG	55	75	90	115	154/119	99	69	6″	8″	80	85	60	1	1
RF-0612-WG	85	115	130	175	194/159	99	69	6″	8″	120	85	60	1	2
RF-0908-WG	128	170	210	270	154/119	137	91	8″	10″	80	114	80	1	1
RF-0912-WG	184	256	290	350	194/159	137	91	8″	10″	120	114	80	2	1
RF-0920-WG	300	400	450	510	274/239	137	91	10″	12″	200	114	80	2	2

■ H(*): Screen Drum Diameter: RF-06: 600mm, RF-09: 900mm

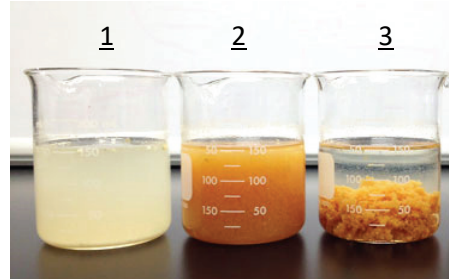
(*)Based on clean water

■ Screen and construction: SUS 304, 316 available as option

■ Dimensions subject to change without notices



The FlocXpress Pipe Flocculator is a *plug-flow reactor* type coagulation, flocculation system, consisting of a long serpentine pipe of a specific length and diameter. The term "plug-flow" refers to the fact that retention time and mixing energy is constant in any given cross section of the pipe. As such, all particles are subjected to the same amount of mixing energy for the same amount of time. This results in a highly uniform floc with excellent separation characteristics.



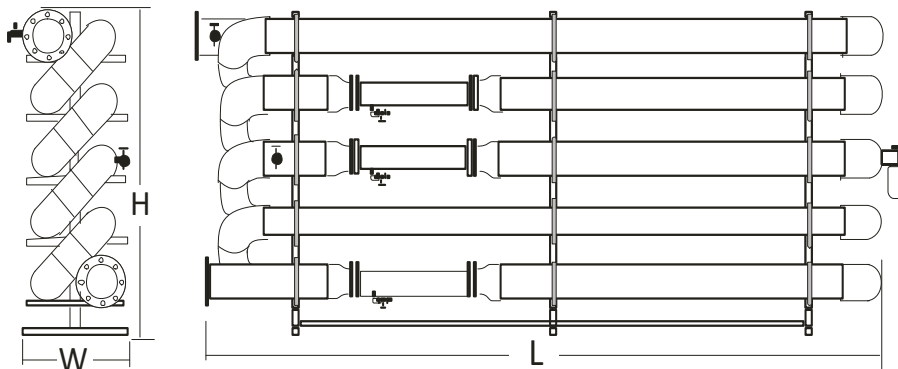
- 1 Raw water
- 2 After dosing coagulant and reaction through static mixer
- 3 After pH control, dosing flocculant and reaction through static mixer



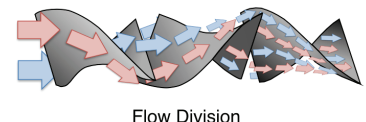
FlocXpress are delivered standard with fitting ports for chemical dosing-Coagulant (PAC/FeCl₃), Alkali/Acid, Polymer, and Sampling drain valve, pH sensor probe and coagulation, flocculation checking ports. Mixing energy and reaction energy in the Static mixer unit and in the pipe are result turbulence. For this reason, a flocculants is dosed after the coagulant and pH is completed. Floc growth takes place in the pipe after the third static mixer units. In this way a uniform, ideal floc is formed for separation in the DAF (left picture) or sedimentation tank by gravity.

Benefits

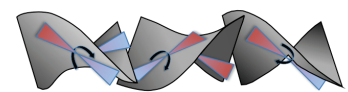
- Both Coagulation, pH adjusted and Flocculation in one unit
- Requires much less space than conventional reaction tanks
- Energy efficiency; No additional energy input required
- Little or no maintenance; No moving parts



Ecologix Static Mixer



Flow Division



Radial Mixing

Dimension and Technical data

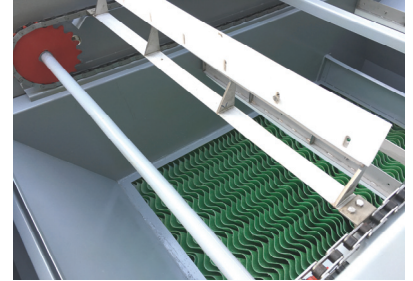
Model	Flow Rate, m ³ /h			Dimensions(cm)				Weight / Kgs	
	MIN.	AVG.	MAX.	L	W	H	Flange	Empty	Full
FX-10	3.5	10.0	18.5	270	51	92	2"	110	160
FX-30	15.5	30.0	40.5	445	75	110	3"	220	475
FX-60	38.0	60.0	75.0	445	85	130	4"	278	734
FX-100	68.0	100.0	120.0	470	115	154	6"	480	1,280
FX-150	90.0	150.0	195.0	483	115	154	8"	543	1,650
FX-200	145.0	200.0	240.0	550	135	180	8"	600	2,030
FX-250	189.0	246.0	305.0	555	135	210	10"	675	2,650
FX-300	250.0	308.0	375.0	555	143	235	10"	740	3,260
FX-400	315.0	390.0	470.0	555	143	235	12"	850	4,050

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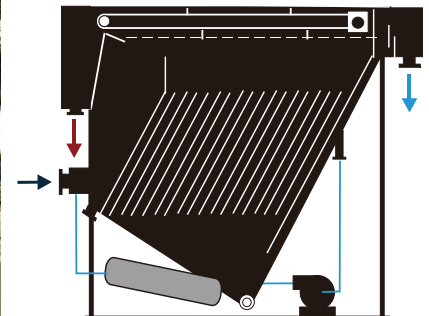
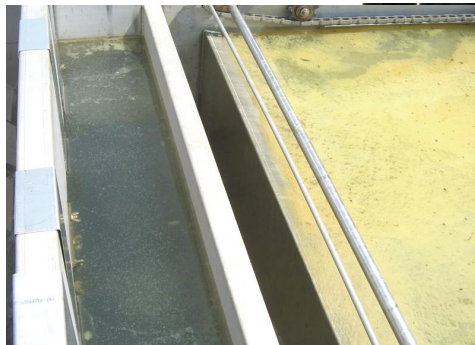
■ Custom size and flow rate available ■ Pipe material: uPVC, HDPE and Stainless steel pipe available as option



Ecologix designs utilize EcoPack parallel plates pack technology to provide more separation surface and therefore to enhance the separation efficiency of the unit. When combined with the flocculants system, the unit is capable of removing in excess of 95% of TSS/FOG(fate, oily & grease) and 80% BOD loadings.



Process: The feed water to the DAF float tank is often receiving the wastewater from flocculants system. A portion of the clarified effluent water leaving the DAF tank is pumped into a tubular reactor with few compressed air. This results in saturating the pressurized effluent water with air (milky water). The milky water is pressure released in front of the float tank and flows through a pressure reduction valve just as it enters the front of the float tank, which results in the air being released in the form of tiny bubbles (30-40 micron). The bubbles adhere to the suspended matter, causing the suspended matter to float to the surface and form a froth layer which is then removed by a skimmer. A parallel-plates unit is submerged into the tank to achieve effective separation of solids/liquid, where the water flows through the gaps between the inclined parallel-plates. The clean water that has passed through the parallel-plates rises up again through a channel to an effluent box. The floated scum is thus drained and thickened. A chain scraper skims off the top of the scum and drops it into a scum hopper.



EcoPack offers the following unique features:

- Proven technology
- Cost effectiveness
- Minimal space requirements
- Prevention and elimination of odors
- Above ground and accessible

Applications:

- Petrochemical industry
- Oil and fat refineries
- Vehicle cleaning water reuse
- Ground water clarification
- Textile, pulp and paper industry
- Industrial kitchens and canteens
- Meat, fish processing and packing
- Convenience food production

Dimension and Technical data

Model	Flow rate		Recir. Pump Hp	Dimension L x W x H(mm)	Connect Schedule-Flange			
	m ³ /h	GPM			Inlet	Scum Outlet	Effluent	Drain
EcoPack- 5	5	20	3.0	2360 x 1300 x 2200	3"	4"	4"	2" x 2
EcoPack-10	10	40	5.0	2660 x 1300 x 2200	3"	4"	4"	2" x 2
EcoPack-15	15	60	7.5	2960 x 1300 x 2200	3"	4"	4"	2" x 2
EcoPack-20	20	80	10	3260 x 1300 x 2500	4"	4"	4"	2" x 3
EcoPack-30	30	120	15	5100 x 1210 x 2890	4"	4"	6"	2" x 5
EcoPack-50	50	200	20	4630 x 2100 x 2890	6"	5"	6"	3" x 5
EcoPack-75	75	300	25	6400 x 2100 x 2890	6"	5"	6"	3" x 9
EcoPack-100	100	400	30	7000 x 2100 x 2890	8"	6"	8"	3" x 9

- Material(s): Stainless steel 304 with epoxy painted; 316 available as option
- Package included Tank, Pump, Sludge skimmer, Air Dissolved Tank system(ADT), Air regular unit and Control panel

■ Dependent on the floc concentration, the technical data and dimensions are subject to change without notice.

Fine bubble disc diffuser

- Ecoflex-235CV(Ø9.5") ■ Ecoflex-250CV(Ø 10")
- Ecoflex-316CV(Ø 12") ■ Ecoflex-350CV(Ø 14")

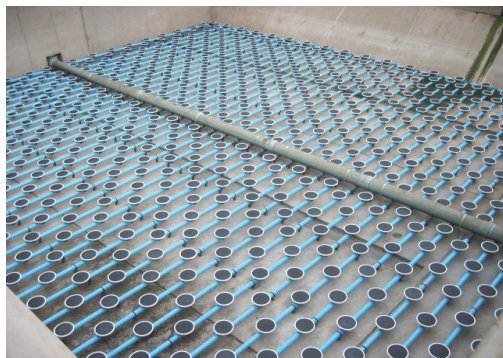


Non-return valve integrated



Perforation membrane
Made in USA

Construction: The materials of construction for both support dish and membrane diaphragm are non-corrosive and UV resistant. The support dish shall be upward facing convex plastic (Glass filled Reinforced Nylon-Dupont) for working without any acid dosing requirements and patented integrated non-return valve designed for back-flow prevention while airflow is interrupted or membrane diaphragm damaged. The membrane diaphragm which covers the dish is made of high grade EPDM resistant to the usual sewage ingredients. The membrane diaphragm shall be further fastened to the support dish with a patented U-type retaining ring (Glass filled reinforced PP) without special tools for fastening or replacement the membrane.



KP Clamp saddle for 2", 3", 4" sch, 40/80 & OD 90mm pipe

Technical Data

Diffuser type	Ecoflex-235CV	Ecoflex-250CV	Ecoflex-316CV	Ecoflex-350CV
Material - Membrane	High grade EPDM, Silicone available			
-Support dish - Retaining ring	Glass filled reinforced Nylon™ - Glass filled reinforced PP			
Diameter	9.5"(240mm)	10"(258mm)	12.5"(320mm)	14"(355mm)
Effective area	0.035m ²	0.037m ²	0.067m ²	0.079m ²
Connector-air inlet threaded	R. 3/4" NPT, male			
Airflow - Standard continuous operation	3.0~5.0m ³ /h	4.0~7.0m ³ /h	6.0~12.0m ³ /h	10.0~14.0m ³ /h
-Max. Overload/Maintenance (<15min./d)	10.0m ³ /h	14.0m ³ /h	24.0m ³ /h	28.0m ³ /h

Fine bubble disc diffuser

■ Ecoflex-520CV (Ø 20")



Perforation membrane
Made in U.S.A.



The Ecoflex-520CV, a diameter 520mm (20") big diffuser releases 1~3mm fine bubble in the wastewater treatment plant. All materials have been selected for their ability to withstand the effects of the chemical, bio-chemical agents and 0~100°C used in wastewater tank.

Air can be easily through the air control orifice and integrated non-return valve into the wastewater. The air orifice design to maintain the diffuser standard airflow input prevented the max. air enter to damage diffuser membrane. The membrane is secured onto the support dish with a stainless steel retaining ring designed to increase the tension on the point of engagement as the diffuser air rate increases.

The Ecoflex-520CV membrane diffuser makes them suitable for high strength industrial and municipal applications. They have a wide turndown capably and are ideal for timed, intermittent applications or for applications with auto dissolved oxygen control. The materials of construction for both support dish and membrane diaphragm are non-corrosive and UV resistant. The upward facing convex plastic support dish for working without any acid dosing requirements and **patented integrated non-return valve with air control orifice, designed for back-flow prevention while airflow is interrupted.** The membrane which covers the dish is made of high grade EPDM or Silicone resistant to the usual sewage ingredients.

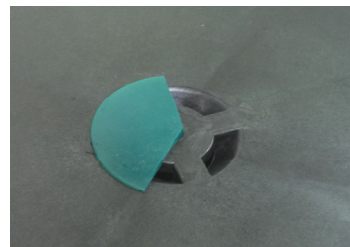
Because of their larger diffusion area compared to others, fewer diffusers are needed, reducing both diffuser and installation costs.



Clamp saddle for 4", sch. 40/80 air header



Strong support dish, glassfiber reinforced PP



Non-return valve integrated

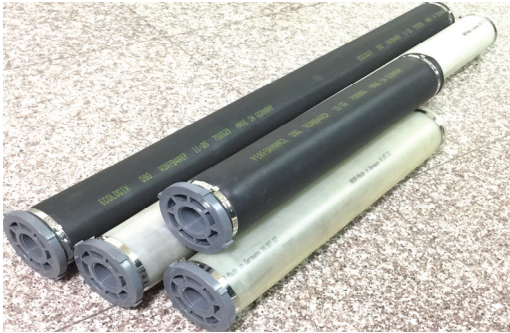


Technical Data

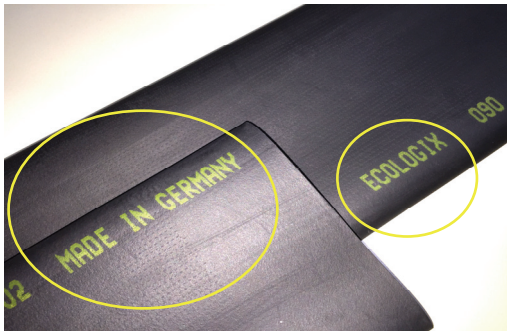
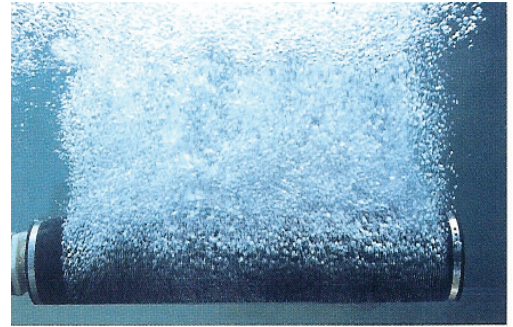
Diffuser type & Description	Ecoflex-520CV-EPDM	Ecoflex-520CV-Silicone
Membrane	High Grade EPDM	Silicone
Support dish	Glass Filled Reinforced PP	
Retaining ring	Stainless steel 304	
Total diameter	520mm(20")	
Effective slots area	0.18m ²	
Air connector threaded	R 1-1/2" NPT, Female	
Best Continuous & Intermittent airflow	12.0 – 24.0 Nm ³ /h	
Max. Overload/Maintenance (<15min./d)	32.0 Nm ³ /h	32.0 Nm ³ /h

Fine bubble tube diffuser

■ Series-9



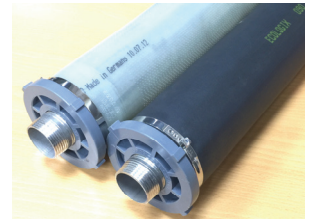
Non-return valve integrated



Perforation membrane, made in Germany by Ecologix OEM facility

STD Configuration

Diffuser Type	9-500F-EP, 9-500F-SL	9-1000F-EP, 9-1000F-SL
OD x Total length	95mm x 550mm	95mm x 1,050mm
Effective length	500mm	1,000mm
Effective area(perforation area)	0.149m ²	0.298m ²
Air inlet threaded	1-1/4" NPT, female	
Continuous airflow	6.0-9.0 Nm ³ /h	12.0-18.0 Nm ³ /h
Max./ Overload & Maintenance airflow	18.0 Nm ³ /h	36.0 Nm ³ /h



Hanging Pairs Configuration

Diffuser type	Membrane	Air header	Remarks
9-1000EP-KPH-04	EPDM	OD.114.3mm	■ Total length x Effective length: 1,290mm x 1,000mm ■ Continuous airflow: 12.0 - 18.0 Nm ³ /h
9-1000SL-KPH-04	Silicon		
9-1000EP-KPH-06	EPDM	OD.168.3mm	
9-1000SL-KPH-06	Silicon		
9-2000EP-KPH-04	EPDM	OD.114.3mm	■ Total length x Effective length: 2,290mm x 2,000mm ■ Continuous airflow: 24.0 - 36.0 Nm ³ /h
9-2000SL-KPH-04	Silicon		
9-2000EP-KPH-06	EPDM	OD.168.3mm	
9-2000SL-KPH-06	Silicon		



Bilateral Pairs Configurations

Diffuser type	Membrane	Air header	Remarks
9-1000EP-KPT-88.9	EPDM	OD.88.9mm	
9-1000SL-KPT-88.9	Silicon		
9-1000EP-KPT-90	EPDM	OD.90mm	■ Total length x Effective length: 1,290mm x 1,000mm ■ Continuous airflow: 12.0 - 18.0 Nm ³ /h
9-1000SL-KPT-90	Silicon		
9-1000EP-KPT-110	EPDM	OD.110mm	
9-1000SL-KPT-110	Silicon		
9-2000EP-KPT-88.9	EPDM	OD.88.9mm	
9-2000SL-KPT-88.9	Silicon		
9-2000EP-KPT-90	EPDM	OD.90mm	■ Total length x Effective length: 2,290mm x 2,000mm ■ Continuous airflow: 24.0 - 36.0 Nm ³ /h
9-2000SL-KPT-90	Silicon		
9-2000EP-KPT-110	EPDM	OD.110mm	
9-2000SL-KPT-110	Silicon		



Diffuser type	membrane	Air header	Remarks
9-1000EP-KPT-114.3	EPDM	OD.114.3mm	■ Total length x Effective length: 1,290mm x 1,000mm ■ Continuous airflow: 12.0 - 18.0 Nm ³ /h
9-1000SL-KPT-114.3	Silicon		
9-2000EP-KPT-114.3	EPDM		■ Total length x Effective length: 2,290mm x 2,000mm ■ Continuous airflow: 24.0 - 36.0 Nm ³ /h
9-2000SL-KPT-114.3	Silicon		



■ EP: High grade EPDM membrane ■ SL: Silicon membrane

EcoMemXpress™ Skid mounted MBR Plant スキッドマウント MBR プラント



EcomemXpress skid mounted MBR plant is a state-of-the-art pre-engineered sewage treatment system utilizing Ecologix immersed membrane module. EcomemXpress contains the process elements of secondary, tertiary and advanced wastewater treatment.

There are many EcomemXpress equipment variations, configurations, and options, all of which are designed to provide the necessary treatment for each wastewater project. Equipment selection is dependent on effluent requirements, ease of maintenance and operation, power consumption, future expansion, and initial capital costs. Above all, the EcomemXpress operating system is designed to be safe and convenient for plant operators.

EcomemXpress features and benefits:

- Pre-assembled and pre-skidded equipment package
- Self-contained modular water treatment plant
- Compact with OCU, pre-mounted, pre-piped and pre-wired.
- Factory assembled and tested to minimize installation and commissioning
- Modular add-on packages from 10cmd to 600cmd and available to customized

Around 200 units of EcomemXpress skid mounted MBR plant operation in North America, Latin America, South East Asia, Australia, South Africa, Dubai, Iran and Turkey since 2005

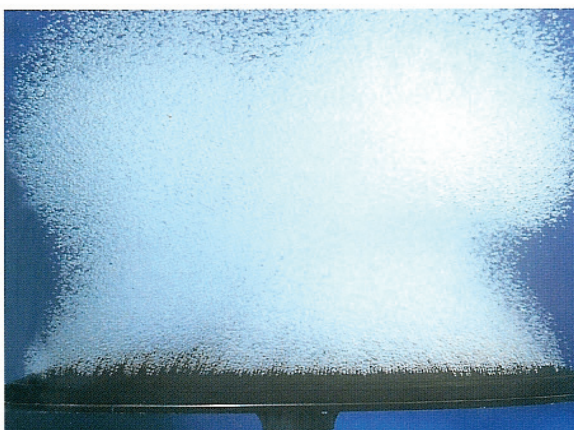


EcomemXpress Skid mounted MBR plant only use Ecologix flat sheet MBR module



廃水処理装置および製品

Wastewater Treatment Equipment & Products



Installation reference



Ecologix's management spirit

As a company, Ecologix prides itself on upholding the principles of equality, respect of human rights, and individual self-determination- these make us a preferred employer. Mutual respect is of paramount importance for a harmonious working environment. Thus, we make every effort to create and maintain a work place where every individual's dignity is respected. Through selective personnel development, we also help our employees achieve their personal and professional goals. Fair and reasonable relations with our employees are essential for the guarantee of the quality of our products.

Ecologix Product Installation Area



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