

## Standard Water Treatment Equipment

Filtration

Water softener

Pure and ultrapure water

Pure and ultrapure water  
for laboratory

Electrolyzed water

Filter

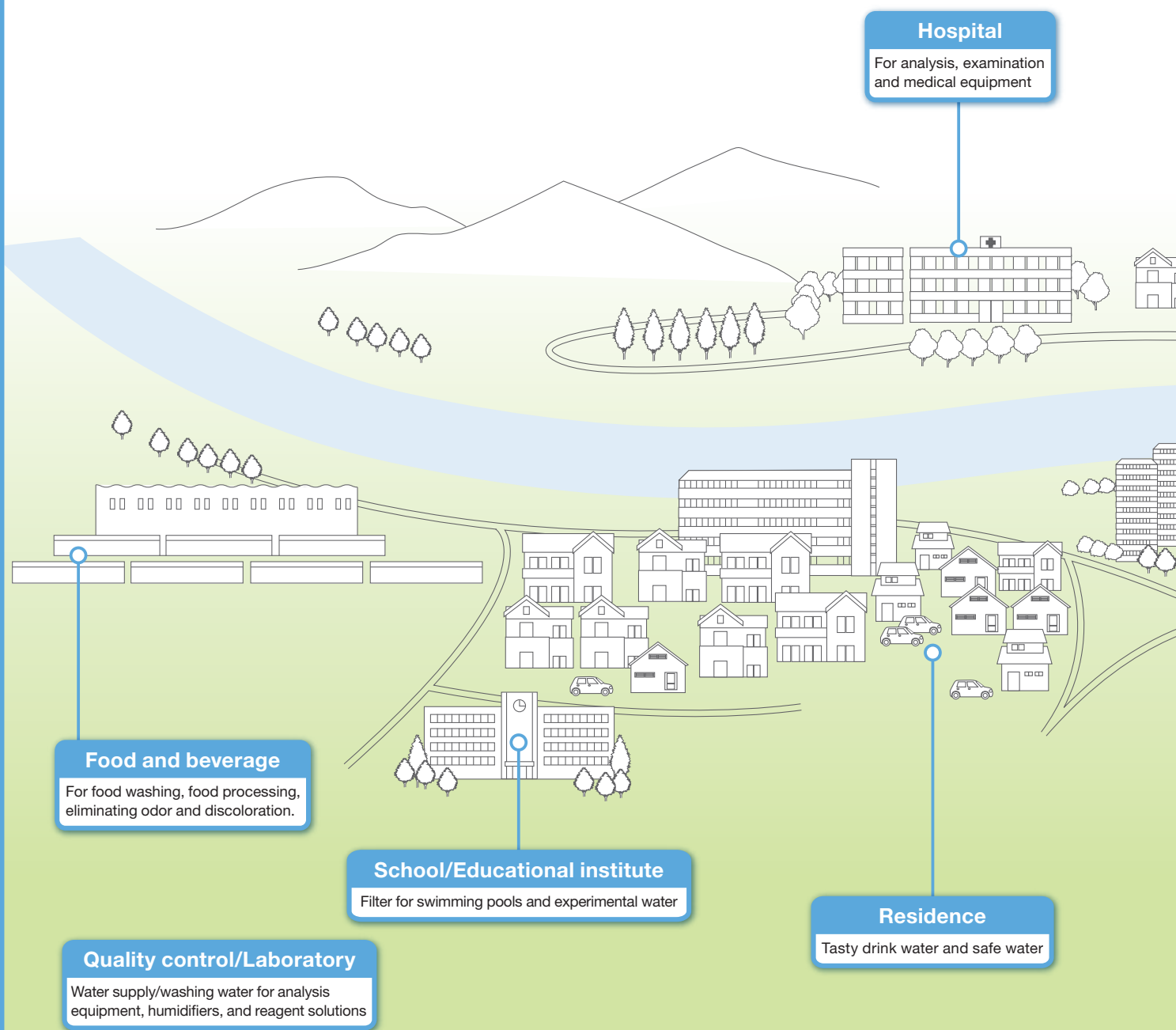
Waste water treatment

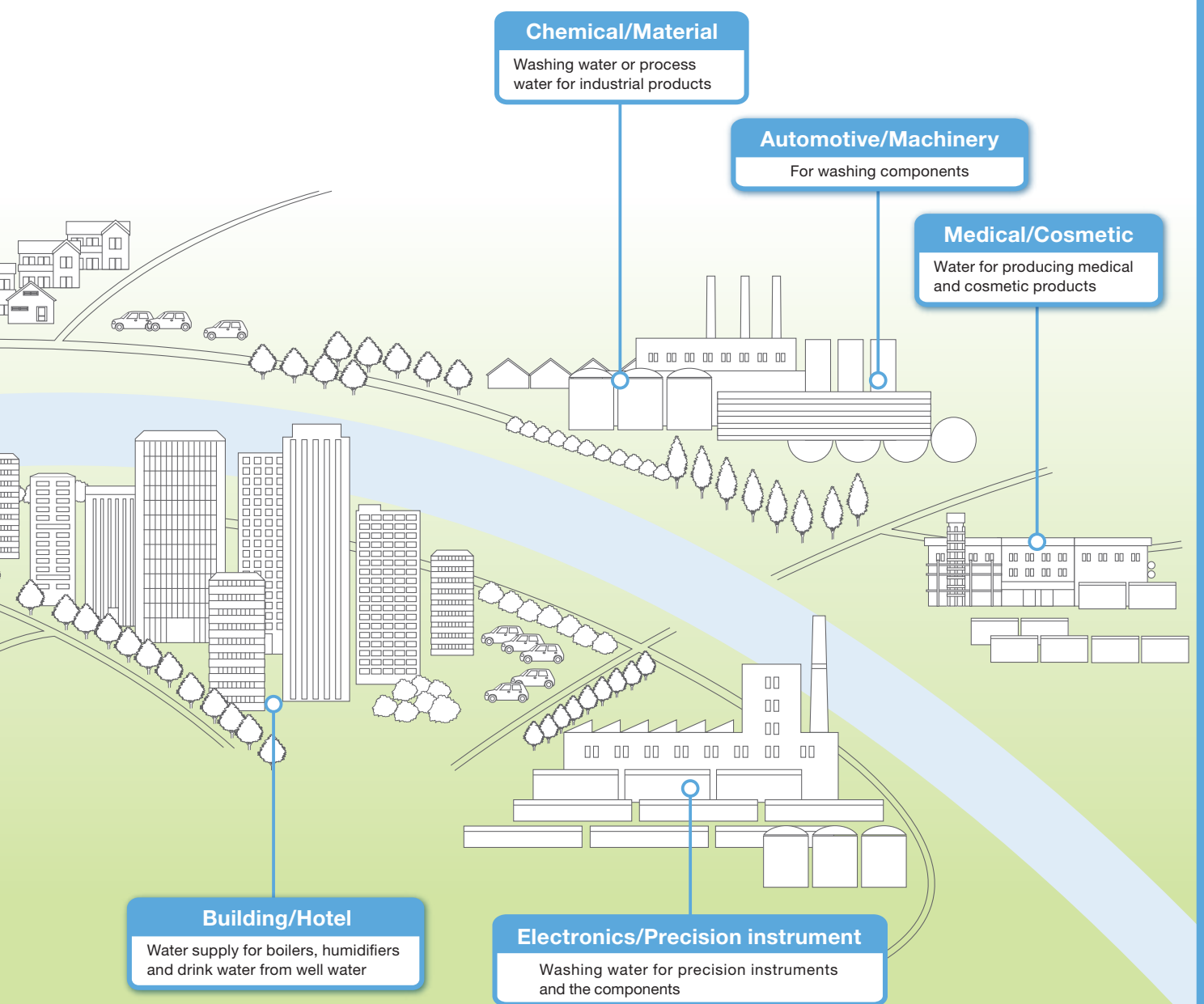
**"ORGANO" water is used in many places of our life.**

**ORGANO purifies water daily in an ecological way considering of life and global environment.**

"Water" is required in various scenes such as food and beverage processing, industrial factory, and medical and chemical research. Each location needs different levels of safety, purity, or hardness.

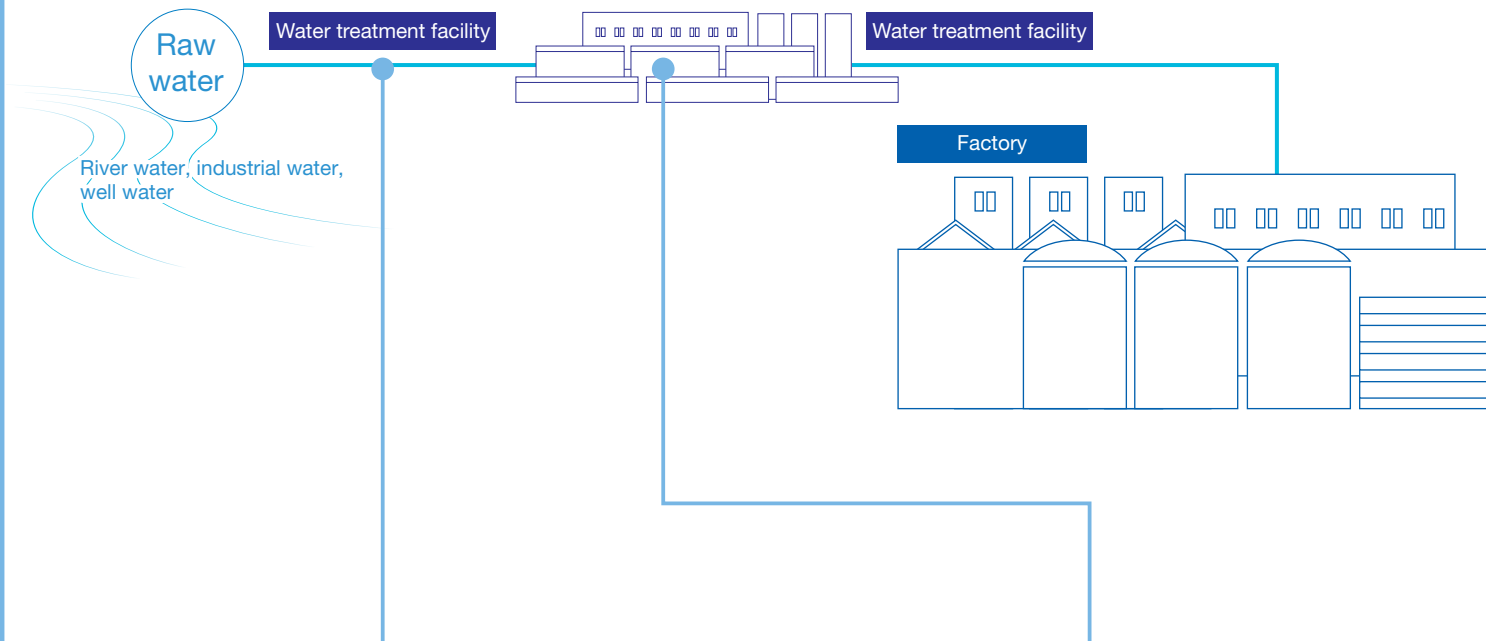
ORGANO will contribute to enriching the lives of people by "water" technology and environmentally friendly technology.





# "One stop solution" for the demands from various industries

To meet various requests from customers, ORGANO provides "one stop solution" such as filtering for manufacturing process, pure/ultrapure water for washing process or quality control, drainage, cooling water for heating power source, and boiler water.



## Filtration and water softener

Membrane filtration [LM series] .....	P7
Membrane filtration [A-MF series] .....	P8
Automatic activated carbon filtration equipment [CF-SS series] .....	P9
Automatic activated carbon filtration equipment [CA-FL series] .....	P9
Manual activated carbon filtration equipment [P-CF series] .....	P9
Standard automatic activated filtration equipment [FT/DF series] .....	P10
High flow rate filtration equipment [FH-A series] .....	P11
Coagulating sedimentation filtration equipment [HV/GF/HH series] .....	P11
Seawater filtration equipment [SW-A series] .....	P12
Seawater filtration equipment [LC-SW series] .....	P12
Seawater filtration equipment [LD-SW series] .....	P12
Pool filtration equipment [A series] .....	P13
Pool filtration equipment [SF-A-B series] .....	P13
Nitrate Nitrogen removal equipment [NA-FL series] .....	P13
Automatic water softener equipment [SA-ZW series] .....	P16
Automatic water softener equipment [SA-A-K/SA-B-K series] .....	P16
Automatic water softener equipment [SA-FL series] .....	P17

### UNIT OPTION

Laser scattering type highly sensitive turbidity meter [OT series] .....	P7
Portable residual chlorine meter [OR-54] .....	P13

## Pure and ultrapure water

Double pass RO unit [RO series] .....	P20
EDI unit [EY-XP/HF series] .....	P20
Final polishing unit [FP series] .....	P21
EDI pure water production equipment [SD-XP/HF series] .....	P22
EDI pure water production equipment [SD-SG series] .....	P23
Cabinet type pure water production equipment [PR-SG/FC series] .....	P24
Cabinet type pure water production equipment [PR-SG series] .....	P25
Synthetic polymer-based composite membrane RO system [RO-FC series] .....	P26
Synthetic polymer-based composite membrane RO system [RO-C series] .....	P26
Synthetic polymer-based composite membrane RO system [DR-A series] .....	P27
Heat exchange unit [HE-S series] .....	P27
Membrane decarbonation equipment [MD-A series] .....	P27
Cartridge pure water production equipment [G series] .....	P28
Automatic pure water production system [AM-C/AM series] .....	P30
Manual pure water production system [HM series] .....	P31
2 beds type pure water production system for high purity [MG-S series] .....	P32
High performance pure water production system [SG-X series] .....	P32
Unit type ultrapure water production system [UC series] .....	P33
Cabinet type ultrapure water production equipment [FP series] .....	P34

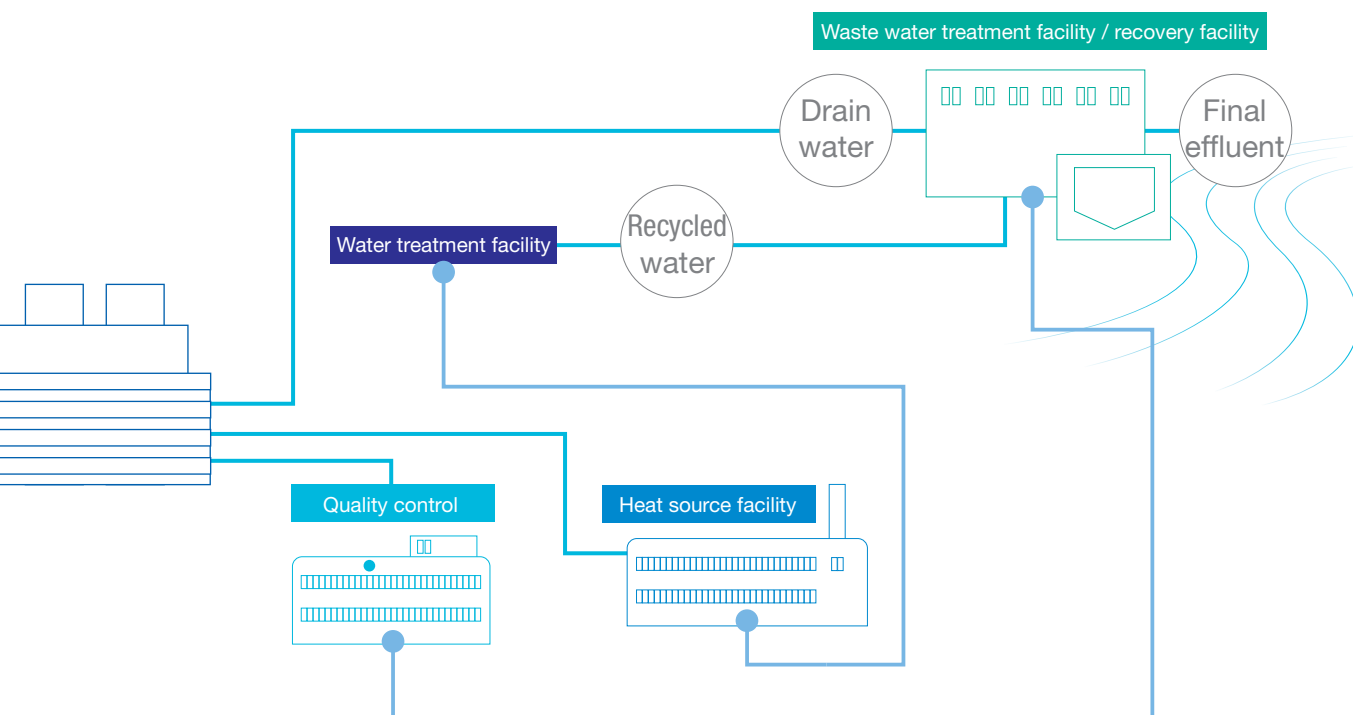
### Related products

IER cartridge .....	P29
Polishing cartridge [PF-P] .....	P29
Desktop type cartridge purifier [G-1 HB] .....	P29
Raw water supply unit [SP-MB series] .....	P31
H-20 .....	P31

### UNIT OPTION

Water quality indicator [RG-12/RG-8A/MH-9] .....	P29
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## Pure and ultrapure water for laboratory

Desktop type pure/ultrapure water production equipment [FP-PR- $\alpha$ series] .....	P36
Cabinet type ultrapure water production equipment [ $\omega$ series] .....	P37
Desktop type pure water production equipment [PR-A series] .....	P38
Desktop type pure water production equipment [MU-15] .....	P38
Filter for removing micro particles and bacteria [Capsule filter] .....	P39

## Waste water treatment

Biological membrane waste water treatment equipment .....	P52
Membrane bioreactor system .....	P53
Flowed carrier anaerobic treatment system .....	P53
High speed flocculator .....	P54
High-rate dissolved air floatation system [H-D-AF] .....	P54

## Electrolyzed water

Alkali electrolyzed water production equipment .....	P40
Slightly acid electrolyzed water production equipment .....	P40

## Filter

List of filter cartridges .....	P44
Drawing of cartridge filters .....	P46
Hydrophilic asymmetric polyestersulfone membrane filter [HP type] .....	P47
Low elution type all polypropylene filter [EU type] .....	P47
[PF-R series] .....	P48
Pure water filter [PF cartridge] .....	P48
Activated carbon filter [PF-RC type] .....	P48
Stainless steel filter housing [SH series] .....	P49
Stainless steel high flow and large scale filter housing [SK series] .....	P50
Sanitary stainless steel housing [SH-S series] .....	P50
High functioning polypropylene filter housing [PH-A series] .....	P51
Multi purpose plastic filter housing [PF-III type] .....	P51
Multi purpose plastic filter housing [PF-VI type] .....	P51

## Other equipment

Japanese distilled spirit (Shochu) purification equipment .....	P41
Multi-stacked tray type aerator .....	P42
Organic chlorine compounds removal equipment .....	P42
Experimental ion exchange resin column .....	P43
Homogenizer for bacteria test .....	P43

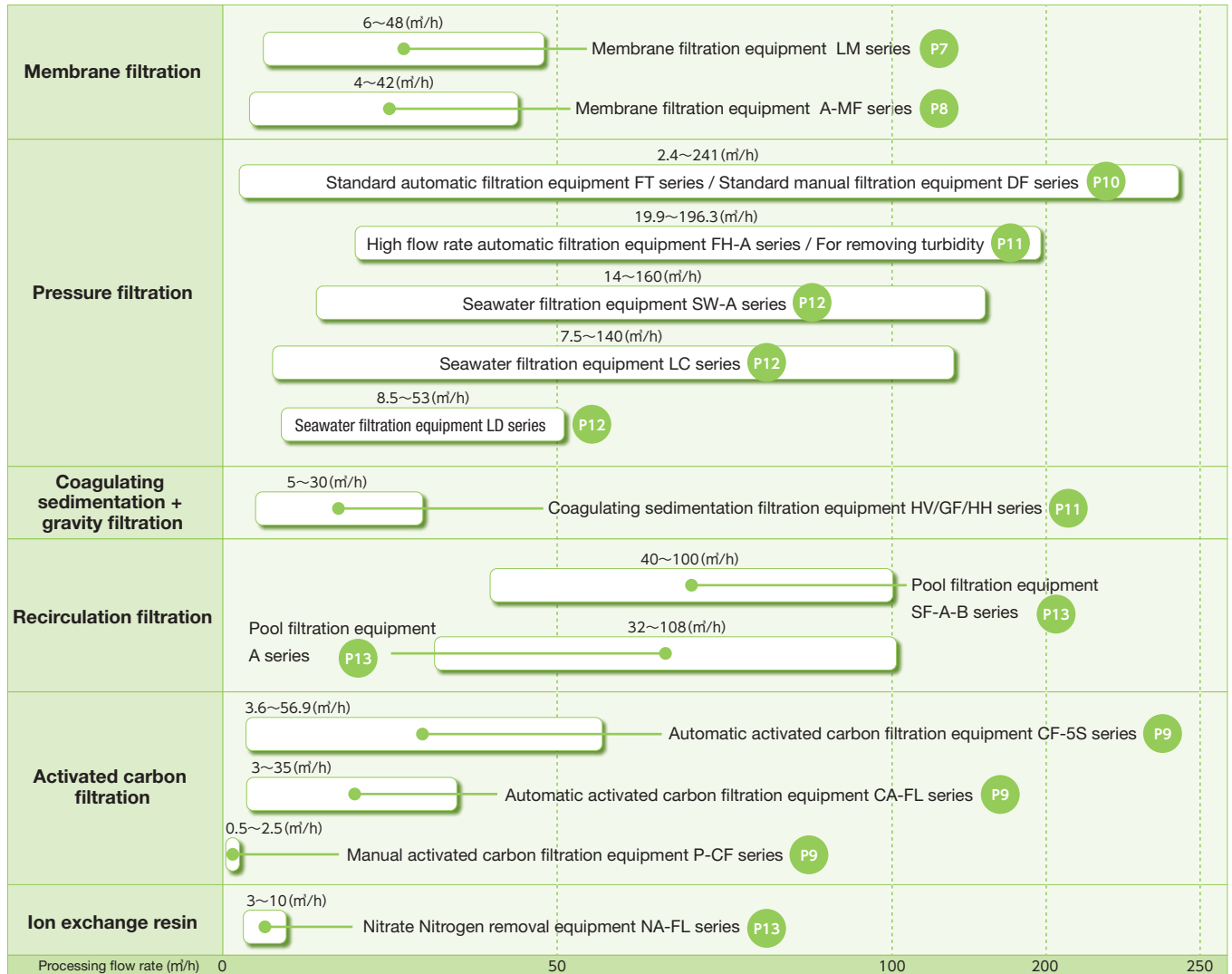
## Related equipment

Ion exchange resin/Synthetic adsorbent .....	P43
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# Filtration

## Various models and precise analysis

ORGANO provides various models of filtration equipment which produces suitable water for all treatment purposes such as food industry, dyeing industry, paper mill industry, electronics industry where Iron, Manganese and colors are critical. To select most suitable equipment, precise analysis of raw water is essential. In ORGANO's analysis center, our experienced and skillful staff is engaged in advanced analysis using cutting-edge technology.



## Selecting table by different purposes

●Excellent ○Good ▲Please contact us

Filtration object	Membrane filtration			Activated carbon		Standard filtration					High flow rate filtration					Coagulating sedimentation	Seawater filtration			Others		
	LM-DW	LM-MS	A-MF	CF-5S	CA P-CF	BF	FM	FP	PM	CF	FH-P	FH-PM	FH-M	FH-C	FH-F	HV/GF/HH	SW-A	LC	LD	A	SF-A-B	NA
Iron	●	●	●					●	●		●	●				●			▲			
Manganese		●					●		●			●	●		○	●			▲			
Suspended solid/ Turbidity	●	●	●	○	○	●	○	○	○	○	○	○	○		○	●	●	●	●	●	●	
Organic matter				●	●					●				●		○						
Odor/Taste/ Residual chlorine				●	●					●				●		○						
Discoloration by humic material	○	○	○	○	○	○				○				○	●	○						
Volatile organic compound				○	○					○				○								
Trihalomethane				○	○					○				○								
Nitrate nitrogen/ Nitrite nitrogen																						●

# Membrane filtration equipment

## LM series

## General

Ideal filtration for drink water from well water and industrial water

## Application

Electronics

Automotive/Machinery

Food/Beverage

Medical/Cosmetic

Chemical/Material

Hospital

Building/Hotel etc

Drink water from ground water(private water), Removing suspended solid in well water,  
Pretreatment for pure water production and RO equipment, Removing fine particles in tap water

## Feature

### Stable quality of treated water

Turbidity 0.1 (NTU) is stably achieved as suspended solids are physically removed through UF.

### Save chemical usage

Flocculants and pH adjusting are not required which are necessary for general sand filtration system. Easy maintenance without troublesome chemical refills or controls.

### Save space

Compact footprint comparing with general sand filtration system by eliminating large size backwash water.

### Good usability

Wide color touch panel(8.4inch and with CF memory card). Usability and visibility improved from conventional models.



### Display of touch panel



Operating condition is easily recognized as the color of membrane module changes upon operating situations.



Historical trend graph shows easily understandable operating condition (6 month operation data)

## Specification

Model	Processing flow rate (m³/h)	Installation space (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Operating pressure (MPa)	Quality of treated water
		W	D	H					
LM-6000-DW	6	1500	1162	2058	390	490	AC100	0.5	Turbidity 0.1 (NTU)
LM-012K-DW	12	1815	1228		480	660			
LM-024K-DW	24	2320	1224		680	980			
LM-036K-DW	36	3100	1283	880	1330				
LM-048K-DW	48	3790	1392	2300	1110	1700			
LM-6000-MS-06	6	3020	1162	2479	785	995			Turbidity below 0.1(NTU) Iron: below 0.3mgFe/L Manganese: below 0.05mgMn/L
LM-6000-MS-12※		3335	1300		875	1165			
LM-012K-MS-12	12	3485		1075	1445				
LM-012K-MS-24※		3990		1260	1275	1765			
LM-024K-MS-24		24	4640	1317	1765	2465			
LM-024K-MS-36※	5420		1965		2815				

Upper limit of TOC of raw water depends on process water amount. It is 2mgC/L if the process water amount is low while it is 0.5mgC/L if it is high  
(※Marked models support high TOC. TOC 1.5-2mgC/L can be processed with max process water amount.).

Indoor Outdoor

### Condition for raw water

Temperature	5~30℃
Pressure	0.3MPa
Turbidity	Below max 5 (NTU) for constant use (below max 20 for urgent case ※:applicable to industrial treated water)
Iron	Below 1.0mgFe/L
Manganese	Below 0.05mgMn/L
TOC	Below 2mgC/L

※Spec of removal of highly concentrated iron and Manganese (LM-MS series) Iron: 2.0mg/Fe/L, Manganese: 1.0mgMn/L

## Option

### Laser scattering type highly sensitive turbidity meter OT series

- Safety purpose for food and beverage industry
- Turbidity control (Below 0.1 NTU) for filtered water output
- Membrane rupture detecting sensor

High sensitivity / Simple maintenance / Low running cost



Highly sensitive turbidity meter  
OT-201N

● The processing flow rate depends on the quality of raw water. ● The installation space does not include space for auxiliary equipment (raw water pump, backwash pump and chemical injection device etc.) and maintenance.

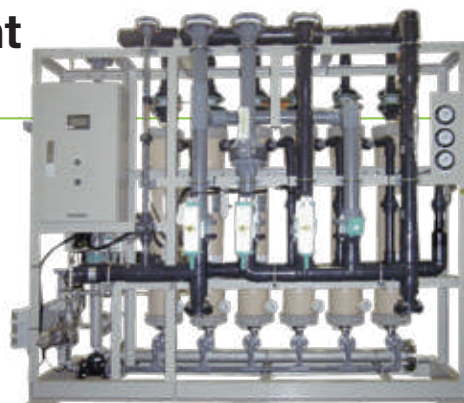
# Membrane filtration equipment

## A-MF series

### General

Electronics    Automotive/Machinery    Food/Beverage  
 Medical/Cosmetic    Chemical/Material    Hospital    Building/Hotel    etc

Advanced process of surface and industrial water, recycle of fine washing water and treated water for food manufacturing, pre-treatment for pure water production, RO and recycle of waste water



### Feature

#### Stable quality of treated water

Assure the quality irrespective of the fluctuation of raw water quality.

#### Save chemical usage

Reduce chemical consumption without the usage of flocculation agent.

#### Ideal membrane for chemical resistance

PVDF membrane excels in physical strength and chemical resistance. A-MF series are equipped with highly crystallized PVDF membrane specialized in durability, and enables highly frequent and loaded washing (air scrubbing + NaClO backwash) and contributes to running cost reduction.

### Specification

Model	Processing flow rate (m³/h)	Installation space (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Max power supply capacity (VA)	Operating pressure (MPa)
		W	D	H					
A-MF-01	4~7	1450	600	1950	400	470	AC200 ×Single phase	500	0.1~0.3
A-MF-02	8~14	1900		2000	520	650			
A-MF-03	12~21	2200			600	800			
A-MF-04	16~28	2800	1000		800	1050			
A-MF-05	20~35	3000			900	1250			
A-MF-06	24~42	3000			1000	1400			

Indoor

Indoor

### Option

#### Laser scattering type highly sensitive turbidity meter OT series

- Safety purpose for food and beverage industry
- Turbidity control (Below 0.1 NTU) for filtered water output
- Membrane rupture detecting sensor

High sensitivity / Simple maintenance / Low running cost



Highly sensitive turbidity meter OT-201N

● The processing flow rate depends on the quality of raw water. ● The installation space does not include space for auxiliary equipment (raw water pump, backwash pump and chemical injection device etc.) and maintenance.

## Activated carbon filtration equipment

### Application

Electronics

Automotive/Machinery

Food/Beverage

Medical/Cosmetic

Chemical/Material

Hospital

Building/Hotel

etc

Removal of organic substances and residual chlorine from city water, removal of odor and discoloration from drink water, pre-treatment for pure water filtration equipment and RO equipment

## Automatic activated carbon filtration equipment CF-5S series

### General

### Stable bacteria management with heat sterilization function

### Feature

#### Excellent durability

SUS316 is used for filtration body while SUS304 is used for main piping.

#### Prevent the growth of bacteria

Equipped with heat sterilization function with steam.

#### Safe material

Can select suitable activated carbon to various purposes.

### Specification

Model	Processing flow rate (m³/h)			Installation space (mm)			Product weight (kg)	Operating weight (kg)	Operating pressure (MPa)	Backwash flow rate (m³/h)	Filtration tower dimension (mm)
	LV20	SV10	SV20	W	D	H					
CF-5S-03	8.8	3.6	7.2	980	1440	2800	340	1380	0.5 (40°C) 0.3 (90°C)	8.8	φ750×H1565
CF-5S-04	14.2	5.7	11.4	1050	1650	2850	500	2540		14.2	φ950×H1870
CF-5S-05	22.6	9.1	18.2	1340	1930	3180	730	4020		22.6	φ1200×H1870
CF-5S-06	40.2	16.1	32.2	1730	2420	3470	1080	7040		40.2	φ1600×H1870
CF-5S-07	56.9	22.8	45.6	2000	2660	3580	1480	10980		56.9	φ1904×H1870

Indoor Outdoor



## Automatic activated carbon filtration equipment CA-FL series

### General

### Equipped with automatic backwash function

### Feature

#### Automatic backwash method

Auto start of backwash/wash by setting interval or time of backwash.

\*Line up with regenerative start mode by signal input from outside. \*Manual mode of backwash can be also selected.

#### Easy to handle by adopting single automatic valve

- Equipped with digital timer.
- Automatic alternating operating function achieves 24-hour continuous water output.

### Specification

Model	Processing flow rate (m³/h)	Installation space (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Operating pressure (MPa)	Backwash flow rate (m³/h)	Filtration tower dimension (mm)
		W	D	H						
CA-3000-FL	3	595	470	1689	60	180	AC100	0.15~0.40	1.8	φ349×H1398
CA-6000-FL	6	785	638	1640	100	330			3.8	φ491×H1370
CA-010K-FL	10	886	685	1926	110	470			4.8	φ555×H1721
CA-015K-FL	15	1027	778	2239	160	720			5.9	φ611×H1918
CA-025K-FL	25	1478	1581	2500	420	1110			9.6	φ781×H1895
CA-035K-FL	35	1624	1584	2500	460	1750			13.6	φ932×H1920

Indoor



## Manual activated carbon filtration equipment P-CF series

### General

### Backwash by simple operation. Long life and low running cost are achieved

### Feature

- Remove residual chlorine and organic substance in raw water.
- Easy operation with new multi-port valves (single operation valves) and secure backwash operation.

### Specification

Model	Processing flow rate (L/h)	Product weight (kg)	Operating weight (kg)	Backwash flow rate (L/h)	Installation space (mm)
P-CF-0500	500	10	20	350	φ260×H865
P-CF-1250	1250	30	50	740	φ345×H1220
P-CF-2500	2500	50	125	1250	φ415×H1497

Indoor



● The processing flow rate depends on the quality of raw water. ● The installation space does not include space for auxiliary equipment (raw water pump, backwash pump and chemical injection device etc.) and maintenance.

# Standard automatic filtration equipment

FT-0A0/0E0 series

# Standard manual filtration equipment

DF-0M0 series

## General

Standard product with many experiences in filtration of well water and industrial water

## Application

Electronics

Automotive/Machinery

Food/Beverage

Medical/Cosmetic

Chemical/Material

Hospital

Building/Hotel etc

Removal of Fe/Mn/turbidity/chlorine from well water, industrial water and river water

## Feature

### Wide selection of models

Suitable equipment can be selected upon water quality and processing purpose.

### Save space

Compact design to reduce installation space.

### Short lead time and low cost

The established mass production systems achieve short lead time and low cost.

### Save operation work

By using automatic valves for major parts, operating work of equipment control is reduced (FT-0A0/0E0 series). Specs of automatic valves are selected upon customer request.

※0A0 type: air operation valve, 0E0 type: electric operated valve



## Specification

Model	Processing flow rate (m/h)				Installation space (mm)			Product weight (t)	Operating weight (t)				Operating pressure (MPa)	Air backwash flow rate (m/min)	Backwash flow rate (m/h)				Filtration tower dimension (mm)
	BF	FM	FP PM	CF	W	D	H		BF	FM	FP PM	CF		BF	BF FM	FP PM	CF		
FT-0500 DF-0500	2.4	3.9	2.9	3.9	900	1100	2330	0.17	0.65	0.59	0.63	0.53	0.3	0.16	5.9	4.9	3.9	φ500×1545	
FT-0600 DF-0600	3.4	5.7	4.2	5.7	900	1200	2370	0.20	0.91	0.81	0.87	0.70		0.24	8.5	7.0	5.7	φ600×1545	
FT-0750 DF-0750	5.3	8.8	6.6	8.8	1200	1300	2455	0.32	1.81	1.69	1.73	1.52		0.37	13.3	11.0	8.8	φ750×1565	
FT-0950 DF-0950	8.5	21.2	14.2	14.2	1300	1500	2745	0.46	2.54	2.34	2.49	2.08		0.59	21.2	17.7	14.2	φ950×1870	
FT-1200 DF-1200	13.6	33.9	22.6	22.6	1700	1800	2880	0.59	5.14	4.74	5.00	4.35		0.94	33.9	28.3	22.6	φ1200×1870	
FT-1600 DF-1600	24.1	60.3	40.2	40.2	1800	2300	3145	0.90	9.12	8.32	8.74	7.62		1.67	60.3	50.3	40.2	φ1600×1870	
FT-1900 DF-1900	34	84.9	56.6	56.6	2200	2300	3430	1.25	11.79	10.72	11.32	9.76		2.36	84.9	70.8	56.6	φ1900×1870	
FT-2400 DF-2400	54.2	136	90.4	90.4	2700	3200	3625	2.86	17.10	15.42	16.39	13.88		3.77	136	113	90.4	φ2400×1884	
FT-2800 DF-2800	73.8	185	123	123	3100	3600	3810	3.68	25.29	23.03	24.35	20.94		5.13	185	154	123	φ2800×1884	
FT-3200 DF-3200	96.5	241	161	161	3500	4200	4160	5.25	34.54	31.71	33.44	28.96		6.7	241	201	161	φ3200×1902	

Indoor

Outdoor

● The processing flow rate depends on the quality of raw water. ● The installation space does not include space for auxiliary equipment (raw water pump, backwash pump and chemical injection device etc.) and maintenance.



## Automatic filtration equipment

### Application

Electronics

Automotive/Machinery

Food/Beverage

Medical/Cosmetic

Chemical/Material

Hospital

Building/Hotel

etc

Removal of Fe/Mn/turbidity/chlorine from well water, industrial water and river water

## High flow rate automatic filtration equipment

### FH-A series

### General

Ideal for high flow processing with space saving design

### Feature

- The flow rate processing is 1.6-2 times higher than conventional pressure filtration equipment.
- Footprint 30% smaller than conventional pressure filtration equipment with similar process flow rate. Efficient utilization of the spaces.
- The backwash water mount is cut by 30-50% comparing to conventional pressure filtration equipment. Reduce running cost.
- Can select the most suitable model upon water quality/purposes.



### Specification

#### FH-A series

Model	Processing flow rate (m <sup>3</sup> /h)			Installation space (mm)			Product weight (t)			Operating weight (t)			Operating pressure (MPa)	Backwash flow rate (m <sup>3</sup> /h)			Filtration tower dimension (mm)
	FH-P	FH-M	FH-C	W	D	H	FH-C	FH-M	FH-P	FH-C	FH-M	FH-P		FH-C	FH-M	FH-P	
13A	53.1	19.9		1500	1900	3900	3	3.5	3.9	5.8	6.1	6.2	0.3	39.8	46.5	39.8	φ1300×2438
17A	90.8	34		1800	2300	4000	5.1	5.9	6.6	10.1	10.5	10.7		68.1	79.4	68.1	φ1700×2438
21A	138.4	52		2100	2800	4300	8.1	9.3	10.3	15.8	16.5	16.6		103.8	121.2	103.8	φ2100×2438
25A	196.3	73.6		2500	3200	4700	12.5	14.2	14.7	22	24.9	25.7		147.3	171.8	147.3	φ2500×2438

For FHC, the values are based on the spec of chlorine removal

Indoor Outdoor

#### For removing turbidity

Model	Processing flow rate (m <sup>3</sup> /h)	Installation space (mm)			Product weight (t)	Operating weight (t)	Operating pressure (MPa)	Backwash flow rate (m <sup>3</sup> /h)	Filtration tower dimension (mm)
		W	D	H					
13A	39.9	2800	2850	4900	4.7	7.6	0.3	46.6	φ1300×2860
17A	68.1	3050	3250	4950	7.9	13.0		79.5	φ1700×2860
21A	103.8	3450	3800	5150	12.5	20.5		121.1	φ2100×2860
25A	147.3	4050	4400	5250	18.2	30.0		171.9	φ2500×2860

Indoor Outdoor

## Coagulating sedimentation filtration equipment

### HV/GF/HH series

### General

Ideal for processing highly concentrated turbidity, Iron, and Manganese

### Feature

- Ideal filtration for processing highly concentrated turbidity/iron/Manganese. Can select most suitable equipment depending on water quality or purpose.
- Vertical type (HV series) for limited space and horizontal type (HH series) for limited height are recommended.
- As each part is unitized, easy to transport by truck and install in factory.
- Automatic operation with reduction of troublesome maintenance work.



### Specification

#### HV/GF series

Model	Processing flow rate (m <sup>3</sup> /h)	Coagulating sedimentation HV series					Gravity filtration GF series				
		Installation space (mm)			Product weight (t)	Operating weight (t)	Installation space (mm)		Product weight (t)	Operating weight (t)	Backwash flow rate (m <sup>3</sup> /h)
		W	D	H			Diameter	H			
5	5	1120			1.3	6.7	1030		0.55	4.5	25
10	10	1580			1.9	12.3	1460		0.8	8.8	50
20	20	φ2650		4200	3.0	24.5	2060		1.25	17.5	100
30	30	φ3150			3.4	32.5	2520		1.65	25.3	150

#### HH series (integrated model of coagulating sedimentation and gravity filtration)

Model	Processing flow rate (m <sup>3</sup> /h)	Installation space (mm)			Product weight (t)	Operating weight (t)	Backwash flow rate (m <sup>3</sup> /h)
		W	D	H			
5	5	4100	2700	2850	2.3	13	25
10	10	5700	3600		2.95	21	50
20	20	8200	4300	2550	4.05	41	100

Indoor Outdoor

Indoor Outdoor

● The processing flow rate depends on the quality of raw water. ● The installation space does not include space for auxiliary equipment (raw water pump, backwash pump and chemical injection device etc.) and maintenance.

## Seawater filtration equipment

### Application

Food/Beverage Fishery processing etc Seawater filtration for fishing harbor, fish culture facility and aquarium

## Seawater filtration equipment

### SW-A series



### General

Long time operation with excellent corrosion resistance

### Feature

#### Effective utilization of whole filters

Adopting 2 layers filtration method enables the high utilization of whole filters and also long time operation with less frequent backwash.

#### Prevent mad balls

Using surface cleaning system to prevent (※) mad balls (a lump of filter material).

※1 Filters form a lump by plankton in sea water tied with filters.

#### Excellent corrosion resistance

Filtration main body is made of copper plate, salt-tolerant coating, and FRP lining material. Internal parts are made of FRP.

#### Easy installation

Compact piping in front of body. Can scramble from right side or left side for inlets and outlets.

### Specification

Model	Processing flow rate (m <sup>3</sup> /h)	Installation space (mm)			Product weight (t)	Operating weight (t)	Operating pressure (MPa)	Backwash flow rate (m <sup>3</sup> /h)	Surface washing flow rate (m <sup>3</sup> /h)	Filtration tower dimension (mm)	
		W	D	H							
SW-A-0950	14	1900	1700	3400	2.1	3.9	0.3	21	3.6	φ950×H2300	Indoor Outdoor
SW-A-1200	23	1950	1850	3500	3.4	6.1		34	5.7	φ1200×H2300	
SW-A-1600	40	2300	2300	3700	6	11.3		60	10	φ1600×H2300	
SW-A-1900	57	2570	2750	3850	8.6	16.3		85	14.2	φ1900×H2300	
SW-A-2400	90	3800	3400	4150	14.3	27.1		136	22.6	φ2400×H2300	
SW-A-2800	123	3400	3800	4500	19.8	37.8		184	31	φ2800×H2300	
SW-A-3200	160	4000	4500	4700	27	51.4		242	40.2	φ3200×H2300	

## Seawater filtration equipment

### LC-SW series

### General

FRP automatic filtration equipment with excellent corrosion and weather resistance

### Feature

#### Excellent corrosion resistance

Using FRP material for main body, it is highly corrosion resistant and can be used long time stably.

#### Excellent weather resistance

Deforms and discolorations can be prevented even for outdoor usage. It can be constantly used in a clean condition.

#### Light weight

FRP main body enables lightweight to transport into factory.



### Specification

Model	Processing flow rate (m <sup>3</sup> /h)	Installation space (mm)			Product weight (t)	Operating weight (t)	Operating pressure (MPa)	Backwash flow rate (m <sup>3</sup> /h)	Filtration tower dimension (mm)	
		W	D	H						
LC-7500-SW	7.5	1200	1450	2600	0.15	1.4	0.29	11.5	φ700×H1800	Indoor Outdoor
LC-012K-SW	12	1350	1700	2750	0.4	2.4		19	φ900×H1800	
LC-022K-SW	22	1400	2050	2950	0.65	4.3		34	φ1200×H1800	
LC-040K-SW	40	1800	2500	3100	1.1	7.8		60	φ1600×H1800	
LC-056K-SW	56	2100	2900	3300	1.6	11.3		85	φ1900×H1800	
LC-075K-SW	75	2900	3400	3400	2.4	15.8		110	φ2200×H1800	
LC-098K-SW	98	3250	3800	3700	3.3	21.3		150	φ2500×H1800	
LC-140K-SW	140	3500	4200	3850	5.1	31.8		212	φ3000×H1800	

※With electric valves, compressed air (compressors etc.) is not necessary.

## Seawater filtration equipment

### LD-SW series



### General

Built-in backwash system to save spaces

### Feature

- With the built-in backwash system, tanks and pumps for backwash are not needed, which can save space.
- Using FRP material for main body, this equipment has high corrosion resistance and is usable stably for long time. Even for outdoor specs, deforms and discolorations can be prevented to be used cleanly.

### Specification

Model	Processing flow rate (m <sup>3</sup> /h)	Filtration tower dimension (mm)	Model	Processing flow rate (m <sup>3</sup> /h)	Filtration tower dimension (mm)	
LD-1200SW	8.5	φ1200×H6610	LD-2200-SW	28.5	φ2200×H6930	Indoor Outdoor
LD-1400SW	11.5	φ1400×H6610	LD-2600-SW	39.8	φ2600×H6930	
LD-1600SW	15.1	φ1600×H6610	LD-3000-SW	53	φ3000×H6930	
LD-1800SW	19.1	φ1800×H6610				

● The processing flow rate depends on the quality of raw water. ● The installation space does not include space for auxiliary equipment (raw water pump, backwash pump and chemical injection device etc.) and maintenance.

## Pool filtration equipment

### Application

Public sector Building/Hotel etc Circulation filtration for poor water treatment

## Pool filtration equipment

### A series

### General

Easy control and maintenance for pool filtration

### Feature

- Easy control and maintenance without emission of drain water by adopting wound type cartridge made of polypropylene.
- Effective volume filtration system with increasing density from the surface layer to the inside layer. Filtration accuracy is approximately 30-50um.



### Specification

Model	Processing flow rate (m <sup>3</sup> /h)			Installation space (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Power consumption (VA)	Operating pressure (MPa)	Filtration tower dimension (mm)
	LV4	SV5	SV6	W	D	H						
A40-50/60	32	40	48	1700	1700	1900	350	850	AC200 × Three phase	3.7	0.3	φ650×H1000
A60-50/60	48	60	72	2000	2000	1900	500	1200		5.5		φ750×H1000
A90-50/60	72	90	108	2200	2200	2000	600	1700		7.5		φ950×H1050

Indoor Outdoor

## Pool filtration equipment

### SF-A-B series

### General

Repeatedly usable filtration equipment for pool

### Feature

- Using sands for filter material, it evacuates filtered turbidity by backwash operation and enables repeated usage.
- Easy operation with single automatic valve.



### Specification

Model	Processing flow rate (m <sup>3</sup> /h)	Installation space (mm)			Product weight (t)	Operating weight (t)	Power supply (V)	Power consumption (VA)	Operating pressure (MPa)	Filtration tower dimension (mm)
		W	D	H						
SF-A-405B/406B	40	1880	1930	2200	0.90	4.60	AC200 × Three phase	6	0.3	φ1200×H1220
SF-A-705B/706B	70	2340	2415	2390	1.38	7.80		8		φ1600×H1220
SF-A-1005B/1006B	100	2760	2755	2550	2.02	12.10		11		φ1900×H1220

Indoor Outdoor

### Related products

#### A series / SF-A-B series

##### Portable residual chlorine meter OR-54

Easy detection of residual chlorine in tap water or pool water.

Water quality control for city water for factory/building or pool

- No reagents are required. No running costs.

- Equipped with digital display of the values and user-friendly feature such as throw-in measurement.



## Nitrate nitrogen removal equipment

### NA-FL series

### General

Remove nitrate (nitrous) nitrogen harmful to human

### Feature

#### Automatically regenerating method

Automatic regeneration or cleaning can be done by setting regenerating interval or time.

※Regenerating operation can start by signal input from outside.

※Manual regenerating and cleaning can be also selected.

#### Easy operation by adopting single automatic valve

Equipped with digital timer. In addition, automatic alternating operation function achieves 24 hour continuous water output.



### Specification

Model	Processing flow rate (m <sup>3</sup> /h)	Installation space (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Operating pressure (MPa)	Resin amount (L)	Regenerant usage (kg/cycle)
		W	D	H						
NA-3000-FL	3	1510	649	1689	100	420	AC100	0.15~0.40	50	12.7~14.0
NA-6000-FL	6	1950	776	1640	150	710			100	25.4~27.9
NA-010K-FL	10	2070	891	1926	190	1030			175	44.4~48.84

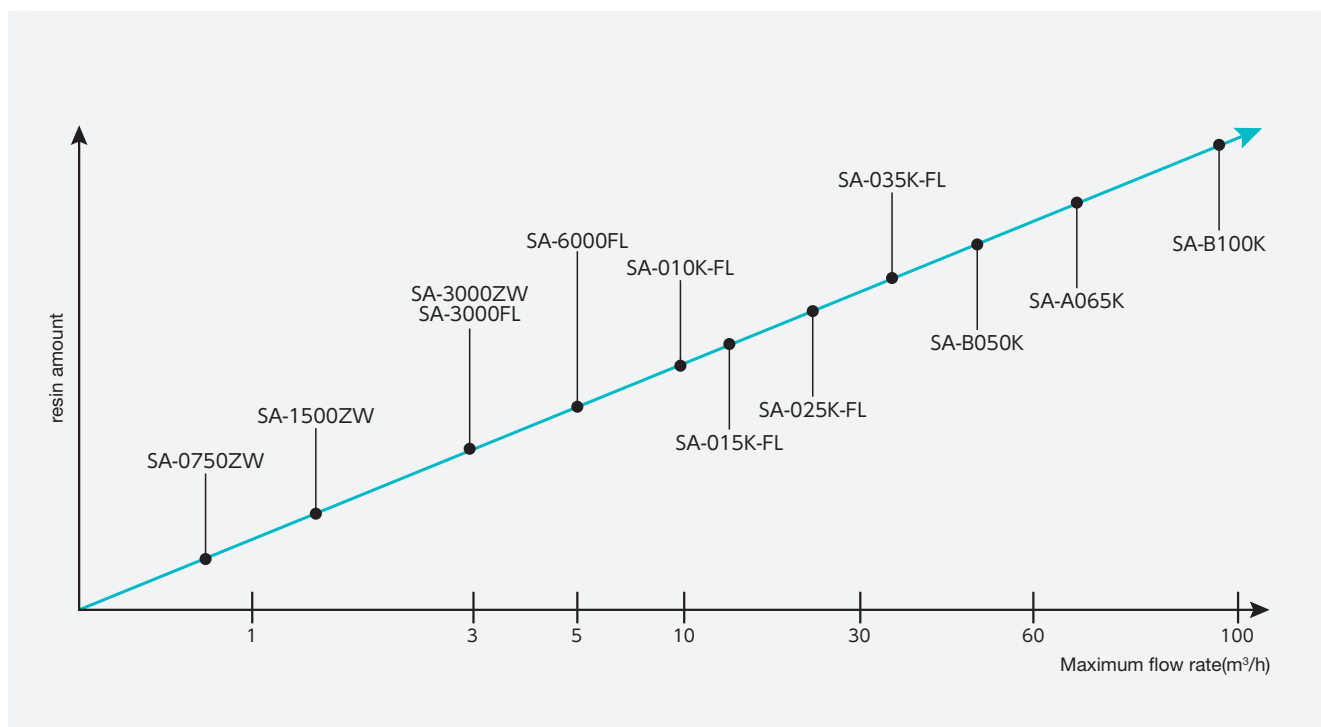
Indoor

● The processing flow rate depends on the quality of raw water. ● The Installation space does not include space for auxiliary equipment (raw water pump, backwash pump and chemical injection device etc.) and maintenance.

## Hard water and Soft water

Even colorless and transparent tap or well water contains many kinds of substances which cannot be seen by our eyes. The typical substances are Ca and Mg called "hard components."

The water containing a lot of hard components is called "hard water" while the water containing little of them is called "soft water."



Resin amount (L)	Model	Amount of collected soft water (m³/cycle)	
		Raw water hardness 45mg/L	Raw water hardness 90mg/L
12.5	SA-0750ZW	10	5
25	SA-1500ZW	20	10
50	SA-3000ZW	40	20
	SA-3000FL		
100	SA-6000FL	80	40
175	SA-010K-FL	140	70
250	SA-015K-FL	200	100
425	SA-025K-FL	340	170
600	SA-035K-FL	480	240
1000	SA-B050K	812	406
1400	SA-A065K	1120	560
2000	SA-B100K	1624	812

● \*If the raw water is above 90mg/l hardness, it may not be sufficiently softened. Please contact us

## What is Soft water or Hard water?

The origin of the word "hard water" has been said in many ways. Some people say that it is the water to make beans hard when you use it to boil beans or it is the water making silk hard when being used to do the silk scouring. Both support the fact that hard water contains a component to make things hard. In other words, soft water makes beans or silk soft if it is used for boiling or silk scouring.

We call components making things hard as hard components (examples: Ca and Mg).

There is no clear definitions for soft water or hard water in terms of containing amounts of hard components in water.

But generally, it is considered to be soft water which contains less than 30mg/ℓ hardness.

ORGANO's water softener controls the water less than 1mg/ℓ. The hardness limitation for drink water is considered less than 300mg/ℓ which is justified for tap water by law. It means tap water is not necessarily soft water.

Application	If hard water is used...
<b>Tea</b>	Tea tastes, flavors or pigment components are not fully extracted due to hard components. Color components are also affected and cause discoloration.
<b>Juice</b>	Sweet taste is not fully abstracted and the color changes unstably. During storage, a lot of sediments and turbidness are generated.
<b>Boiled bean</b>	Harder water makes beans harder. if the water is more than 900mg/ℓ hardness, beans cannot be made softer no matter how long they are boiled.
<b>Wheat flour or starch</b>	Hard components connecting to wheat flour or starch make those qualities worse. As a result, the foods made of the worsen flours get hard and do not have enough stickiness.
<b>Sugar-containing processed food</b>	Sugar is easily caramelized, and even crystallized after they are included in final products.
<b>Transparent water</b>	The substances melting in water comes out with solids when water turns into ice. Those substances are mainly hard components. Hard components above 70mg/ℓ (especially Fe 0.2mg/ℓ) are difficult to produce transparent ice.
<b>Noodle</b>	Hard water causes insufficient stretch of noodles and also the difficulties of complete boiling of them for short time.
<b>Soap or washing</b>	Hard components connected to soap become dregs hard to melt in water (called metal soap). If the water cannot contain enough substances of soap by generated metal soap, less bubbles are produced and reduce the cleaning capability.
<b>Boiler</b>	If the water containing hard components is boiled, the substances react with each other causing sediments which generate scale by sticking and hardening in a boiler. As scale has low heat-conductivity, more fuels are required (lower efficiency). Furthermore, scale causes direct danger by extra heat or congestion.

## Water softener for beverage



### Feature

#### Taste and flavor

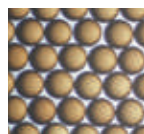
Produce mild tea and coffee

#### Prevent scale\*\*

\*1 Ca or Mg etc. is deposited to become white strains

### IER complying with food additives regulations in Japan

- Adopt special IER for food and beverage
- Comply with food additives regulations in Japan



### Many applications of water softeners





# Automatic water softener

## SA-ZW series



Easy maintenance and ECO design

Electronics Automotive/Machinery Chemical/Material Hospital Building/Hotel etc

Water supply for boiler, cleaning water, water for humidifier

Regeneration start-up depending on customer convenience —

### ■ Timer regeneration mode

Regeneration starts up on time set in timer. It is the suitable mode when there are the certain periods when soft water is not in use.

### ■ Meter regeneration mode\*1

It starts regeneration at the time when the soft water collection reaches the selected amount.

### ■ Meter and scheduled regeneration mode\*1

After the selected amount of soft water is collected, regeneration starts at the scheduled time.

ECO design - Cut the waste of regenerants and drainage —

### ■ Integrated flow meter is adopted (meter regeneration mode)\*1

It measures the level of collected soft water and can start regeneration when soft water output reaches the selected amounts. It automatically reduces the frequency of regeneration when the usage of soft water is low, which achieves the cut of the wasteful regenerant consumption.

A slide-type cover makes regenerant input easy \*1 —

Opening the slide-type cover located in upside of body, you can see the input port for regenerant. Easy procedure with low risk of spilled regenerant.

※1 SA-0750/1500ZW only

Model	Processing flow rate (L/h)	Dimension (mm)			Power supply (V)	Power consumption (W)	Operating pressure (MPa)	Resin amount (L)	Regenerant usage (kg/cycle)	
		W	D	H						
SA-0750ZW	750	560	325	650	AC100	7	0.15~0.5	12.5	1.5	Indoor
SA-1500ZW	1500	560	325	1110				25	3	
SA-3000ZW	3000	900	500	1460				50	6.1	

● The processing flow rate depends on the quality of raw water. ● The dimensions do not include the space for maintenance.

# Automatic water softener

## SA-A-K/SA-B-K series

Remarkably easy operation with automatic regeneration function

Electronics Automotive/Machinery Chemical/Material etc Water supply for boiler, cleaning water, water for humidifier

■ The integrated flow meter on the inlet side can output signal, which achieves the scheduled quantity operation.

■ Suitable for drink water with epoxy coating on the inner surface of resin column and regenerant solution tank and the polyethylene lining piping.

■ With the 5-cycle system, long time use of resin and the reduction of regenerant waste can be done.

■ Push-button start for automatic regeneration and manual operation are possible.



Model	Processing flow rate (m³/h)	Installation space (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Power consumption (W)	Operating pressure (MPa)	Resin amount (L)	Regenerant usage (kg/cycle)	
		W	D	H								
SA-B-050K	50	3100	2100	3350	2440	6040	AC100	125	0.15 ~ 0.3	1000	100	Indoor Outdoor
SA-A-065K	65	3300	2300	4100	3300	6600				1400	140	
SA-B-100K	100	3800	2600	3950	6440	11530				2000	200	

## SA series/SA-A series/AW-S series Regenerant for water softener

ORGANO provides ideal regenerant for water softener. The large size of particle diameter 9mm of granulated regenerant is easily dissolved in solution without forming balls even when it is soaked in water long time. High purity of the regenerant contributes to stable operation of your water softener.



### 20Kg box (5kg x4 package)



Easy handling by small packages. Recommended for the case of low frequency of regeneration.

### 25Kg package

ORGANO also provide a large sized package for high frequency of regeneration.



● The processing flow rate depends on the quality of raw water. ● The Installation space does not include space for maintenance.



# Automatic water softener

## SA-FL series

## General

Easy operation with automatic regeneration function

## Application

Electronics

Automotive/Machinery

Chemical/Material

Hospital

Building/Hotel

etc

Water supply for boiler, cleaning water, water for humidifier



## Feature

### Automatically regenerating method

Automatic regeneration or cleaning can be done by setting regenerating interval or time.

※Regenerating operation can start by signal input from outside.

※Manual regenerating and cleaning can be also selected.

### Easy operation by adopting single automatic valve

Equipped with digital timer. In addition, automatic alternating operation function achieves 24 hour continuous water output.

## Specification

Model	Processing flow rate (m <sup>3</sup> /h)	Installation space (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Operating pressure (MPa)	Resin amount (L)	Regenerant usage (kg/cycle)	
		W	D	H							
SA-3000-FL	3	1350	520	1689	90	320	AC100	0.15~0.40	50	5.1~6.6	Indoor
SA-6000-FL	6	1700	657	1640	120	590			100	10.2~13.2	
SA-010K-FL	10	2020	776	1926	170	880			175	17.8~23.1	
SA-015K-FL	15	2390	1004	2239	260	1400			250	25.4~33.0	
SA-025K-FL	25	2950	1581	2500	520	1950			425	43.1~56.1	
SA-035K-FL	35	3080	1584	2500	560	2610			600	60.0~79.2	

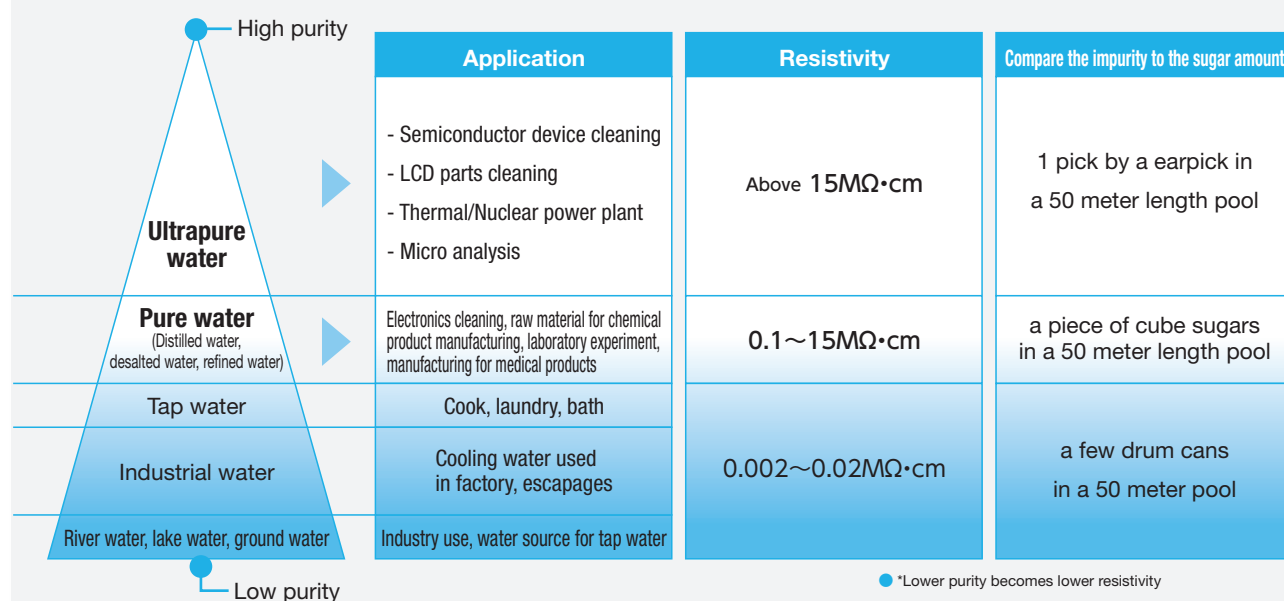
● The processing flow rate depends on the quality of raw water. ● The installation space does not include space for maintenance.

# Pure Water and Ultrapure Water

Ultrapure or pure water			Model	Processing flow rate	Page
Pure water	RO	Double pass	RD series	~4.6m³/h	P20
			DR-A series	~6m³/h	P27
		Single pass	RO-FC series	~5.2m³/h	P26
			RO-C series	~14.4m³/h	P26
	Ion exchange resin (Regeneration)	MB (Auto)	AM series	~36m³/h	P30
		MB (Manual)	HM series	~6m³/h	P31
		2B	MG-S series	~10m³/h	P32
		2B3T or 3B4T	SG-X series	~110m³/h	P32
	Ion exchange resin (non regeneration)		G series	~4m³/h	P28
	Electrodeionization (EDI)		EY-XP/HF series	~4m³/h	P20/21
	RO + DI (non regeneration)		PR-SG/FC series	~2.6m³/h	P24
			PR-SG series	~0.5m³/h	P25
	RO + EDI		SD-XP/HF series	~3m³/h	P22
			SD-SG series	~0.2m³/h	P23
Ultrapure water	Ultrapure water	Raw water: Tap water	UC series	~2.6m³/h	P33
	Sub system unit	Raw water: Pure water	FP series	~5m³/h	P21
			FP series	~0.5m³/h	P34
Others	Heat transfer equipment		HE-S series	~6m³/h	P27
	Decarbonation equipment		MD-A series	~6m³/h	P27

## What is Pure water or Ultrapure water?

Pure H<sub>2</sub>O (Theoretically pure water)



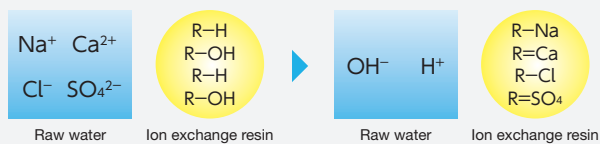
## Various ways of pure water purification

### Ion exchange

This is a purification way using an ion exchange resin(IER).

Water contains a cation ( $\text{Na}^+$ ,  $\text{Ca}^{2+}$ , etc.) and an anion( $\text{Cl}^-$ ,  $\text{SO}_4^{2-}$ , etc.).

When a cation contacts a cation exchange resin or an anion contacts an anion exchange resin, those ions tie with an IER and are locked in a IER. Then  $\text{H}^+$  or  $\text{OH}^-$  is generated, which reacts each other resulting in  $\text{H}_2\text{O}$ . This is how IER method removes ions from water.



### Regeneration or cleaning process is necessary for recycling IER

The number of ion exchange groups in IER is limited. Once all ion exchange groups are processed, further reactions of ion exchange does not proceed. So, to make IER useable again, regeneration or cleaning process is required.



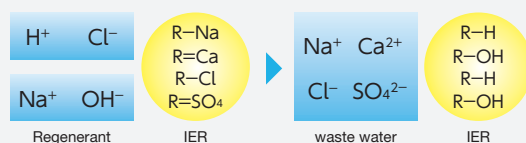
### 3 ways of IER regeneration

#### 1. Non regeneration method (Cleaning)

ORGANO is able to perform cleaning processes for used-up IER so that those IER can be used again.

#### 2. Regenerant method (by chemical "HCL and NaOH")

This is a method to use chemicals suitable to cation or anion exchange resin. When an used-up cation exchange resin contacts with such acid as HCl, a cation ( $\text{Na}^+$ , etc) tying with exchange groups is to be replaced by a hydrogen ion. In the same way, when an used-up anion exchange resin contacts with such alkali as caustic soda, an anion (chloride ion, etc.) tying with exchange groups is to be replaced by a hydroxide ion.



### Reverse Osmosis (RO)

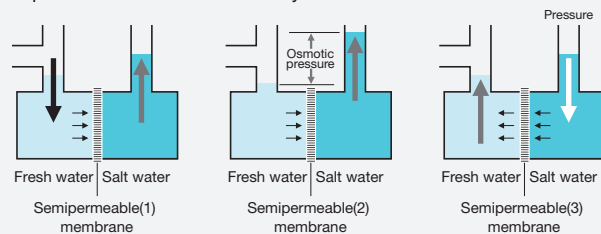
This is a water purification method by Reverse Osmosis (RO).

If 2 kinds of liquids (like fresh water and salt water) with different concentration are put in and separated across semi-permeable membranes (only solvent can go through), fresh water of dilute liquids moves to the side of concentrated salt water(1).

This is called "osmosis phenomenon". The migration of water continues till it reaches a certain water pressure level, which is called osmotic pressure(2).

On the other hand, by giving more pressure than osmotic pressure on the concentrated liquid side, the water moves from the concentrated side (salt water) to the dilute side (fresh water). This is called reverse osmosis (3).

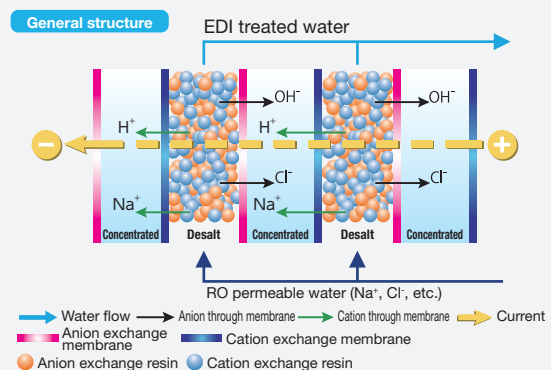
RO method usually puts 1MPa pressure on the concentrated side so that the impurity (colloidal material or ion etc.) are separated from water effectively.



#### 3. Electrodeionization

EDI(Electrodeionization) is the technology how IER catches an ion in water and then those ions are collected in concentration compartment and drained by electric field. EDI makes it possible that IER is constantly able to exchange an ion.

ORGANO's specially developed and advanced EDI achieves the longtime functionality of stable Silica removal and high purity.



# ORGANO's pure/ultrapure water production system

## Application

Electronics Automotive/Machinery Food/Beverage Medical/Cosmetic Chemical/Material etc

Pre-treatment desalting for pure water production, precision apparatus cleaning, electronics products cleaning, cosmetic manufacturing cleaning, process-use water for medicine manufacturing, beverage / food manufacturing, air conditioning usage, laboratory purpose etc

Double pass RO unit

## RD series

### Feature

#### Compact design (save space)

Compactly unitization of RO membrane (double pass), RO pump, and controller. 30% (volume level) size of ORGANO's conventional equipment. Easy transfer of the machine even in the spaces with narrow passages.

#### Reduce running cost

As RD series have the double pass RO structure, if IER pure water purification system is used in the post process, long life of IER is achieved.

#### Excellent energy saving

RO pump equipped with inverter achieves its energy saving.



EDI (Electrodeionization) unit

## EY-XP/HF series

#### Compactly unitization

Compact sized unit of ORGANO's newly developed EDI, DC power source device, and controller. 30% (volume level) size of ORGANO's conventional equipment. Easy transfer of the machine in the spaces with narrow passages.

#### Highly safe and ECO-friendly operation with no chemical usage

No required acid or alkali chemicals (which are necessary for regeneration-type pure water production equipment). No need to save hazardous chemicals or related maintenance work. ECO-friendly with no drainage of acid or alkali.

#### (XP) Extremely high purity of pure water

ORGANO's newly developed EDI-XP makes possible to provide highly pure water stably, which is suitable for long-hour operation.

### Flow



### Specification

Model	Processing flow rate (m³/h)	Dimension (mm)			Product weight (kg)*	Operating weight (kg)*	Power supply (V)	Power capacity (kVA)
		W	D	H				
RD-1100	1.1	900	1100	1900	570(640)	650(720)	AC200 × Three phase	17
RD-2300	2.3	850	1750		850(950)	1000(1100)		20
RD-3500	3.5	1100			1010(1120)	1230(1340)		
RD-4600	4.6				1130(1240)	1400(1510)		

\* The values in "0" are the weight equipped with a cabinet.

Indoor

Model	Processing flow rate (m <sup>3</sup> /h)	Dimension (mm)		
		W	D	H
EY-1000-XP/HF	1	600	800	1900
EY-2000-XP/HF	2		1100	
EY-3000-XP/HF	3			
EY-4000-XP/HF	4			

Quality of treated water (EY-XP)	
Resistivity	Above 10MΩ·cm
Silica	Below 20μg SiO <sub>2</sub> /L

Quality of treated water (EY-HF)	
Conductivity	Below 1μS/cm

### Option

#### Cabinet

To improve external appearance and safety

● Applicable model: RD/EY/FP



## Feature

### System designed for customer request

Easy control and manipulation with each unit (EY/ FP) control integrated in RD series' control panel  
(Examples: RD+EY / RD+EY+FP.

※ Single use is also possible).

### Easy control of daily operation

Equipped with large sized 8.4 inch TFT color LCD touch panel. Easy understanding of operation condition and easy daily control. The measured data can be abstracted by USB in the front side of touch panel so that the operation data can be easily stored.

### Good design of appearance

Give a good impression of the equipment to auditors coming to factory and contribute to improving the facility assessment. Cabinet type (option) prevents non-official persons to touch accidentally inside the equipment and can be operated safely.

### (XP) Excellent removal function of SiO<sub>2</sub>

ORGANO's newly developed EDI-XP stack is able to control SiO<sub>2</sub> concentration at sub ppb level.

### (HF) Reduce running cost

With ORGANO's developed EDI-HF, the simpler system is realized without decarbonation treatment or softening treatment. No required regenerant for water softener system can contribute to the reduction of running cost.



## Final polishing unit

### FP series

#### High energy saving

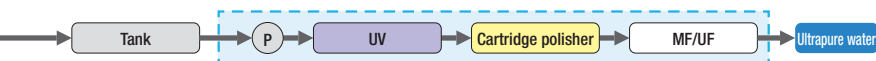
A pump for pure water equipped with inverter is able to reduce energy waste. Contribute to energy saving.

#### Energy and Water saving

No drain water by using dead end-typed UF module. No required cost of the drain water treatment contributes to reduction of running cost.

#### Compact design (space saving)

30% space cut over conventional equipment.  
Easy transfer of machine even in the spaces with narrow passages.



Product weight (kg)*	Operating weight (kg)*	Power supply (V)	Power capacity (kVA)
300(360)	320(380)	AC200× Single phase	3
420(490)	440(510)		
500(580)	540(620)		5
540(610)	580(650)		

※ The values in "()" are the weight equipped with a cabinet.

Indoor

Model	Processing flow rate (m³/h)	Dimension (mm)			Product weight (kg)*	Operating weight (kg)*	Power supply (V)	Power capacity (kVA)
		W	D	H				
FP-1000UF	1	1000	700	1900	320(370)	380(430)	AC200× Three phase	3.1
FP-1000MF						390(440)		
FP-2000UF	2	1550			400(470)	490(560)		
FP-2000MF					410(480)	510(580)		
FP-3000UF	3	1600			420(490)	560(630)		5
FP-3000MF					430(500)	580(650)		
FP-5000UF	5	2200			520(620)	710(810)		6.5
FP-5000MF					530(630)	740(840)		

Quality of treated water (FP-MF)	
Resistivity	Above 17.5MΩ·cm
Micro particles	Below 50units/mL (0.2μm)
Viable bacteria	Below 0.1units/mL

Quality of treated water (FP-UF)	
Resistivity	Above 17.5MΩ·cm
Micro particles	Below 10units/mL (0.1μm)
Viable bacteria	Below 0.1units/mL

※ The values in "()" are the weight equipped with a cabinet.

Indoor

# Electrodeionization pure water production equipment

## SD-XP/HF series

### General

Non-chemical operation, energy saving, support for high hardness degree water

### Application

Electronics Automotive/Machinery Food/Beverage  
Medical/Cosmetic Chemical/Material etc

Precision apparatus cleaning, metal plate cleaning, electronics product cleaning, cosmetic manufacturing, water for medicine manufacturing, air conditioning humidifier, chemical experiment or cleaning for analysis device, beverage/food manufacturing, other processing purposes etc.



### Feature

#### Non-chemical operation

No acid or alkali chemicals are required. Also, no need to possess hazardous chemicals or refill such chemicals. It is Eco friendly equipment as there is no need for neutralization without the emission of acid or alkali chemicals

#### Energy saving

With ORGANO's newly developed EDI, the simpler system without decarbonation treatment or water softening treatment is realized. RO pump equipped with inverter can save energy excellently.

#### For high degree of hardness water (ease the conditions of raw water)

ORGANO's developed EDI stack can ease the conditions for raw water input. Cutting water softening process contributes to the reduction of running cost.

#### Easy control of daily operation

Equipped with large sized 8.4 inch TFT color LCD touch panel. Easy understanding of operation condition and easy daily control. The measured data can be abstracted by USB in the front side of touch panel so that the operation data can be easily stored.

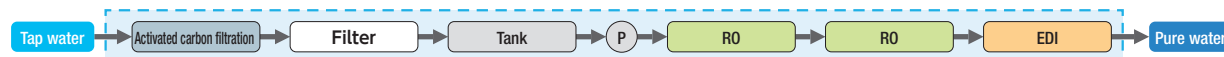
#### Stably highly pure water

With double pass RO system and ORGANO's newly developed EDI-XP, the equipment is able to reach high purity of pure water (SiO<sub>2</sub> concentration is at sub ppb level). Ideal for long-hour operation<sup>※1</sup>.

● Cabinet type prevents non-official persons to touch accidentally inside the equipment and can be operated safely.

※1 for the case of SD-X series

### Flow



### Specification

Model	Processing flow rate (m/h at 25°C)	Dimension (mm)			Product weight (t)	Operating weight (t)	Power supply(V)	Power capacity (kVA)	
		W	D	H					
SD-0500XP	0.5	650	915	1675	Approx.0.35	Approx.0.41	AC200-220 ×Three phase	4.3	Indoor
SD-1000XP	1	1950	1400	1850	Approx.0.95	Approx.1.5		15	
SD-2000XP	2				Approx.1.1	Approx.1.7		20	
SD-1000HF	1				Approx.0.95	Approx.1.5		15	
SD-2000HF	2				Approx.1.1	Approx.1.7		15	
SD-3000HF	3		1500		Approx.1.3	Approx.1.9		25	



# Electrodeionization pure water production equipment

## SD-SG series

### General

The latest ORGANO-own EDI realizes the reduction of maintenance work

### Application

Electronics

Automotive/Machinery

Medical/Cosmetic

Chemical/Material

Hospital

Quality control/Laboratory

etc

Biochemistry analyzer, weatherometer, heater, humidifier, cleaning for various purposes, raw water for ultra pure water production, analysis/reagent adjusting water



SD-0040SG/0080SG



SD-0200SG

### Feature

#### No need to replace IER cartridges\*

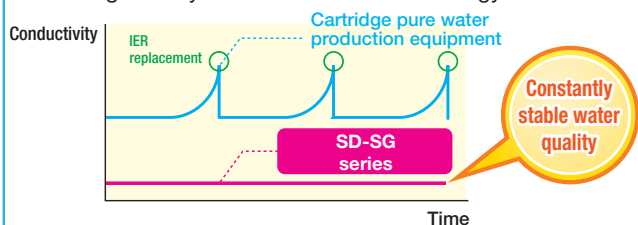
Conventional IER needs to be replaced once it cannot exchange ion anymore.

As SD-SG has the latest EDI which enables IER to maintain the capability of ion exchange, the replacement of the ion exchange resin cartridge is not necessary.

#### Stable water supports high-accuracy analysis

In conventional IER, the water quality is lowered when it is close to the time of IER replacement.

SD-SG is able to achieve constantly the stable water quality for long time by ORGANO's latest technology of EDI.



#### User-friendly design

- Roundish design with no edges in consideration of safety.
- Easy understanding of operation display



Large sized color display



Cover for water collecting to prevent damages

※Need to replace CP cartridge

### Flow



### Specification

Model	Processing flow rate (L/h at 25°C)	Dimension (mm)			Operating weight (kg)	Power supply (V)	Power capacity (VA)	Pure water tank (L)	Quality of treated water
		W	D	H					
SD-0040-SG	40	400	562	1500	Approx.110	AC100±10% (50/60Hz)	600	20	Above 10MQ·cm
SD-0080-SG	80	450	804	1480	Approx.175		1500	60	
SD-0200-SG	200	600	951	1500	Approx.280			100	

Indoor

# Cabinet type pure water production equipment

## PR-SG/FC series



PR-1300 (Cabinet is optional)

### General

The latest pure water production equipment with compact design and one unitization of pretreatment, RO membrane and IER cartridge

### Application

Electronics Automotive/Machinery Medical/Cosmetic Chemical/Material  
Hospital Quality control/Laboratory etc

Precision apparatus cleaning, electronics parts cleaning, cosmetic manufacturing, process-use water for medical manufacturing, water for various manufacturing and processing, etc.

### Feature

#### PR-SG series

- Equipped with line-switching function (automatically) between RO permeable water and treated water. Initial automatic washing enables the supply of constant level of water quality.
- Improve the replacement method for cartridge purifier. One touch replacement for cartridge can be done. By 1 push button, automatic operation is enabled for easier manipulation.

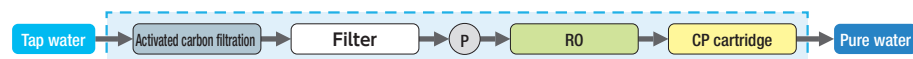
\*Cabinet standard

#### PR-FC series

- ORGANO in-house automatic flow rate control system enables easy operation. Also, RO element blockage problems by wrong operation are prevented.
- By dispersing agents, it can process water of high degree of hardness. Automatic flow rate control enables constantly high recycle rate and the reduction of the drain water waste.
- RO pump equipped with inverter can save wasteful energy consumption by automatic control.

\*Cabinet is optional

### Flow



### Specification

Model	Processing flow rate (L/h at 10°C)	Dimension (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)
		W	D	H			
PR-0600-SG	600	642	993	1554	Approx.300	Approx.360	AC200×Three phase 50Hz/60Hz
PR-1300-FC	1300	1350	900	1883	Approx.450~570	Approx.550~700	AC200×Three phase 50Hz/60Hz Universal
PR-2600-FC	2600	1700	1025	1985	Approx.650~850	Approx.800~1000	

Indoor

### Related products

#### Scale preventive for RO membrane

It has highly preventive effects for Silica and Calcium Carbonate scale and improves water recycling efficiency for RO membrane.

#### 8kg Box (2kg x 4bottles)



Easy handling by small packed bottles (2kg).

#### 10kg BIB



\*BIB=Bag in box

- The processing flow rate and the quality of treated water depend on the quality of raw water.
- The dimensions do not include the space for maintenance.
- Pre treatment equipment may be required depending on the quality of raw water.

# Cabinet type pure water production equipment

## PR-SG series

### General

ORGANO's definitive model as a pioneer of cabinet type pure water production equipment

### Application

Electronics Automotive/Machinery Medical/Cosmetic  
Chemical/Material Hospital Quality control/Laboratory etc

Biochemistry analyzer, weatherometer, heater, humidifier, water for various manufacturing purposes, cleaning for various purposes, raw water for ultra pure water production, analysis/reagent adjusting water

### Feature

#### User-friendly design

- Roundish design with no edges in consideration of safety
- Easy understanding of operation display



Large sized color display



Cover for water collecting to prevent damages



PR-0040SG/0100SG

PR-0250SG/0500SG

#### Simplified procedure of exchanging IER cartridge

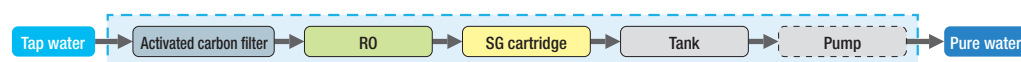


Adopting an one-touch connector realizes the easy exchanging work.  
(A conventional way of attaching/detaching a cap is not required)

#### Reliably stable operation

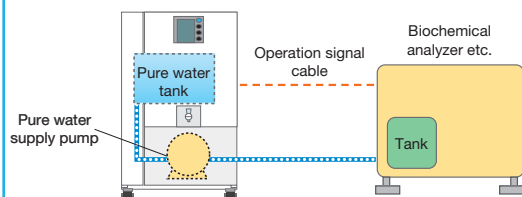
Stable flow amount even at low temperature by the latest Ultra-low pressure RO membrane

### Flow



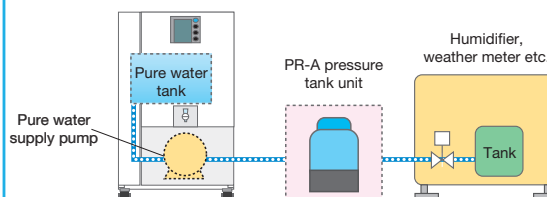
#### Case: Supply pure water to biochemical analysis equipment

By using a pump, the system supply water receiving signal from biochemical analyzer.



#### Case: Supply pure water to humidifiers or test instruments etc.

Case: Supply pure water to humidifiers or test instruments etc.



\*We have various pumps for pure water supply suitable to post equipment

### Specification

Model	Processing flow rate (L/h at 10°C)	Dimension (mm)			Operating weight (kg)	Power supply (V)	Power consumption (VA)	Pure water tank (L)	Quality of treated water
		W	D	H					
PR-0040-SG	40(0.7L/min)	350	639	1142	98	AC100±10%	450	20	Below 1μS/cm
PR-0100-SG	100(1.7L/min)				100		500		
PR-0250-SG	250(4.2L/min)	520	908	1400	220		900	100	
PR-0500-SG	500(8.3L/min)				250		1300		

Indoor

- The processing flow rate and the quality of treated water depend on the quality of raw water.
- The dimensions do not include the space for maintenance.
- Pre treatment equipment may be required depending on the quality of raw water.

# Synthetic polymer-based composite membrane RO system

## RO-FC

### General

The latest model of RO equipment with automatic flow rate control

### Application

Electronics

Automotive/Machinery

Food/Beverage

Medical/Cosmetic

Chemical/Material

**Pre-treatment desalting for pure water production, various cleaning/process purposes, air conditioning usage, experimental/laboratory purpose etc**

### Feature

- With ORGANO in-house "automatic flow rate control system", it is easily operated and RO element blockage can be prevented due to wrong operation.
- Equipped with 4.3 inch color touch panel. Easy understanding of operation condition and easy daily control. Can save operation data abstracted by USB.
- By Dispersing agent, it can process water of high degree of hardness. Automatic flow rate control can constantly maintain the high rate of recycle and reduce the waste of drain water.
- RO pump equipped with inverter can save wasteful energy consumption by automatic control.



### Specification

Model	Processing flow rate (L/h at10°C)	Dimension (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)
		W	D	H			
RO-1300-FC	1300	550	780	1750	Approx.270	Approx.300	AC200 × Three phase 50Hz/60Hz Universal
RO-2600-FC	2600	660	1040		Approx.360	Approx.420	
RO-3900-FC	3900	900	1010		Approx.440	Approx.560	
RO-5200-FC	5200	970	1000		Approx.480	Approx.600	

Indoor

# Synthetic polymer-based composite membrane RO system

## RO-C

### General

Capable of supporting a variety of applications

### Application

Electronics

Automotive/Machinery

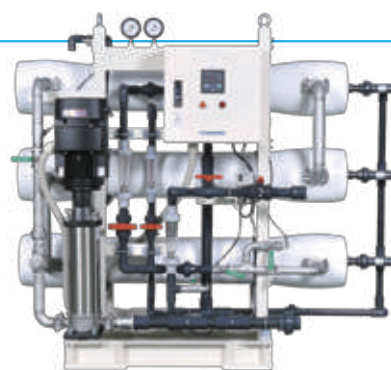
Food/Beverage

Chemical/Material

**Pre-treatment desalting for pure water production, various cleaning/process purposes, air conditioning usage, experimental/laboratory purpose etc**

### Feature

- High flow rate model. Improve flow rate per element.
- 3-side maintenance design enables the system to be installed to the close location to the wall.



### Specification

Model	Processing flow rate (m³/h at25°C)	Dimension (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Power capacity (kVA)	
		W	D	H				(50Hz)	(60Hz)
RO-C-1200	1.2	1740	770	1480	250	310	AC200 × Three phase	3.8	5.0
RO-C-2400	2.4				290	400		5.0	
RO-C-3600	3.6				340	490		5.5	
RO-C-4800	4.8				400	600		9.4	6.9
RO-C-7200	7.2	2750	670	1550	470	730		13.8	
RO-C-108H	10.8	3760	810	1590	560	920		13.8	
RO-C-144H	14.4			1800	660	1140		18.8	

Indoor

# Synthetic polymer-based composite membrane RO system

## DR-A

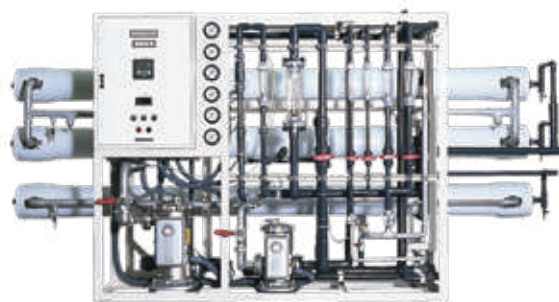
General

Ideal double pass RO unit for highly pure RO water

Application

Electronics Automotive/Machinery Food/Beverage Medical/Cosmetic  
Chemical/Material Quality control/Laboratory etc

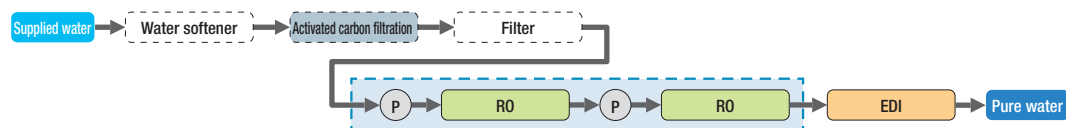
Pre-treatment desalting for pure water production, various cleaning/process purposes, air conditioning usage, experimental/laboratory purpose etc



Feature

- The water flow passes through double-pass of RO, which can produce more highly desalinated water.
- Significantly longer life for the cartridge purifier (optional) put in the post treatment.

Flow



Specification

Model	Processing flow rate (m <sup>3</sup> /h at 25°C)	Dimension (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Power capacity (kVA)	
		W	D	H					
DR-A-6000	6	3774	1444	1700	780	1700	AC200×Three phase	16	Indoor

# Heat exchange unit

## HE-S series

General

Improve the efficiency for RO system operation

Feature

- By adjusting water temperature to 25°C, it can ensure the stability of RO permeate flow amount.

※Also can be used for highly Silica-substance concentrated water

※RO permeate water amount decreases 2.5% if the temperature drops by 1°C.

Indoor

Specification

Model	Processing flow rate (m <sup>3</sup> /h)	Dimension (mm)			Product weight (kg)	Operating weight (kg)	Steam	
		W	D	H			Steam supply	Required steam amount (kg/h at 0.3MPaG Saturation)
HE-3000-S	3	500	800	1640	160	190	Saturated steam	119
HE-6000-S	6		900	1690	200	230		238
HE-010K-S	10		950	1790	220	260		397

# Membrane carbon acid removal unit

## MD-A series

General

For life-prolonging of cartridge purifier and carbon acid removal from raw water

Feature

- Reduce the loading of free carbon acid and contribute to long life for IER.<sup>※1</sup>
- Prevent deterioration of EDI water quality by carbon acid. Even if free carbon acid fluctuates in raw water, it still can maintain the water quality stably.<sup>※2</sup>



Specification

Model	Processing flow rate (m <sup>3</sup> /h at 25°C)	Dimension (mm)			Product weight (kg)	Operating weight (kg)	ph	Air condition Supply flow rate (L/min)	
		W	D	H					
MD-A-6000	6	500	600	1700	110	120	1~14	385	Indoor

※1 In case it is used as pre treatment of a cartridge purifier.

※2 In case it is used as pre treatment of EDI.

● The processing flow rate and the quality of treated water depend on the quality of raw water. ● The installation space does not include space for maintenance. ● Pre treatment equipment may be required depending on the quality of raw water.

Pure and ultrapure water



# Cartridge type pure water production equipment

## G series

### General

### Application

### Top market share of a cartridge type purifier in Japan

Electronics Automotive/Machinery Medical/Cosmetic Chemical/Material  
Hospital Building/Hotel Quality control/Laboratory etc

Washing for experimental tools, industrial washing for electronics, metal and glass products etc., for the manufacturing of chemical products etc., for environmental test, for humidifier, for battery replenishing



### Feature

### Reduce troublesome work, Simple design, Economical

Only by connecting to a pressure pipping (ex. water facet) without troublesome installation work, pure water is supplied when a faucet is turned on. A pump is not necessary.

### Ion exchange system with no chemicals and no wastes required

This cartridge purifier needs the replacements for IER when IER capacity is used up. ORGANO provides chemical regenerative service for which customers do not need to have chemical washing or disposal procedure. At the time of regenerating IER, ORGANO delivers to customer those IER after ORGANO has conducted IER quality check and pressure test on a cartridge based on ORGANO standard

### Specification

### Specification table for resin cartridges

- Cartridge purifiers (G series) target at water conductivity less than 1μS/cm (depending on raw water)
- The below amounts of water yield are only estimated values based on raw water 200μS/cm. Water quality differs depending on raw water quality

Model	Water yield (L) *Raw water 200μS/cm	Standard flow rate (L/h)	Cartridge height H1 (mm)	Total height H2 (mm)	Cartridge diameter D1 (mm)	Bottom diameter D2(mm)	Operating weight (kg)	IER amount (L)
G-5D	Approx.950	30~100	616	711	136	230	Approx.10	5
G-10D	Approx.1900	50~200	745	840	169	260	Approx.18	10
G-20C	Approx.3800	100~400	929	1024	212	320	Approx.38	20
G-35C	Approx.6650	180~700	1153	1248	234	345	Approx.58	35
G-50C	Approx.9500	250~1000	1042	1137	328	415	Approx.88	50
G-70C	Approx.13000	350~1400	1458	1553	330	415	Approx.110	70
G-200A	Approx.38000	1000~4000	—	1740	555	559	Approx.400	200



Model	Inlet/Outlet hose (m)	Interface	Bolt hole	Option		Quality of treated water
				Filter mounting bracket	Recommended conductivity meter	
G-5D	Inlet2/Outlet1	Joint nozzle 15A	NA	Attachable	RG-12※1	Below 1μS/cm
G-10D	Inlet2/Outlet2		3-φ 12			
G-20C						
G-35C						
G-50C	—	Union 15A	NA	Non-attachable	MH-9	
G-70C						
G-200A	Only Inlet2	Raw water inlet: inner φ38 x outer φ46.2(mm) Treated water outlet: 40A TS	NA			

Indoor

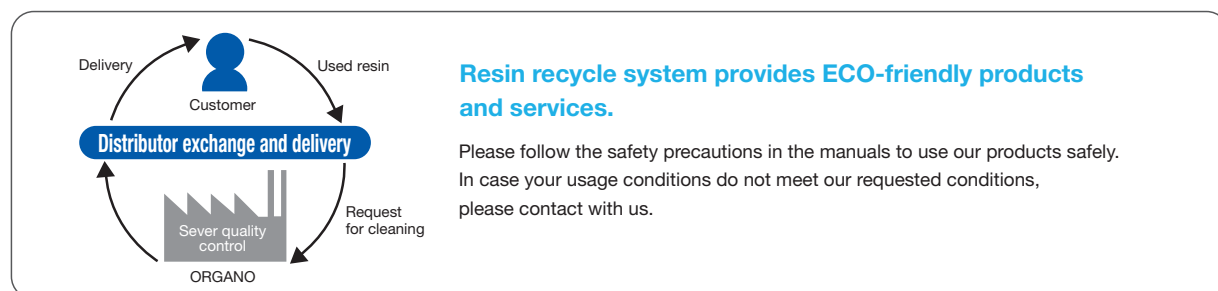
\*1 In case the flow amount for flow switch is over 500L/h, whole pressure loss (including purifier) becomes more than 0.1MPa, which may affects smooth water-supply.

### Resin recycle system

Ion exchange resin(IER) which has reached the capacity of the exchange can be usable again by the cleaning process. ORGANO has established resin recycle system to take back and clean the used IER. To maintain the quality of the resin, please make sure to use only tap water or well water which conforms to the level.



In case you use inappropriate water (ex. recycling cooling water), IER function is dramatically dropped due to contained heavy metal, organic solvent, oil or oxidizer and, as a result, IER cannot be recycled anymore. As ORGANO has the rules for recycle (eg. raw water is tap water or the resin is not used for the second process of cleaning circulation system), please contact us for the details.



### Resin recycle system provides ECO-friendly products and services.

Please follow the safety precautions in the manuals to use our products safely. In case your usage conditions do not meet our requested conditions, please contact with us.

- The processing flow rate and the quality of treated water depend on the quality of raw water.
- Pre treatment equipment may be required depending on the quality of raw water.



## Option

### Electrical conductivity meter to issue alarm upon water quality problem RG-12

Automatic measurement using flow switch (manual operation by a lever is also usable).  
Digital display with alarm contact.



Electrode Flow switch

### 2 points measuring electrical conductivity meter MH-9

Alarm output contact complying with DIN standard. Equipped with temperature compensation.



## List of water quality meter

Model	Range (μS/cm)	Measuring points	display	Alarm set	Alarm output	Power	Applicable model
RG-12	0.1~99.9	1	Digital	○	○	AA battery 2pcs	G-5~G-70
RG-8A	~2	1	Lamp	—	—	AC100V (Adapter)	
MH-9	0.01~999*	2	Digital	○	○	AC100V	G-200

\*Alarm set is for max 99.9μS/cm.

## Related products

### PF-III

The transparent blue housing enables you to check dirtiness from outside. Suitable filters can be selected for each purpose (~500L/h).

- Material: ABS, AS(Transparent blue)
- Applicable model: G-5/10/20/35



Please refer to P51

### Housing SH series

Stainless steel housing for pre and post treatment filter

- SH-D1-1C (~500L/h)
- SH-D1-2C (~1,000L/h)
- SH-D1-3C (~1,500L/h)
- SH3-2C (~3,000L/h)
- SH3-3C (~4,500L/h)

- Material: Stainless steel SUS304
- Applicable model: G-35/50/70/200



Please refer to P49

### Dual type mounting bracket for PF-III housing



- Applicable model: G-5/10/20/351

## Sister product

### IER-CARTRIDGE

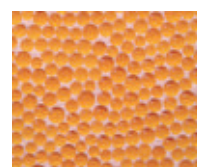
Model	Raw water	Standard flow rate	Quality of treated water	Water yield
001(for pure water)	Tap water	5~25L/h	1μS/cm以下	Approx.150L※1
002(for soft water)	Tap water	10~50L/h	Below 1mgCaCO <sub>3</sub> /L(hardness)	Approx.900L※2
	RO permeated	Below 130L/h	Below 10μgCaCO <sub>3</sub> /L(hardness)	Approx.300m <sup>3</sup> ※3

\*1 In case of 200μS/cm of raw water quality

\*2 In case of 55mgCaCO<sub>3</sub>/ℓ of raw water hardness degree

\*3 In case of 150μg CaCO<sub>3</sub>/ℓ of raw water hardness degree

Product weight	Size	Material	Water conduction temperature
Approx.850g	φ75×H250mm	PP・PE	1~40°C



Ion exchange resin



IER cartridge PF-III

### For polishing PF-P

Highly pure water can be produced by setting it after cartridge purifiers.

- Applicable model: G-5/10



### Desktop type cartridge purifier G-1 HB

Water yield	Standard flow rate	Quality of treated water
Approx. 150L (Estimated amount calculated based on 200μS/cm raw water)	5~25L/h	Below 1μS/cm(at25°C)
Dimension		
W	D	H
127	180	346
Operating weight		
Approx. 3kg		
supply conditions		
・Raw water: Tap water ・Max operation pressure: 0.1Mpa ・Operation water temperature:5-40°C		



# Automatic pure water production system

## AM-C/AM series

### General

ORGANO's longtime seller

Mixed bed pure water production system

### Application

Electronics

Automotive/Machinery

Food/Beverage

Chemical/Material

Electronics parts cleaning, chemical experiment, analysis tool cleaning, metal plate cleaning, process-use water for medical manufacturing, air conditioning humidifier, beverage/food manufacturing, other various processes such as used in hospital.



### Feature

#### Save water - high efficiency of water utilization

AM-C/AM series achieve 95%<sup>※1</sup> of water recycle and contribute to the reduction of water consumption or water utility cost. Can cut drain water consumption by 40% and also acid and alkali drain by 30% comparing with ORGANO's conventional system (less loading on neutralization facility).

#### Save electricity and energy

AMC/AM series only consume only 10%<sup>※2</sup> of electricity comparing with RO+electrical regenerating method. It can greatly contribute to the energy saving. It is ECO friendly system to reduce CO<sub>2</sub> emission.

※1 Reference value only when raw water quality is 100μS/cm. The value depends on raw water quality.

※2 The saving ratio depends on models

#### Short time regeneration - approx. 90 minutes

Having reviewed regenerative chemical passage, it shortens dramatically regeneration time comparing conventional systems. It can reduce the work of facility maintenance.

#### Easy daily control

Equipped with large sized 8.4 inch TFT color LCD touch panel. Easy understanding of operation condition and easy daily control. The measured data can be abstracted by USB in the front side of touch panel so that the operation data can be easily stored.

#### High safety

It adopts high safety regenerative chemical "H-20". Reducing the occurrence of Hydrochloric acid fume, it has enhanced the safety for chemical refilling work. It can minimize its influence to surrounding equipments or facilities.

### Specification

Model	Processing flow rate (m <sup>3</sup> /h)	Installation space (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Power capacity (kVA)	IER amount (L)	
		W	D	H					Cation	Anion
AM-C-18D	1	1100	800	2400	230	500	AC100 or AC200	0.5	18	36
AM-C-35D	2			2440	265	700			35	70
AM-C-50D	3	1150	800	2700	330	860			50	100
AM-C-70D	4.2	1200	900	2500	390	1250			70	140
AM-6000-SR	6	883	1154	2831	770	1570			100	200
AM-012K-SR	12	960	1448	3200	880	2350			200	400
AM-018K-SR	18	1040	1656	3585	1020	3400			300	600
AM-024K-SR	24	1213	2164	3931	1380	4470			400	800
AM-030K-SR	30	1402	2200	4023	1500	5230			500	1000
AM-036K-SR	36	1402	2287	4084	1670	6110			600	1200

Model	Water yield (m <sup>3</sup> /cycle) Raw water conductivity		Acids and alkalis drain (L/cycle)	General waste water (L/cycle)	Regenerative chemical amount (L/cycle)		Quality of treated water (at 25°C)
	100μS/cm	200μS/cm			H-20	25%NaOH	
AM-C-18D	17	8.3	436	280	8.6	11.3	Below 1μS/cm
AM-C-35D	34	16	838	522	16.7	22.0	
AM-C-50D	48	23	1149	733	23.9	31.5	
AM-C-70D	68	32	1647	1042	33.4	44.1	
AM-6000-SR	85	41	2220	1320	47.8	62.8	
AM-012K-SR	180	82	4320	2660	95.6	125.6	
AM-018K-SR	260	120	6260	3640	143.4	188.4	
AM-024K-SR	340	170	8220	4780	191.3	251.2	
AM-030K-SR	430	215	10210	5870	239.0	314.0	
AM-036K-SR	520	260	12230	7020	286.9	376.8	

Indoor

- The processing flow rate and the quality of treated water depend on the quality of raw water.
- The Installation space does not include space for auxiliary equipment (chemical injection device etc.) and maintenance.
- Pre treatment equipment may be required depending on the quality of raw water.
- The water yield is only for reference.
- Acid and alkali waste water needs neutralization process separately.

# Manual type pure water production system

## HM series

### General

### Mixed bed pure water production system adopting manual single control valve

### Application

Electronics

Automotive/Machinery

Food/Beverage

Chemical/Material

Cleaning for precision apparatus, electronics parts, metal plating,  
Process-used water for medical manufacturing, food/beverage, other  
various process etc.

### Feature

#### Short-time regeneration - Approx. 90 minutes

Having reviewed regenerative chemical passage, it shortens  
dramatically regeneration time comparing with conventional systems.  
It can reduce the work of facility maintenance.

#### Easy operation

As this system adopts single control valve, the operation can be  
controlled more easily.

### Specification

Model	Processing flow rate (m <sup>3</sup> /h)	Installation space(mm)			Product weight (kg)	Operating weight (kg)
		W	D	H		
HM-9B	0.5	1400	1050	1800	92	285
HM-18B	1	1400	1100	2400	113	322
HM-35B	2	1600	1150	2450	146	525
HM-50B	3	1600	1150	2600	213	760
HM-70B	4.2	1750	1250	2500	248	950
HM-100B	6	1800	1300	2850	283	1375

Model	IER amount (L)		Water yield(m <sup>3</sup> /cycle)		Acids and alkalis drain (L/cycle)	General waste water (L/cycle)	Regenerative chemical amount (L/cycle)	
	Cation	Anion	100μS/cm	200μS/cm			35%HCl	25%NaOH
HM-9B	9	18	8.5	4.1	140	210	2.3	5.7
HM-18B	18	36	17	8.3	280	370	4.6	11.3
HM-35B	35	70	34	16	560	685	8.9	22
HM-50B	50	100	48	23	785	875	12.8	31.4
HM-70B	70	140	68	32	1105	1355	17.9	44
HM-100B	100	200	96	46	1585	1795	25.6	62.8

※1 Measuring tank included

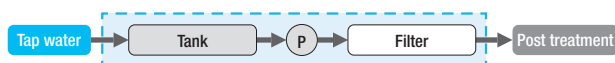


Pure and ultrapure water

### Option

#### Raw water supply unit SP-MB series

- One packaging of raw water tank, pump, filter and power source.  
Reduce installation time by easy transfer of equipment.



Model	Raw water supply (m <sup>3</sup> /h)	Raw water tank (L)	Installation space(mm)		Product weight (kg)	Operating weight (kg)
			W	D		
SP-1000-MB	1.3	100	700	940	160	280
SP-2000-MB	2.4	200	980	1000	180	420
SP-3000-MB	3.3	300	1070	1130	200	560
SP-4200-MB	4.7	500	1580	1350	290	890

● Applicable model: AM-C/AM/HM series



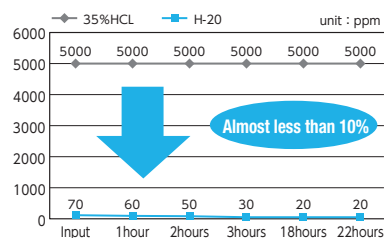
#### H-20

Reduce fume generation during chemical input.

H-20 is 20% hydrochloric acid developed for regeneration for pure  
water production system. 35% hydrochloric acid may cause safety  
problem by its fume and furthermore damage surrounding facilities.  
On the other hand, H-20 can be used as safe regenerant without  
affecting surroundings with only little fume.

- Safe refilling work for chemical input
- Prevent damage to surrounding facilities
- No exhaust facility required

#### Fume generation experiment comparing 35% hydrochloric acid and H-20



- The processing flow rate and the quality of treated water depend on the quality of raw water.
- The Installation space does not include space for maintenance.
- Pre treatment equipment may be required depending on the quality of raw water.
- The water yield is only for reference.
- Acid and alkali waste water needs neutralization process separately.

## 2B type pure water production system for high purity MG-S series



### General

Reduce Silica concentration and drain water by short-time regeneration

### Application

Electronics Automotive/Machinery Food/Beverage Medical/Cosmetic Chemical/Material

Cleaning for precision apparatus, electronics parts, process-used water for medical or cosmetic manufacturing, food/beverage preparation water, other various process etc.

### Feature

#### Short-time regeneration (approx. 45 minutes)

With simultaneous regeneration of cation and anion towers, it can shorten its regeneration time against MB type IER regeneration.

#### Save chemicals - ECO

Using up-flow regeneration method, the effective utilization of regenerant (HCl, NaOH) can be realized. (Less than 60% regenerant consumption of MB type.)

#### High purity

New technology achieves less than  $1\mu\text{S}/\text{cm}$  purity by short time. Guarantee Silica less than 0.1ppm by heating regeneration of NaOH.

### Specification

Model	Processing flow rate (m³/h)	Installation space(mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Power capacity (kVA)
		W	D	H				
MG-S-1500-0E0	1.5	2300	1000	1880	140	230	AC200 × Three phase	10
MG-S-2500-0E0	2.5	2500			170	400		20
MG-S-5000-0E0	5	2700	1100		210	680		35
MG-S-1500-0S0	1.5	2300	1000		150	240		2
MG-S-2500-0S0	2.5	2500			170	400		3
MG-S-5000-0S0	5	2700	1100		180	670		4
MG-S-010K-0S0	10	3000	1500		270	1230		4

#### Heating regeneration specification

MG-S heats and regenerates NaOH in order to reduce Silica. There are 2 methods of heating by electricity (Model: 0E0) or steam (Model: 0S0), which is selectable.

※MG-S-010K is only with steam method

Indoor

Model	IER amount(L)		Water yield (m <sup>3</sup> /cycle)		Acids and alkalis drain (L/cycle)	Regenerative chemical amount(kg/cycle)		Pure water usage (L/cycle)	Steam flow (kg/h)
	Cation	Anion	100 $\mu\text{S}/\text{cm}$	200 $\mu\text{S}/\text{cm}$		35%HCl	25%NaOH		
MG-S-1500-0E0	25	50	20	9.6	600	5	12	170	—
MG-S-2500-0E0	50	100	40	19.2	1050	10	24	350	—
MG-S-5000-0E0	100	200	80	38.4	2000	20	48	700	—
MG-S-1500-0S0	25	50	20	9.6	600	5	12	170	13
MG-S-2500-0S0	50	100	40	19.2	1050	10	24	350	26
MG-S-5000-0S0	100	200	80	38.4	2000	20	48	700	52
MG-S-010K-0S0	200	400	160	76.8	4000	40	96	1400	104

- The processing flow rate and the quality of treated water depend on the quality of raw water.
- The Installation space does not include space for auxiliary equipment (chemical injection device etc.) and maintenance.
- Pre treatment equipment may be required depending on the quality of raw water.
- The water yield is only for reference.
- Acid and alkali waste water needs neutralization process separately.

## High-performance pure water production system SG-X series



### General

High performance pure water production system realizing high quality, short-time regeneration, and short-time installation.

### Application

Electronics Automotive/Machinery Food/Beverage Chemical/Material

Cleaning for precision apparatus, electronics parts, process-used water for medical or cosmetic manufacturing, food/beverage preparation water, other various process etc.

### Feature

#### Save chemicals - ECO

Resin flow is eliminated during chemicals injections in a way that reinforced resin of the bottom inside body is packed by partition plate. It can achieve the reduction of regenerative drain water without backwash water.

#### Short-time regeneration (approx. 60minutes)

By using ward flow for chemical injection process and back wash process, weak IER bed can be regenerated in a backwash form. It can shorten the regeneration time by 30 minutes over conventional system.

### Specification

Model	Processing flow rate (m <sup>3</sup> /h)	SG-X1 series		SG-X2 series(polisher-attached type)	
		Quality of treated water		Quality of treated water	
		Conductivity	Ion Silica	Resistivity	Ion Silica
SG-X-0750	24	Below 2 $\mu\text{S}/\text{cm}$	Below 20 $\mu\text{SiO}_2/\text{L}$	Above 5M $\Omega\cdot\text{cm}$ (at 25°C)	Below 20 $\mu\text{SiO}_2/\text{L}$
SG-X-0850	31				
SG-X-1000	43				
SG-X-1200	62				
SG-X-1400	84				
SG-X-1600	110				

Indoor

Outdoor

- The processing flow rate and the quality of treated water depend on the quality of raw water.
- Pre treatment equipment may be required depending on the quality of raw water.

# Unit type ultrapure water production system

## UC series



### General

The latest model of one compact unit consisting of pretreatment, pure water purification and subsystem

### Application

Electronics Automotive/Machinery Food/Beverage Chemical/Material

Cleaning for precision apparatus, electronics parts, process-used water for medical manufacturing, food/beverage preparation water, other various process etc.

### Feature

#### Easy daily control

No necessary to adjust flow amount

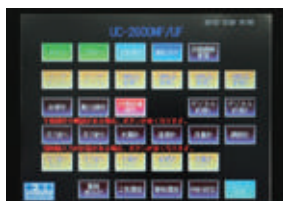
With Organo in-house "automatic flow control system", there is no need to adjust flow rate.

Daily maintenance gets easier.

Higher usability with large-sized touch panel

Equipped with 8.4 inch large-sized color touch panel. Can easily check its whole flow and operation condition.

Easy system control with operation data saved in CF card



Menu display



Flow picture



#### Save water

Equipped with RO element dispersing agents (G510), it supports the water of high degree of hardness. No wasteful water with constantly high recycling rate.

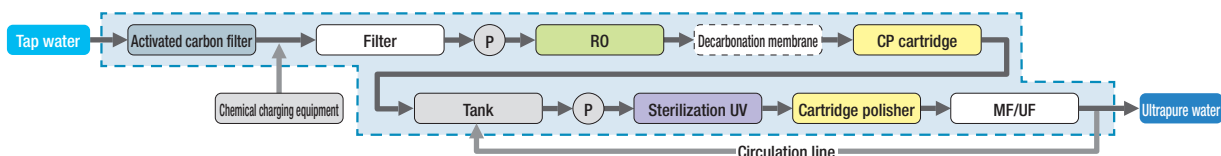
#### Save energy

RO and pure water pump with inverter reduce wasteful energy consumption by automatic control. Contribute to energy saving.

#### Compact size

25% size reduction comparing with conventional systems. Can utilize the space effectively.

### Flow



### Specification

Model	Processing flow rate (m/h)	Dimension (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	
		W	D	H				
UC-1300-UF	1.3	1,925	1,530	1,990	Approx.1,170	Approx.1,700	AC200 × Three phase (50/60Hz)	
UC-1300-MF								
UC-2600-UF	2.6	2,025				Approx.1,350		Approx.2,025
UC-2600-MF								

Quality of treated water	UC-UF series	UC-MF series
Resistivity	Above 17.5MΩ·cm	Above 17.5MΩ·cm
Micro particles	Below 10units/mL(0.2μm)	Below 30units/mL(0.2μm)
Bacteria	Below 0.05units/mL	Below 0.1units/mL
TOC	Below 0.1mgC/L	Below 0.1mgC/L

※Above TOC values are only based on raw water TOC below 1.0mg/L.

### Option

#### Membrane decarbonation module

For pro-longing cartridge purifiers.

### Related products

#### Scale preventive for RO membrane

It has highly preventive effects for Silica and Calcium Carbonate scale and improves water recycling efficiency for RO membrane.

##### 8kg Box(2kg x 4bottles)



Easy handling by small packed bottles(2kg).

##### 10kg BIB



※BIB=Bag in box



# Cabinet type ultrapure water production system

## FP series



### General

#### Cabinet size to save space

- Ideal for central water supply for laboratory use-

### Application

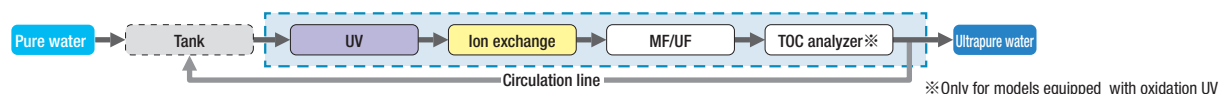
Electronics Automotive/Machinery Medical/Cosmetic Chemical/Material  
Hospital Quality control/Laboratory

Analysis/culture test, high-level cleaning for semiconductor industry etc,  
quality control for medical products, water supply for Hemanalysis  
immunodiagnosis device, water supply for clean room etc.

### Feature

- Adopt top quality grade of next generation IER for highly ultrapure water.
- Excellent production capacity (~500L/h) which desk top system cannot reach.
- Equipped with real-time TOC monitor.
- With the recommended pre-treatment system (PR-SG series), it enables ultra-pure water supply from tap water.
- Data saving of water quality and maintenance history etc.

### Flow



### Specification

Model	Processing flow rate (L/h)	Dimension (mm)			Operating weight (kg)	Power supply (V)	Power capacity (kVA)	Final filter	UV	TOC monitor	Quality of treated water
		W	D	H							
FP-0500	SM-000	500	350	750	Approx. 100	AC100±10% 50-60Hz universal	1	MF	Sterilization	—	Above 18.0MΩ·cm
	SU-000							UF	Sterilization	—	
	XM-0T0							MF	Oxidation	○	
	XU-0T0							UF	Oxidation	○	


Indoor

- The processing flow rate and the quality of treated water depend on the quality of raw water.
- The dimensions do not include the space for maintenance.
- Pre treatment equipment may be required depending on the quality of raw water.



# Laboratory Pure Water and Ultrapure water

## Lineup of equipment and systems H<sub>2</sub>O is produced from tap water at the required quality level.

 <b>Tap water</b> Electroconductivity 100~300μS/cm	<b>Pure water</b> Electroconductivity : 0.2~1μS/cm Resistivity : 1~5MΩ·cm	<b>Highly pure water</b> Resistivity : 5~15MΩ·cm	<b>Ultrapure water</b> Resistivity : 17.5~18.2MΩ·cm ※ Can provide ultrapure water when combined with pure water production system.
<b>Research/ Analysis</b>	<b>PR-α series</b> <span>P36</span> Usage <15L/h	<b>PR-α-X series</b> <span>P36</span> Usage <1L/min	<b>ω series</b> <span>P37</span> Usage <2L/min (20~60L/day)
	<b>PR-A series</b> <span>P36</span> Usage <15L/h		<b>FP-α series</b> <span>P37</span> Usage <2L/min
	<b>MU-15</b> Usage <15L/h		
<b>Environmental test</b>			
<b>Biochemical analysis</b>			

## ASTM D1193-06(2011) Reagent Grade Water Specifications

Parameter	Type-I	Type-II	Type-III	Type-IV
Resistivity(min) MΩ·cm(25°C)	18	1	4	0.2
pH(25°C)	-	-	-	5.0~8.0
TOC(max) μg/L	50	50	200	-
Na <sup>+</sup> (max) μg/L	1	5	10	50
CL <sup>-</sup> (max) μg/L	1	5	10	50
Total Si(max) μg/L	3	3	500	-
Equipment name	ω(OMEGA) FP-α(ALPHA) FP-0500	PR-α-X(ALPHA)	PR-SG SD-SG PR-A MU-15	G series

# Desktop type pure water and ultrapure water production equipment

FP-  
PR-<sup>ALPHA</sup> Series

NEW

General

New generation with a wide selection of usage!

Application

## Quality control/Laboratory

**Device for analyzing ultratrace metal (ICP-MS, ICP-AES, IC, FL-AAS)**  
**Organic analysis (HPLC, LC-MS)**  
**Bio experiment (iontophoresis, molecular biological experiment)**  
**Pre-treatment for analysis or adjusting reagent, cleaning purpose etc.**



Feature

## FP-α

- Specially refined IER is used to produce highly ultrapure water.  
High purity and low TOC are achieved by double-pass IER process.
- All models are equipped with circulation system for ultrapure water tank. Without fitting a sampling port filter (which often causes contamination problems), its ultrapure water can be used for highly sensitive analysis etc.
- By adopting UF specification for Bio research, RNase, DNase, and Endotoxin-free ultrapure water is produced. No DEPC treat process and No autoclaves after treatment.  
※FP-0120-UT0

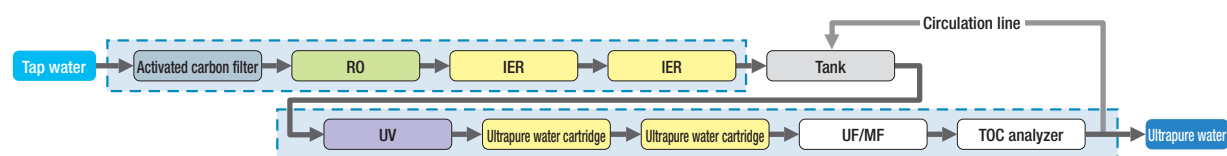


## PR-α

- Low cost and high performance one-touch cartridge is adopted.  
Easy cartridge replacement and running cost reduction.
- Double pass IER system. The impurities leaked from the first pass is removed from the next pass.  
No concerns about the water quality deterioration when IER is saturated.
- Achieve the water level of TypeII(ASTM D1193-6).  
Save water and energy as an alternative to distiller supporting TypeII.  
※-X00/-Xt0 only



Flow



Specification

Model	Quality of treated water	TOC (ppb)	Processing flow rate	Dimension (mm)			Operating weight (kg)	Power consumption(VA)	Final filter	TOC monitor
				W	D	H				
FP-0120 α -UT0	18.2 M Ω ·cm	1 ~ 3	~ 2L/min	354	335	448	Approx.26	340 (AC100 ~ 240V)	UF	Real time
FP-0120 α -MT0		—							MF	—
FP-0120 α -MO0		—					—		Real time	
PR-0015 α -XT0	0.2μS/cm	50	~ 1L/min				Approx.28		—	—
PR-0015 α -X00		—								
PR-0015 α -O00		—					—		—	—

※ A tank and a dispenser are necessary separately

Indoor

- The processing flow rate and the quality of treated water depend on the quality of raw water.
- The dimensions do not include the space for maintenance.

# Cabinet type ultrapure water production equipment

## ω (OMEGA) series

### General

ORGANO flagship model

Ideal for ultratrace-metal analysis, organic analysis, bio experiment

### Application

#### Quality control/Laboratory

Device for analyzing ultratrace metal (ICP-MS/MS, ICP)

Organic analysis (HPLC, LC-MS)

Bio experiment (iontophoresis, molecular biological experiment)

Pre-treatment for analysis or adjusting reagent, cleaning purpose etc.

### Feature

#### Perfecting "purity"

Water quality of ultrapure water is critical to micro-analysis or highly sensitive analysis. Extremely pure H<sub>2</sub>O is required.

- Resistivity: 18.2MΩ·cm/ TOC≤1ppb / Silica<0.1ppb / Boron<10ppt
- RNase, DNase, Endotoxin-free water
- High grade IER of new generation for extremely ultrapure water

#### Perfecting "usability"

Highly improved functionality without contamination during operation.

- One-drop, continuous, fixed volume and foot-switch collection are selectable.

#### Perfecting "installation"

Ideal for laboratory applications. "Simple is best."

- One package with a built-in tank, no stand required.
- Easy equipment transfer with casters.



### PURIC ω water collection part



### Quality of treated water

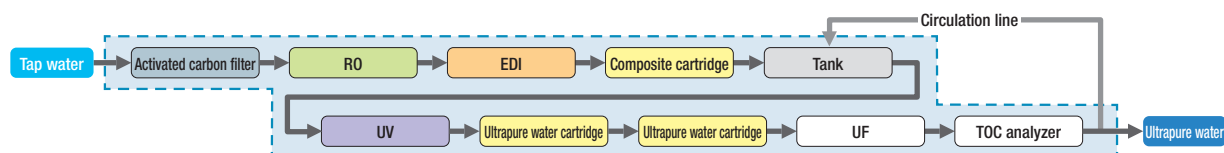
#### [Example of results by ICP-MS]

Element	unit	QL
Na	ng/L	<0.1
K	ng/L	<0.1
Ca	ng/L	<0.1
Mg	ng/L	<0.1
Fe	ng/L	<0.1
Cu	ng/L	<0.1
Zn	ng/L	<0.1
Cd	ng/L	<0.1
Ni	ng/L	<0.1
Pb	ng/L	<0.1
Mn	ng/L	<0.1
Al	ng/L	<0.1
Co	ng/L	<0.1
Cr	ng/L	<0.1
B	ng/L	<10

※ The values by Agilent7500 (continuous water collection).

※ The quality of treated water depends on the quality of raw water.

### Flow



### Specification

Model	Processing flow rate	Equipment dimension (mm)			Dispenser dimension (mm)			Product weight (kg)	Power supply (V)	Power capacity (VA)	Tank (L)
		W	D	H	W	D	H				
ω	one drop to 2L/min	300	600	1100	300	300	600	85	AC100±10%	200	20
ω60		450	700	1200				150			60

Indoor

- The processing flow rate and the quality of treated water depend on the quality of raw water.
- The dimensions do not include the space for maintenance.

## Pure water production equipment

### Application

Hospital Quality control/Laboratory

Biochemical analyzer, substitution for distillation apparatus, cleaning for lab experiment, reagent adjusting water, raw water supply to ultrapure water production/tester/washer/humidifier etc.

## Desktop type pure water production equipment PR-A series



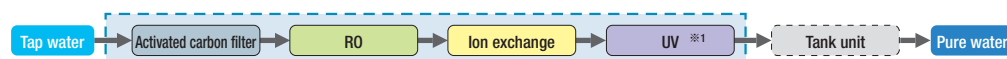
### General

Small foot print and reduction of utility cost as an alternative to a distiller

### Feature

- Save installation space comparing with distillers
- Save utility and water usage cost as an energy saving product
- Easy maintenance with IER cartridge
- Easily obtain pure water
- OV1 type has sterilizing UV lamp and can prevent bacteria in treated water

### Flow



### Specification

Model	Processing flow rate (L/h at25℃)	Dimension (mm)			Operating weight (kg)	Power supply (V)	Power capacity (VA)	Quality of treated water	Indoor
		W	D	H					
PR-A-0015-001	15	328	325	436	Approx.10	AC100±10%·50-60Hz	70	Below 1μS/cm	
PR-A-0015-OV1							120		

※1 PRA-0015-OV1 only

## Desktop type pure water production equipment MU-15



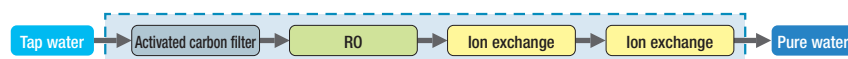
### General

By one touch replacement, it can reduce maintenance procedures

### Feature

- One compact package of activated carbon cartridge + RO + IER cartridge (attached with 12ℓ pressure tank).
- Easy cartridge replacement by one touch.

### Flow



### Specification

Model	Processing flow rate (L/h at25℃)	Dimension (mm)			Operating weight (kg)	Power supply (V)	Power capacity (VA)	Quality of treated water	Indoor
		W	D	H					
MU-15	15	343	185	420	Approx.10	AC100±10%	24	Below 1μS/cm	

※The above space and weight do not include a pressure tank.

- The processing flow rate and the quality of treated water depend on the quality of raw water.
- The dimensions do not include the space for maintenance.

# Final filter (removal of micro particles and bacteria) Capsule filter

General

Final filter for ultrapure water production equipment for laboratory

Application

## Quality control/Laboratory

Final filter for ultrapure water production equipment, removing bacteria from culture medium in medical industry, filter for various processing, filtration to dilute solution, integrated disposable filter in analysis device, etc.



※ A special bush is included (optional) in the above image



Installation image

Feature

- Cleaned by ultrapure water ( $\geq 18\text{M}\Omega\cdot\text{cm}$ ) before shipping, it can reduce elution from filter and enables stable analysis results.
- All items have passed integrity tests (non-destructive). Hence, it can be used for various purposes.
- Light weight and compact design enable smooth sampling work.

Specification

Model	Pore diameter ( $\mu\text{m}$ )	Dimension (mm) $\phi \times \text{H}$ (mm)	Max. working temperature	Pressure MPa	Interface				Material	
					IN	OUT	Vent	Drain	Body	Filter
Capsule filter	Abs 0.22	72.5 × 85	40 (0.15MPa)	0.39 (25℃)	NPT1/4	NPT1/4	NPT1/8	NPT1/8	PP	PES

Indoor

# Electrolyzed Water

## What is Electrolyzed Water?

It is a collective term of solution obtained via electric treatment by low electric current/voltage from tap water, diluted hydrochloric acid/saline or sodium bicarbonate water.

## What is Slightly Acidic Electrolyzed Water?

Slightly Acidic Electrolyzed Water is getting common in various industries requiring hygiene management such as the food industry. It is hoped to be a sterilization function as an alternative to conventional sodium hypochlorite since it has excellent features different from other commonly used chloride agents.

## What is Alkali Electrolyzed Water?

Alkali electrolyzed water production system produces Alkali water electrolyzed from inorganic-salt solution which is harmless such as sodium bicarbonate. The system is receiving a lot of attentions as an alternative to washing agent as oils, fats and protein are safely washed and raw material is only sodium bicarbonate.

## Slightly acidic electrolyzed water production equipment

### Ideal for bacteria elimination and deodorization

Food factory    kitchen    Health and Welfare facilities

Bacteria elimination in the food industry for food, ice, fish and shellfish, grazing, cooling water, machine, conveyer, container, hands, cloths etc, toilet cleaning, bacteria elimination in fish farm, work place etc.

Sterilizing substance	Slightly acidic	Chlorine concentration	Sterilizing capability
Hypochlorous acid (HOCl)	pH5.0-6.5 (Drink water: approx. pH7.5)	10-30ppm (Drink water: 0.1-0.4ppm)	80-150 times of Hypochlorite ion (OCl <sup>-</sup> )

- Trihalomethane is not generated
- It contributes to high-quality sanitary control as it is effective to most of bacterias
- It does not influence the taste, color, and nutrition of the food as it has originally almost no taste and odor.
- It has almost no influence on surrounding facilities due to only slight metal corrosion and rust.
- Waste water can be released without treatment.

Process flow rate (L/h)	300~10,000	Indoor
-------------------------	------------	--------

## Alkali electrolyzed water production equipment

### This new system does not generate wasteful acidic water

Electronics/Precision apparatus    Automotive/Machinery    Food/Beverage    Medical/Cosmetic    Chemical/Material

Degreasing for metal parts (substitution to surfactant), removing chips-cutting oil, prevent iron rust, cleaner for cooking/kitchen purposes, cleaning water(for rooms, floors or appliances etc.) etc.

- Excellent effect of grease removing and rust prevention
- ECO design without emission of waste acidic water
- Easy waste-liquid treatment
- Safe use
- Economical



Raw water	Quality of electrolyzed water	Processing flow of electrolyzed water	Dimension (mm)			Raw material	Power supply (V)	Product weight (kg)	Operating weight (kg)	
			W	D	H					
Soft water or pure water	pH10~12.5	12~480L/h	300	330	460	Sodium bicarbonate (NaHCO <sub>3</sub> 99%)	AC100-50/60Hz	13	20.7	Indoor



# Other equipment

## Japanese distilled spirit (called Shochu) purification equipment

General

Improve mild taste with retaining Shochu original flavor  
The most popular equipment in the industry

Application

Food/Beverage Purification for Shochu

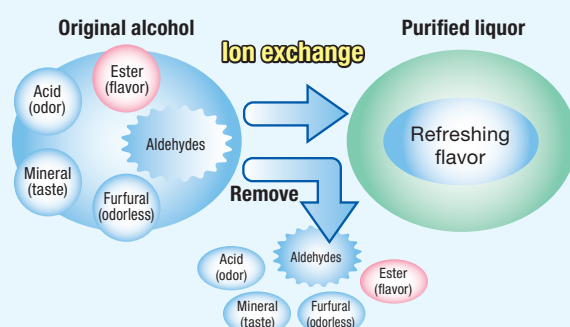
Feature

### Flavor-retaining purification method

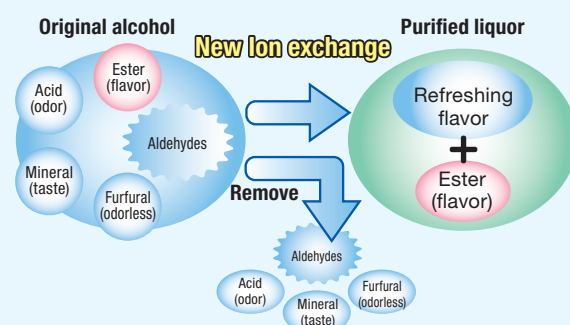
With breakthrough technology to retain active flavor ingredients of Ester and eliminate Aldehyde, it achieves the product with the best flavor originally coming from Shochu raw ingredient.



### Conventional Shochu purification system



### New Shochu purification system



Specification

Model	Shochu purification yiled (L/cycle)	Alcohol injection flow amount (L/h)	Dimension (mm)			Product weight (kg)	Operating weight (kg)	Power supply (V)	Resin amount(L)		
			W	D	H				Anion tower	MB tower	
									Anion	Cation	Anion
Type 1	1300	54~135	2850	2500	2500	320	500	(Electroconductivity meter) AC100×Single phase (Alcohol supply pump) AC200×Three phase	25	9	18
Type 2	2600	110~270		2900	2900	370	700		50	18	36
Type 3	5000	210~530	3100	3200	3200	450	1000		100	35	70
Type 4	7200	300~750	3400	3400	3400	600	1400		140	50	100
Type 5	10000	420~1100	3700	3200	3200	730	1800		200	70	140
Type 6	14400	600~1500	3800	3600	3600	830	2300		280	100	200

Indoor

# Multi stacked tray type aerator



**Aerator with compact size and high efficiency**

Electronics/Precision apparatus Automotive/Machinery Food/beverage Medical/Cosmetic  
Chemical/Material Hospital Quality control/Laboratory etc

Removal of volatile compounds in water, prevention of spread polluted ground water, treatment of industrial waste water

## High process capability

Multi-stacked method enables high gas-liquid contact ratio.

## Compact design

With using trays, low equipment height and easy indoor installation.

## Flexible support for various raw water conditions

Using multi-stacked trays, can flexibly support the fluctuations of raw water concentration and water amount.

## Easy maintenance

Trays can be cleaned at inspection doors. Making the trays easy in disassembling, it is excellent in maintainability.

Model	Processing flow rate <sup>*1</sup>	Dimensions(mm) <sup>*2</sup>			Number of tray stacking (Stacks)	Body material
		W	D	H		
1300-P	0.1~3.4	800	1800	1700~2000	1~4	PE
1300	0.1~5.0	1000	1000	1700~2300	1~5	SUS304
2300-P	0.2~10	1350	2500	1700~2000	1~4	PE
2300	0.2~10	1000	1300	1700~2300	1~5	SUS304
2600	0.5~20	1900	1300	1700~2300	1~5	SUS304
3600	0.7~30	1900	1800	1700~2300	1~5	SUS304
31200	1.4~60	3800	1900	1700~2600	1~5	SUS304
41200	1.8~80	3800	2300	1700~2600	1~5	SUS304

Indoor Outdoor

\*1 The maximum processing flow rate may not be reached due to some substances or concentration ratio of raw water.

\*2 The dimensions are the only estimated values for standard aerator tower and blower with optional stand and pump for treated water.

● Organo prepares treatment equipment for exhaust gas drained from the equipment.

# Organic-chlorine compounds removal equipment



**Ideal for removing Organic-chlorine substance from ground water**

Food/beverage Hospital Building/Hotel etc Removal of organic chlorine compound from well water

## Compact design

It realizes compact size by the injection with high water flow rate. Saving space and short-time installation.

## High process capability

By having raw water flow from upside by downward stream, and also sufficient gas-liquid contact from bottom air, the efficient removal of organic-chlorine substance is achieved.

## Easy maintenance

Since aeration process is done by packed tower method, the equipment is simple. Furthermore, the maintenance is easy without increasing of algae and intrusion of dust.

## Safe operation (A lot of achievements in purification plants)

In combination of aeration process and exhaust gas treatment (optional), the equipment can remove organic-chlorine compounds from ground water and exhaust gas (No worries about air pollution by exhaust gas of organic-chlorine compounds).

Model	Processing flow rate(m³/h)	Tower diameter (mm)
800-90	18~27	φ800
1000-90	27~39	φ1000
1200-90	39~59	φ1200
1450-90	59~80	φ1450

Indoor Outdoor

● Processing flow rate more than 80m³/h also can be designed. ● Organo prepares treatment equipment for exhaust gas drained from the equipment.

# Experimental ion exchange resin column

General

Mots suitable for the experiment for ion exchange resin or synthetic adsorbent

Application

**Quality control/Laboratory** For laboratory and experiment etc.

Feature

## For many applications

Applicable to a variety of solutions from drainage water to organic water as fluorine resin material is used in all liquid-contact areas.

## Excellent durability

Can prevent chemical corrosion by fluorine resin coating on pedestal parts. It is excellent in corrosion resistance.

## Compact storage

Packable in compact as it can be separated into 2 shaft portions.

## Easy installation

Equipped with necessary tools for experiments, an experiment can be started immediately after installation.

Specification

Column	Material	Filter content (mL)	Inner diameter (mm)	Height (mm)
	PFA (Fluororesin)	50	16	Approx.440
Separatory funnel	Material	Content (mL)	Height (mm)	
	PFA (Fluororesin)	1000	Approx.440	
Stand	Material		Product weight(kg)	Height (mm)
	Pedestal	Shaft		
	SPCC (Fluororesin coating)	SUS	Approx.3	1018

Indoor



Related products

## Ion exchange resin/Synthetic adsorbent

ORGANO sells experimental Ion exchange resin(IER) for customers considering of using IER or of conducting verification experiment before using IER.

\*Content 500mL (or 200g)



# Homogenizer

400

General

For bacteria testing in consideration for hygiene

Application

**Quality control/Laboratory** Bacteriological inspections for food

Feature

## Ensure hygiene

There is no contact between sample and equipment by suspension in disposal bags and also no need to clean equipments, which contributes to efficient usage.

## Improve usability

Adopt easily understandable touch panel, time setup, display of count-down remaining operation time, 3-step paddle speed setting, Auto setting, etc.

## Easy insert of bag

Paddles on left and right stop simultaneously and realizes smooth insert of bags.

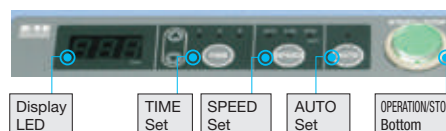
Specification

Model	Capacity (mL)	Operation time set	Speed setting	Dimensions (mm)			Power consumption (W)	Product weight (kg)
				W	D	H		
400	80~400	10-600 secs (by 5secs interval)	3steps (200, 230, 260rpm)	283	411	294	100	22

Indoor



Display



- Display is highly visible and usable, which contributes to efficient work.
- Count down indication of remaining operation time enables easy check of work time.

Other equipment

## List

Type		Micro filter														
Pore size		Absolute pore size														
Material		Polysulfon						Polyether sulfone(PES)				PTFE				
Structure		Pleated type														
Model		BS		BC			A		HP			FT				
Image																
Heat resistance(°C)		70~90														
Sterilization condition (Except type1)		—		—			—		Heat sterilization 95°C/60mins x 100times Autoclave sterilization 121°C/30mins x 10times Inline steam sterilization 135°C/60mins x 50times				Autoclave sterilization 125°C/30mins x 10times			
Inter-membrane differential pressure (MPa)	Psitive at 25°C	0.54											0.49			
	Reverse at 25°C	0.34														
Pore size code		1	0.10μm		1	0.10μm		1	0.10μm	2	0.20μm		4	Vapor:0.10μm／Liquid:0.45μm		
		2	0.20μm		2	0.20μm		2	0.20μm	4	0.45μm		-	—		
		4	0.45μm		4	0.45μm		4	0.45μm	6	0.65μm		-	—		
		-	—		8	0.80μm		8	0.80μm	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		-	—		-	—		-	—	-	—		-	—		
		Shape code	1	Both-ends gasket			Both-ends gasket			Both-ends gasket		Both-ends gasket			Both-ends gasket	
2	O ring-226			O ring-226			-		O ring-226			O ring-226				
3	O ring-222			O ring-222			-		O ring-222			O ring-222				
Length code	S(1)	Shape Type 1 250mm	Shape Type 2 313mm	Shape Type 3 257mm	Shape Type 1 250mm	Shape Type 2 313mm	Shape Type 3 257mm	250mm	Shape Type 1 250mm	Shape Type 2 313mm	Shape Type 3 257mm	Shape Type 1 250mm	Shape Type 2 313mm	Shape Type 3 257mm		
	D(2)	504mm	565mm	509mm	504mm	565mm	509mm	500mm	504mm	565mm	509mm	504mm	565mm	509mm		
	T(3)	756mm	817mm	761mm	756mm	817mm	761mm	750mm	756mm	817mm	761mm	756mm	817mm	761mm		
Features (main applications)		■ Polysulfone membrane of low pressure loss achieves high flow rate process ■ All parts cleaned by ultrapure water (low elution) ■ All parts have passed Integrity tests before shipping ■ Long-life final filter used in ultrapure water production line ■ Removal of micro particles from industrial water ■ Sterilization and removal of micro particles for high grade pure water used for research institutes and laboratory.			■ Low-cost final filter for ultrapure water line or industrial water usage ■ All parts cleaned by ultrapure water (low elution) before shipping. ■ All parts have passed Integrity tests before shipping ■ Sterilization and removal of micro particles used in highly pure or ultrapure water.			■ Adopt High grade polysulfone membrane. ■ Excellent cost-perform-ance filter for sterilization and removal of micro particles.			■ Hydrophilic asymmetrical PES membrane filter for the food industry. ■ Heat resistance for heat sterilization conditions. ■ Sterilization and removal of micro particles used in pharmaceutical or cosmetic production line where the elution is not accepted. ■ Removal of sediment of wine, beer, Sake or yeast. Sterilization and removal of micro particles for beverage or preparation water. ■ All parts have passed Integrity test before shipping			■ Hydrophobic PTFE membrane filter for gas. ■ Removal of bacteria and micro particles for air vent in pure water tank. ■ PTFE has excellent heat resistance, cold resistance, and chemical resistance. ■ Applicable to air-filtration sterilization in aseptic filling lines, etc.		

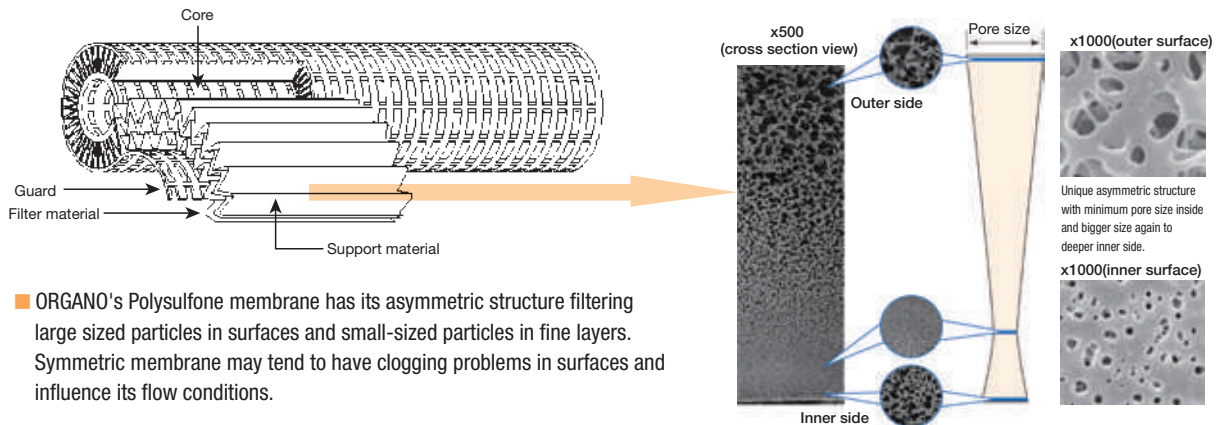
Micro filter										RO wound		PF									
Nominal pore size																					
Polypropylene(PP)				Polyester		Polypropylene(PP)				Cotton		Polypropylene(PP)		Granulated active carbon	Fibrous active carbon	Granulated + Fibrous					
Pleated type				Layered type				Wound type		Wound type		Activated carbon									
EU				N		PF-R-SL		PF-R-SN		PF-R-W		RO wound		PF cartridge		PF carbon	FA-C-2	PF-RC			
70~80						60						40									
—						—						—									
0.49										0.39		0.34									
0.15 ※Only type with guard				0.15		—		—		—		—		—		—	—	—			
04	0.4μm			1	1.0μm	005	0.5μm	005	0.5μm	005	0.5μm	—		1	1.0μm	—		—	—		
1	1.0μm			10	10μm	008	0.8μm	008	0.8μm	008	0.8μm	—		3	3.0μm	—		—	—		
3	3.0μm			20	20μm	010	1.0μm	010	1.0μm	010	1.0μm	—		5	5.0μm	—		—	—		
10	10μm			40	40μm	030	3.0μm	030	3.0μm	030	3.0μm	—		10	10μm	—		—	—		
30	30μm			-	—	050	5.0μm	050	5.0μm	050	5.0μm	—		-	—	—		—	—		
40	40μm			-	—	70	7.0μm	100	10μm	100	10μm	—		-	—	—		—	—		
-	—			-	—	100	10μm	250	25μm	250	25μm	—		-	—	—		—	—		
-	—			-	—	120	12μm	500	50μm	500	50μm	—		-	—	—		—	—		
-	—			-	—	150	15μm	750	75μm	750	75μm	—		-	—	—		—	—		
-	—			-	—	170	17μm	10H	100μm	10H	100μm	—		-	—	—		—	—		
-	—			-	—	200	20μm	15H	150μm	15H	150μm	—		-	—	—		—	—		
-	—			-	—	300	30μm	-	—	20H	200μm	—		-	—	—		—	—		
-	—			-	—	400	40μm	-	—	-	—	—		-	—	—		—	—		
-	—			-	—	500	50μm	-	—	-	—	—		-	—	—		—	—		
-	—			-	—	700	70μm	-	—	-	—	—		-	—	—		—	—		
-	—			-	—	900	90μm	-	—	-	—	—		-	—	—		—	—		
-	—			-	—	12H	120μm	-	—	-	—	—		-	—	—		—	—		
-	—			-	—	15H	150μm	-	—	-	—	—		-	—	—		—	—		
Both-ends gasket				Both-ends gasket		Both-ends gasket		—		—		—		—		—		—	—		
O ring-226				—		O ring-226 (optional)				—		—		—		—		—	—		
O ring-222				—		O ring-222 (optional)				—		—		—		—		—	—		
Shape Type 1	250mm	Shape Type 2	318mm	Shape Type 3	261mm	250mm	250mm	250mm	250mm	250mm	250mm	250mm	250mm	250mm	250mm	250mm	250mm				
	500mm		568mm		511mm	500mm	500mm	500mm	500mm	—	—	—	—	—	500mm						
	750mm		818mm		761mm	750mm	750mm	750mm	750mm	—	—	—	—	—	750mm						
<ul style="list-style-type: none"><li>■Low elution type all-Polypropylene filter excellent in heat and chemical resistance.</li><li>■High filtration capability and low pressure loss to various applications</li><li>■Removal of sediment and micro particles for beverage, preparation water, brewery in the food industry.</li><li>■Chemical liquid filtration, removal of micro particles in water treatment line.</li></ul>						<ul style="list-style-type: none"><li>■Hydrophilic polyester membrane pleated filter.</li><li>■Stable flow rate and long life.</li></ul>		<ul style="list-style-type: none"><li>■PP high-density layered filter with high filtration performance</li><li>■Multi layered filter made from various density nonwoven</li></ul>		<ul style="list-style-type: none"><li>■High cost-performance of PP layered filters with low elutions.</li><li>■Suitable to applications to avoid elutions extremely.</li></ul>		<ul style="list-style-type: none"><li>■Wide range of filters from 0.5um - 200um</li><li>■PP type wound filter</li></ul>		<ul style="list-style-type: none"><li>■Protection and pre-filter for RO membrane</li><li>■Adsorb foreign substances in water by charged membrane</li></ul>		<ul style="list-style-type: none"><li>■PP wound filter cleaned by pure water</li><li>■Prevent the leaks of foreign substances by nonwoven in the deepest part</li></ul>		<ul style="list-style-type: none"><li>■The two layered structure of activated carbon and pre-filter removes residual chlorine and impurities.</li><li>■Fibrous activated carbon of high adsorption speed</li><li>■Low pressure loss and clean structure preventing generation of fine powder</li></ul>		<ul style="list-style-type: none"><li>■Mix carbon structure of granular and fibrous forms</li><li>■High capability and long life of removing residual chlorine</li></ul>	



# Cartridge filter

## Development drawing of pleated cartridge

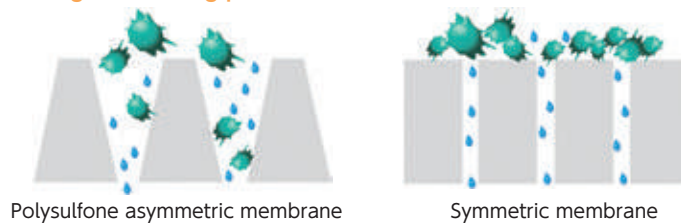
### Structure



### Feature

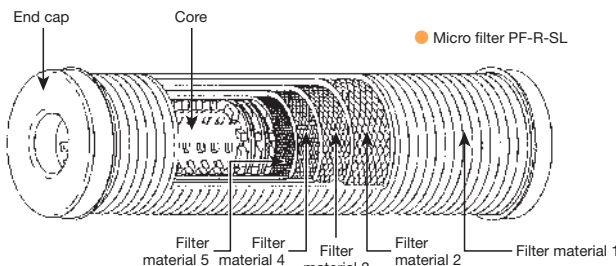
- ORGANO's Polysulfone membrane has its asymmetric structure filtering large sized particles in surfaces and small-sized particles in fine layers. Symmetric membrane may tend to have clogging problems in surfaces and influence its flow conditions.

### Image of filtering particles



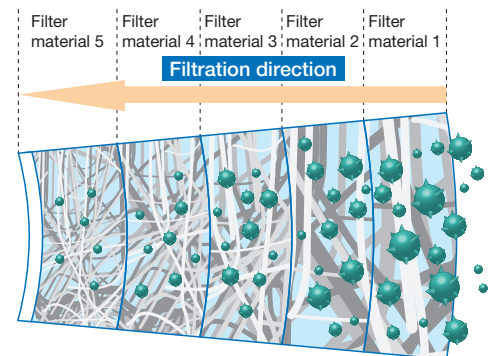
## Development drawing of layered cartridge

### Structure



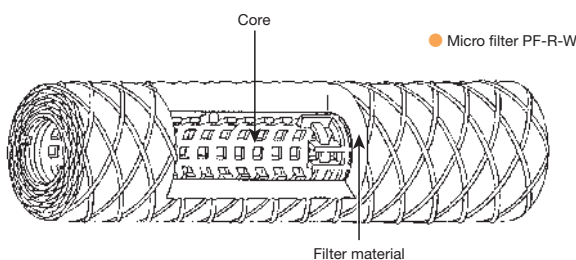
### Feature

- Various kinds of filtration material (different pore size) with the structure of differential filtration density can filter the liquids with a wide range of particle size distribution.
- Filter fineness is designed to be higher in stages from outside to inside. The structure can achieve the filtration of various sizes of particles effectively.



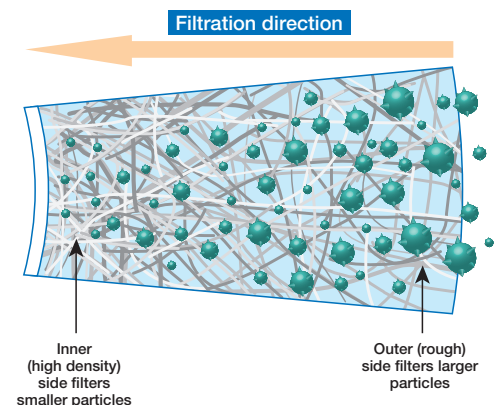
## Development drawing of wound cartridge

### Structure



### Feature

- Single filter material with getting finer from primary side (outer) to secondary side (inner).
- Gidding on filter surface improves the filtration efficiency.
- Efficient depth structure of utilizing whole filter layer enables longer life and higher filtering accuracy.





## Hydrophilic asymmetric polyether sulfone(PES) membrane filter

### Micro filter HP type



#### General

Hydrophilic asymmetric PES membrane filter with excellent heat resistance

#### Feature

#### High performance filter

Bacteria elimination capability: A bacteria adsorption test shows the 0.2μm cartridge filter entirely adsorbs 10<sup>7</sup> Pseudomonasdiminuta<sup>※1</sup> and the 0.45μm cartridge filter entirely adsorbs 10<sup>7</sup> Serratia marcesens<sup>※2</sup> per 1cm<sup>2</sup> membrane.

#### High grade material

Sealed by thermal welding method (no glue used), it is ideal for high grade water treatment systems. Washed by high purity water, there is relatively low elution and no influence on products. It has realized stable filtration.

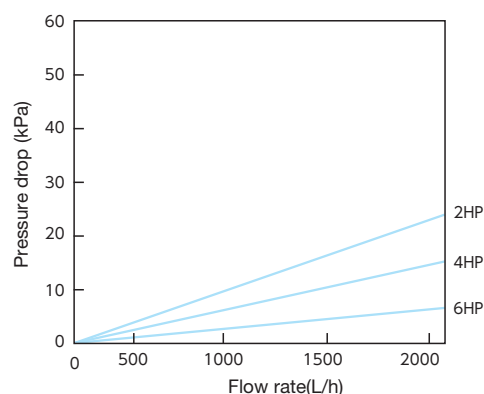
#### High reliability

All parts have passed integrity test (non-destructive). It can be operated safely and stably

※1 Index bacteria for 0.2μm filter ※2 Index bacteria for 0.45μm filter

#### Specification

Material	Filter	Asymmetric PES
	Support	Polypropylene
	Parts	Polypropylene
	Packing, O ring	Silicon (standard)
Heat resistance	Shape type 1	70℃
	Shape type 2	90℃
Pressure resistance	Positive	0.539MPa(25℃) 0.249MPa(90℃)
	Back	0.343MPa(25℃) 0.169MPa(90℃)
Usable pH range		1~13
Germicide	Hydrogen peroxide 3%	Applicable
	Formalin 1%	Applicable
	Chlorine water 10mgCl/ℓ	Applicable
Ethyleneoxide sterilization		Applicable
Sterilization conditions	Hot water	95℃ 60mins x 100cycles
	Autoclave	121℃ 30mins x more than 10cycles
	Inline steam	135℃ 60mins x 50cycles



## Low elution type all polypropylene filter

### Micro filter EU type



#### General

Polypropylene filter with excellent heat resistance and chemical resistance

#### Feature

#### High heat and chemical resistance capability

Polypropylene widely used in all constructional elements except gaskets or O-rings. Hence, the product can realize its excellent heat resistance and chemical resistance.

#### Low elution

As thermal welding method (no glue used) is applied for the manufacturing of this filter, it assures stable use for pre-treatment for ultrapure water production.

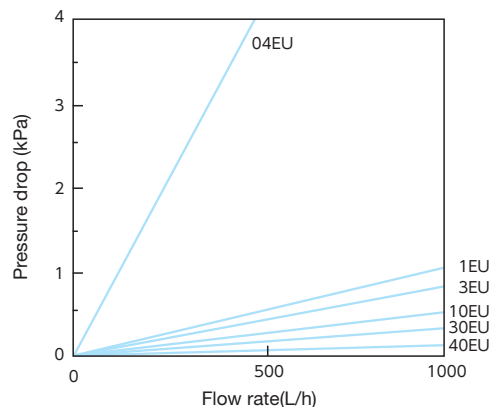
#### Pass standard regulation test for apparatus/container and package

The product has passed standard regulation elution tests to assure safe usage for customers.

#### Minimized pressure loss

Low loss of initial pressure for high flow rate filtration enables longer-time usage.

Material	Filter	Polypropylene
	Support parts	Polypropylene
	Guard	Polypropylene (only guard)
	Core	Polypropylene
	End cap	Polypropylene
	Gasket, O ring	EPDM(standard)
Heat resistance	Shape type1	S:80℃ D/T:70℃
	Shape type1 and 2	80℃
Pressure resistance	Positive	0.49MPa(25℃) 0.20MPa(80℃)
	Back	0.15MPa(25℃) 0.10MPa(80℃)



#### Specification

## Micro filter PF-R type

### General

### Micro particles removing filter with a wide range of filtration accuracy

- The most suitable filter is selectable to each purpose -

### Feature

#### PF-R-SL type

High-density layered filter with various functions from rough to fine filtration by one unit

- High sealability with end cap
- 18 kinds of pore size prepared for various applications

#### PF-R-SN type

Low-cost layered filter blocking micro particles in stages by multi accuracy filtration layers.

- Multi layered filter made from various filtration accuracy nonwoven
- Finer filtration structure from outer to inner

#### PF-R-W type

Wound filter ranging from 0.5-200μm size

- Finer filtration accuracy from outer to inner. Raising fiber element gets higher efficiency of filtration.
- Lowest cost version among PF-R series.



PF-R-SL type

### Specification

Product		PF-R-SL	PF-R-SN	PF-R-W
Material	Filter	Polypropylene(layered)	Polypropylene(layered)	Polypropylene(wound)
	Core	Polypropylene	Polypropylene	Polypropylene
	End cap	Polyethylene foam	-	-
Heat resistance		60°C		
Differential pressure resistance		0.49MPa(at25°C)		

## Pure water filter PF cartridge

### General

### Removal of iron rust or impurities from tap water

### Feature

- Quickly reach high purity as all parts are cleaned.
- Prevent leak by nonwoven in the deepest part.

### Specification

Material	Filter	Polypropylene
Heat resistance		40°C
Differential pressure resistance		0.34MPa(at25°C)
Initial pressure loss		0.005MPa



## Activated carbon filter PF-RC type

### General

### Long life activated carbon filter with huge flow and huge adsorption capability

### Feature

#### High capability of residual-chlorine removing

Total filtration water mount is 80m³ (S type, removal ratio 80%) with longer life feature. The capability of removing residual-chlorine is twice as high as conventional filters.

#### Low pressure loss

Initial pressure loss is below 0.03MPa (standard flow rate) by using MIX activated carbons.

#### Pass standard regulation test for apparatus/container and package

The product has passed standard regulation elution tests to assure safe usage for customers.

#### Hygiene

Special activated carbon with bacteriostatic function can prevent the increase of bacterias.



### Specification

Material	Filter	Granular activated carbon + Fibrous activated carbon
Heat resistance		40°C
Initial pressure loss		0.03MPa

# Stainless steel filter housing

## SH series

### Feature

- Excellent pressure resistance and corrosion resistance
- Adjustable by guide tool according to cartridge size
- Various packages from S size 1 unit to T size 12 units

### Housing code

SH(D)  -

Quantity code      Length code

Quantity code		Length code	
1	1 unit	1	For S size
3	3 unit	2	For D size
6	6 unit	3	For T size
12	12 unit		



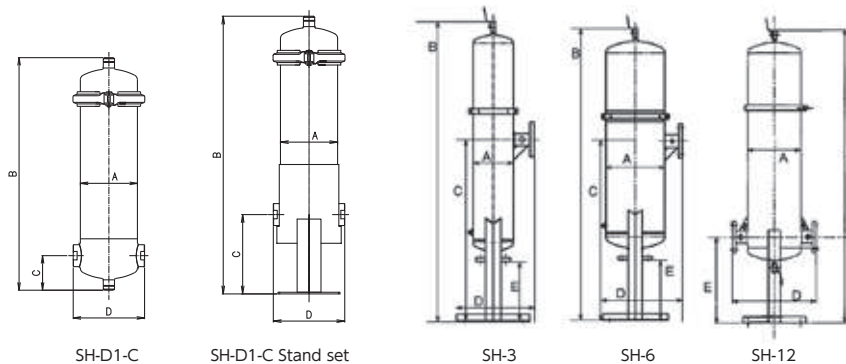
### Specification

Maximum pressure	0.7MPa
Material	Body: SUS304, O ring: Silicone
Applicable cartridge shape code	Type 1 (Double open end)
Applicable cartridge length code	S, D, T

### Dimension

Model		Dimension (mm)					Joint					Cartridge		Operating weight (kg)
Model		A	B	C	D	E	N1 Inlet	N2 Outlet	N3 Drain	N4 Air vent	N5 Pressure monitor	Size	Quantity	
SH-D1-1C		102	414	62	127	141	Rc3/4	Rc3/4	G1/4	G1/4	-	S	1	6
SH-D1-2C		102	664	62	127	141	Rc3/4	Rc3/4	G1/4	G1/4	-	D	1	9
SH-D1-3C		102	914	62	127	141	Rc1	Rc1	G1/4	G1/4	-	T	1	13
SH-D1-1C	with stand	102	493	141	127	141	Rc3/4	Rc3/4	G1/4	G1/4	-	S	1	8
SH-D1-2C	with stand	102	743	141	127	141	Rc3/4	Rc3/4	G1/4	G1/4	-	D	1	11
SH-D1-3C	with stand	102	993	141	127	141	Rc1	Rc1	G1/4	G1/4	-	T	1	15
SH3-2C		165	986	745	318	245	40A	40A	Rc3/8	Rc3/8	Rc3/8	D	3	29
SH3-3C		165	1231	745	318	245	40A	40A	Rc3/8	Rc3/8	Rc3/8	T	3	35
SH6-2C		267	1082	816	364	275	50A	50A	Rc3/8	Rc3/8	Rc3/8	D	6	61
SH6-3C		267	1332	816	364	275	50A	50A	Rc3/8	Rc3/8	Rc3/8	T	6	77
SH12-2B		403	1233	-	400	410	65A	65A	Rc3/8	Rc3/8	Rc3/8	D	12	175
SH12-3B		403	1480	-	570	410	65A	65A	Rc3/8	Rc3/8	Rc3/8	T	12	220

### Drawing



# Stainless steel high flow and large scale filter housing

## SK series

### Feature

- The housing is for high flow process. Line up from T size 10 to 64 units.
- Adjustable by guide tool according to cartridge size.

### Housing code

SK  -3

Quantity code

#### Quantity code

Quantity of attachable T size filter cartridge

### Specification

Maximum pressure		0.7MPa
Design temperature		40°C (at 0.7MPa)
Material	Body	SUS304
	O ring	EPDM
Applicable cartridge shape code		Type1 (double open end)
Applicable cartridge length code		T (The connection of S 3units are usable)



Model	Dimension (mm)		Product weight (kg)	Operating weight (kg)	Joint						Cartridge Quantity
	Total height	Tower diameter			N1 Inlet	N2 Outlet	N3 Drain	N4 Air vent	N5 Pressure monitor	N6 Water opening	
SK10-3	1150	319	55	140	50A	50A	Rc3/8	Rc3/8	Rc3/8	Rc1/2	10
SK12-3	1150	319	55	140	50A	50A	Rc3/8	Rc3/8	Rc3/8	Rc1/2	12
SK16-3	1585	400	130	275	65A	65A	Rc1/2	Rc3/8	Rc3/8	Rc1/2	16
SK20-3	1595	450	135	325	80A	80A	Rc1/2	Rc3/8	Rc3/8	Rc1/2	20
SK24-3	1700	500	160	430	80A	80A	Rc1	Rc3/4	Rc3/8	Rc1/2	24
SK30-3	1710	550	180	480	100A	100A	Rc1	Rc3/4	Rc3/8	Rc1/2	30
SK40-3	1720	600	220	620	100A	100A	Rc1	Rc3/4	Rc3/8	Rc1/2	40
SK50-3	1740	650	230	700	125A	125A	Rc1	Rc3/4	Rc3/8	Rc1/2	50
SK60-3	1790	750	310	900	125A	125A	Rc1	Rc3/4	Rc3/8	Rc1/2	60
SK64-3	1790	750	320	910	125A	125A	Rc1	Rc3/4	Rc3/8	Rc1/2	64

# Sanitary stainless steel filter housing

## SH-S series

### Feature

- Adopt SUS316L excellent in pressure and corrosion resistance.
- Highly precise treatment of outer and inner surfaces.
- 3 kinds of shapes (V shape, T shape, L shape) to minimize remaining liquids.
- Optional valves for air vent are available.

### Housing code

SH-S1-  B

Length code Shape code

#### Length code

1	S size
2	D size
3	T size

#### Shape code

V	V type
T	T type
L	L type

### Specification

Maximum usable pressure		0.5MPa
Maximum usable temperature		121°C
Material	Body	SUS316L
	Gasket	Silicone
Surface finishing	Outer	#400
	Inner	#400+electro polishing
Applicable cartridge shape code		Type 2 (single open end/ O ring-226/with fin)
Applicable cartridge length code		S, D, T

Shape code	Length code	Dimension (mm)		Operating weight (kg)	Interface			
		Total height	Tower diameter		Inlet	Outlet	Body clamp band	air bleed clamp band
V	1	441.5	φ101.6	Approx.7	1S	1S	4S	1.5S
	2	693.5		Approx.10				
	3	945.5		Approx.13				
T	1	406.5		Approx.7				
	2	658.5		Approx.10				
	3	910.5		Approx.13				
L	1	407.5		Approx.7				
	2	659.0		Approx.10				
	3	911.0		Approx.13				



## High functioning polypropylene filter housing

### PH-A series



#### Feature

- All parts made by polypropylene (except O-rings).
- The ring-nut method prevents problems arising from seals.
- The adopted parts are suitable to FDA.

#### Specification

Maximum pressure		0.5MPa
Maximum temperature		40℃
Material	Body	Polypropylene
	O ring	Silicone
Applicable cartridge shape code		Type1(Double open end) Type3(Single open end/O ring-222/Without fin)
Applicable cartridge length code		S

#### Housing code

PH-A1-  Joint code

Joint code	Dimension (mm)		Operating weight (kg)	Joint		
	Total height	Tower diameter		IN/OUT	Air vent	Water draining
200	364	ø132	Approx.4	Rc3/4	G1/4	G1/4
250				RC1		

## Multi-purpose plastic filter housing

### PF-Ⅲ series



#### Feature

- Light weight to handle easily.
- Transparent blue vessels enables us to see impurities inside easily.

#### Specification

Maximum pressure		0.5MPa
Maximum temperature		40℃
Material	Cap	ABS
	Container	AS
	V packing	NBR
Applicable cartridge shape code		Type1(Double open end)
Applicable cartridge length code		S
Operating weight (kg)		Approx.3

Product	Dimension (mm)		Joint
	Total height	Tower diameter	
PF-Ⅲ	320	φ115	Rc1/2

## Multi-purpose plastic filter housing

### PF-VI series



#### Feature

- Transparent vessels enables us to see impurities inside easily
- 2 units of air vents are installed in IN/Out (2 locations)
- By exchanging vessels, it is flexibly applicable to Double/Triple

#### Specification

Maximum pressure		0.5MPa
Maximum temperature		40℃
Material	Cap	ABS
	Container	Transparent AS
	Adapter, O ring	EPDM(Standard)
	Air vent, Under-drain plug	ABS
	Seal plate	ABS(T), POM(T3)
Applicable cartridge shape code		Type1(Double open end)
Applicable cartridge length code		S, D, T

#### Housing code

PF-VI- <div>Size</div> <div>Joint code</div>	Product	Size(mm)	Join code	Dimension (mm)		Operating weight (kg)	Joint		
				Total height	Tower diameter		IN/OUT	Plug(O ring)	Air vent plug (with O ring)
	PF-VI	S : 250	15	345	φ121	Approx.3	15A(Rc1/2)	G1/4	M10
		S : 250		345					
		D : 500	20	595			Approx.5		
T : 750			845	Approx.8					

# Waste Water Treatment

## Organic waste water treatment

### High efficiency treatment

#### Bio treatment

Bio-membrane waste water treatment system

P52

#### Bio treatment

Membrane bioreactor system OF-AS series

P53

#### Bio treatment

Flowed carrier anaerobic treatment system

P53

High performance sludge de-watering machine  
Screw press CP-HS

Sludge reducing solvent

## Inorganic waste water treatment

### Coagulation treatment

Hi speed suspended solid contact clarifier

P54

### Pressure flotation treatment

High-rate dissolved air floatation (H-D-AF)

P54

Organic coagulant  
CL series

Waste reduction

## Bio treatment

### Application

Electronics

Automotive/Machinery

Food/Beverage

Medical/Cosmetic

Chemical/Material

Waste water for various cleaning purposes, processing, laboratory/environmental purposes

## Bio-membrane waste water treatment system

### General

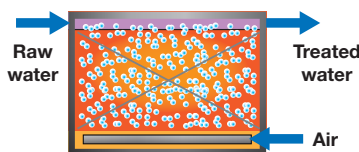
Space saving and easy operation with its simple structure

Aerobic reaction tank filled with ORGANO's own carries.

**ORGANO provides the most suitable carries and system to each waste water.**

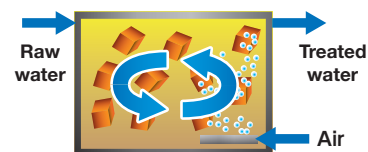
### Fixed bed type

- Fix carries in tank



### Flowed bed type

- Let carries flow in tank



### Feature

#### Save space

High process capability and 20% installation space only comparing with activated sludge process.

#### Easy maintenance

Surface monitoring of sedimentation tank or such maintenances as sludge drawing, etc are not necessary. It can stand load fluctuation with effective microorganism sticking to carrier's surfaces strongly.

#### Reduce sludge generation

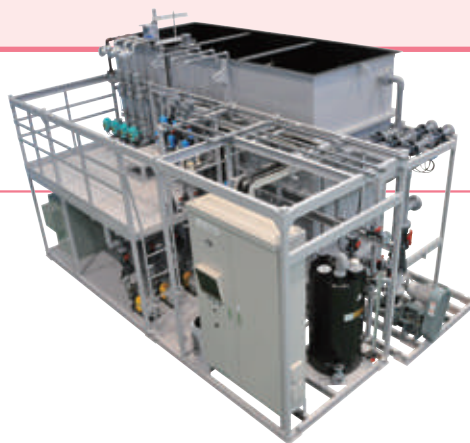
Many of protozoans/metazoans are generated and cause food-chain.

The system can retain a number of micro bacterias and generate selfdigestion smoothly.



# Membrane bioreactor system

## OF-AS series



### General

**Compact waster water treatment equipment with stability and advanced quality of treated water**

### Feature

#### Save space

High-load operation and sedimentation tanks are not necessary. Space saving.

#### Compact size

Such components as tank and pump are integrated in a compact skid. Contribute to the reduction of installation space as well as local installation time.

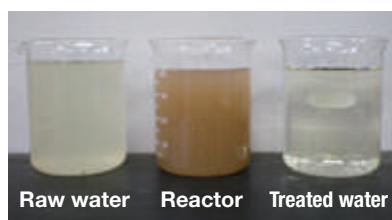
#### High quality of treated water

The most suitable for complying with discharge regulation or water recycling.

#### Reduce maintenance work

Sedimentation not required, there is no sludge carry-over or bulking generation.

Appearance sampling of Raw water - Treated water



### Specification

Model	OF-AS-S1-030	OF-AS-S1-050	OF-AS-S1-100
Processing flow rate(m <sup>3</sup> /day)	30	50	100
Dimension(mm)	W4000×D3500×H3200	W6000×D3500×H3200	W6500×D4500×H3600
Product weight(t)	5.3	6.7	11.0
Operating weight(t)	19.0	28.0	47.0
Power	AC200V Three phase		
Power capacity	15	20	32
Quality of treated water	BOD below 5mg/L Turbidity below 0.2 (NTU)		
Quality of raw water	Standard BOD: 100-300mg/ℓ Temperature: 15-30℃ pH: 5 - 9 Impurities: No fiber, vinyl materials are included ※In case of BOD above 300mg/ℓ, an additional reaction tank is to be installed. ※For highly concentrated water such as oil, SS, etc, pre-treatment equipment such as pressure flotation equipment is required. ※Evaluation is to be conducted based on a laboratory test in advance as treated water quality differs depending on waste water quality or sludge conditions.		

# Flowed carrier anaerobic treatment system

### General

**Anaerobic treatment system with highest speed and most stable processing**

### Feature

#### High speed process

The flow carrier system achieves high contact efficiency between micro-bacteria and waste water. High-performance flowed carriers retain high concentration of anaerobic bacterias. So, the system has realized higher speed processing comparing with conventional systems.

#### Stable and safe process

Flowed carriers retain micro bacteria stably. Unlike the Granule method, micro bacterias are not emitted outside the system.

#### No clogging problems

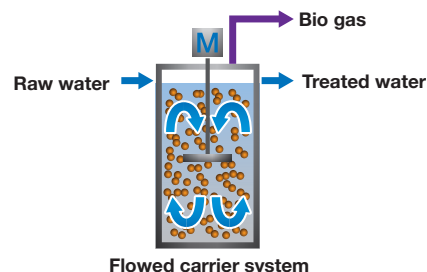
As the inside of tank circulates continuously, there are no worries of clogging problems unlike the Granule method.

#### Applicable to various kinds of waste water

Due to flowed carrier's capability of retaining bacterias, the system can support anaerobic treatment with a wider range of waste water. Low concentrated waste water (CODcr 1,000mg/L approximately) or waste water containing oil, which cannot be treated by conventional ways, can be applied to.

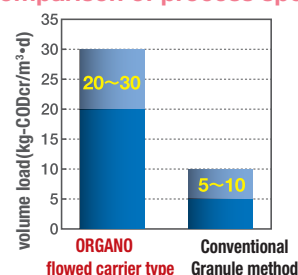
#### ORGANO's own flowed carrier system

Let carriers flow in a ideal condition



Flowed carrier system

#### Comparison of process speed



# Flocculation/Pressure floatation treatment

## High-speed flocculator

General

High speed process LV3-6m/h! Space saving and low cost

Application

Electronics Automotive/Machinery Food/Beverage Medical/Cosmetic Chemical/Material

Waste water for various cleaning purposes, processing, laboratory/environmental purposes

Feature

### Principle of coagulative precipitation

■ Upward flow evenly generated in tank (by constant rotation of distribution tubes and blocking plate) creates sludge blankets stably.

### High speed process of sedimentation LV 3-6m/h

Higher LV is realized than conventional system approx. LV 1m/h.

### Smaller sized tank and low cost of the construction

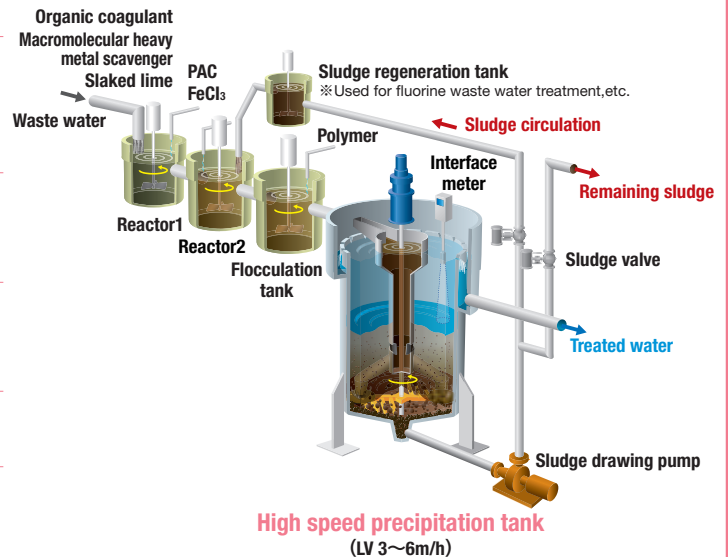
Due to downsizing of precipitation tank, low cost is realized

### High quality of treated water

Sludge blanket is able to catch micro flock.

### Stable operation

The height of sludge blanket interface is continuously monitored.



## High rate dissolved air floatation system

H-D-AF

General

High speed process, space saving, and low cost model

Application

Electronics Automotive/Machinery Food/Beverage

Medical/Cosmetic Chemical/Material

Process water for pre-treatment, waste water for various cleaning purposes, laboratory/environmental purposes

Feature

### Principle of High speed

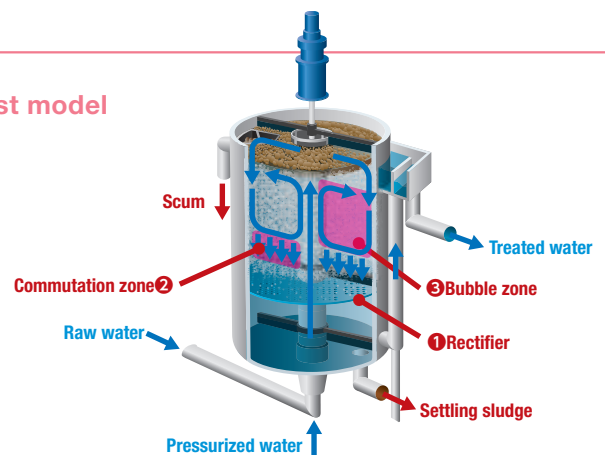
- Rectifier(①) forms a commutation zone(②) of even flow speed.
- Simultaneously, a bubble zone (③) (where micro bubbles are fulfilled) is generated and accelerates the tie between flock and bubbles.
- A fully utilized tank enables the high-speed solid-liquid separation.

### Great reduction of installation space

The size is approx. 25% of conventional pressure floatation system.

### Stable quality of treated water

Sufficient treatment capability for water containing oil, humin substance, and algae, etc.  
Stable treatment quality even in winter when water temperature is low and the quality is tend to be worse.



The flow in "High rate dissolved air floatation system".

### Low cost

Downsizing of floatation tank contributes the cost reduction.

### Applicable to a wider range of flow rate

Treated water amount per tower: 8-160m³/h (Φ 1,000-3200mm).

## R&D Center

ORGANO conducts development and research to master water according to the progress of the industry. ORGANO is engaged in a wide range of technology such as pure/ultrapure water, water treatment, waste water treatment, environmental cleanup/impact reduction, advanced separation, purification, analyzing monitoring.

4-4-1 Nishi-Onuma, Minami-ku, Sagami-hara, Kanagawa Prefecture, 252-0332, Japan



## Iwaki Factory

It is a state-of-the-art manufacturing factory of water treatment equipment. Manufacturing the standardized units to constitute a large scale water treatment plant, the factory contributes to enhancing product quality and short construction time. It is also remarkable that there are clean room assembly facilities for semiconductor and pharmaceutical customers.

1-66 Yoshima Kogyodanchi, Iwaki City, Fukushima Prefecture, 970-1144, Japan



## Tsukuba Factory

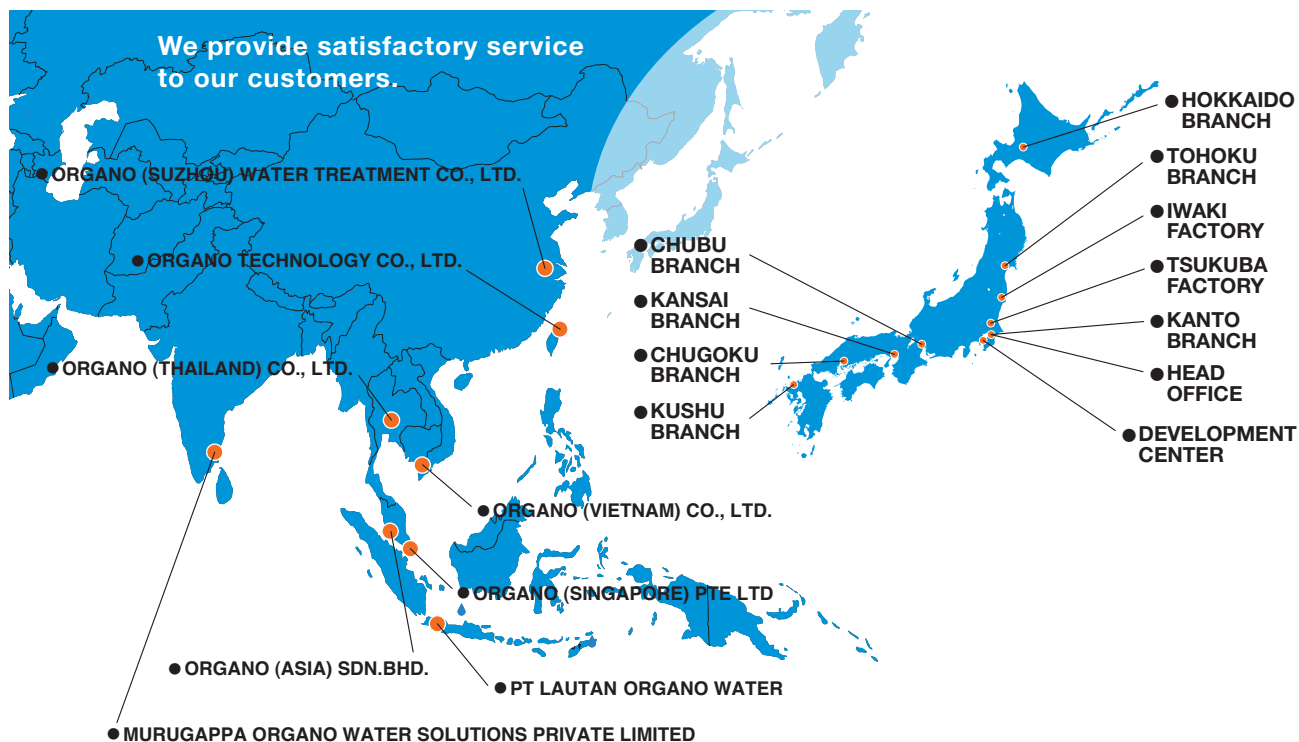
As a national water treatment plant engineering manufacturer, it is only ORGANO who owns a refining plant exclusive to ion exchange resin.

This plant is dedicated to regeneration and conditioning of ion exchange resin which is a key material to pure/ultrapure water production system. We are proud that it is a World No.1 state-of-the-art plant.

2-3 Midorigahara (Tsukuba TechnoPark Toyosato), Tsukuba City, Ibaraki Prefecture 300-2646, Japan



## Global network spread around the world



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